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THE EFFECTS OF PARENTING ON PERFECTIONISM AND INTOLERANCE TO UNCERTAINTY IN YOUTH AND ADULTS

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Abstract

Objectives. Perfectionism and intolerance of uncertainty can be two elements that distort the optimal development of a child for his transformation into a successful adult. The objective of this study was to identify the relationship between perfectionism and intolerance of uncertainty, as well as establish the impact of parental support on them.
Material and methods. This study was conducted on a sample of 247 respondents, 226 (91%) female, 20 (8%) male, and 1 respondent who did not state gender. The method used was the indirect survey, and the research instrument used was the questionnaire through which the three research variables were measured. Results were processed using statistical operations such as correlations, regressions, and ANOVA analysis of variance.
Results. As the level of parental support decreases, the level of uncertainty intolerance increases ($r = -.18$, $p = .006$, $p < .05$). A significant effect of the respondent's age on the level of intolerance uncertainty was established ($F(6,81.84) = 2.96$, $p = .01$, $p < .05$). As parental recognition of feelings decreases, intolerance of uncertainty increases. The performance induced by the parents is not associated with the level of perfectionism of the respondents. The increased level of intolerance of uncertainty was associated with an increased level of perfectionism ($r = .35$, $p < .001$).
Conclusions. This study demonstrates the importance of parental support for reducing intolerance to uncertainty and, at the same time, for reducing the level of maladaptive perfectionism, according to which the young adult is constantly worried about aspects of life that cannot always be controlled.

Keywords: intolerance of uncertainty, perfectionism, parental support.

Introduction

According to Frost, Marten, Lahart, & Rosenblate (1990) perfectionism is a dispositional trait that involves the imposition of standards that are not reasonable following the individual's potential or conditions of action. This is also associated with the permanent tendency to criticize one's person, but also with emotional dysregulation, and dissocial behavior, respectively, according

to which the young person does not respect the rights of those around him and cannot adapt to social norms (Casale, Fiorovanti, & Ghinassi 2023). Along with perfectionism as a variable of the present study, intolerance of uncertainty is named in the literature according to Graham (2021), psychological allergy, a concept explained by the fact that when an individual intolerant to uncertainty is exposed to a low level of intolerance to uncertainty, he will have a disproportionately strong reaction to the actual uncertainty towards the event, respectively. In this case, the result is a strong emotional reaction that increases the risk of stress and anxiety.

Perfectionism and its limitations

There are two models of the development of perfectionism: social expectations and social learning models. According to social expectations, perfectionism develops as a result of parental standards and criticism, while perfectionism developed through social learning is represented by both observing and imitating parental perfectionism. If parental expectations refer more specifically to youths' tendency to perceive them as holding excessively high standards in line with their ability to meet those standards, overly critical parents are perceived by youths as disapproving and judgmental of their imperfections. All these manifestations of parents toward their children lead to depressive disorders, obsessive-compulsive disorders, and eating disorders (Smith, 2022).

The level of perfectionism is increasing as a result of trends such as increasingly tighter competition regarding admission to prestigious educational institutions, the increase in the cost of education for receiving quality services, the approach of parental styles focused on control, and, last but not least, the promotion of comparisons in social media (Newport Academy, 2022).

Young people's experiences of socializing with family members are important in determining and simultaneously understanding the distinctive features of this personality trait. Regarding the level of perfectionism of the parents, Vieth & Trull (1999), concluded that there was a moderate correlation between the perfectionism of mothers and that of their daughters, while no significant association could be demonstrated between the perfectionism of fathers and that of daughters. Curran & Hill (2022) state that one cause of the growing trend of perfectionism among teenagers is represented by the increasingly accentuated presence of competitiveness and individualism in today's society, which causes parents to adopt parenting practices that demonstrate a high level of anxiety about them, parental practices through which they excessively involve themselves in the lives of young people or, control their actions.

According to the Newport Academy platform (2022), between 25 and 30% of teenagers experience maladaptive perfectionism, as evidenced by struggling with unrealistic perfectionism to the point where it causes pain among them. It has been established that there is a genetic component to perfectionism that is reinforced over time and by parenting practices, although the predominant influence on the level of perfectionism comes from the individual's environment.

In a study of self-critical perfectionism and life satisfaction, demonstrated that as the level of self-esteem increases, the possibility of experiencing self-critical perfectionism decreases, and as self-critical perfectionism increases, life satisfaction decreases.

Adaptive perfectionism, manifested by the person's desire to exercise his full potential to achieve a goal but also by accepting a possible failure, can determine the acquisition of a satisfying life while maladaptive perfectionism, represented by constant and extreme worries about several aspects of life, can have negative consequences on both physical and psychological development (Fekih-Romdhane, Sawma, Obeid, & Hallit, 2023).

The specialized literature mentions that adaptive perfectionism is associated with the struggle for excellence, being present in people who set high goals, are characterized by high standards in all aspects of life, but at the same time are persistent in the activities carried out to achieve their goals. It is a type of positive perfectionism, with the person having an optimistic attitude in the face of various challenges and desiring both personal and professional growth. Maladaptive perfectionism is associated with the demand for perfection, causing the individual to focus on failure (Davis, 2023).

From the perspective of the bond between parents and children, there are two dimensions of it: parental care, represented by the manifestation of warmth and affection towards the child, and parental overprotection, characterized by behaviors denoting excessive control over the child's actions and restrictiveness towards him. Ge, Chen, Hewitt, & Flett (2023) noted in their research on the impact of the relationship between parents and youth on the latter's perfectionism that female youth exhibited a higher level of socially prescribed perfectionism as they experienced paternal overprotection, while young males experienced high levels of perfectionism as they benefited from paternal overprotection.

Seki (2023) demonstrated in his study about the effects of "helicopter" parents on perfectionism and the well-being of young people that as parents adopt this parenting style, there is an increase in the level of perfectionism among young people and the desire to achieve social approval.

In this case, the psychological well-being of young people is negatively affected.

Martucci, Visaggi, Di Iorio, Vacca, Zaccaria, Ardizzone, & Lombardo (2023) concluded from the study of parents and children's perfectionism that the mother's socially prescribed perfectionism, together with maternal kindness, conscientiousness, and flexibility, predict high personal standards, developing adaptive perfectionism in the case of children, but the same is also not true in the case of kindness, respectively paternal conscience, which was associated, according to the mentioned study, with the critical, maladaptive perfectionism of children. Thus, it was found that parents' perfectionism can promote the development of perfectionistic tendencies in children, but at the same time, mothers and fathers influence their perfectionism differently.

Flett, Hewitt, Oliver, & Macdonald (2002) demonstrated in their study about the perfectionism of parents and children that certain aspects of perfectionism among children are associated with parental stress but also with a diminished sense of the adult's worth from the perspective of the parenting role.

Intolerance of uncertainty and limitations on youth/adult development

Intolerance to uncertainty is a personality trait generally valid for all individuals, but it is known that in the case of some people, the level of intolerance to uncertainty is high, affecting their proper functioning and development. Like perfectionism and rigidity, intolerance of uncertainty is a predisposition and not a diagnosable disorder, but individuals with high levels of this predisposition are at greater risk for anxiety (Russo, 2022). It can also be defined as the dispositional inability of an individual to bear an aversive response triggered by the absence of important information for guiding behavior and solving the problem (Bottesi, Ghisi, Carraro, Barclay, Payne, & Freeston,2016).

Uncertainty becomes detrimental to youth development because it is responsible for triggering negative emotions such as fear and anxiety. Based on these considerations, people try to reduce uncertainty to have as clear an estimate as possible on relevant events from a motivational

perspective, being followers of avoiding threats and obtaining reward or safety (Morriss, Goh, Hirsch & Dodd, 2023).

Buhr & Dugas (2002) conceptually differentiate between intolerance of uncertainty and worry. Worry refers to the individual's excessive attention to future events that they interpret as negative and are characterized by uncertainty about the outcome. Along with focusing excessive attention on these events, the individual also experiences states of anxiety. On the other hand, uncertainty is an aspect of worry, which is manifested by the person's tendency to consider it unacceptable for a negative event to occur in his life, regardless of how small the probability of that event occurring in reality is. If uncertainty intolerance is associated with a filter through which individuals perceive their environment, causing excessive worry when uncertain situations arise, optimal worry is a mental activity through which they reflect on the situation and possible outcomes. According to Graham (2021), intolerance of uncertainty becomes a major factor that causes the person's worry to seem uncontrollable, and because everyday life events are also marked by uncertainty, young people must develop coping mechanisms in the face of them.

Ong, Magiati, Maybery, Rodgers, Uljarevic, & Alvares (2023) concluded following the study of parents' perspectives on children's intolerance of uncertainty that this often manifests itself through increased emotional behavioral reactivity of children, hurting both their development and the well-being of the family.

Although children are aware of and can respond to uncertainty early in their development, several cognitive processes related to uncertainty develop by mid-childhood and adolescence.

Introspective awareness continues to develop until elementary school, and metacognitive skills such as remembering possible predicted outcomes, delaying interpretation until additional information appears, or making tentative interpretations develop gradually (Osmanagaoglu, Creswell, & Dodd, 2018).

Intolerance of uncertainty is known to be associated with worry and rumination, which mediate the established relationships between intolerance of uncertainty and symptoms of anxiety and depression. At the same time, a strong link was established between the intolerance of uncertainty and the person's inability to use effective strategies to regulate emotions and negative thoughts and successfully manage aversive responses to uncertainty (Sbrilli, Haigler, & Laurent, 2021).

Lauriola, Iannattone, & Bottesi (2023) found that intolerance of uncertainty and emotion processing in adolescents are closely related. Thus, changes related to intolerance of uncertainty precede changes in the processing of emotions, thus causing difficulties in emotional regulation.

Effects of parental support on Youth/adults

Parental support is described in specialized and scientific literature as being of three types: informational, emotional, and instrumental. All three forms of parental support contribute to the performance of young people in different areas, including achieving academic performance. While informational support aims to share the child's knowledge in situations that require such parental behavior, emotional support demonstrates love, valuing the child, and belief in his abilities, and instrumental support refers to providing the financial resources necessary for the optimal development of the child from all points of view (McCulloh, 2020).

Kocayoruk, Altinas, & Icbay (2015) point out that as the parental climate gives children the opportunity to develop autonomously, their healthy growth and development are observed, as well as the emergence of psychological well-being. In this context, parental practices are defined as

offering children the possibility to make autonomous choices and to express their opinion, but also to explore the opportunities that can guide them towards achieving success by providing the necessary framework for the development of social skills, respectively. All of these parenting practices will also help improve self-awareness and self-esteem. Parents' influence and the way they handle different situations are the premises for the children's future adult behaviours (Roman & Pinto, 2015).

Macalli, Cote, & Tzourio (2020) demonstrated in their study of parental support that a perceived lack of it on the part of adolescents is associated with an approximately fourfold greater risk of developing mental health disorders. Thus, lower levels of perceived parental support represented sources for the emergence of suicidal behavior, major depression, and generalized anxiety disorders.

From the perspective of parental support perceived by children in tasks related to school, for example, solving homework, Nunez, Freire, Ferradas, Valle, & Xu (2023) concluded that the lower children perceive the support that parents provide in school tasks, the more it increases the likelihood of self-handicapping behaviors and decreases, at the same time, their behavioral involvement in pregnancy. This low level of behavioral involvement is marked by making little effort to complete the task, partially solving the task, and procrastinating.

According to the interpersonal acceptance-rejection theory, Boele, Nelemans, Denissen, Prinzie, Bulow, & Keijsers (2022), the degree of parental acceptance and rejection predicts children's mental health, even though the way parents exercise their support towards children varies according to culture, country, or family.

Neuenschwander & Hofmann (2021) noted that parental support given to adolescents with low self-efficacy helps them to make good career decisions in the long term, thus obtaining a positive correlation between parental support and youth self-efficacy.

Current study. Objectives and research questions

The present study aims to investigate the impact of parental support on perfectionism and intolerance of uncertainty on the development of young people/adults, but also how the age of young people/adults is an indicator according to which intolerance of uncertainty varies. Along with this general objective of the study, it is identified how parental behaviors such as diminishing the recognition of feelings or demanding performance under pressure act on the perfectionism and intolerance of uncertainty of young people/adults. The independent variables analyzed in the research are represented by parental support, age of respondents, recognition of feelings, performance under pressure, and intolerance of uncertainty. The dependent variables analyzed are intolerance of uncertainty and perfectionism. It is found that the uncertainty intolerance variable is treated alternatively both as an independent variable and as a dependent variable.

Research questions and hypotheses

To investigate the aforementioned objectives, the following research questions and hypotheses were formulated:

RQ1: Is there an association between parental support and youth/adult intolerance to uncertainty?

RQ2: What is the relationship between youth/adults' intolerance of uncertainty and their age?

RQ3: Is there an association between parental recognition of feelings and youth/adult uncertainty intolerance?

RQ4: What is the impact of demanding performance under pressure from parents on youth/adult perfectionism?

RQ5: What is the relationship between youth/adults' intolerance of uncertainty and their perfectionism?

H1: As the level of parental support decreases, youth/adults' intolerance of uncertainty increases.

H2: The level of intolerance of uncertainty varies with the age of young people/adults.

H3: Decreased recognition of feelings by parents is associated with increased uncertainty in youth/adults.

H4: Parent-induced performance under pressure is associated with youth/adult perfectionism.

H5: As the level of intolerance of uncertainty increases, the level of perfectionism among youth/adults is found to increase.

Material and methods

Participants

The sample for this research consisted of 247 respondents: 226 (91%) female, 20 (8%) male, and 1 respondent who did not state gender. The age ranges vary from under 20 years old to over 45 years old, with the predominant ones being under 20 years old in the case of 38 respondents (15%), 21-25 years old for 69 respondents (28%), and over 45 years old in the case of 44 respondents (18%).

Procedure

Data for the present study were collected online by disseminating the form in a virtual format, predominantly in social media groups. There were no exclusion conditions for participating in the study, and the data was collected from respondents including adults. Regardless of age, each respondent was advised to complete a retrospective questionnaire relating to their relationship with their parents, particularly during childhood. Participants gave their consent to participate and were informed that they could withdraw from the study at any time. In addition to completing the instruments, they also provided a range of demographic information (age, gender).

The collected data were later processed using the Excel database and statistically interpreted using the Jamovi program.

Instruments

To identify the level of parental support experienced by respondents, the Perceived Parental Autonomy Support Scale (P-PASS), validated by Mageau, Ranger, Joussemet, Koestner, Moreau, & Forest (2015), was used and translated into Romanian by Raluca Livinți. The scale is composed of 24 items distributed in 6 factors as follows: Factor 1 – Freedom within certain limits; Factor 2 – Argumentation of requirements and limits; Factor 3 – Recognition of feelings; Factor 4 – Threats and punishments; Factor 5 – Performance under pressure; Factor 6 – Guilt-inducing critics. The responses are provided on a five-step Likert scale, where 1 – To a very small extent and 5 – To a very large extent.

To identify the level of perfectionism of the respondents, the Perfectionism scale was used, taken from the source International Personality Item Pool: A Scientific Collaboratory for the Development of Advanced Measures of Personality Traits and Other Individual Differences (http://ipip.ori.org/) and translated into Romanian by Dragoș Iliescu. A reference study that used this scale is by Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, & Gough (2006). The scale is composed of 9 items. The responses are provided on a five-step Likert scale, where 1 – To a very small extent and 5 – To a very large extent.

To measure the level of intolerance to uncertainty, the Uncertainty Scale-Short form (IUS-S) was used (Carleton, Norton, & Asmundson 2007). The scale was translated into Romanian by Coca Mirel-Valentin.

The scale is composed of 12 items. The responses are provided on a five-step Likert scale, where 1 – To a very small extent and 5 – To a very large extent.

The reliability coefficients (Cronbach's Alpha coefficients - α) in the present study were: α = .82 for the Perceived Parental Autonomy Support Scale (P-PASS), α = .92 for Uncertainty Scale-Short form (IUS-S) and α = .79 Perfectionism scales.

Results

Descriptive statistics

The means, standard deviations, standard error, minimum, maximum, skewness, and kurtosis for each variable are presented in Table 1. The value of skewness varies between – 1.02 and .44, and the value of kurtosis varies between – 1.19 and 0.96. Both ranges of values are statistically acceptable. Therefore, after the normality of the research variables was analyzed, all skewness and kurtosis values were within an acceptable range.

Table 1

Descriptive statistics for the variables parental support, intolerance of uncertainty, and perfectionism

	Score Perception of parental support	Factor 1: Freedom within certain limits	Factor 2: Arguing demands and limits	Factor 3: Recognition of feelings	Factor 4: Threats and punishments	Factor 5: Performance under pressure	Factor 6: Guilt-inducing critics	Score Intolerance of Uncertainty	Perfectionism score
N	247	247	247	247	247	247	247	247	247
Missing	0	0	0	0	0	0	0	0	0
Mean	61.83	12.64	13.31	13.23	7.11	8.99	6.56	32.23	30.11
Median	64	13	13	13	7	9	6	32	30
Standard deviation	10.70	3.06	4.55	4.47	2.37	1.62	2.28	10.20	5.23
Minimum	28	4	4	4	4	5	4	12	10
Maximum	80	18	20	20	12	13	12	59	41
Skewness	-1.02	-.95	-.22	-.30	.10	.10	.44	.28	-.52
Std. error skewness	.15	.15	.15	.15	.15	.15	.15	.15	.15

	Score Perception of parental support	Factor 1: Freedom within certain limits	Factor 2: Arguing demands and limits	Factor 3: Recognition of feelings	Factor 4: Threats and punishments	Factor 5: Performance under pressure	Factor 6: Guilt-inducing critics	Score Intolerance of Uncertainty	Perfectionism score
Kurtosis	.96	.52	-.85	-.78	-1.19	-.21	-.96	-.27	.43
Std. error kurtosis	.31	.31	.31	.31	.31	.31	.31	.31	.31

Testing Hypothesis 1: As levels of parental support decrease, youth/adults' intolerance of uncertainty increases

To identify the link between parental support and intolerance of uncertainty, a correlational analysis was performed between the two variables, as a result of which a negative, statistically significant association was obtained ($r = -.18$, $p = .006$, $p < .05$) between the two variables. Thus, as parental support decreases, intolerance to uncertainty increases. These results can be explained by the fact that parental support can be associated with solid benchmarks for the child's actions, now reaching the period of youth or adulthood. In the absence of such benchmarks and the necessary skills, the individual has difficulty coping with uncertain situations, showing intolerance towards them. Following these results, it was found that the hypothesis that as the level of parental support decreases, youth/adults' intolerance of uncertainty increases was confirmed.

Testing Hypothesis 2: The level of intolerance of uncertainty varies with the age of youth/adults

To identify how the level of intolerance to uncertainty varies according to the age of the respondents, an analysis of variance (ANOVA) was performed between the dependent variable intolerance to uncertainty and the categorical independent variable age of the respondents, through which the sample is distributed into seven independent groups. Following the analysis of variance, a significant effect of the respondent's age on the level of intolerance uncertainty was established $F(6,81.84) = 2.96$, $p = .01$, $p < .05$).

The predominant groups of respondents from the perspective of age are those under 20 years old in some 38 respondents with an average uncertainty intolerance of 35.08, the group made up of respondents aged between 21 and 25 years old in 69 respondents with an average of 35.41 tolerance to uncertainty, and groups aged between 41 and 45 years and over 45 years, in the number of 31 and 44 respondents whose average tolerance to uncertainty is 30.13 in the case of respondents aged between 41 and 45 years and 29.84 in the case of respondents over 45 years old (Table 2). It was found that the average of the uncertainty intolerance scores was higher in the case of respondents under 20 years of age, respectively in the range of 21-25 years, and as the age of the respondents approached 45 years or exceeded 45 years, the average uncertainty intolerance scores decreased. This evolution in terms of decreasing intolerance to uncertainty may be due to life experiences that can lead to improved capacity for resilience and, subsequently, for managing uncertain situations.

Following Anova output, the hypothesis that the level of intolerance of uncertainty varies with the age of youth/adults was confirmed.

Table 2

Mean scores of the uncertainty intolerance variable according to the age of the respondents

	The age range	N	Mean	SD	SE
Score Intolerance of Uncertainty	Under 20 years	38	35.08	11.48	1.86
	21-25 years old	69	35.41	10.37	1.25
	26-30 years old	17	29.24	10.60	2.57
	31-35 years old	21	31.14	11.23	2.45
	36-40 years old	27	29.11	9.40	1.81
	41-45 years old	31	30.13	7.92	1.42
	Over 45 years old	44	29.84	8.46	1.28

Testing Hypothesis 3: Decreased recognition of feelings by parents is associated with increased uncertainty in youth/adults

To identify the relationship between the recognition of the respondents' feelings by the parents, as a way of providing parental support and intolerance to uncertainty, a correlational analysis was carried out between the two variables, as a result of which a negative, statistically significant association was obtained ($r = - .23$, $p < .001$). Thus, as the respondents benefited from reduced parental support from the perspective of recognizing feelings, their level of intolerance to uncertainty increased.

To determine how the level of intolerance of uncertainty varies according to parental recognition of feelings, a regression analysis was performed between the two variables. The regression coefficient $R = .23$ indicates the statistically significant association between the two variables ($p < .001$), and the value of the coefficient $R^2 = .05$ demonstrates that 5% of the variability of intolerance to uncertainty is influenced by the recognition of feelings by parents.

Following correlational analysis and linear regression, the hypothesis that decreased recognition of feelings by parents is associated with increased uncertainty in youth/adults was confirmed.

Testing Hypothesis 4: Performance under parent-induced pressure is associated with youth/adult perfectionism

To establish the relationship between the dependent variable perfectionism and the independent variable performance under pressure from the perspective of parental support, a correlation analysis was performed between the two variables, according to which a negative and statistically insignificant association was obtained (Table 3). Based on these results, the hypothesis that parent-induced performance under pressure is associated with youth/adult perfectionism was not confirmed.

Table 3

Correlational analysis between respondents' perfectionism and demanding performance under parental pressure

		Perfectionism score	Factor 5: Performance under pressure
Perfectionism score	Pearson's r	—	
	p-value	—	
Factor 5: Performance under pressure	Pearson's r	-.09	—
	p-value	.139	—

Testing Hypothesis 5: As the level of intolerance of uncertainty increases, the level of perfectionism of youth/adults is found to increase

To identify the relationship between the independent variable intolerance of uncertainty and the dependent variable perfectionism, a correlation analysis was performed between the two, as a result of which a positive, statistically significant association was obtained ($r = .35$, $p < .001$). Based on these results, it was found that as the level of uncertainty intolerance increases, so does the level of perfectionism. These results can be explained by the fact that intolerance of uncertainty is also characterized by postponing decisions regarding a series of actions, which stimulates the emergence of maladaptive perfectionism.

To determine how the level of perfectionism varies according to the level of intolerance of uncertainty, a regression analysis was performed between the two variables. The regression coefficient $R = .35$ indicates a statistically significant association between the two variables ($p < .001$), and the value of the coefficient $R^2 = .12$ demonstrates that 12% of the variability of perfectionism is influenced by intolerance of uncertainty.

In Table 4 a correlation can be observed, which indicates the relationship of association between the variables perfectionism and the level of uncertainty of the respondents.

Table 4

Model Coefficients - Linear regression between the perfectionism variable and the level of uncertainty intolerance of the respondents

Predictor	Estimate	SE	t	p
Intercept	24.32	1.04	23.44	< .001
Score Intolerance of Uncertainty	.18	.03	5.84	< .001

Following correlational analysis and linear regression, the hypothesis that as the level of intolerance of uncertainty increases, the level of perfectionism among youth/adults is found to increase was confirmed.

Discussions

This study examines the impact of parental support on youth/adults' intolerance of uncertainty as well as their level of perfectionism. Respondents' age and parental behaviors, such as recognizing feelings and demanding performance under pressure, are indicators to which their to intolerance of uncertainty and perfectionism were measured.

Perfectionism acts on young people from two different perspectives: a positive perspective, motivating them to perform at the highest level and undertake quality work, and a negative perspective, causing states of deep, unjustified anxiety while also slowing down the pace of work. Monitoring progress to achieve the objective, adjusting standards for completing tasks and also making a list of concrete activities that must be completed can cause the emergence of positive, adaptive perfectionism and subsequently increase the chances of achieving success (Knight, 2019). Along with perfectionism, intolerance of uncertainty appears early in children's lives and mediates the relationship between sensory hyperreactivity and anxiety, causing negative effects on their development in adulthood (Ong, Magiati, Maybery, Rodgers, Uljarevic, & Alvares, 2023).

From the perspective of parental support, Nunez, Freire, Ferradas, Valle, & Xu (2023) differentiate between parental support that focuses on building confidence and parental involvement that focuses on control exercised over the child. Adults who offer parental support encourage children to be aware of their skills and will and perceive them correctly to achieve the proposed goals. Adults who follow a parental involvement focused on control have a low tolerance for children's problems, regardless of their nature; they become punitive and monitor them excessively**.**

Implications of perfectionism on individual development

Ablard & Parker (1997), stated that academically gifted adolescents who perceived the parent as adept at validating competence through social comparison experienced higher risks of experiencing maladaptive perfectionism by imposing high personal standards, excessive worry about mistakes, and a doubtful attitude about the ability to act in different contexts. In contrast to them, adolescents who perceived their parents as adept at improving learning skills and orienting themselves toward achieving goals and not toward social comparison developed adaptive perfectionism. This type of perfectionism is characterized by the natural acceptance of mistakes and acting in the direction of identifying the most suitable solutions to solve the problem, namely the young person's low tendency to express doubts about his actions.

As parents were characterized by a high level of expectations towards their children, but also of criticism towards their behavior, young people registered an increased level of socially prescribed perfectionism, according to which individuals believe that others have exaggerated expectations of them, causing reduced effective communication skills, but also the formation of the perception of social support as low (Curran & Hill, 2022).

Even though high societal or even parental standards from teenagers are associated with increased levels of perfectionism, in an article on the impact of perfectionism on mental health, Newport Academy (2022) states that high standards, also called "perfectionistic strivings" don't always cause problems. A young person with a balanced ambition to achieve excellence achieves

the performance of achieving satisfaction by putting in effort even if the result is not up to expectations and persevering by integrating the lessons learned from mistakes.

The main difference between the positive and negative dimensions of perfectionism is represented by young people's perception of the goals they want to achieve. Thus, positive perfectionism is associated with their pleasure to accept their limits, striving in a controlled, constructive way to achieve perfection, and negative perfectionism is characterized by the imposition of unrealistic expectations of the capabilities of individuals and the conditions in which they can carry out the activity, becoming permanently dissatisfied with their performance (Seki, 2023).

The impact of intolerance of uncertainty on individual development

People characterized by intolerance of uncertainty, according to Russo (2022), are defined by behaviors such as preparing excessively for different situations, memorizing possible answers that could help them avoid the tension caused by intolerance of uncertainty, documenting in depth from all valid sources to cope with any given situation, seeking reassurance from others about solving problems, avoiding taking risks when the outcomes are not fully known, making decisions under the influence of impulsiveness to escape the pressure caused by uncertainty, or becoming inflexible when they have access to new information that can change their perspective on something previously known.

High levels of intolerance to uncertainty are associated with the frequent expression of negative emotions, such as anger, especially in the case of people with anxiety disorders and obsessive-compulsive control, but also with the diminution of positive emotions and–reduced anticipation of reward, especially in the case of individuals with depression. As the level of intolerance of uncertainty increases, young people show a heightened tendency to overperceive threats regarding uncertain situations that may ultimately have a positive outcome (Morriss, Goh, Hirsch & Dodd, 2023).

According to Osmanagaoglu, Creswell, & Dodd (2018), youth anxiety and worry are positively correlated with intolerance of uncertainty, and this can also be manifested through avoidance behaviors or information-seeking in uncertain conditions.

Steiner & Dahlquist (2021) draw attention to the importance of parental support, demonstrating that maternal intolerance of uncertainty and child health increases the risk of protective parenting. In the case of this type of parenting, adults do not provide support for the child's development but show excessive control over it. In this sense, the importance of training programs in the field of parental education that prepare adults to manage their uncertainties regarding the status of a parent to later be able to support the child in possible moments of intolerance to uncertainty and not only.

When children perceive their parents as having a low level of acceptance of them, giving them less warmth and affection, or when they perceive them as very rejecting, causing them to feel unappreciated as children or even despised, they increase their risk of developing depressive symptoms. All this is associated with a reduced level of parental support (Boele, Nelemans, Denissen, Prinzie, Bulow, & Keijsers 2022).

Limitations and furture directions

Along with the implications of this study, which considers the impact of parental support on perfectionism and intolerance of uncertainty in young people/adults, the following limitations were identified: the absence of statistically high correlations to explain the links between variables and the presence of a sample that is characterized by a reduced level of heterogeneity from the perspective of the age of the respondents, a fact that determines the questionable character of the variance of intolerance to uncertainty according to age. In this context, it becomes necessary to expand the sample of respondents to obtain results defined by a high level of validity.

Conclusions

This study highlights the importance of parental support in the context of perfectionism and uncertainty intolerance among young/adult research participants. The results indicate that as parents provide less support to children, they experience increased levels of intolerance of uncertainty, even into youth and adulthood. At the same time, a decrease in intolerance to uncertainty is present as individuals advance in age as a result of the skills they develop in terms of managing uncertain situations.

The more reduced childhood parental support young people/adults experienced, from the perspective of recognizing feelings, the higher the level of intolerance to uncertainty, but the absence of parental support and its replacement with the demand for performance in the presence of pressure is not associated with the emergence of perfectionism among youth/adults. This relationship between parent-induced achievement and youth/adult perfectionism requires future research to draw valid conclusions.

The increased level of intolerance to uncertainty is associated with increasing the level of perfectionism and implicitly affecting the quality of life of individuals and the achievement of goals, reducing the feeling of self-efficacy.

From an educational point of view, the theme of this research highlights the impact of parental behaviors on perfectionism and intolerance of uncertainty on the child who is currently in the stage of youth or adulthood. Parental support represents an essential behavior for the well-being of the young adult, who has now become independent from his parents but who can even now feel the effects of authoritarian or permissive parenting. The educational implications of the study also aim at the transmission of behavioral models from parents to children who have become young and adults, respectively, behaviors that can later be transposed in the relationship of the young person/adult with their own child. From these considerations, the necessity of forming healthy principles, valid from a scientific point of view, through which parents can ensure a quality education for the child with positive effects in the long term, is found.

The autonomy provided by parents to the young person/adult during childhood, the creation of opportunities for him to form critical thinking skills, and also the ability to make decisions are associated with increasing intolerance of uncertainty as he advances in age. These aspects should represent a strong motivation for today's parents to find a balance between their and the child's needs, between the support offered and the opportunity to exercise autonomy.

Following the obtained results, the approach of parenting strategies adapted to the needs of the child in the context of optimal and multilateral development with an impact on the periods of youth and adulthood is noted.

The results demonstrate the importance of awareness of the effects of parental behaviors from the perspective of the child's adult life and the implementation of parental education programs focused on prevention.

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EARLY CHILDHOOD LEARNING THROUGH OUTDOOR EDUCATION AND MINDFULNESS

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Abstract

Objectives. Research suggests that mindfulness practice has had a positive impact on the development of personality. Outdoor education is also considered an important aspect of early childhood education. Research on the use of mindfulness with children is scarce at present, and it focuses entirely on the primary school level and beyond. This informal survey aims to illustrate how mindfulness practice and outdoor education can be combined in activities for nursery school children.
Material and Method. Forty children from two to three years of age participated in the survey. They were divided into two groups: the intervention group and the control group. They both practiced mindfulness exercises to develop concentration and selective attention, together with sensory-motor activities. Children in the intervention group could practice mindfulness in outdoor activities, whereas children in the intervention group practiced the same activities in the classroom. Grids and a logbook for each child were used to record observation data. In addition, the Social Behavior Scale and the GMT-ER test were used for the assessment of children's social-emotional and motor-cognitive skills before and after mindfulness practice combined with or without outdoor activities.
Results. The qualitative analysis of the results indicates that the teaching of mindfulness practice, together with outdoor activities, encourages children to reflect on themselves, to maintain concentration on activities for a longer period of time, to have pro-social behaviors, and to become aware of the environment.
Conclusion. Nursery school activities should always involve body, mind, and emotions, together with mindfulness practice. When a child can experience this connection within a natural environment in the context of play, this has a significant impact on their psychological wellbeing

Keywords: mindfulness, outdoor education, pro-social behavior.

Introduction

With the term *outdoor education,* we refer to more than merely those activities engaged in the outdoors in contact with nature and their fruition, but also a true educational philosophy and a specific mission for an educational structure that strives to apply those principles relating to outdoor education.

Over time, several definitions of outdoor education have been put forth: Lewis 1975; Lappin 1984; Smith 1995; Neill 2003. Each of these authors has underlined the practice from the more

naturalistic to the closer connection of experiencing time and space to the social aspect that deals with the lack of exercise leading to physical issues such as obesity or other emotional issues.

Research on the topic has shown the educational benefits resulting from learning in an open-air environment. Additionally, this form of learning allows for greater opportunities for exercise and physical well-being derived from the outdoor experience. Children become more active, more creative, and more capable of finding opportunities for play when they are involved in outdoor activities. This is not the case when children are presented with the same activities within the confines of the classroom.

Peterson (2013), moreover, has indicated how play in a natural environment appears more varied, more imaginative, and more creative, resulting in an overall positive influence on linguistic competencies and the child's collaborative abilities.

Another aspect to be considered in enhancing the effect of outdoor education is the practice of mindfulness with children.

Mindfulness may be defined as a series of practices with the aim of developing self-awareness using systematic concentration techniques. Central to these techniques is focusing one's attention on the present moment without forming a judgmental attitude (Kabat-Zinn, 1994, p. 16). Mindfulness techniques in adults were first studied in the 1990's, and findings were positive, showing a link between mindfulness practices and feelings of well-being (Brown, Ryan, & Creswell, 2007). Research on the practice of meditation with high school and middle school students has also yielded positive outcomes for these age groups (Britton et al., 2010; Broderick, Khalsa, Greenberg, Reichl, & Kabat-Zinn, 2010; Mendelson et al., 2010). Research regarding young children has only just begun, but studies point to some positive effects (Burke, 2010; Thompson & Gauntlett-Gilbert, 2008). Children from seven to eight years of age with anxiety benefited from focusing on their breathing for several minutes at a time (Semple, Reid, & Miller, 2005). Research is scarce for preschoolers due to the difficulty in deciding on the most appropriate practices for that age group (Lillard, 2011).

This contribution describes an informal survey taken in two nursery schools in Rome during the scholastic year 2022-2023, in which two groups of children from two to three years of age took part in mindfulness practices in outdoor activities. These represented the intervention groups, while another group of the same age functioned as a control group and where mindfulness activities were not carried out in the open-air. This was the first instance of combining mindfulness practice and outdoor education involving very young children in Italy.

The objectives of the survey were to investigate how sensory-motor activities, selective attention exercises, and practical life activities can be made a part of mindfulness training in outdoor education and how best to plan mindfulness exercises and outdoor activities for children at the nursery school level.

Materials and Methods

Participants in the intervention group (22 children from 2 to 3 years of age) took part in activities of selective attention. Examples included observing details of a leaf, a flower, a small animal, or a cloud in the sky, playing with small objects, or wandering around the pond. Children were also asked to focus on their breathing and their movements while walking, or climbing, or

moving natural objects around the garden or in a little wooded area. The book "Sitting Still Like a Frog. Mindfulness Exercises for Kids" (Snel, 2016)" was instrumental as a source in promoting awareness of what was being done at various times of the child's day.

Children were observed by the teachers and the researchers during mindfulness practice outdoors, and grids were used to record data. Questions included: "How long does the child observe the leaf or small animal? How much time is spent playing with natural materials?" A three-point Likert scale was applied to measure the level of selective attention and concentration during play.

Researchers compiled a logbook for each child in the intervention group. Here, researchers recorded the concentration times, the type of attention paid to natural elements, and the games that children spontaneously invented using the materials under the guidance of the teachers. The Social Behavior Scale (SBS) (Merrell, Sanders, Popinga, 1993) was the measurement tool used during observation, a scale used for exploratory and confirmatory factor analysis for Italian preschoolers. Factors included in the scale are: Emotional Competency, Social Engagement, and Aggressiveness. Another tool used was the GMDS-ER test (Luiz et al., 2006) for the assessment of children's motor, cognitive, and social skills before and after mindfulness practice combined with outdoor activities.

Children in the control group (18 children from 2 to 3 years of age) engaged in the same type of activities as did those in the intervention group: observing nature, looking at the sky through the classroom window, playing with water in a little pot in the classroom, etc. The mindfulness practices from the book by Snels (2016) were part of the classroom activities as well.

Educators observed the children from the control group, then recorded the data using the same tests and the same grids and logbook used with the children from the intervention group.

Educators working in the schools in the survey also answered two questionnaires: the former consisted of 12 items focused on teachers' previous and eventual experience in teaching mindfulness practice and outdoor education. The latter consisted of 30 items focusing on competencies needed to develop a child's concentration and sensory-motor skills. A curriculum was planned based on mindfulness practice in addition to everyday outdoor activities.

Results

The recorded data were compiled and analyzed by both the educators and the researchers.

The observations reported in the grid and in the SBS test show a direct correlation between the grid data and the SBS ($p \leq 0.001$). It was evident that the children in the intervention groups appeared calmer, had longer attention spans, and were more apt to engage with their peers.

The children in the control group, instead, appeared more agitated, with the same ability to concentrate but for shorter periods of time.

From the logbook entries, it appears that the control group exhibited more frequent difficulties in sharing materials while playing with peers than were exhibited by the children in the intervention group. The latter group found a solution to the conflict by themselves, whereas in the control group, children asked the teachers for help to solve conflict. In short, the children in the control group did not exhibit the same level of concentration and social willingness as did those in the intervention groups.

Quantitative results indicate that, according to the pre-school teachers, the surveyed mindfulness has significant value in early childhood education ($p \leq 0.001$). Moreover, they see a need for a curriculum that focuses on concentration activities, selective attention, and sensory-motor

experience in the context of outdoor education. The teachers interviewed expressed a positive view of combining mindfulness and outdoor education (100%) and welcomed the possibility of a curriculum based on outdoor education with mindfulness practice in the open air ($p \leq 0.001$).

Discussion

This survey was conducted over a period of two months, and the data that emerged from the observation of the two groups suggests the effectiveness of mindfulness programs in the outdoor context. The findings seem to indicate that children who engage in outdoor mindfulness training exhibit improved psychological health and that mindfulness practice enhances the fit between the outdoor environment and the child.

A study was conducted in 2015 by Flook, Goldberg, Pinger and Davidson, in which the effects of mindfulness training to improve social behavior and self-control in preschoolers were examined. Children in the intervention group demonstrated greater social competence and enhanced learning abilities, along with improved health and emotional development, compared with those in the control group.

Another study was conducted by Lee and his collaborators (Lee et al., 2020) about the condition of wellbeing for children in kindergarten. The researchers demonstrated the presence of positive effects on children's emotional and social behavior when children have the opportunity to practice unstructured free play together with mindfulness intervention.

In addition, several psychologists recognize the important role that bodily experiences and selective attention exercises may play in cognition and vice versa (Glenberg, 1999; Niedenthal, Barsalou, Winkielman, Krauth-Gruber, and Ric, 2005; Lillard, 2011).

Conclusion

Mindfulness practice can be quite useful in the formulation of an educational and teaching framework centred on very young children. This framework, in which sensory-motor experiences are fundamental, should focus on developing concentration techniques to achieve a balance that aims to establish healthy relationships with others and with one's environment. The interaction among body, mind, and emotions, integral to mindfulness practice, represents a child's developmental stages from zero to three years of age.

When a child can experience this connection within a natural environment in the context of play, there is a significant impact on the psychological wellbeing of the child and his ability to feel good about himself as a part of his environment.

Traditionally, the indoor classroom has represented the sole venue for learning about the natural world. The concept of the outdoor classroom, in contrast, suggests an innovative approach, particularly adapted to the learning style of nursery school children.

Venturing outdoors to discover and learn from the outside environment is the focal point of outdoor education. The act of bringing into the classroom what has been discovered, observed, and gathered as the focus of the child's attention can be a new way for the child to experience nursery school and to learn from it.

Outdoor education, along with mindfulness practice, can represent an effective approach, especially well-suited to the age group 0-3.

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WORK SKILLS OF FORMAL CAREGIVERS AND QUALITY OF LIFE OF SENIORS IN GERIATRIC CARE INSTITUTIONS

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Abstract

Objectives. The aim of this study was to describe some experiences of formal caregivers in geriatric care institutions in the city of Tijuana, Baja California, Mexico, particularly those feelings regarding satisfaction and care interactions with the elderly.
Materials and methods. This study is based on the preliminary results obtained from qualitative methods, which primarily focused on the analysis of speeches from a set of twelve interviews conducted with a sample of formal caregivers who are working within geriatric care institutions for more than 8 hours in their shift. For the analysis of the data, Atlas.ti version 9 was used.
Results. In the code "Feeling regarding the satisfaction of caregivers", the participants expressed that despite doing a very demanding job and having working conditions such as low salaries, a lack of work material, and the stress of the caregiver, their greatest reward is helping the seniors. According to the code "Interaction in Care with the Elderly", the caregivers expressed that the gratitude on the part of the elderly and practicing empathy, love, and positive communication produce a state of emotional well-being, motivation, and perseverance within the institution.
Conclusions. The effort and responsibility of formal caregivers within geriatric care institutions allow the caregiver to be humanized since it contacts him with satisfaction and strengthens his self-esteem and professional development by making him feel useful and productive within his work, where he seeks to promote the quality of life of vulnerable seniors.

Keywords: formal caregivers, satisfaction, seniors.

Introduction

The accelerated growth of life expectancy in recent years has brought about new challenges in the area of health, which demand the implementation of plans and programs to promote quality care and sustainable development from a multidisciplinary perspective (Sistema Nacional para el Desarrollo Integral de la Familia [National System for the Integral Development of the Family] [DIF], 2021). According to the World Health Organization [WHO] (2020), a progressive growth of 34% of the elderly population in 2030 is estimated to double by 2050, where 80% of the elderly will live in low- and middle-income countries.

In addition, the WHO (2019) indicates that the lack of healthy habits leads to chronic diseases and disability, making the lack of autonomy a great risk for the functionality of the elderly; particularly, the deterioration in the cognitive, sensory, motor, and affective areas impacts the well-being and quality of life of the elderly (Carrillo, Rivera, García & González, 2020; Laguado, Camargo, Campo & Martín, 2017; Salamanca-Ramos, Velasco & Baquero, 2019).

Care for older adults should be understood in terms of the search for the maintenance and improvement of quality of life through the prevention of physical and mental illnesses (Martin, 2019), understanding that quality of life is, according to the WHO, the "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" (Mesa, Valdés, Espinosa, Verona, & García, 2020).

Regarding the quality of life of older adults in geriatric care institutions, several researches developed in Latin America (such as Colombia, Chile and Mexico) indicate that certain working conditions directly affect the care of care services, such as: work organization, physical and mental workload, autonomy in the performance of activities and social context; causing absenteeism in staff, decreased productivity and quality of services, (Blanco-Colunga, Monier-Rodríguez, & Turtos-Carbonell, 2019; Calzada & Ocampo, 2018; Jimenez, Orozco & Caliz, 2017) consequently neglecting care, safety, as well as the emotional, social and spiritual aspects of the older adult (Segura, Miranda, & Guillén, 2015).

In Mexico, the care of the elderly is associated with the social security system, which is mostly provided by governmental or public institutions but also by private institutions such as retirement homes, daycare centers, and residences (Ronzón, Méndez, & Jardón, 2021). According to the Sistema Nacional para el Desarrollo Integral de la Familia (DIF, 2021), the protocols for prevention, treatment, and services developed in geriatric institutions in Mexico show various socioeconomic and information systematization limitations, which reveals the need to evaluate the quality of the care provided, as well as the training received by the staff.

In this sense, formal caregivers are defined as those persons trained through theoretical-practical courses, dictated by multidisciplinary and interdisciplinary teaching teams, with the purpose of providing preventive, assistance, and educational care to the caregiver and his or her family nucleus (unlike informal caregivers, who are generally family members), who are hired by an organization or institution or by a person who is in charge of providing them with a salary, benefits, and other regulations. It is worth mentioning that their work can be carried out in institutional care (nursing homes, retirement homes, day hospitals) or home care (patient's home), where the demands, workload, activities to be carried out, remuneration, and schedules tend to vary (Calzada & Ocampo, 2018; Hormaza & Amezquita, 2018).

The importance of developing competent practices in formal caregivers lies in the fact that it favors the implementation of strategies adapted to improve the quality of life of older adults and facilitates the incorporation of the most appropriate models or methods that favor well-being and satisfaction within the aging process (Hernández-Sampieri & Mendoza, 2018; Mastrapa, Gibert, & Espinosa, 2020).

Different studies indicate that a healthy work environment for the formal caregiver improves the levels of job satisfaction and the service that the collaborator offers (Aliaga-Zamora, Delgado-Céspedes, Romero-Cueva, Cholán-Valdez, & Rondon-Jara, 2022), so in addition to taking care of the user, the institution must also take care of the caregiver. Since formal caregivers are

constantly facing multiple stressors when offering their services within the institutions, such as increased workload, lack of supplies for the provision of services, low wages, and increased demands for care, they are likely to present burnout syndrome, which can affect their own quality of life as well as that of the people who are under their care (Albán & Santafe, 2023). Also, according to several studies (Fajardo, Nuñez, & Henao, 2021), the act of caregiving implies an emotional burden resulting from empathizing with the cared person; however, very few studies have addressed the issue of caregiver well-being and satisfaction as a result of the caregiving interaction or interpersonal bond with the cared person, in particular with older adults.

Material and methods

General objective

Describe some experiences of formal caregivers in geriatric care institutions, particularly those regarding satisfaction and care interactions with the elderly.

Design of research

A qualitative design of a phenomenological hermeneutic type, in which the experiences lived by formal caregivers in geriatric institutions were collected through the use of in-depth interviews to then reflect and interpret their subjective nature, with the purpose of validating the meanings attributed by the participants based on their values, perceptions, beliefs, thoughts, and, in general, all their intersubjective reality (Fuster, 2020).

Participants

Convenience sampling is conducted in long-term care institutions in the city of Tijuana, Baja California. The study participants were 12 formal caregivers (nursing assistants, paramedics, and nursing technicians) working in a geriatric care institution (nursing homes, retirement homes, and care centers, among others), of both sexes, with working days longer than 8 hours and studies in a technical career, course or diploma that guarantees some degree of knowledge or study in relation to geriatric care.

Instruments

A semi-structured interview was developed to explore the work competencies of formal caregivers and their relationship to the quality of life of older adults.

The instrument was constructed based on two categories, each of which contains different dimensions to be assessed:

1) Core competencies in gerontological care centered on long-term care institutions.
    a) Attention to activities of daily living
    b) Attention to psychological activities
    c) Professional relationship
2) Caregiver profile
    a) Basic knowledge of the care of older adults
    b) Meanings of caregiving practice

In addition, sociodemographic variables such as sex, age, schooling, marital status, and occupation of the formal caregivers were included.

The instrument includes 31 questions, but for the purposes of this article, the answers to the following questions were analyzed:

1. In general, what daily activities do you carry out in the institution with older adults?
2. What do you think are the main emotional needs of an older adult?
3. Do you have the material and human resources to achieve them? If not, what resources do you need to be able to perform your work according to your expectations?
4. How satisfied are you with the work you do within the institution? What makes you feel this way?
5. How do you think your level of satisfaction with the service or attention you provide within the institution influences your level of satisfaction?

Procedures

In Baja California, Mexico, 60 geriatric care institutions with civil association status were identified, 25 of which are registered in the city of Tijuana by the DIF, of which 23 were included because they provide long-stay care (care longer than 24 hours) and have formal caregivers on their staff. Two institutions were excluded because they focus exclusively on providing home care, short-term care of less than 24 hours (day care centers), and because they are located outside of the Tijuana city delegations.

Once the 23 institutions that met the inclusion criteria were identified, a simple random sampling was carried out, stratified geographically in the 9 delegations that make up the city of Tijuana, finally selecting 6 civil associations concentrated mostly in the "La Mesa" delegation.

Finally, of an approximate universe of 70 formal caregivers, 12 were invited to participate (2 per institution) to maintain homogeneity in the institutions; their ages ranged from 23 to 60 years, with the majority (66.66%) being women (8 interviewed compared to 4 men), of which 74.99% had a nursing assistant certification, 16.66% paramedics, and 8.3% had a degree in nursing; and an average of 4 years of seniority in the position.

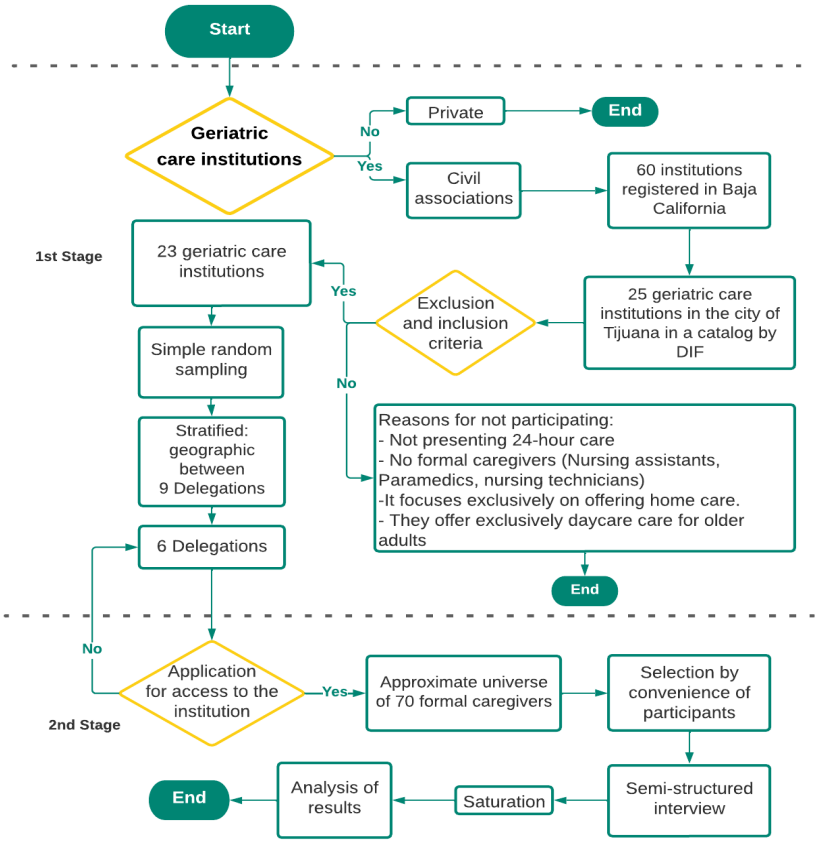
Each step of the procedure is summarized in Figure 1 (next page).

The interviews were conducted in a private space in the facility, under appointment, so as not to interfere with their caregiving activities. This allowed participants to feel comfortable and safe expressing their opinions without fear of being overheard by other superiors, caregivers, and older adults within the facility.

Ethical aspects of research

Once the research project had been approved by the Bioethics Committee of the School of Medicine and Psychology of the Autonomous University of Baja California (file number D318, valid for one year from October 2022), an informed consent document was given to each participant, explaining the objectives of the study, the data collection instrument, the risks and benefits of their participation, and the confidentiality of the data.

Figure 1
Strategy for the selection of participants



Data analysis

The transcription of the interviews (audio material) was carried out in the computer program Atlas.ti version 9, following the 5 phases proposed by Ulin, Robinson, and Tolley (2006) for discourse and content analysis within the qualitative paradigm: 1) immersion, where notes are read and reviewed; 2) coding, which consists of the development of labels or codes; 3) presentation, which aims to present the information in detail for each category; 4) reduction, which aims to reduce information to essential points; and 5) interpretation, which consists of interpreting all the results globally.

Results

When exploring the experiences of the 12 formal caregivers in geriatric institutions, some types of *occupational hazards* could be recognized, the most representative being understaffing, lack of materials, caregiver overload, salary risk, physical risk, and lack of initiative among colleagues (Figure 2).

Figure 2

Occupational hazards in Caregivers on a geriatric institution

According to the testimony of the participants, the main risks are: the lack of work materials (such as medicines and diapers) since they depend on donations and the resources of the families to obtain and cover this demand; the lack of personnel that leads them to have difficulties in caring for the elderly because they experience lack of time and fatigue, as well as greater pressure to perform the additional tasks of basic daily care (which could lead them to suffer from caregiver overload). Finally, they explained that it would be important to adjust salaries according to the activities performed, especially with staff working as volunteers who do not have an employment contract and receive only in-kind payments, such as free food and lodging at no cost within the institution (Table 1).

Table 1

Occupational hazards in Caregivers on a geriatric institution

Code	Concurrence	Participant	Testimony
Lack of materials	8 occasions	Participant 5	Well, right now the condition is good; let's suppose there was always more material for healing pressure ulcers. It would be better if we always had that material, right? But we don't always have it, it comes from time to time when people donate.
		Participant 6	It would require the person who is supporting me… I would go to her to be able to ask for what I need and then to keep her up to date with everything she needs too, but there are still times when we limit ourselves to that for lack of financial resources.

Code	Concurrence	Participant	Testimony
		Participant 7	There are many things that we can have because the administrators bring us the resources, but on other occasions they do not. And well, sometimes we manage to comply with what is done, but there are times when materials are needed, and it takes us a long time to solve it.
			Mmm, well, sometimes medicines or diapers, or things for healing... sorry, it's hard for me to think that we need them.
		Participant 8	Sometimes we must take hygiene materials from other patients to cover the needs of those who do not have them, but for this, we must notify the administration to replace them because we would end up leaving another person with the problem.
			The administration staff does everything possible so that we are well, as well as when material is needed, they review it, and if they have it, they give it to you immediately, but if not, it takes a while for it to reach us, but it does arrive.
		Participant 9	Materials: sometimes we have too much or, on other occasions, they are very few, and we have to figure it out. Fortunately the administration supports us, but it depends to a large extent on families or donations…
		Participant 11	Well, I'm not going to lie to you; there are times when we are short on materials such as diapers or certain medications. It depends on the families that bring them. We are fortunate that we have donations, but you never know what will come, so at certain times it's a matter of luck...
Caregiver overload	4 occasions	Participant 2	We have so many things to do that sometimes we can't do everything... well, it's not often, but there are times when I would like more coexistence with the elderly. Occasionally, due to the workload during the process of bathing them and changing them, we get a little stressed sometimes and that makes us want to sit down for a little bit or something, so I feel like I want to be with them a little more, without the pressure that we have to do more things or certain activities.
		Participant 4	We all have moments; we also lose patience.

Code	Concurrence	Participant	Testimony
		Participant 9	I think that the most difficult thing is our attention in those moments, because they get us busy attending to other things and well, they want our attention and well, at times it is not possible because we have to finish with other pending tasks that we have, and as I always tell them, "Let me finish with this and then I'll come to you" because older adults must be patient; they are not the only ones we care for.
		Participant 11	The difficult thing happens when there are not so many nurses here, and, well, you have to do all that I mentioned to you alone, and if it becomes tiring, and, in the end, the elderly realize when things are not well, when there is a lack of personnel or when everything is fine, or when we know what to do or when we don't know, they realize... and it's difficult with that... also when we don't know what's happening to the elderly, that too...
Lack of staff	3 occasions	Participant 8	There are times when we need one more nurse to support us or help us.
		Participant 9	Maybe someone else comes so that it is not such a big workload, and we can dedicate ourselves to making everything calmer and with time, right? Because they are some patients, but sometimes time falls on you, and it is difficult to be able to finish pending things in a single moment.
		Participant 11	I think I could say it with the people who work here: there are times when they are not committed, and they are missing, or they don't hire more people and well, there is a need.
Salary risk	2 occasions	Participant 5	There is no contract here. It's because it's voluntary here; that is, I'm here, I live here, and well, they pay me with a roof and food; I eat here at the time it's necessary; well, I'm here 24 hours a day.
		Participant 9	I also understand that sometimes we are short, but it would also be good to consider our salary a little. I know that here there are things that happen that are missing, and I understand it, but there is also our health.
Physical risk in caregivers.	2 occasions	Participant 1	Only when an elderly person is sick, when they are frustrated, or when we have to pick them up, is it difficult there, because we have to pick them up so they can eat, or when they are at risk of vomiting, and there are times when you cannot turn them over despite (the fact) that you use all your great will, and then you have to ask for help.

Code	Concurrence	Participant	Testimony
		Participant 6	The activity that is more difficult would be with the non-walking seniors. Picking them up is a bit more difficult because since they can't move, I have to use strategies to carry them without hurting them and without hurting myself, because finally I have to pick them up, move them to the living room, bring them to the dining room, or take them to the bath. That would be most difficult, because moving a person who cannot move on their own to do all their activities is difficult.
Lack of initiative among colleagues	1 occasion	Participant 3	Well, something that caregivers are missing is identifying if they see that an adult is missing something. Just keep an eye on them, right? Have a little more vision of what they can do.

According to the perception of formal caregivers, older adults experience certain emotional needs such as love, attention, and companionship, as well as the need for listening and understanding. Figure 3 indicates that the words with the highest concurrence are "love", "family", "time", "tranquility", "cuddle", "affection" "health", "smile", "visit" and "service".

Figure 3

Emotional needs of older adults as perceived by formal caregivers.

Consequently, Table 2 analyzes the testimonies on the emotional needs of the elderly. It highlights the importance of providing care, listening, and companionship from a loving perspective, offering dignified and humane treatment that covers both the physical and emotional care of older adults.

Table 2

Emotional needs of older adults as perceived by formal caregivers

Code	Concurrence	Participant	Testimony
Love for the elderly	4 occasions	Participant 1	Well, a lot of love, more than anything, because they require a lot of love. Because we don't know what they carry or have suffered in their lives, how much anguish will they have in their minds? So right now, they kind of want to be cuddled a lot, to be loved more than anything a lot of love, a lot of love towards them.
		Participant 1	Much love. Because we don't know how they suffered before coming here, who have suffered so much and well, they require a lot of love, more than anything, a lot of love because, I don't know, a lot, a lot of love, so that they are well with themselves when you give them a lot of love to a senior, the senior will be fine, but if you give him a lot of violence, hell no! That senior is going to be bad, right? Giving love and tranquility, they and I will be fine.
		Participant 10	I think they pay attention to them, and love them, and give them love.
		Participant 12	May seniors receive love from the people around them.
Affection towards to seniors	2 occasions	Participant 3	I think it is to give a lot of love to the seniors. Well, the one who treats them well, the one who loves them that way, of course... Well, yes, love, but not just like that, but rather that they are given affection so that they feel good and feel as if they were at home.
		Participant 6	I think it's their emotions; well, treat them friendly; well, treat them with a certain amount of affection, like friendship of friends, to count them as if they were well, as if they were family well, with love.
Companionship to seniors	2 occasions	Participant 2	Companionship (...) that seniors do not feel alone, and also frustrated. There are many seniors who feel fed up with being here, not because they are locked up, but if they would like to get out, well, I don't know, getting out of here for a little while doesn't hurt. It's like, little by little, some grandparents do feel like it's very routine to do everything the same every day; sometimes they get anguished and say, "Well, I'm going to die here."
		Participant 2	…that they are heard and that they have company.
Family care for seniors	2 occasions	Participant 11	Attention from the family… Even though we are here, it is not the same. Although at least they feel good about what we give them, but there are times when they are sad about it, but in the end they adapt here in the house, and it is usually a time when they want to be here with us.

Code	Concurrence	Participant	Testimony
		Participant 5	What they need are visits from their families.
Listen to seniors	2 occasions	Participant 4	Well, attention... and we return to the same thing about living with them and listening to them, and well, sometimes we don't know what to answer, but we try to ensure that the answer is not bad or that it is negative... Well, we try to answer what they ask and give them a good answer so that they feel comfortable.
		Participant 7	Well, I think they come to love it; there are several elderly people who want to be pampered... Here we try to do that — to listen to them and talk to them because, when they show us a smile, they tell us… when everything is fine, when they feel that way.
Living with the elderly	1 occasion	Participant 4	Talk (and) live together... Well, what else can you do other than live and talk with them and try to understand them?
Provide more attention to seniors	1 occasion	Participant 8	That we as caregivers pay attention to them, because at certain times we are very busy and we cannot attend to everyone, and they want to be attended to immediately, but we do what we can...
Care mainly in the elderly	1 occasion	Participant 9	Well, first of all, they should be in good health, because there are times when their vital signs are not well… Another (is) that we (should) be there as nurses, taking care of them all, giving them the time, they want, and also, that they play with the elderly; there are service boys who come not so much but play with them and have fun for a while, and they are fine.

Figure 4 (next page) shows that formal caregivers perform "basic care activities" such as taking vital signs, administering medications, providing palliative care, offering hygiene assistance, and providing mobility support for older adults. They also provide "support for emotional health in seniors" by maintaining a positive and loving attitude in caregiving. This contributes to the development of "care interaction with the elderly", which is essential for stability in the relationship between older adults and caregivers.

Finally, Figure 5 describes the "feelings regarding the satisfaction of caregivers", highlighting work motivation and happiness as a result of providing care to seniors and learning skills. The participants expressed that the affection they receive from the elderly gives them happiness because providing help to others makes them feel useful and satisfied with their vocation, as well as invigorated. They emphasized the importance of giving a lot of "love" to the seniors and not transmitting their personal problems, of having warm approaches to avoid loneliness and suffering (which they experience both for their past lives and for being away from their family in the present).

Figure 4
Care interaction with the Elderly

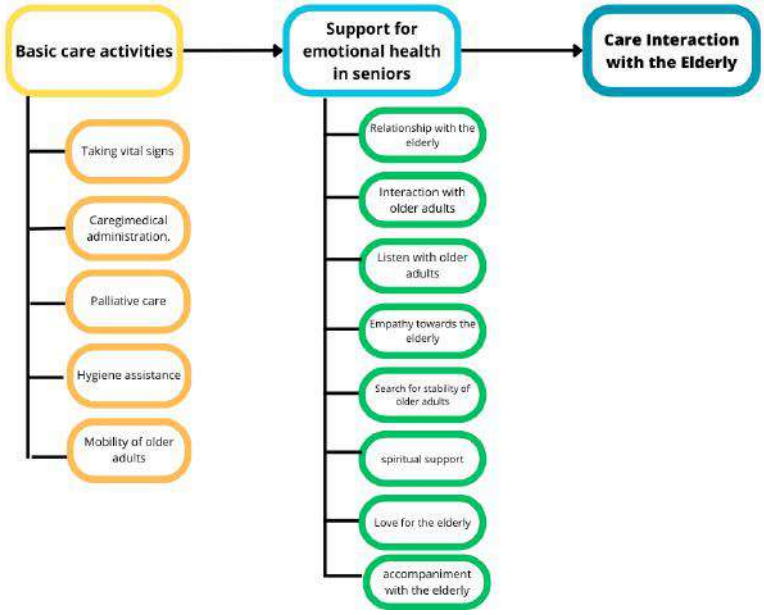
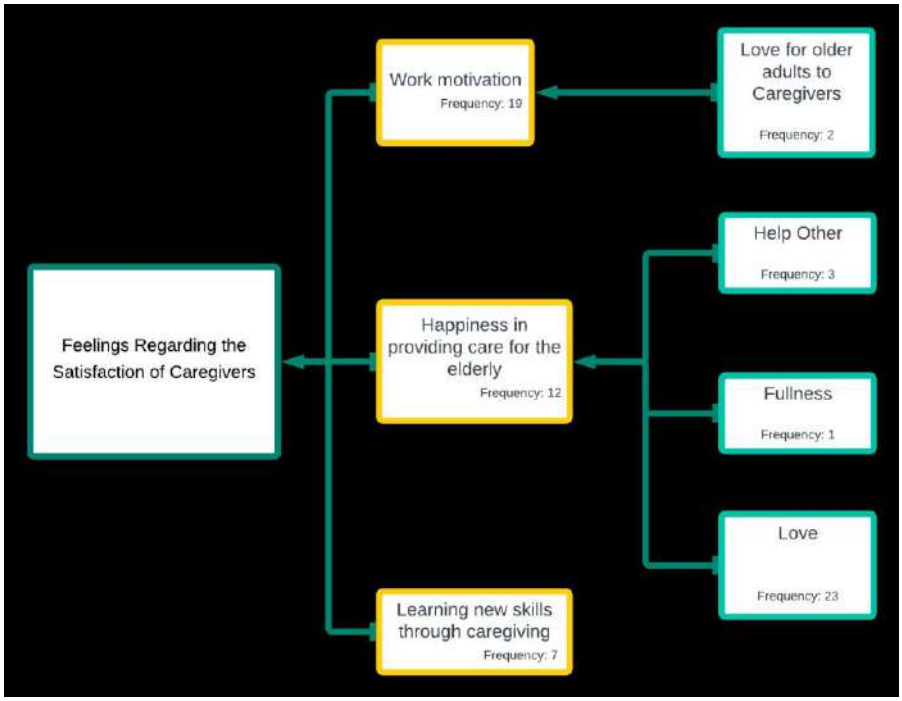


Figure 5
Feelings regarding the satisfaction formal caregivers



Discussions

Throughout the interviews, formal caregivers were talking about their perceptions of the different occupational hazards and emotional needs of the elderly, as well as the feelings of satisfaction they experience while interacting with them and providing them basic care for daily life and for their emotional health.

In this research, it was possible to verify, as other authors refer (Augusto, Teixeira, Falcão, Costa, & Pimentel, 2019), that formal caregivers within geriatric care institutions contribute to the quality of life of residents and their families, so it's necessary to establish goals aimed at medical, functional, and social support through daily routines, occupational activities, etc., where an adequate relationship between caregivers and seniors is favored. It is also necessary to provide personalized care, adjusted to the specific needs of each user, in order to ensure more effective interventions.

About the occupational risks identified in this study, other authors agree that these can influence the fulfillment of the care and quality of life objectives of older adults and even cause caregiver overload (Fajardo-Ramos, Soto-Morales, & Henao-Castaño, 2019). Along the same lines, it has also been shown that the multiple responsibilities involved in caring for older adults affect the physical and emotional well-being of caregivers and consequently their optimal work performance (Lara, Lemus, & Iglesias, 2019). Finally, Bringas, Naveiras, and Rodríguez (2020) explain how lack of materials, understaffing, overload, and payment in kind can produce stress and dissatisfaction in caregivers and thus have an impact on the quality of care provided to older adults.

In relation to the *care interaction with the elderly*, as could be observed, formal caregivers provide *basic care activities* and *support for emotional health in seniors* with a positive and loving attitude. Similarly, López (2017) highlights the importance of including in the professional training of caregiver competencies related to communication, information, support, and accompaniment to improve the performance of their care tasks. Therefore, when training is offered, it allows the caregiver to be open to making decisions aimed at improving their quality of life and that of the person they are caring for, something that the literature refers to as resilient transformation (Zuluaga-Callejas et al., 2021); likewise, other researchers have emphasized that the relationship between formal caregivers and older adults should focus on reciprocity and humane and moral treatment to procure harmony (Morales-Castillo, Hernández-Cruz, Morales, & Landeros, 2016).

Finally, regarding the *feelings regarding the satisfaction of caregivers*, the participants confirmed that despite the perceived occupational risks, they feel motivated and satisfied, in line with the findings of Bringas et al. (2020). According to Zuñiga, Fernández, & Aguilar (2020), when formal caregivers perceive that they are developing activities that are related to their training, skills, and experience, they feel a sense of well-being and satisfaction within their work in the institution, so to achieve the ideal level of commitment, it is necessary to work on the motivation of employees and improve working conditions, such as communication and collaborative work. Similarly, other findings demonstrate that discovering personal skills (Pérez, Díaz, Cabrera, Llontop & Callejas, 2020); exploring values of love, commitment, and dedication (Cerquera et al., 2021); valuing the importance of the activities performed (Lara et al., 2019); and providing affection to older adults (Medina et al., 2020) are valuable for formal caregivers and contribute to improving their care.

Conclusions

This paper sheds light on the limited amount of evidence-based data available in the northwestern region of Mexico regarding formal caregivers and their contribution to the quality of life of older adults. Most of the research in this area focuses on informal caregivers, demonstrating that it is necessary to continue exploring the labor competencies of this population, especially because they often do not have the training, material resources, salary, and attention to their own emotional needs to prevent caregiver overload and the negative consequences on their physical and mental health, as well as that of their environment.

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COMPUTER-SUPPORTED COLLABORATIVE LEARNING AS A PREDICTOR OF SELF-EFFICACY AND EPISTEMIC EMOTIONS IN HIGHER EDUCATION STUDENTS IN MEXICO

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Abstract

Objectives. This study investigated the predictive effect of computer-supported collaborative learning (CSCL) on self-efficacy and epistemic emotions in college students.
Material and methods. A quantitative randomized experimental design was used with 191 Mexican university students from the Psychology degree program at the Autonomous University of Baja California. Participants were randomly assigned to either a collaborative group or a non-collaborative group. Both groups completed the Online Learning Self-Efficacy Scale and the Epistemic Emotions Scales before and after solving the Cognitive Reflection Test.
Results. The results showed that the collaborative group reported significantly higher levels of surprise, confusion and anxiety after solving the Cognitive Reflection Test, but lower levels of curiosity. The non-collaborative group showed significant differences in surprise, confusion, and frustration. Comparing both groups in the posttest, the collaborative group showed higher levels of excitement and lower levels of boredom. The regression analysis showed that CSCL does not predict self-efficacy, but it does predict epistemic emotions, particularly anxiety and boredom.
Conclusions. The findings suggest that CSCL can be a valuable tool for fostering positive epistemic emotions in college students, such as curiosity and excitement. However, more research is needed to understand the relationship between CSCL and self-efficacy, as well as the role of negative epistemic emotions in collaborative learning.

Keywords: Computer-supported Collaborative Learning, Self-efficacy, Epistemic Emotions, Higher Education Students.

Introduction

The COVID-19 pandemic that started in China in 2019 unleashed transformations in multiple social spheres at the global level. The consequences of the pandemic were strongly felt in

health systems, leading to the restriction and closure of economic activities, political changes, modification of social behavior patterns, and a radical transformation in educational activity at all levels worldwide, including higher education, which had no benchmarks or previous experience in these conditions (Aristovnik, Keržič, Ravšelj, Tomaževič, & Umek, 2021). There were some exceptions, such as the suspension of educational services caused by the AH1N1 influenza virus during 2009, as well as emergencies due to armed and migratory conflicts in African and Middle Eastern countries (Zambrano-Ponce & Garcia-Espinosa, 2022).

The transformations the pandemic caused in higher education students went beyond academics to their physical and mental balance (Keržič et al., 2021). In terms of academics, educational institutions transferred their face-to-face courses to the online modality at an accelerated pace, turning online learning into a mandatory teaching and learning process (Aristovnik et al., 2021). However, due to the haste of this transition, certain skills required of students, in particular, the self-regulated learning skills needed for the online courses, were not adequately addressed (Edisherashvili, Saks, Pedaste, & Leijen, 2022).

The COVID-19 pandemic not only had an emotional impact on students' day-to-day lives, but it also made more evident the role of emotions in their learning process (Pedrosa et al., 2020).

Particularly in the learning context, epistemic emotions have played a paramount role. Epistemic emotions are emotions that arise specifically in relation to knowledge and learning. They can be positive, encouraging engagement and a deeper understanding, or negative, hindering learning and motivation. Based on their valence, the epistemic emotions can be categorized as positive or negative. Examples of positive epistemic emotions include curiosity÷ (a desire to learn and explore new things), enjoyment (finding learning pleasurable and engaging), surprise (experiencing something unexpected or challenging existing beliefs), confidence (feeling capable of learning and mastering new concepts), and hope (believing in one's ability to succeed and reach learning goals). For its part, examples of negative epistemic emotions include boredom (finding learning dull and monotonous), frustration (feeling stuck or unable to grasp a concept), anxiety (feeling worried or stressed about learning and performance), confusion (feeling uncertain or not understanding a concept), and shame (feeling embarrassed or inadequate due to learning difficulties) (Pekrun, Vogl, Muis, & Sinatra, 2017). These emotions are involved in the aspects of learning related to the cognitive and epistemic qualities of information and information processing (Chevrier, Muis, Trevors, Pekrun, & Sinatra, 2019).

The COVID-19 lockdown also seems to have affected student motivation, particularly self-efficacy. Self-efficacy is a concept from social cognitive theory that refers to a person's belief in their ability to succeed in a particular task or situation. According to Pintrich, Smith, Duncan, and Mckeachi (1991), the motivational process is made up of six basic components: (1) intrinsic goal orientation; (2) extrinsic goal orientation; (3) task value; (4) control of learning beliefs; (5) anxiety during the test application process; and (6) self-efficacy for learning and performance. Askar and Umay (2001) define self-efficacy as the belief in one's ability to organize and execute the courses of action required to produce successfully given attainments, behaviors, or actions. Zimmerman (2000) emphasizes that self-efficacy is "a judgment of one's capabilities to perform and succeed at a task. In summary, the element of self-efficacy alludes to the motivation, perseverance, expectations, and self-reflexivity that individuals have with respect to the goals they set for themselves (Bandura, 2012).

While it has been proposed to positively impact students' emotions and motivation during online courses, the inclusion of collaborative activities within courses is an appropriate strategy to facilitate the achievement of educational goals, as it has been shown to positively impact students'

emotions and motivation through peer relationships (Hiltz & Wellman, 1997). Thus, recent studies refer to the importance of learning to collaborate online, seen as a teaching-learning method that achieves greater productivity, long-term retention, better relationships among students and that promotes active learning in a fluid and student-centered manner, as well as in the skills needed to perform in daily life Recent studies have also highlighted the importance of learning to collaborate online, as this teaching-learning method can lead to greater productivity, long-term retention, better relationships among students, active learning in a fluid and student-centered manner, and the development of skills needed for daily life (Archer-Kath, Johnson, & Johnson, 1994; Dorego & Villasana, 2007; García-Chitiva & Suárez-Guerrero, 2019).

Collaborative learning is defined as the acquisition of knowledge, skills, or attitudes that occurs as a result of group interaction (Trentin, 2010). When this collaborative process is mediated by computers, it is defined as computer-supported collaborative learning (CSCL). This collaboration can take place synchronously, where participants interact in real time or asynchronously (Stahl, Law, Cress, & Ludvigsen, 2014). In CSCL, students collaborate in a coordinated manner and enrich each other to perform a task, making use of technological and virtual tools (Reyes & Quiroz, 2020). From this perspective, knowledge is not something that students receive from a teacher but is the result of a dialogue and a shared task that allows them to develop concepts, acquire techniques and skills, and strengthen the relationships they create with their peers (Coll & Colomina, 1990). However, existing virtual platforms often reproduce traditional forms and sequences of learning, i.e., activities are organized based on behaviorist methodologies and mostly individual performances: notes, readings, exams, etc. (Silva, 2017). Therefore, it is necessary to enhance the use of innovative methodologies in educational processes (Gisbert & Johnson, 2015).

Based on the above, the aim of this paper is to identify whether computer-supported collaborative learning (CSCL) predicts an increase in self-efficacy and positive epistemic emotions (e.g., surprise, curiosity and enjoyment) in college students.

The hypothesis for this work is that CSCL activities increase the level of positive epistemic emotions and self-efficacy in students compared to non-collaborative activities.

Methodology

Design

This research is based on a quantitative method with a random assignment, experimental design.

Participants

The sample consisted of 191 Mexican university students (age mean = 21.13, 50.80% females) of the Psychology degree program at the Autonomous University of Baja California. The age range of 18 to 36 years was selected because, according to the XVII Study on the Habits of Internet Users in Mexico by the Internet Association MX (2023), the profile of the user who mostly uses the Internet is within that age range.

A total of 191 participants were randomly selected from the population. The sampling method used was probabilistic sampling. The G*Power program was used to determine the sample size, taking into account the effect size ($w = 0.20$), error probability ($\alpha = 0.05$), and statistical power ($1 - \beta = 0.80$) as recommended by Cohen (1992).

Material and methods

Instruments

The Epistemic Emotions Scales (EES) developed by Pekrun et al. (2017) was used. The EES is a Likert-type scale that measures the level of epistemic emotions experienced by students while performing a task. The scale ranges from 1 (not at all) to 6 (very strong) and the emotions it measures are surprise, curiosity, enjoyment, confusion, anxiety, frustration, and boredom. The instrument includes contextualized instructions. The reliability of the EES has been reported to be good to excellent, with a Cronbach's alpha of .76 to .88 (Pekrun et al., 2017).

Likewise, the Online Learning Self-Efficacy Scale (OLSES), developed by Zimmerman and Kulikowich (2016) was used to determine the self-efficacy perceptions of university students in online learning environments. The scale consists of 19 items, distributed into three factors (learning in the online environment, time management and technology use). The reliability of the instrument has been reported to be high for the three factors (α =0.89, α = 0.85 and α = 0.84, respectively) (Zimmerman & Kulikowich, 2016).

The activity assigned in both collaborative and non-collaborative groups was the Cognitive Reflection Test (CRT) proposed by Frederick (2005). This test promotes the ability to reflect on or question the intuitive answer (the first answer that comes to mind) by presenting dilemmas that require testing mathematical, rational, and open-minded thinking The test consists of the following three questions: 1) A bat and a ball cost $1.10 total, the bat costs $1.00 more than the ball, how much does the ball cost, 2) If 5 machines take 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets, 3) In a lake, there's a group of water lilies. Every day, the patch doubles in size. It takes 48 days to cover the entire lake. How long would it take to cover only half?

Procedure

After the students signed the informed consent form, they individually completed a pre-survey with questions related to sociodemographic information. Subsequently, a randomization procedure was performed to assign participants to one of two groups: collaborative group (experimental group) and non-collaborative group (control group). Within the experimental group, small subgroups of three people were randomly assigned to solve the CRT together. While students in the collaborative group communicated through a live chat on the Google Meet platform to agree while answering the CRT, those in the non-collaborative group solved the CRT individually. Next, levels of epistemic emotions were measured with the EES and levels of self-efficacy with the OLSES for both groups before and after the treatment. Finally, the data obtained were collected and analyzed using JASP 0.13.1.0 software.

Statistical Analysis

First, descriptive statistics were calculated for the sociodemographic data and for the results obtained in the EES and OLSES instruments. The non-normal distribution of the data was identified by means of the Shapiro-Wilk coefficient. Therefore, the decision was made to use non-parametric statistics.

Second, pretest and posttest results were compared in each of the groups calculating the Wilcoxon signed-rank test to identify changes in self-efficacy and epistemic emotions.

Third, a comparison between the groups was performed to identify differences in the variables through the Mann-Whitney U calculation. Finally, to identify whether CSCL predicts an increase in self-efficacy and epistemic emotions, Spearman's correlation coefficient was first calculated to test multicollinearity and then, a multiple linear regression was performed with CSCL as the dependent variable. The data obtained were collected and analyzed using JASP 0.13.1.0 software.

Results

Comparison by groups

The collaborative group did not show significant differences in the pretest and post-test self-efficacy report. However, the epistemic emotions of this group showed significant differences ($p < .001$) in terms of surprise ($M_{pretest} = 2.34$; $M_{posttest} = 3.50$), curiosity ($M_{pretest} = 4.94$; $_{posttest} = 4.24$), confusion ($M_{pretest} = 2.60$; $M_{posttest} = 3.87$) and anxiety ($M_{pretest} = 2.96$; $_{postest} = 3.47$).

On the other hand, the non-collaborative group showed significant differences in the epistemic emotions of surprise ($M_{pretest} = 2.27$; $M_{posttest} = 3.50$; $p<.001$) and confusion ($M_{pretest} = 2.16$; $M_{posttest} = 3.60$; $p < .001$), as well as in frustration ($M_{pretest} = 1.94$; $M_{posttest} = 2.59$; $p = .002$).

Comparison between groups

As can be seen in Table 1, the results from the comparison between groups regarding the levels of self-efficacy and epistemic emotions showed that the students in the collaborative group had significantly higher levels of curiosity, confusion, and anxiety in the pretest. However, in the posttest, only excitement and anxiety maintained the significant difference, in addition to the differences in boredom.

Table 1
Descriptive statistics and between-groups comparisons

	Group 1		**Group 2**				
	M	**SD**	**M**	**SD**	**W**	**p**	**Rank-Biserial Correlation**
Pretest							
General self-efficacy	4.07	0.86	4.17	978.00	2600.50	.453	-.710
Technology	4.51	0.99	4.67	1.05	2466.00	.208	-.119

	Group 1		Group 2				
	M	**SD**	**M**	**SD**	**W**	**p**	**Rank-Biserial Correlation**
Learning	4.06	0.95	4.15	1.09	2601.00	.454	-.710
Time management	3.48	1.01	3.49	1.27	2788.00	.965	-.400
Epistemic Emotions	2.90	0.72	2.59	0.75	3441.50	.015	.229
Surprised	2.34	1.23	2.28	1.27	2915.50	.653	.410
Curious	4.94	0.92	4.00	1.31	3987.50	< .001	.424
Excited	3.54	1.22	2.95	1.24	3546.00	.004	.266
Confused	2.60	1.49	2.16	1.49	3313.00	.044	.183
Anxious	2.96	1.60	2.49	1.59	3326.00	.042	.188
Frustrated	1.77	1.27	1.94	1.50	2748.50	825	-.180
Bored	1.59	0.91	2.00	1.21	2279.00	.031	-.186
Posttest							
General self-efficacy	4.10	0.95	4.25	1.04	2550.00	.347	-.890
Technology	4.45	1.08	4.72	1.11	2312.00	.066	-.174
Learning	4.13	45.14	4.27	1.18	2553.00	.353	-.880
Time management	3.57	1.01	3.58	1.25	2815.50	.955	.600
Epistemic Emotions	3.29	0.99	3.05	0.92	3205.50	.127	.145
Surprised	3.50	1.63	3.50	1.56	2796.50	.991	-.100

	Group 1		Group 2				
	M	**SD**	**M**	**SD**	**W**	**p**	**Rank-Biserial Correlation**
Curious	4.24	1.43	3.81	1.52	3254.00	.081	.162
Excited	3.70	1.38	2.98	1.41	3616.50	.002	.292
Confused	3.87	1.83	3.60	1.58	3077.00	290	.990
Anxious	3.47	1.79	2.80	1.63	3401.00	.021	.215
Frustrated	2.81	1.87	2.59	1.64	2956.50	542	.560
Bored	1.41	0.73	2.05	1.42	2139.00	.005	-.236

CSCL prediction on self-efficacy and epistemic emotions

To test the proposed predictive model, where the dependent variable is CSCL, a logistic regression analysis was conducted for each independent variable. The analysis indicated that collaborative learning does not predict self-efficacy. However, the analysis showed that, in general, epistemic emotions are predicted by collaborative learning, particularly by higher levels of anxiety and lower levels of boredom, between 14% and 24%, respectively (see Table 1 and Table 2).

Table 2

Logistic regression of the epistemic emotions model with the dependent variable

odel	**eviance**	**IC**	**IC**	**f**	**²**		**cFadden R²**	**agelkerke R²**	**jur R²**	**ox & Snell R²**
0	07.277	09.277	12.288	49						
1	77.499	93.499	17.584	42	9.778	.001	.144	.24	.181	.18

	Estimate	Standard Error	z	Wald Statistic	p
(Intercpt)	0.695	0.732	0.95	0.902	0.342
Surprised	0.250	0.154	1.624	2.637	0.104
Curious	-0.066	0.174	-0.38	0.145	0.704
Excited	-0.318	0.17	-1.876	3.518	0.061
Confused	0.019	0.144	0.13	0.017	0.896
Anxious	-0.355	0.166	-2.139	4.574	0.032
Frustrated	-0.046	0.168	-0.275	0.076	0.783
Bored	0.623	0.206	3.025	9.153	0.002

Discussions

The hypothesis of this study was that computer-mediated collaborative activities would increase the level of positive epistemic emotions. This hypothesis was partially supported, as computer-mediated collaborative work was found to predict a change in epistemic emotions, but from a perspective focused on negative emotions. The present study was unable to validate the hypothesis of the role of computer-mediated collaborative work in relation to self-efficacy.

The underlying hypothesis of this research is that student social and emotional presence fosters socio-cognitive processes of negotiation, which in turn enhance individual learning outcomes. This is especially true of collaborative learning, especially computer-supported cooperative learning (CSCL). This can even improve their levels of self-perceived satisfaction (Hernández-Sellés, 2021).

Within this context, the role of the student is substantially modified as they are encouraged to be more autonomous, reflective, and dynamic. Additionally, students empowered to take charge of their own education and that of their peers (Cotán., García, & Gallardo, 2021).

The findings of this study showed that significant differences were obtained in epistemic emotions, but not in the levels of self-efficacy, which is consistent with other research that has found that a high percentage of students have low academic self-efficacy (Suria-Martínez, 2023; Bonilla-Yucailla, Balseca-Acosta, Cárdenas-Pérez, & Moya-Ramírez, 2022). This is a concern for the school system, as self-efficacy is recognized as a valuable tool for enhancing other capabilities needed by the student in the academic context. Similarly, several studies have found a positive association between self-efficacy and school performance and motivation, commitment and expectations, university access, self-regulation of activities, positive affect, and personality (Álvarez-Pérez, López-Aguilar, & Garcés-Delgado, 2021; González-Benito, López-Martín, Expósito-Casas, & Moreno-González, 2021; Rodríguez, Figueroa-Varela, & Muñoz Salazar, 2023; Yupanqui-Lorenzo, Mollinedo, & Montealegre 2021).

Regarding positive epistemic emotions, our results showed higher levels of curiosity and excitement in the collaborative group. This is in line with the empirical evidence of other authors,

who argue that students who frequently experience positive emotions linked to their studies will have available within their repertoire of personal resources those of psychological capital, such as self-efficacy, hope, optimism, and resilience (Carmona-Halty, Villegas-Robertson, & Marín-Gutiérrez, 2019).

Coordinating the cooperative learning activities of individuals can be challenging, particularly when technology is being used to facilitate the meeting. In higher education, the main challenges to be solved are the acceptance of virtual collaborative mediation and the need to implement a combination of pedagogical strategies and virtual tools that guarantee the achievement of disciplinary competencies (García-Chitiva & Suárez-Guerrero, 2019).

Even though the CRT task is considered a single cognitive activity, its presentation across three questions suggests that evaluating epistemic emotions for each question individually may be necessary.

In view of the above, this research has the merit of having carried out a comparative study among groups of university students who solve academic problems using computerized collaborative learning. It has demonstrated that epistemic emotions are relevant during the collaborative process and, on the other hand, it shows that self-efficacy requires further studies to understand its associated variables, particularly in relation to virtual learning environments.

Conclusions

In conclusion, Computer-supported Collaborative Learning can have a positive impact on students' epistemic emotions, such as curiosity and excitement. However, the findings of this study suggest that CSCL may not be effective in increasing self-efficacy, but further research is needed. This study also highlights the challenges of coordinating collaborative activities in virtual learning environments. The application of unconventional strategies, such as virtual collaborative tasks, and the requirement to implement a combination of pedagogical strategies, which ensure the achievement of disciplinary competencies, present the biggest challenges in higher education.

Finally, according to our results, educators should. monitor the negative emotions of boredom and anxiety and their effects on students' self-efficacy, as well as encourage students to develop positive emotions like curiosity and self-efficacy beliefs by providing them with opportunities to succeed.

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DOES LINGUISTIC PERFORMANCE IN ROMANIAN INFLUENCE SOCIAL AXIOMS, BASIC PSYCHOLOGICAL NEEDS, AND SUBJECTIVE WELL-BEING?

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Abstract

Objectives. This study explores the link between social axioms, basic psychological needs, and subjective well-being, considering Romanian participants' linguistic performance, specifically whether different levels of linguistic performance influence social axioms and other variables analyzed in this study.
Material and methods. 190 adult Romanian males and females (M = 40.25; SD = 11.16) completed the Basic Psychological Need Satisfaction and Frustration Scale—General Measure; Social Axioms Survey II; the World Health Organization Well-Being Index; and the Language Experience and Proficiency Questionnaire, a measure of linguistic performance in Romanian. The study analyzed two groups of participants: those with high- and low-level linguistic performance in Romanian.
Results. Participants with high linguistic performance in Romanian tend to exhibit high values of social cynicism, social complexity, and fate control. Individuals with low linguistic performance tend to exhibit low scores at reward for application and religiosity. A t-test for independent groups reveals that fate control differs between the two groups of participants: fate control means scores of the high-level linguistic performance group (M = 22.87, SD = 5.378) are significantly higher (t = 2.308, df = 188, p = .022) than those of the low-level linguistic performance group (M = 21.04, SD = 5.515). Higher linguistic performance tends to be associated with psychological needs satisfaction, while lower levels are associated with frustration. High well-being scores are associated with the high-level linguistic performance group.
Conclusions. Individuals with a strong sense of fate control tend to believe it is pointless to resist it, yet they acknowledge the presence of expectations. A balance in evaluating social situations contributes to subjective well-being for those with high linguistic ability.

Keywords: social axioms, basic psychological needs, linguistic performance.

Introduction

Defined as "generalized beliefs about oneself, the social and physical environment, or the spiritual world" (Leung et al., 2002, p. 289), social axioms represent a construct that helps explain human actions. Social axioms are social because they appear due to socialization and are axioms because people accept and endorse them without too much validity analysis (Leung & Bond, 2009).

Previous research suggests that social axioms are stable in time across a period of eight years (Leung et al., 2012b, p. 837), and changes with impact at the societal level, e.g., wars and natural catastrophes, can result in significant changes in social axioms (Li & Leung, 2012). Even the recent COVID pandemic could not identify a significant change of beliefs in a group of Romanian participants (Mosoia, 2022, p. 69). Investigations on the culture-level dimensions of social axioms across 41 cultures indicate a higher value for Romania on societal cynicism, a construct that refers to the same content as social cynicism (Bond et al., 2004a, p. 566).

Other studies suggest that social axioms are meaningful variables either for describing groups and societies (Leung et al., 2002; Bond et al., 2004a; Leung & Bond, 2009; Comunian, 2009; Guan, Bond, Dincă, & Iliescu, 2010; Leung, Li, & Zhou, 2012a; Leung et al., 2012b; Iliescu, Dincă, & Bond, 2017) or individuals inside those groups and societies (Singelis, Hubbard, Her, & An, 2003; Dragolov & Boehncke, 2015).

Social axioms were investigated in different cultural contexts along with various variables. For example, learning in the Philippines (Bernardo, 2009); moral development in Italy (Comunian, 2009); personality and behavioral indicators in Romania (Dincă & Iliescu, 2009); couple relations in Romania (Iliescu et al., 2017); social beliefs (Leung & Bond, 2004); values (Bond, Leung, Au, Tong, & Chemonges-Nielson, 2004b; Leung et al., 2007); personality and beliefs (Chen, Bond, & Cheung, 2006); life satisfaction (Lai, Bond, & Hui, 2007); achievement (Zhou, Leung, & Bond, 2009); and subjective well-being (Hui & Bond, 2010).

The Basic Needs Theory (Deci & Ryan, 2000) states that humans have three innate, fundamental psychological needs: relatedness, competence, and autonomy, and their achievement supports optimal functioning. Therefore, the satisfaction of psychological needs "predicts optimal psychological functioning, well-being, life satisfaction, and positive affect" (Deci & Ryan, 2000, p. 62) and well-being throughout life (Lataster et al., 2022). Frustration with basic psychological needs may cause people to experience ill-being, dissatisfaction, and negative affect (Hagger, Hankonen, Chatzisarantis, & Ryan, 2020).

Studies on basic psychological needs suggest that satisfaction is critical for healthy functioning across cultures (Nishimura & Suzuki, 2016). Psychological needs are essential in "development, adjustment, and wellness across cultures, with strong implications for basic motivational science, applied practices, and even broad social policies" (Vansteenkiste, Ryan, & Soenens, 2020, p. 2).

Basic psychological needs were studied in different aspects of life, such as education (Klassen, Perry, & Frenzel, 2012); work and motivation in the workplace (Deci & Ryan, 2014; Olafsen, Deci, & Halvari, 2018); sport (Li, Wang, Pyun, & Kee, 2013); well-being and enhancement of well-being (Martela & Ryan, 2015); and balance between the needs (Sheldon & Niemiec, 2006; Sheldon & Filak, 2008; Milyavskaya et al., 2009; Milyavskaya, Philippe, & Koestner, 2013; Radel, Pelletier, & Sarrazin, 2012; Dysvik, Kuvaas, & Gagné, 2013).

The term subjective well-being was introduced a couple of decades ago (Diener, 1984) and represents an individual evaluation of the quality of life (Proctor, 2014) or "a person's cognitive and affective evaluations of his or her life" (Diener, Lucas, & Oishi, 2002a, p. 63). Hence, subjective well-being is an inner state that manifests itself through behavior.

Examples of subjective well-being determinants: good mental health and positive relationships with others (Proctor, 2014; Diener & Seligman, 2002); environment (Diener & Seligman, 2004); employment (Diener, Nickerson, Lucas, & Sandvik, 2002b; Lucas, Clark, Georgellis, & Diener, 2004); marriage (Lucas, Clark, Georgellis, & Diener, 2003); age (Diener &

Suh, 1998); culture (Diener, Suh, Smith, & Shao, 1995a); and individual characteristics (Diener, Diener, & Diener, 1995b).

Whatever the language, linguistic performance is not linguistic competence, and Chomsky (2015) made it clear this fundamental distinction between competence and linguistic performance: Linguistic competence is the knowledge of the language by a speaker or listener, while language performance represents "the actual use of language in concrete situations" (Chomsky, 2015, p. 2). Molea (2019), recalling the writings of Coșeriu (2000, p. 9) and Frâncu (1997, p. 19), claims that the competence-performance pair is another form of the language-speech dichotomy specified by Ferdinand de Saussure (1971, p. 38); in the view of the Swiss linguist, language is different from speech as the social is different from the individual (Saussure, 1971, pp. 38–39; 2011, pp. 19–20). Consequently, in this study, the term linguistic performance was used. Linguistic performance was defined as the arithmetic means of the L1 participants' self-evaluation regarding speaking, understanding the spoken language, and reading in their native language.

Considering the objective of this study, i.e., determining the role of the linguistic performance in maternal language on social axioms, basic psychological needs, and subjective well-being, the following general hypothesis emerged: the linguistic performance in the native language of participants differentiates social axioms, basic psychological needs, and subjective well-being.

Material and Methods

Tools

In this study, the Social Axioms Survey II was used (Leung et al., 2012b) to assess social axioms – social cynicism, social complexity, reward for application, fate control, religiosity; the Basic Psychological Need Satisfaction and Frustration Scale – General Measure (Chen et al., 2015) to assess basic psychological needs, i.e. the needs for competence, relatedness, and autonomy; the World Health Organization (WHO) (Five) Well-Being Index (1998 version) (Psychiatric Research Unit, WHO Collaborating Centre in Mental Health, n.d.) to evaluate subjective well-being; a measure of linguistic performance based on the Language Experience and Proficiency Questionnaire the Language Experience and Proficiency Questionnaire, LEAP-Q (Marian, Blumenfeld, & Kaushanskaya, 2007; Kaushanskaya, Blumenfeld, & Marian, 2019).

The Social Axioms Survey II, shortened as SAS II (Leung et al., 2012b), consists of 40 items referring to beliefs, which group five dimensions of social axioms: social cynicism, the reward for application, social complexity, fate control, and religiosity. Each item is scored on a Likert scale from 1, 'Strongly disbelieve', to 5, 'Strongly believe'. In this way, social axiom factors range from a minimum value of eight to a maximum value of 40. Examples of SAS II items: "People create hurdles to prevent others from succeeding." − social cynicism; "Building the way step by step leads to success" − reward for application; "There is usually more than one good way to handle a situation." – social complexity; "Matters of life and death are determined by fate." – fate control; "Belief in a religion helps one understand the meaning of life." – for the factor religiosity.

The Basic Psychological Need Satisfaction and Frustration Scale – General Measure (Chen et al., 2015), shortened as BPNSFS, was used to measure basic psychological needs for autonomy, relatedness, and competence. The BPNSFS scale consists of 24 items about actual experiences of certain feelings in the respondent's life. Answers are scored on a Likert scale from 1, 'Not True at all', to 5, 'Completely True', to indicate the degree to which the statement is valid for the respondent. Each of the three dimensions of the scale – autonomy, relatedness, and competence − consists of

four items, either for the satisfaction or frustration of the need. Therefore, scores range from a minimum value of four (4) to a maximum value of 20. Examples of BPNSFS items: "I feel a sense of choice and freedom in the things I undertake.", "I feel that my decisions reflect what I really want." – autonomy satisfaction; I feel connected with people who care for me, and for whom I care." – relatedness satisfaction; "I feel confident that I can do things well." – competence satisfaction; "I feel forced to do many things I wouldn't choose to do." – autonomy frustration; "I feel excluded from the group I want to belong to." – relatedness frustration; "I have serious doubts about whether I can do things well." – competence frustration.

The World Health Organization (WHO) (Five) Well-Being Index (1998 version) was used to measure subjective well-being. It is a self-report questionnaire consisting of five statements on how the respondent has been feeling over the last two weeks by choosing the appropriate answer on a Likert scale, from zero (0) to five (5), where 0 = "At no time", 1 = "Some of the time", 2 = "Less than half of the time", 3 = "More than half of the time", 4 = "Most of the time", and 5 = "All the time". Raw scores range from zero (0), the worst possible, to 25, the best possible quality of life. A percentage score was calculated by multiplying the raw score by 4; Hence, a percentage score of 0 represents the worst possible, while 100 represents the best possible quality of life. Therefore, high scores indicate better subjective well-being. Example of WHO-5 items: "I have felt cheerful and in good spirits." "I have felt active and vigorous."

The Language Experience and Proficiency Questionnaire, LEAP-Q (Marian et al., 2007; Kaushanskaya et al., 2019) is a self-report questionnaire. LEAP-Q items refer to all languages the participant knows, starting with its native language, the order of acquisition of these languages, the knowledge of the language, and its learning history. For example, the age at which they began to learn the language, the age at which they became fluent in the language, the age at which they began to read in the language, the age at which they began to read fluently in the language; the respondent also selects, on a scale from zero (0) to ten (10), the level of proficiency in speaking, comprehension and reading, where 0 (zero) means "no level", 1 = very low, 2 = low, 3 = acceptable, 4 = insufficient, 5 = sufficient, 6 = just above sufficient, 7 = competent, 8 = very competent, 9 = excellent, and 10 = perfect.

Starting from The Language Experience and Proficiency Questionnaire (LEAP-Q) (Marian et al., 2007), a measure of the level of performance in the maternal language (L1) was suggested and defined. This study chose the word 'performance' instead of 'competence' because it was considered the distinction made by Chomsky between competence, "the speaker-hearer's knowledge of his language", and performance, "the actual use of language in concrete situations" (Chomsky, 2015, p. 4). Therefore, linguistic performance was defined as the arithmetic means of the L1 participants' self-evaluation of speaking, understanding the spoken language, and reading in their native language: [1/3(Speaking + Understanding + Reading)].

Participants and procedure

One hundred ninety Romanian adults, 126 females and 64 males, aged between 18 and 60 years (M = 40.25, SD = 11.16), filled out an online survey in the Romanian language. The data were collected between May 2019 and March 2020. Participants were recruited (e.g., during several meetings with undergraduate and master's psychology students) and through electronic platforms for graduate and postgraduate students. The questionnaire was created in Google Forms. Participants could withdraw from completing the survey for any reason. Respondents were not rewarded in any way. At the beginning of the survey, respondents were asked to answer honestly. They wrote a valid email indicating the participant's adult age and agreement to participate in the study.

Two groups of participants were made depending on their above-defined linguistic performance in Romanian. Group 1 consists of 98 adults (71 females and 27 males) for whom the level of linguistic performance in Romanian is equal to 10 (ten), PerfL1Ro = 10; Group 2 consists of 92 participants (55 females and 37 males) for whom the level of linguistic performance in their maternal language is strictly smaller than 10 (ten), PerfL1Ro < 10. Table 1 summarizes the characteristics of the two groups of participants.

Table 1

Romanian participants in this study, depending on their high- and low-level linguistic performance in Romanian (PerfL1Ro is the participants' linguistic performance in Romanian)

Participants	**Group1, PerfL1Ro = 10**	**Group2, PerfL1Ro < 10**
	98 (*M* = 39.66, *SD* = 10.887)	92 (*M* = 40.87, *SD* = 11.464)
	71 females and 27 males	55 females and 37 males
Total	190	

Data and statistical analysis

The data for this study consists of information collected from some 190 Romanian participants. The analysis in this study was done with IBM SPSS Statistics (version 26) and MPlus version 7 (Muthén & Muthén, 2012). *T*-tests were used to investigate the differences between the means of the variables. The normality of the data was checked with the *z* values of Skewness and Kurtosis, the Shapiro-Wilk test, and visual inspection of histograms. Graphics were made with an Excel program within Microsoft 365.

Results

For each group of participants, Group 1 and Group 2, the means scores of social axioms, basic psychological needs, and subjective well-being were calculated. Table 2 (next page) summarizes the mean scores of the variables depending on the participants' gender and linguistic performance in Romanian. It was observed that the mean scores of the variables were different.

Table 2
The means of the variables – social axioms, basic psychological needs, subjective well-being - depending on participants' gender and their high- and low-level of linguistic performance in Romanian, PerfL1Ro = 10 (Group 1 participants) and PerfL1Ro < 10 (Group 2 participants)

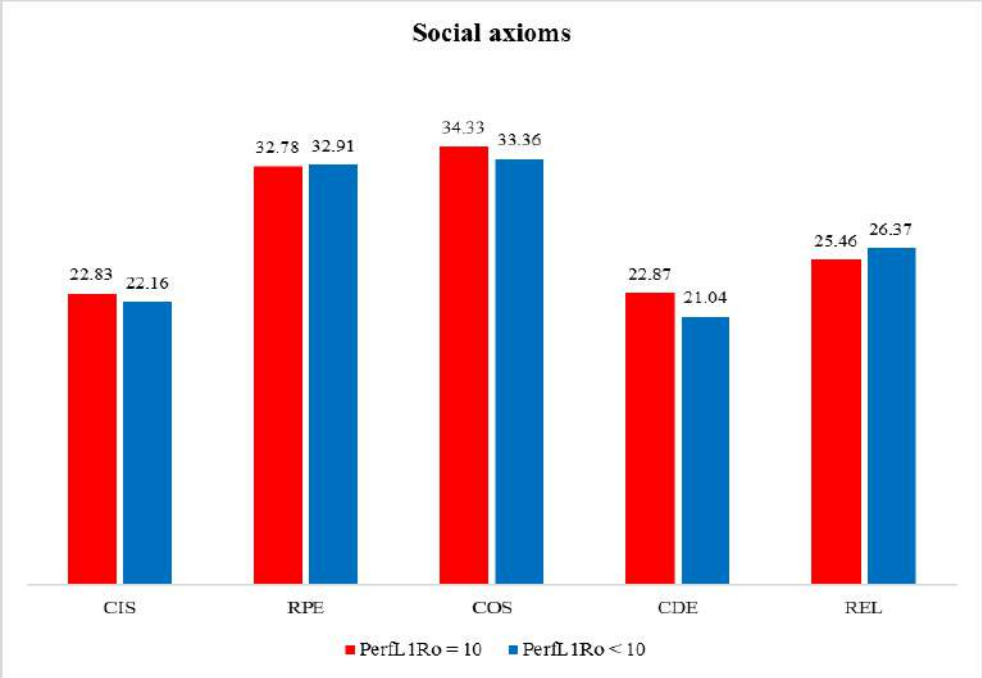
Variable	Participants					
	PerfL1Ro = 10			PerfL1Ro < 10		
	98 p	71 f	27 m	92 p	55 f	37 m
Social cynicism (CIS)	22.83	22.17	24.56	22.16	21.82	22.68
Reward for application (RPE)	32.78	32.93	32.37	32.91	33.07	32.68
Social complexity (COS)	34.33	34.66	33.44	33.36	33.98	32.43
Fate control (CDE)	22.87	23.41	21.44	21.04	21.84	19.86
Religiosity (REL)	25.46	24.52	27.93	26.37	26.84	25.68
Competence satisfaction (STC)	17.49	17.51	17.44	16.76	17.22	16.08
Competence frustration (FTC)	7.50	7.10	8.56	8.09	7.89	8.38
Relatedness satisfaction (STR)	16.42	16.37	16.56	15.80	16.20	15.22
Relatedness frustration (FTR)	6.76	6.51	7.41	7.16	7.20	7.11
Autonomy satisfaction (STA)	15.46	15.58	15.15	15.12	15.05	15.22
Autonomy frustration (FTA)	10.66	10.61	10.81	11.10	11.15	11.03
Subjective well-being (SWB)	62.73	65.52	55.41	60.52	63.71	55.78

Social axioms

The social axioms' values corresponding to each group, Group 1 and Group 2, are illustrated in Figure 1.

Figure 1

Social axioms mean scores corresponding to the two groups of participants, Group 1 with PerfL1Ro = 10, and Group 2 with PerfL1Ro < 10



Next, to analyze if the difference between the variables means is statistically significant, the normality of the data was checked. Table 3 exemplifies the data for the social axiom of fate control.

Table 3

The information used to check the normality of the data of the social axiom of fate control

	Skewness	**Kurtosis**	**Shapiro-Wilk**
Group 1	.082/0.244 = .336	-.506/.483 = -1.047	$p = .165$, $p > .05$
Group 2	.111/0.251 = .442	.529/.498 = 1.062	$p = .152$, $p > .05$

A Shapiro-Wilk's test ($p > .05$) (Shapiro & Wilk, 1965; Razali & Wah, 2011) and a visual inspection of their histograms, normal Q-Q plots, and box plots showed that fate control (CDE) scores were approximately normally distributed for both groups, with a skewness of .082 (*SE* = .244) and a kurtosis of -.506 (*SE* = .483) for Group 1 and a skewness of .111 (*SE* = .251) and a kurtosis of .529 (*SE* = .498) for the second group. Therefore, the scores on the social axiom of fate control are approximately normally distributed, and the ANOVA test or the independent samples *t*-test may be used.

A *t*-test shows that the mean scores of fate control (CDE) obtained by the participants with a high level of linguistic performance in Romanian, PerfL1Ro = 10, ($M = 22.87$, $SD = 5.378$), are

statistically significantly higher (t = 2.308, df = 188, p bidirectional = .022) than those of participants with a low level of linguistic performance in the Romanian language, PerfL1Ro < 10 (M = 21.04, SD = 5.515).

Furthermore, a t-test shows that the mean scores of social complexity (COS) obtained by the participants with a high level of linguistic performance in Romanian, PerfL1Ro = 10, (M = 34.33, SD = 3.274), are statistically significantly higher (t = 2.027, df = 188, p bidirectional = .044) than those of participants with a low level of linguistic performance in the Romanian language, PerfL1Ro < 10 (M = 33.36, SD = 3.307).

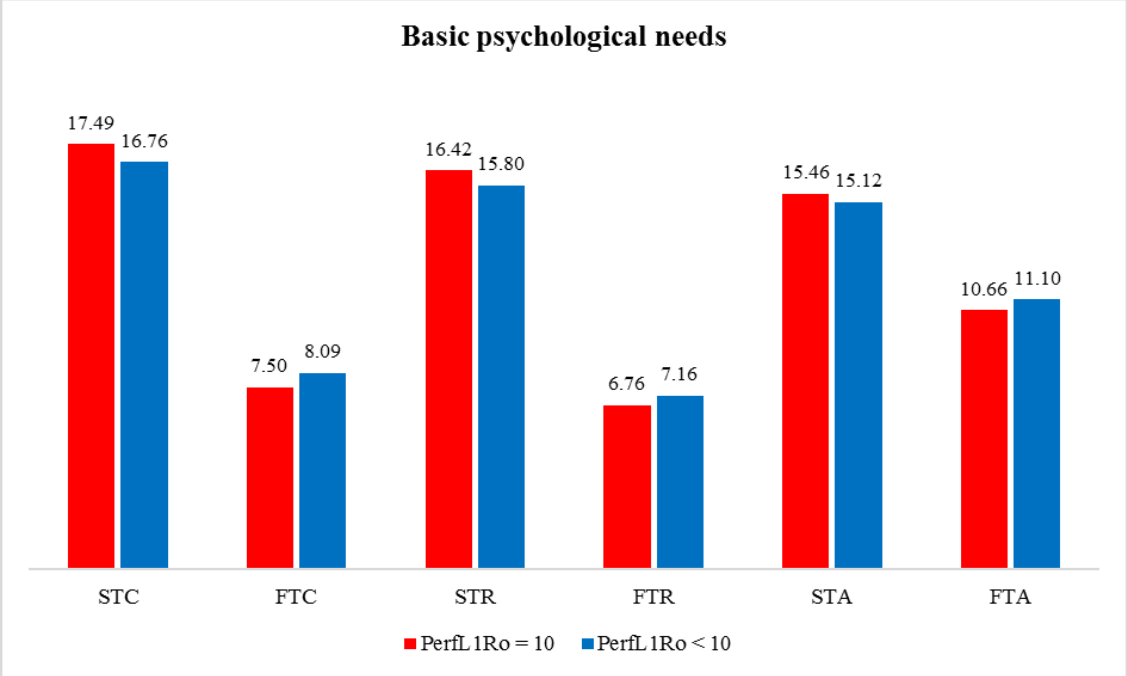
Group 1 and Group 2 participants' scores at social cynicism, reward for application, and religiosity are different but not statistically significant.

Basic psychological needs

Figure 2 illustrates the basic psychological needs scores corresponding to each group of participants: Group 1 (participants with PerfL1Ro = 10) and Group 2 (participants with PerfL1Ro < 10).

Figure 2

The basic psychological needs mean scores corresponding to the two groups of participants: Group 1 with PerfL1Ro = 10, and Group 2 with PerfL1Ro < 10



A t-test shows that the mean scores of competence satisfaction (STC) obtained by the participants with a high level of linguistic performance in Romanian, PerfL1Ro = 10, (M = 17.49, SD = 2.193), are statistically significantly higher (t = 2.008, df = 188, p bidirectional = .046) than those of participants with a low level of linguistic performance in the Romanian language, PerfL1Ro < 10 (M = 16.76, SD = 2.791).

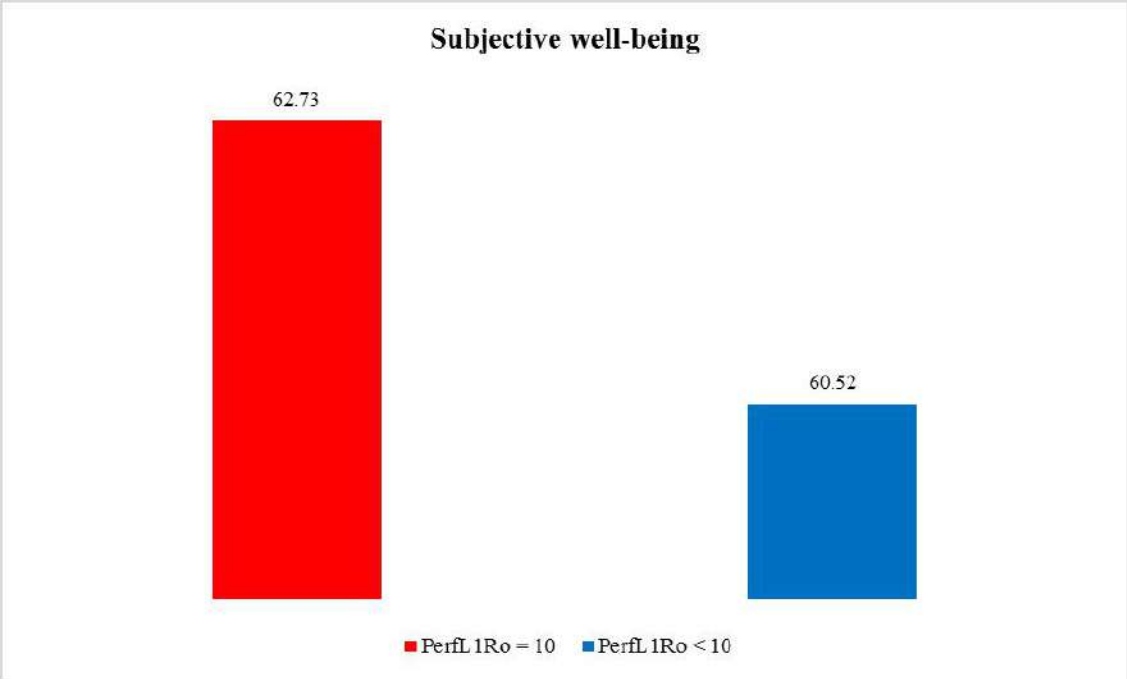
The difference in the mean scores for the rest of the psychological needs is not statistically significant. However, we observe that the mean scores of relatedness satisfaction and autonomy satisfaction corresponding to participants with a high level of linguistic performance in Romanian, PerfL1Ro = 10, are higher than those with a low level of linguistic performance in Romanian, PerfL1Ro < 10 (16.42 > 15.80; 15.46 > 15.12).

Subjective well-being

Figure 3 illustrates the subjective well-being mean scores corresponding to each group of participants: Group 1 (participants with PerfL1Ro = 10) and Group 2 (participants with PerfL1Ro < 10).

Figure 3

Subjective well-being mean score corresponding to the two groups of participants: Group 1 with PerfL1Ro = 10, and Group 2 with PerfL1Ro < 10



Regarding subjective well-being, the mean scores corresponding to Group 1 and Group 2 of participants are different but not significant from a statistical point of view. Still, it was observed that participants with a high level of linguistic performance in Romanian, PerfL1Ro = 10, have better subjective well-being than participants with a low level of linguistic performance in the Romanian language, PerfL1Ro < 10 (62.73 > 60.52).

In the case of those 98 Romanian participants and their linguistic performance in Romanian, the following significant results were obtained:

(1) Participants with a high level of linguistic performance in Romanian, PerfL1Ro = 10, had a higher fate control (CDE) than those of participants with a low level of linguistic performance in the Romanian language, PerfL1Ro < 10.

(2) Participants with a high level of linguistic performance in Romanian, PerfL1Ro = 10, had a higher social complexity (COS) than those of participants with a low level of linguistic performance in the Romanian language, PerfL1Ro < 10.
(3) Participants with a high level of linguistic performance in Romanian, PerfL1Ro = 10, had a higher competence satisfaction (STC) than those of participants with a low level of linguistic performance in the Romanian language, PerfL1Ro < 10.

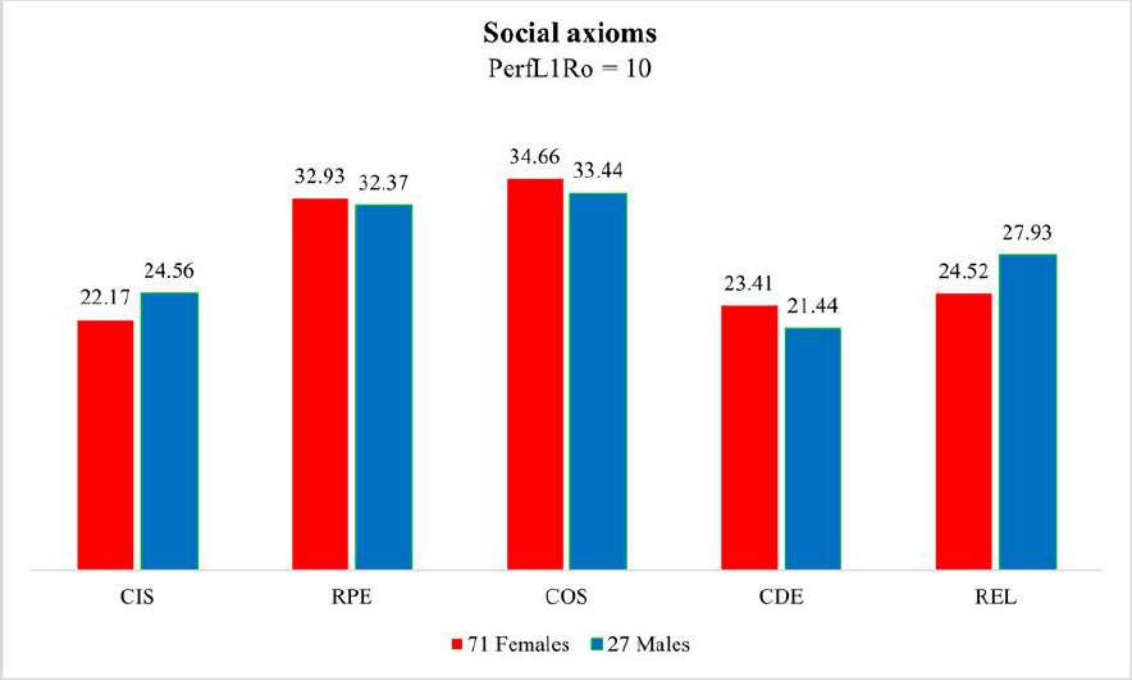
A gender perspective on the variables in this study

The gender perspective on social axioms, basic psychological needs, subjective well-being, and a measure of linguistic performance in the Romanian language reveals a difference between the mean scores of females and males.

Group 1 of participants, PerfL1Ro = 10

Figure 4 illustrates the participants' female and male mean scores on social axioms corresponding to Group 1, i.e., participants with a high level of linguistic performance in Romanian.

Figure 4
The social axioms mean scores corresponding to Group 1 of females and males' participants



In the case of those 98 Romanian participants, 71 females and 27 males, with a high level of linguistic performance in Romanian, PerfL1Ro = 10, *t*-tests show that:

- The mean scores for social cynicism (CIS) obtained by females (M = 22.17, SD = 5.943) are statistically significantly smaller (t = -1.839, df = 96, p bidirectional = .034) than those of males (M = 24.56, SD = 5.154).

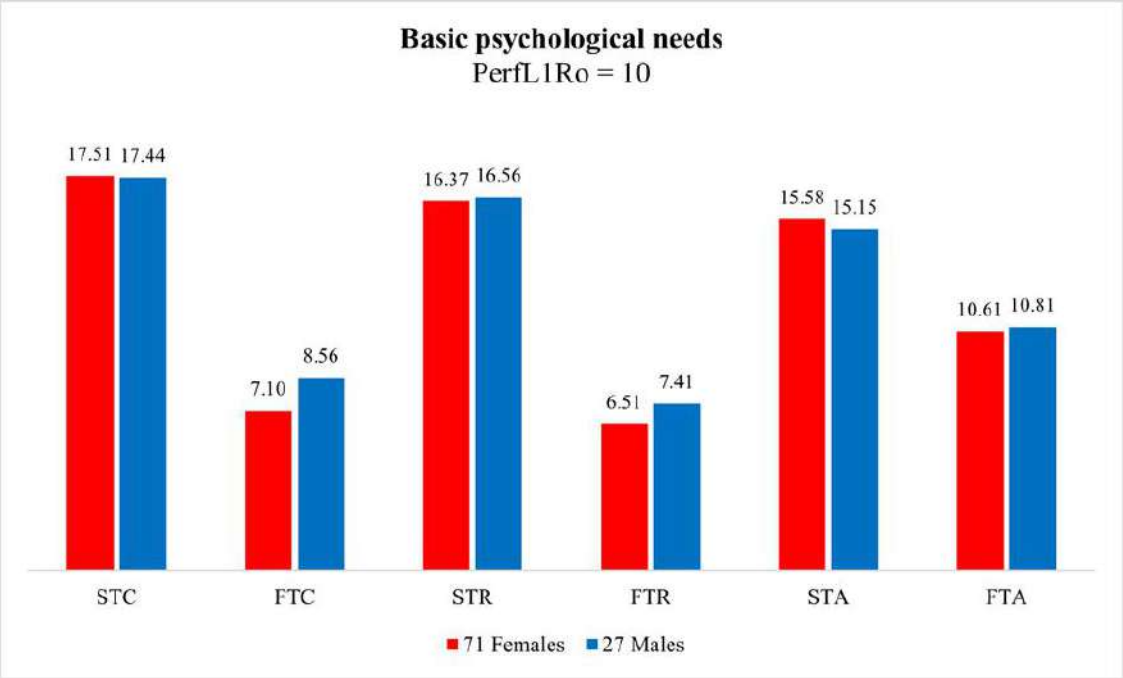
- The mean scores for religiosity (REL) obtained by females (M = 24.52, SD = 6.689) are statistically significantly smaller (t = -2.079, df = 96, p bidirectional = .040) than those of males (M = 27.93, SD = 8.562).

It was observed that females' mean scores on reward for application, social complexity, and fate control are higher than those of males, but the differences are not statistically significant.

Figure 5 illustrates the mean scores on basic psychological needs corresponding to females and males with a high level of linguistic performance in the Romanian language.

Figure 5

The basic psychological needs mean scores corresponding to 71 females and 27 males with high-level linguistic performance in Romanian, PerfL1Ro = 10



A t-test shows that the mean scores of competence frustration (FTC) obtained by females (M = 7.10, SD = 2.559) are statistically significantly smaller (t = -2.256, df = 96, p unidirectional = .029) than those of males (M = 8.56, SD = 3.534).

It was noted that the mean scores on the satisfaction of need competence, need relatedness, and need autonomy for females and males are different, but the differences are not statistically significant.

Figure 6 illustrates the mean scores of subjective well-being corresponding to females and males with a high level of linguistic performance in the Romanian language.

A t-test shows that the mean scores of subjective well-being (SWB) obtained by females (M = 65.52, SD = 17.726) are statistically significantly higher (t = 2.524, df = 96, p bidirectional = .013) than those of males (M = 55.41, SD = 17.705).

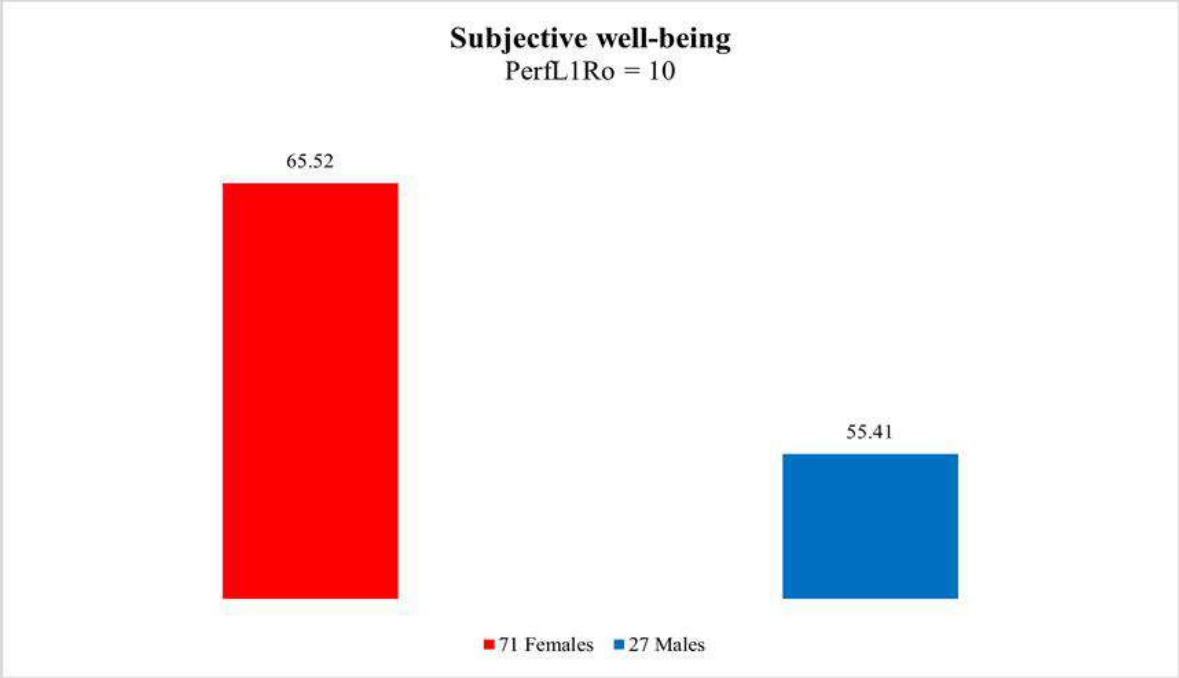
Therefore, a gender perspective on 98 Romanian participants, 71 females and 27 males, with a high level of linguistic performance in Romanian, PerfL1Ro = 10, shows that:

(4) Females' religiosity (REL) is smaller than that of males.

(5) Females' social cynicism (CIS) is smaller than that of males.
(6) Females' competence frustration (FTC) is smaller than that of males.
(7) Females' subjective well-being (SWB) is higher than that of males.

Figure 6

The mean scores of subjective well-being corresponding to 98 Romanian participants, 71 females and 27 males, with a high level of linguistic performance in the Romanian language, PerfL1Ro = 10



Group 2 of female and male participants, PerfL1Ro < 10

Figure 7 (next page) illustrates the mean scores of social axioms corresponding to 92 Romanian participants, 55 females and 37 males, with low-level linguistic performance in the Romanian language.

In the case of those 92 Romanian participants, 55 females and 37 males, with a low level of linguistic performance in Romanian, PerfL1Ro < 10, *t*-tests show that:

- The mean scores for social complexity (COS) obtained by females (M = 33.98, SD = 3.046) are statistically significantly higher (t = 2.252, df = 96, p bidirectional = .027) than those of males (M = 32.43, SD = 3.500).
- The mean scores for fate control (CDE) obtained by females (M = 21.84, SD = 5.453) are statistically significantly higher (t = 1.699, df = 96, p unidirectional = .046) than those of males (M = 19.86, SD = 5.468).

The females' social cynicism mean score was noted to be smaller than that of males, but the differences are not statistically significant. Also, the females' mean scores at reward for application and religiosity are higher than those of males, but the differences are not statistically different.

Figure 7

The social axioms mean scores correspond to 92 Romanian participants, 55 females and 37 males, with low-level linguistic performance in the Romanian language, PerfL1Ro < 10

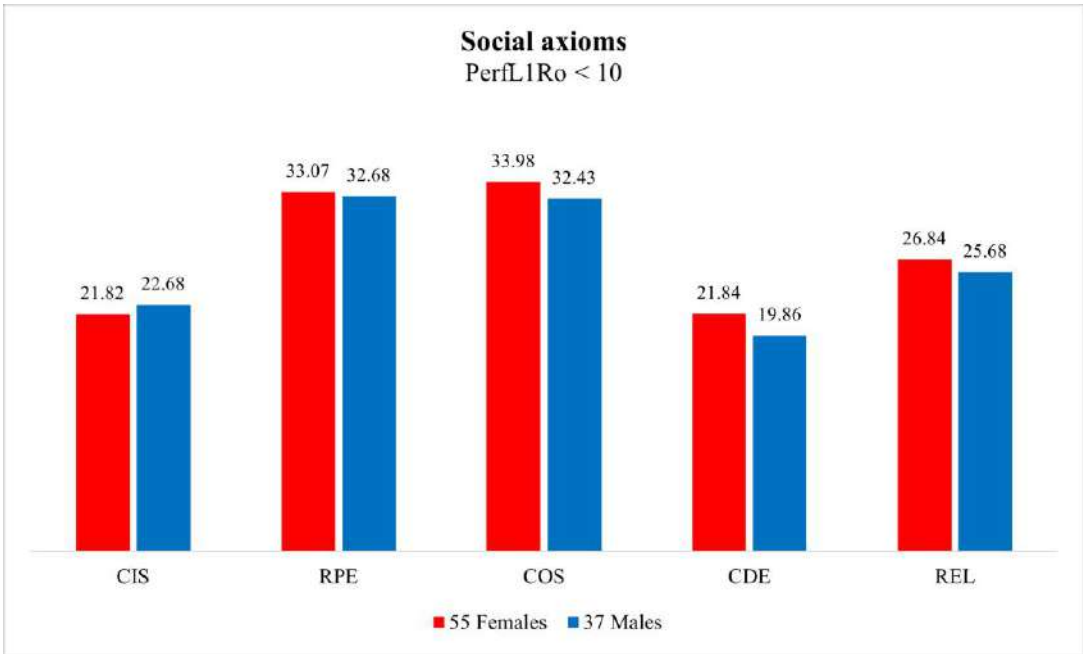


Figure 8

The basic psychological needs mean scores corresponding to 92 Romanian participants, 55 females and 37 males, with low-level linguistic performance in the Romanian language, PerfL1Ro < 10

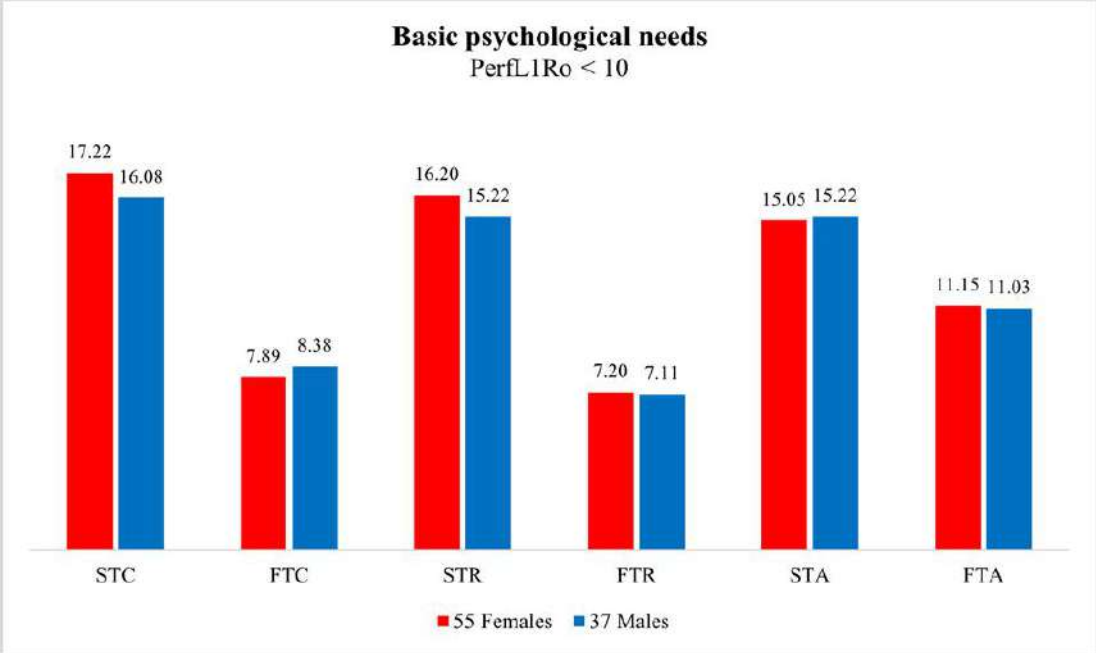


Figure 8 illustrates the mean scores of basic psychological needs corresponding to females and males with low-level linguistic performance in the Romanian language.

According to the data in Figure 8, for the 92 Romanian participants, 55 females and 37 males, with a low level of linguistic performance in Romanian, PerfL1Ro < 10, *t*-tests show that:

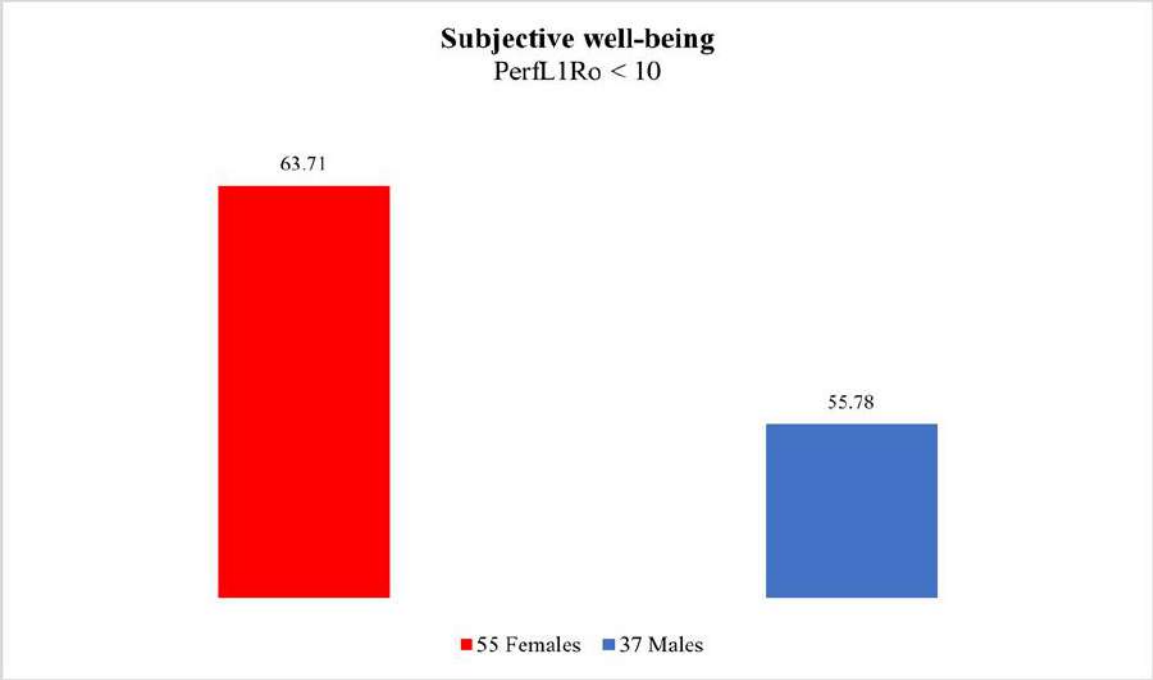
- The mean scores of competence satisfaction (STC) obtained by females (M = 17.22, SD = 2.401) are statistically significantly higher (t = 1.945, df = 90, p unidirectional = .027) than those of males (M = 16.08, SD = 3.201).
- The mean scores of relatedness satisfaction (STR) obtained by females (M = 16.20, SD = 2.724) are statistically significantly higher (t = 1.718, df = 90, p unidirectional = .044) than those of males (M = 15.22, SD = 2.647).

It was noted that mean scores of autonomy satisfaction (STA) obtained by females are smaller than those of males, but the differences are not statistically significant.

Figure 9 illustrates the mean scores of subjective well-being corresponding to females and males with a low level of linguistic performance in the Romanian language.

Figure 9

The basic psychological needs mean scores corresponding to 92 Romanian participants, 55 females and 37 males, with a low level of linguistic performance in the Romanian language, PerfL1Ro < 10



Analysis reveals that the mean scores of subjective well-being (SWB) obtained by females (M = 63.71, SD = 19.442) are statistically significantly higher (t = 1.905, df = 90, p unidirectional = .030) than those of males (M = 55.78, SD = 19.753).

Therefore, a gender perspective on 92 Romanian participants, 55 females and 37 males, with a low level of linguistic performance in Romanian, PerfL1Ro < 10:

(8) Females have a higher social complexity (COS) than males.
(9) Females have higher fate control (CDE) than males.
(10) Females have higher competence satisfaction (STC) than males.

(11) Females have higher relatedness satisfaction (STR) than males.
(12) Females have higher subjective well-being (SWB) than males.

The results of this study are summarized in Table 4.

Table 4

Social axioms, basic psychological needs, and subjective well-being of 190 Romanian participants depending on their high- and low-level linguistic performance in Romanian (PerfL1Ro = 10 and PerfL1Ro < 10) and their gender (f, females, and m, males)

Variable	PerfL1Ro = 10 | PerfL1Ro < 10	PerfL1Ro = 10 98p (71f+27m)	PerfL1Ro < 10 92p (55f+37m)
		Gender perspective	
Social axioms	COS(PerfL1Ro = 10) > COS(PerfL1Ro < 10)	CIS_f < CIS_m	COS_f > COS_m
	CDE(PerfL1Ro = 10) > CDE(PerfL1Ro < 10)	REL_f < REL_m	CDE_f > CDE_m
Basic psychological needs	STC(PerfL1Ro = 10) > STC(PerfL1Ro < 10)	FTC_f < FTC_m	STC_f > STC_m
			STR_f > STR_m
Subjective well-being		SWB_f > SWB_m	SWB_f > SWB_m

Discussions

The analysis of social axioms, basic psychological needs, subjective well-being, and linguistic performance in Romanian shows that the high- and low-level linguistic performance in the native language of participants differentiates some, but not all, of the variables. In addition, the variables were investigated from a gender perspective. This study identifies, in total, 12 statistically significant relations; they are all presented in Table 4.

Participants with a high level of linguistic performance in Romanian have more profound beliefs in social complexity (COS) and fate control (CDE) than participants with a low level of linguistic performance in the Romanian language. Also, respondents with a high level of linguistic performance had higher competence satisfaction (STC) than those with a lower level of speaking, reading, and understanding Romanian.

The gender perspective on the variables, in the case of participants with a high level of linguistic performance in their native language, Romanian (PerfL1Ro = 10), shows the following inequalities:

- Females' religiosity (REL) is smaller than that of males;
- Females' social cynicism (CIS) is smaller than that of males;
- Females' competence frustration (FTC) is smaller than that of males;
- Females' subjective well-being (SWB) is higher than that of males.

The same gender perspective on the variables but corresponding to participants with a low level of linguistic performance in Romanian (PerfL1Ro < 10) shows the following five differences:

- Females have a higher social complexity (COS) than males;
- Females have higher fate control (CDE) than males;
- Females have higher competence satisfaction (STC) than males;
- Females have higher relatedness satisfaction (STR) than males;
- Females have higher subjective well-being (SWB) than males.

Previous research suggests that, in general, men are more cynical than women (e.g., Leung et al., 2012a, p. 1159; Mosoia, 2022, p. 58). However, investigations of students from eight different cultural contexts suggest that women are more cynical than men (Leung et al., 2012a, p. 1161). Therefore, the result of this study suggests that men have a higher social cynicism than women in the context of high linguistic performance in the native language of participants.

Referring to the social axiom of religiosity, men are more religious than women, a result that confirms previous investigations (e.g., Mosoia, 2022, p. 58) and contradicts other studies (e.g., Beit-Hallahmi, 2003). However, this study suggests that men are more religious than women in the context of high-level linguistic performance in the native language of participants.

Regarding social complexity, this study suggests that females have a more profound belief than men, confirming previous research (e.g., Mosoia, 2022, p. 58). However, this study suggests that the result is valid among participants with a lower level of linguistic performance in their maternal language.

The present study shows that participants with a high level of linguistic performance in their native language have more profound fate control than participants with a low level of linguistic performance in their maternal language. Participants with a high level of speaking, reading, and understanding Romanian have a stronger sense of fate control and tend to believe that it is pointless to resist it. Also, they acknowledge the presence of expectations. In other words, respondents with a high level of linguistic performance in Romanian seem to accept more readily that the ability to change predetermined events and predetermination are logically incompatible than those with a low level of linguistic performance in Romanian.

Conclusions

This study shows greater social complexity and fate control associated with high-level linguistic performance in Romanian. High social cynicism tends to be associated with high-level linguistic performance in the maternal language of participants. The linguistic performance in Romanian differentiates reward for application and religiosity, but the difference is not statistically significant.

Also, higher linguistic performance tends to be associated with psychological needs satisfaction, while lower levels are associated with frustration. Also, high well-being scores are associated with high-level linguistic performance in maternal language.

In other words, this research suggests that linguistic performance in participants' maternal language impacts some social beliefs, basic psychological needs, and subjective well-being. In other words, this research positively answers the question addressed at its beginning.

Limitations

The time interval of this study, May 2019–March 2020, contains the emergence of the global pandemic in early 2020, which has consequences for the world population, implicitly on Romanian participants in this research. The present investigation did not consider COVID-19 as a variable, as it may have influenced participants' social axioms, psychological needs, and subjective well-being. Therefore, it represents a limitation of this study.

Next, most participants in this study reported a high level of education, and the generality of the findings also needs to be evaluated with low-levels education participants.

Another limitation emerged from how participants self-assessed themselves on speaking, understanding, and reading in their mother tongue, the Romanian language. The grade they report may be overestimated or underestimated. Therefore, biases could be manifested at the level of their beliefs. Overcoming this situation could have been achieved using a technique that did not involve participants' self-evaluation.

At the time of this study, studies have yet to be identified on the possible influence of language performance in the mother tongue on social axioms, which constitutes another limitation of the present research.

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RISKS AND OPPORTUNITIES FOR EDUCATION IN ROMANIA DURING THE COVID-19 PANDEMIC

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Abstract

Objectives. To provide an answer to the question: What were the main obstacles faced by teachers in Romanian pre-university education during the COVID-19 pandemic? School closures during pandemic effects will be investigated from the perspective of the difficulties in the educational process during the two years of the COVID-19 pandemic.
Material and methods. Qualitative methodology using four online focus groups (18 teachers from the pre-university education system in Romania) centered on topics related to education and teacher-student relations. Data collection period: July 27–September 13, 2022.
Results. Most respondents rated their digital skills as "good" or "very good" (46.5%). The main difficulties they faced online were: poor internet connection (71.2%), lack of software and applications (45.3%), lack of adequate equipment (38.8%), lack of digital knowledge (35.5%), decrease in student motivation (61.2%), fatigue (67.7%), and assessment errors (45.9%). Most respondents were aware of GDPR regulations (69.4%), and only 5% of them did nothing to ensure the students and teachers online safety.
Conclusions. The online educational activities during the COVID-19 pandemic had positive aspects (e.g., the ability to adapt quickly to the online education requirements; the development of new digital skills) and negative aspects (decreased student motivation; the emergence of new psychological phenomena—digital fatigue, student assessment errors). The main obstacles faced by teachers in Romanian pre-university education during the COVID-19 pandemic were professional, administrative, and psychological. Future studies are needed to identify ways to support teachers, on the horizon of the present economic and social crisis.

Keywords: Assessment of students' knowledge, COVID-19 pandemic, Digital competences, Online education, Online security.

Introduction

On March 11, 2020, Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization, announced the beginning of the first pandemic of the 21st century (WHO, 2020):

"In the past two weeks, the number of COVID-19 cases outside of China has increased 13 times, and the number of affected countries has tripled... Therefore, we have assessed that COVID-19 can be characterized as a pandemic. Pandemic is not a word to be used lightly or carelessly. It is a word that, if misused, can cause unreasonable fear or unwarranted acceptance that the fight is over, leading to needless suffering and death."

In order to prevent illness with the COVID-19 virus worldwide, numerous measures have been taken, such as: long-term quarantine; limitations of people's physical mobility; the obligation to carry out tele-work for non-essential jobs; limiting or prohibiting gatherings; physical distancing from from everyone, even if they do not appear to be sick; and moving school activities into the online, virtual space. (These advices for the public, along with avoiding the three Cs — social encounters that would take place in crowded and closed spaces and that would lead to close contacts —WHO, 2023) During the COVID-19 pandemic, similar measures were taken in Romania as in other European countries, among which those that affected the education system were among the most disruptive.

According to the statements of the Minister of National Education, at the beginning of the 2019–2020 school year, 2.8 million students and 215,289 teachers were enrolled in the system (Ofițeru, 2018). In the context of the COVID-19 pandemic, all of them were put in a position to adapt to distance education, mediated online, with teachers having to teach in the virtual space and learn the ways of teaching in the online system on the go.

The needs and challenges arising in the context of moving face-to-face teaching to the online environment can be divided into two broad categories, namely challenges faced by teachers on the one hand and challenges faced by students on the other. According to the specialized literature (Nistor, 2020), each category has two dimensions: logistics literacy and digital literacy. On the other hand, the COVID-19 pandemic contributed to the acceleration of the development of the online learning industry, globally, being the main method approached in most countries of the world (Todorov, 2022) to continue education and maintain social distancing and isolation. The idea of online learning is not new, but now it has been exploited on a large scale, considering not only the needs but also the benefits already noted, such as more independence and flexibility for learners, improved self-motivation, and better time management learning. However, the disadvantages of online education should not be minimized, which include the need for self-coordination, less social interaction, and more effort for pupils and students, as stated in the same paper.

In the following, the main current points of view regarding online versus physical education, face-to-face, will be detailed, starting from the various research studies carried out previously and/or during the COVID-19 pandemic, with the aim of delimiting the theoretical framework that substantiated the research with pre-university teachers regarding how they adapted and used the online environment to continue teaching activities in the conditions of social isolation imposed by the pandemic.

The theoretical framework

One of the first concerns determined by the move of education to the online environment was the exposure of children and adolescents to the inherent risks due to the long time spent online: from the "classic" risks, such as behavior (cyberbullying, sexting), content (exposure to pornography, cyberhate, exposure to extreme violence), or contact (harassment, theft of personal data) (Livingstone & Stoilova, 2021), the discussions extended to emerging risks, such as the datafication of children through the use of digital educational solutions and new technologies and

platforms (VR, AR, online games) and the commercialization of the educational act (Velicu, 2021). The studies carried out during the pandemic demonstrated the increase in cases of problems with the security of personal data and fraud in the online environment, the disruptive intrusion of strangers in online classes, and the exposure of children and adolescents to inappropriate content and cyberbullying (Khlaif, Salha, Fareed, & Rashed, 2021; Lassoued, Alhendawi, & Bashitialshaaer, 2020).

Starting from the model developed within the EU Kids Online project, with regard to all types of risks of the online environment, it must be taken into account that the risk is not equivalent to a negative impact on the user, but there is a relativity in terms of the effects on which risks have on children, some being more vulnerable than others (it all depends on the degree of resilience development of each) (Livingstone, Mascheroni, & Staksrud, 2018). It should also be taken into account that evidence shows that risks are generally associated: exposure to one of the online risks often involves experiencing other online risks, and those vulnerable in the offline environment are also victims in the online environment and vice versa (Livingstone & Stoilova, 2021; Stoilova, Livingstone & Khazbak, 2021).

An emerging risk of the pandemic period that affects children and adults, students and teachers alike, is "zoom fatigue", a term used to describe the fatigue generated by the excessive use of video conferences at work, and which is also associated with online education, mediated by the different platforms that make it possible to learn "synchronously". Research shows that this syndrome is characterized by increased levels of anxiety, depression, social and emotional isolation, and loneliness (Elbogen et al., 2022). Children and young people who have experienced online schooling for long periods of time during the pandemic have been affected by these issues: excessive exposure to screens, social isolation, a lack of breaks, and the opportunity to think critically (Ringelstein, 2020). To these are added problems related to the difficulty and errors related to assessment, the process of teaching-learning-assessment being affected by the transition of all educational processes online.

Another controversy related to online education is the issue of social inequalities. On the one hand, it can have beneficial effects on social inclusion, but on the other hand, it can deepen social and educational inequalities if it is not properly implemented, with special consideration of these aspects. The implementation of online education must take into account the risk of deepening social inequalities both in terms of access to infrastructure (Internet technology, connected devices) and in relation to a number of social aspects of this form of education. Family support is also often necessary for online education, and children from disadvantaged backgrounds are often at risk of not receiving this support due to the poor literacy of their parents or grandparents, their low digital skills, or a lack of time (in single-parent families, for example). Moreover, for some of these children, attendance at school represents more than access to information, especially access to a space and time dedicated to learning, which are sometimes limited within the household (cases in which children help with household chores, take care of younger brothers/sisters, or do not have enough space to access the virtual learning space, even if they have access to such devices) (Velicu, 2021). All this should have been taken into account when online education was extended for most of the 2020–2021 school year in Romania, so that online education would not be an extra burden for the family (and thus increase the risk of school dropout) or to deprive children of the right to education. In Romania, the situation is quite serious regarding these gaps, considering the fact that it was ranked first in terms of the number of children at risk of poverty and social exclusion (41.5%) (Eurostat, 2021).

For a good implementation of online education, digital skills are needed by students, teachers, and even parents (Cachia, Velicu, Chaudron, Di Gioia, & Vuorikari, 2021), even more so in the case of young students or children with special educational needs. These digital skills should not be reduced to operational skills (to use the Internet and connected digital devices at a basic level), but should be understood globally, according to the DigComp grid (Vuorikari, Kluzer, & Punie, 2022) developed at the level of the European Commission, which carries out a detailed operationalization of them. Digital competences develop on three dimensions: cognitive, practical (skills), and attitudinal, each of which is detailed in five thematic areas that conceptually define the DigComp model, i.e., information literacy, communication and collaboration, digital content creation, online safety issues, and digital problem solving. Only with such a holistic understanding of digital skills and aiming at at least an average level of development at the level of teachers can online learning be successfully applied. Thus, for example, without real skills of communication and collaboration in a digital environment or of creating content using online resources, the use of digital technology is reduced to being a parallel teaching environment, through which is conveyed what would be transmitted identically transmitted face-to-face, as many voices have identified as the case during the pandemic (Bülow, 2022).

In this context, teachers in Romania, forced to move quickly and learn on-the-go didactic strategies useful for adapting to the online environment, have faced a series of specific problems, to a greater or lesser extent related to issues at the international level. The qualitative research, through the method of online focus groups carried out with Romanian teachers, aimed precisely to identify the particular aspects specific to the national framework regarding the adoption of online education.

The methodology

The present article had as its research objective the identification of possible answers to the question:

The research question is: "What were the main obstacles faced by Romanian pre-university teachers during the COVID-19 pandemic?"

In order to identify possible answers, this study analyzed a set of data obtained within the "DigiTeaL" (Digital Teaching Literacy) project, an Erasmus+ project carried out during 2021–2022 during 18 months, in partnership between the University of Bucharest (Romania); the University of Wolverhampton (Great Britain), and some non-governmental organizations: "Demokritos" (Cyprus), "Emphasis" (Greece), and "Beno" (Germany). More precisely, in the second stage of the project, between September 9 and 11, 2021, a set of four online focus groups with 18 teachers from pre-university education in Romania was conducted in Romania.

Results

The analysis of the results of the focus groups indicated that, in terms of online teaching, the teachers developed a series of new skills. Thus, on the one hand, teachers had the opportunity to develop new skills and learn many new things (e.g., the development of digital and online teaching and assessment skills).

> *"I can tell that the kids have done better with the new technology, and they're actually becoming teachers of teachers." (FG3)*

"We used more informational materials to create new, engaging lessons for students." (FG3)"For the French and English teachers, it was a challenge to choose the platform, attract them with new materials, etc." (FG4)

At the same time, an extremely interesting aspect of the focus group sessions was the skill set needed by a teacher in online teaching, comprising two aspects. One aspect aims at learning the creative use of digital tools (especially video programs), but also various quiz applications and didactic games:

"As for the extras related to online teaching here, I would mention games, puzzles that were appreciated by the students." (FG1)

"I can say that in 2020 I learned a lot from the students and less from my colleagues." (FG3)

The second aspect concerns the more effective use of already existing online teaching platforms:

"Most students have the necessary digital skills. Over time, I have used a lot of gaming apps. For example, Jamboard is very popular with students." (FG1)

"We had to put in a lot of hours using platforms that allow teachers to be creative. I can say that a creative activity requires a lot of time and the development of clear technical skills for us teachers." (FG1).

Regarding assessment, teachers stated that they too could not assess student achievement in an objective and fair way because of the environment in which teaching took place (exclusively or partially online).

"I lost a lot of children. It is true that two pupils with special educational needs benefited, but they did their homework with their parents, and we don't know who actually did the homework." (FG2)

"I would say that I evaluated 30% of the activity submitted by the students. And let's not forget that grades were higher online than offline." (FG3)

"It was very difficult to mobilize and control the class during online classes." (FG4)

As for the difficulties of online teaching, they were of several types: technical, social, related to class management, and personal.

Regarding the technical difficulties, the teachers participating in the focus groups indicated the lack of appropriate technology (laptops, tables, mobile phones) or the existence of problems related to the Internet connection and platform security.

"The students lacked many devices at the beginning. It is clear that here, in terms of devices, the state that spent on the purchase of tablets benefited. But overall, even if the state won education, it lost, and I say this not only for students from 1 to 8, but also for those aged 16–19!"(FG1)

"We sought to protect online students from different individuals accessing the online class link. So that the students were initially introduced one at a time, and only the students of the respective class could enter at that time." (FG3)

"Our internet often goes down in the winter, and we don't have an internet connection in the commune." (FG4)

From the perspective of social difficulties, the group discussions highlighted the emergence of new types of relationships within the "golden triangle" (teacher-child-parent) and, simultaneously, the development of new social roles for the child and parent within the educational process.

"I didn't know who was connected: the student, the parent, (or) a sibling? There was also a problem with the lack of feedback because the students no longer say if they understood, and it is not known if they actually understood something from the lesson." (FG3)

"The parents also participated in the classes, a fact that wouldn't bother me anymore if it weren't for the situations in which they intervened during the activity. One of them drew my attention, saying that he knows how to solve a math problem. Another came over another child, saying to let him answer as well... A series of situations to which I didn't even know how to react anymore!" (FG2)

The classroom management difficulties concerned, on the one hand, the emergence of extremely high barriers related to attracting and maintaining students' attention and the existence of obstacles in the individual assessment of learning performance, on the other.

"It is very difficult with young students who are not prepared. They play but don't want to attend classes. At the same time, parents complain that they have no way to help them get online. The lucky ones are the ones who have older siblings and help them with online classes." (FG1)

"It's clear that students' concentration level decreases with online classes; it's something that I and my colleagues have also noticed." (FG3)

The fourth category of difficulties, those of a personal nature, was identified by participants in the focus group sessions as related to their need to learn and develop new skills related to online teaching, the emergence and persistence of time management problems, and the increase in the time allocated by them for the preparation of lessons.

"Online education is totally different from face-to-face education. At first, the children worked in the classroom in teams; then it was no longer possible online. We tried, but the students complained that it was difficult and not good. Likewise, the hybrid system was very difficult because there were overlaps and broken hours." (FG2)

"I won't hide from you that preparing the online classes took longer than when I was preparing them for the classic system." (FG3)

Group discussions also revealed that pre-university teachers had to attend training courses to refine their technical-digital, social, and psychological skills needed in online interactions with students.

"I attended paid online courses for the assessment sheet. Before, there were free courses through Casa Corpului Didactic, but the courses that were previously free are now paid." (FG3)

Discussions and conclusions

The COVID-19 pandemic has produced a series of important changes in the education system, both in terms of the large-scale introduction of digital technology in the teaching-learning-assessment act and in terms of the main online teaching methods used by teachers in Romanian pre-university education.

Most of the teachers included in the focus group discussions had mixed evaluations of online teaching during the period of total isolation (March–May 2020) and the 2020–2021 school year. On the one hand, teachers had the opportunity to develop new skills and learn many new things. On the other hand, they could not assess the children's achievements in an objective and fair way because of the environment in which the teaching took place (exclusively or partially online).

Teachers identified several types of problems they faced during this pandemic. Thus, in terms of technical difficulties, they talked about the lack of appropriate technology (laptops, tables, mobile phones) or the existence of problems related to the Internet connection. From the perspective of social difficulties, they mentioned: new types of relationships within the "golden triangle" (teacher-child-parent) and the emergence of new social roles for the child and parent in the educational process. In terms of personal difficulties, teachers mentioned the need to learn and develop new skills related to online teaching. From the perspective of difficulties related to managing students in an online classroom versus a face-to-face situation, the participants in the online discussions indicated the existence of extremely high barriers related to the individual assessment of learning performance; problems related to teaching and assessment of performance; and in the case of teaching classes, problems related to maintaining the attention of students during online classes. A highly interesting aspect of the focus group sessions was the skill set required of a teacher in online teaching, including: learning to use digital tools creatively (especially video programs), making more efficient use of already existing online teaching platforms, and attending training courses to refine the social and psychological skills needed in online interactions with students.

Although this research has a number of limits, especially related to representativeness, the results cannot be extrapolated to the level of all Romanian pre-university teachers, the results obtained and the ideas provided by the participating teachers are valuable to demonstrate once more that pre-university teachers Romanian reacted quickly, accepting and adapting to the challenges induced by the pandemic and moving the school to the online environment: they acquired new digital skills either by participating in training courses or through their own effort and self-learning, they became more creative, they made efforts to continue the educational process adapting to the context of each school and the specific needs of the students.

Finally, this article contributes to the ongoing discussions about the efficiency and effectiveness of online learning in the pre-university education system by presenting the main challenges Romanian teachers were facing during the pandemic. Nowadays, as the pandemic is over and technological advancements continue to provide solutions for integrating online learning into the classroom, teachers and stakeholders should keep in mind the lessons learned during that period and propose better solutions. Online learning alone is proving to be a “bad solution” with many drawbacks, but the idea of integrating online resources into the physical classroom is a necessity to teach children digital skills. Teachers have proven during the pandemic that they are open and interested in using digital technologies for learning and teaching. Therefore, they should be further trained to be better equipped to use online platforms and tools in the classroom. Online platforms, VR (virtual reality), and AR (augmented reality) technologies continue to evolve to help teachers deliver complex and relevant learning experiences to children and students, enhancing the blend between theory and practice. Knowing that learning by doing and practice are the most efficient ways to help students acquire the desired competencies, future research should focus on finding the best mix for integrating online resources and digital technologies into the classroom to avoid the disadvantages and promote the benefits of technological development.

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EXPOSURE AND SUBJECTIVE EXPERIENCE OF THE CONSUMPTION OF AUDIOVISUAL CONTENT IN YOUNG MEXICAN UNIVERSITY STUDENTS

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Abstract

Objectives. This study aims to characterize the exposure of Mexican young university students to internet audiovisual content and analyze their subjective experiences in consuming such content.

Material and Methods. A multiple case study design was employed utilizing content analysis as analytical strategy. Data were collected through 15-item semi-structured interview, validated by experts calculating the content validity coefficient (CVC) before initiating data collection.

Results. Sixteen participants were evaluated. Data analysis considered two general categories: A) Exposure to audiovisual content (types of media, initial devices used for viewing playful content, variations in consumption times, historical patterns of audiovisual content consumption); and B) Subjective experience of audiovisual content consumption (emotions associated with consumption, positive and negative perceptions). Category A yielded two main results: 1) Mobile devices facilitated access to audiovisual content, though television and video games remained the primary means of entry; and 2) participants exhibited a shift in interests towards more specialized content during their university years. Concerning category B, participants reported seeking audiovisual content to experience specific emotions such as fear and joy. Additionally, they highlighted benefits like social connection, entertainment, and learning. However, some reported negative effects, including experiencing negative emotions and a perceived lack of control over the time spent consuming audiovisual content.

Conclusions. This research contributes to the understanding of audiovisual content consumption habits in young university students. It seeks to identify how the consumption of such content positively and negatively impacts their emotions, entertainment experiences, learning, and socialization processes. Furthermore, the study aims to shed light on potential risks associated with problematic usage patterns.

Keywords: Audiovisual content, subjective experience, university students.

Introduction

Audiovisual content refers to any combination of sounds, visual images and text, that are intended to inform or entertain (Law Insider, 2023). Examples of audiovisual contents include videos, films, slideshows, presentations, animations, interactive content, and audio recordings (Kathirvel & Hashim, 2020).

The consumption of audiovisual content through the Internet has increased in recent years. (Instituto Federal de Telecomunicaciones [IFT] [Federal Institute of Telecommunications], 2022) and the consumption of audiovisual content is changing rapidly, younger audiences are increasingly consuming audiovisual content through online streaming services such as Netflix or YouTube (Budzinski, Gaenssle, & Lindstädt-Dreusicke, 2020). This trend is also being driven by the increasing use of mobile devices, such as smartphones and tablets, which allow people to consume audiovisual content not only in the living room at home but virtually anywhere and at any time.

This consumption of audiovisual content represents an important part of people's daily lives (Center for Technology, Media & Telecommunications practice, 2018) since it influences their emotions (Huston & Bentley, 2010) and the creation of their routines (Feiereisena, Rasolofoarisonc, De Valckd, & Schmitte, 2019).

However, to identify how the consumption of this audiovisual content impacts the lives of university students, it is important to first describe how students approach audiovisual content and then characterize the emotions they elicit.

According to the Instituto Nacional de Estadística y Geografía [National Institute of Statistics and Geography] (2022), Mexico had 84.1 million Internet users in 2020, with a high frequency of use in young adults of 18 to 25 years old (90.5% usage). In addition, the state of Baja California is in third place at the national level in the states with the highest values in proportion of Internet users with 84.3%.

Due to this high rate of Internet use in Mexico, by the youth population, studies have been conducted on the understanding of the digital behavior of this population and their attitudes and emotions aroused from the consumption of audiovisual content. The results indicate that the use of the Internet is massive among the university students (Morales, Zacatenco, Luna, García & Hidalgo, 2020), and they use it to watch series on streaming services (Benavides & García-Béjar, 2021), playing video games (Morales et al., 2020), and communicating through social networks (Rivera & Carriço, 2019).

On the other hand, it is important to identify the subjective experience of young university students when consuming audiovisual content. The subjective experience could involve aspects such as the emotions evoked, the individual's personal interpretation of the content, the impact on their mindset, and other qualitative elements that contribute to the overall subjective experience (Avalos, 2019). Studies carried out with participants from Tijuana in Mexico determined that they use the Internet and its content as entertainment tools, contributing to the construction of meanings (León, 2018; Avalos, 2019). This consumption could be attributed to the gratification from factors such as (1) instant accessibility through technological devices, and (2) the subjective process of the experience of young people (Avalos, 2019). Although, some students reported negative effects derived from their consumption of content on the Internet (e.g., loss of time notion, which produces feelings of guilt for time consumed) (Cebrero, 2017), another studies have found that the subjective experience is determined by the positive and negative emotions associated with the consumption of audiovisual content (Blanco-Ruiz, Sainz-de-Baranda, Gutiérrez-Martín, Romero-Perales, & López-

Ongil1, 2020) as well as the socialization needs satisfied by audiovisual media (Kwegyriba, Osei, & Ewusi, 2022).

Based on the above, this study aims to analyze Mexican university students' exposure to internet audiovisual content and their subjective experience with it.

Material and methods

The study employed a multiple case study design, using content analysis as the analysis strategy. The data was collected through semi-structured interviews which were validated for content.

Sample

The sample consisted of 16 people whose inclusion criteria were to be a university student between the ages of 18 and 30 of any sex. Participants were volunteers and were identified using a snowball sampling strategy.

Material

The instrument used was a semi-structured interview developed by the researchers and subjected to a content validation process. To determine the content validity, the Content Validity Coefficient (CVC) was calculated. This coefficient is based on the evaluations of judges (experts not involved in the current research) according to established criteria (Hernández-Nieto, 2002).

In this study, the categories used for validation were adequacy and pertinence of the interview items. Additionally, the judges had the option of providing direct comments on each item to ensure optimal suitability for the research purpose.

Procedure

After the validation of the semi-structured interview format, university students from the Autonomous University of Baja California were invited to participate in the development of this study. Those people who decided to participate received an informed consent, previously approved by the bioethics council of the Faculty of Medicine and Psychology of the University. Their participation in the study was explained to them, as well as the risks, benefits, and management of the information they would provide. After signing the informed consent form, the volunteers were invited to participate in a virtual interview via Google Meet. Each interview session had an average duration of 25.66 minutes, being recorded with the prior consent of the participant and later transcribed.

Results

First, the instrument's validity by the CVC procedure for the semi-structured interview was carried out. The original version of the instrument consisted of 22 items, subjected to the expert's validation. Three experts evaluated each item on a scale from 1 to 5 (1 being the lowest value and 5 being the highest value) in the categories of (1) adequacy (the question is easily understood) and (2)

pertinence (it is pertinence to achieve the general objective of the investigation). In addition, the judges were asked for comments they considered pertinent on each item to improve the instrument.

Subsequently, the CVC was calculated for each of them following the formula:

$$CVC = \frac{Mx}{Vmax}$$

were *Mx* represents the average of the element in the score given by experts, and *Vmax* the maximum score that the item could reach. Finally, only the items with a cut-off point greater than .80 were retained. In addition, for each of these items, the adjustments suggested by the expert judges were made, mainly in terms of drafting. This process resulted in the latest version of the semi-structured interview, with 15 items overall (see Table 1).

A total of 16 participants (56% women) with an average age of $M = 22.68$; $SD = 2.36$ years were interviewed (There was no significant difference between the age of males and females). The average daily time spent consuming audiovisual content per participant was 4.6 hours (see Table 2).

Table 1

Items of the semi-structured interview by category and code and Total CVC index by item

Category	Code	Item	Total CVC
A. Exposure to audiovisual content	A1. Format and modality of exposition	1. What devices do you use to watch audiovisual content?	.90
		2. Do you remember at what age and how did you start watching audiovisual content on your own?	.83
		3 How has your approach to audiovisual content and the time you dedicate to it changed in recent years?	.83
		4. Currently, what kind of audiovisual content do you watch and for what purpose?	.90
		5. What is the platform, web page or application that you use the most to watch this content?	.83
		6. How much time do you invest in audiovisual content on each website, application, and/or platform you use?	.83

Category	Code	Item	Total CVC
		7. Did university change your audiovisual content routine in any way? How?	83 .
B. Subjective experience of consumption of audiovisual content	B1. Emotions associated with the consumption of audiovisual content	8. What do you find most appealing about the audiovisual content you watch?	83 .
		9. What emotions generate in you watching this type of content?	83 .
		10. Do you consider that audiovisual content has had effects on you? What kind and why?	83 .
	B2. Positive perception of the consumption of audiovisual content	11. In general, what benefits do you think that audiovisual content provides to young people?	83 .
	B3. Negative perception of the consumption of audiovisual content	12. Do you consider there are negative effects of the audiovisual content? Which ones and why?	83 .
		13. What strategies do you use to regulate the negative effects?	83 .
	B4. Socialization	14. What effect, if any, do you think watching audiovisual content has on your family relationship?	90 .
		15. What effect, if any, do you think watching audiovisual content has on your friendships?	90 .

Note: the original items are in Spanish, here is an English version.

Table 2
Descriptive data of each analyzed interview

Document	Age	Sex	Career	Most used device	Platforms	Average consumption time (daily)
E1	22	M	Industrial engineering	Smartphone, laptop	YouTube, Netflix, Instagram	2 hrs
E2	21	W	Industrial engineering	Smartphone, TV	HBO, Primevideo	/
E3	22	M	Computer engineering	Smartphone, laptop	TikTok, Twitch, Re-edit	11 hrs
E4	21	W	Industrial design engineering	Smartphone	YouTube, Instagram	5 hrs
E5	22	W	Digital graphic design engineering	Smartphone	Instagram, Youtube, Netflix, Disney Plus	4 hrs
E6	21	W	Digital graphic design engineering	Smartphone, laptop, tablet, TV	Youtube	5.5 hrs
E7	27	W	Master of Biomedical Sciences	TV, PC, Smartphone, Nintendo switch	Netflix, pubmed, league of legends	Netflix 2.5 hrs League of legends 5 hrs
E8	27	M	Master of Biomedical Sciences	Smartphone, PC, TV	Youtube y social media (Facebook, Instagram)	4 hrs

Document	Age	Sex	Career	Most used device	Platforms	Average consumption time (daily)
E9	22	M	Industrial design engineering	Smartphone, PC, videogame consoles, TV	Youtube	10 hrs
E10	22	W	Bachelor's Degree in Spanish-American Literature and Language	Smartphone, laptop	Netflix, animeflv	2 hrs
E11	22	W	Digital graphic design engineering	TV, laptop, smartphone	Mubi, youtube	5 hrs
E12	21	M	Mechanical engineering	Laptop	Netflix, primevideo	2 hrs
E13	21	W	Mechatronics engineering	Smartphone, TV, laptop	Youtube, Disney+, netflix	3 hrs
E14	22	M	Architecture	Smartphone, laptop	Facebook, youtube	1.5 hrs
E15	28	M	Industrial design engineering	Laptop, Smartphone	Youtube	3.5 hrs
E16	22	W	Fashion design	PC, smartphone	Tiktok, instagram	3 hrs

Based on the previously defined categories ("Exposure to audiovisual content" and "Subjective experience of consumption of audiovisual content"), the analysis carried out with the support of the Atlas Ti software in its version 23.1.1 from the speeches of the 16 participants is presented.

A. Exposure to audiovisual content

A.1 Format and modality of display

Although the devices for consuming audiovisual content are varied, all the participants referred to mobile devices as the main means of accessing audiovisual content. Television and video game consoles are the first devices that were voluntarily used by the participants to view playful content. The starting record was between 7 and 10 years of age for the voluntary search for consumption of cartoons and between 12 and 14 for video games.

According to the results, variations in the amount of audiovisual content consumed over time were associated with the content types and the ways of accessing them. The transition from the use of free-to-air television to the use of electronic tablets or cell phones, through platforms such as YouTube and Netflix, allows for on-demand management, unlike the programming established on television channels.

Entrance to undergraduate and postgraduate university programs were referred to as impact factors on the consumption of audiovisual content in two ways: (1) as a reducer of the time available to dedicate to the recreational consumption of audiovisual content, and (2) as a differentiator of new interests in content.

As the E1 participant refers, the same platforms are used to adjust to the new interests:

"But lately, or until two years ago, a year or so, I began to focus on those topics that were a little more interesting and, therefore, for example, Youtube channels that are a little more formal for news to things like that" (E1).

B. Subjective experience of consumption of audiovisual content

B1. Emotions associated with the consumption of audiovisual content.

Regarding the emotions associated with the consumption of audiovisual content, one of the participants verbalizes the search for specific content to experience certain emotions:

"I like to watch horror and suspense movies for the emotions that provokes you, how that feeling remains intriguing and how that's where they're going to scare me. […]. And I also like romantic comedies" (E5).

Other emotions reported were happiness, hope, satisfaction, stress, anxiety, frustration, and sadness. As can be seen, the emotions associated with consumption are both positive and negative; they also mention the intentional search for distraction from problematic situations.

B2. Positive perception of the consumption of audiovisual content

There is recognition of platforms as spaces for learning and entertainment. In addition, it was pointed out as an emotional benefit for consumers the perception of some content as a tool for connecting with society:

"Generally, it helps them a lot to see another perspective. Actually, you have your own senses, the media, and other daily events, but by watching audiovisual content you can learn different things and expand your knowledge" (E7).

B3. Negative perception of the consumption of audiovisual content

The negative perception of the consumption of audiovisual content refers to the lack of control over consumption time and, specifically, on some platforms such as TikTok and with the idealization of lifestyles, as discussed in E6:

"I feel that something is happening a lot with this, with my generation and the generations that follow, that they are comparing a lot with what they see and sometimes learn methods or take dynamics that can become toxic to themselves, such as comparing themselves with others" (E6).

Likewise, the possibility of social isolation by not controlling the time of consumption was recognized as a negative effect.

"The worst thing for me is the time it takes. When I feel like it's too much I stop, sometimes it's League of Legends that makes me quit the computer and do something else, but to rest from the extra time that I spent on that activity" (E7).

This is associated with the possibility of generating sedentary lifestyles and more profound effects on the "subject to information manipulation" (E8), such as the alteration in the perception of the context and the risk of doing things that cause them problems, such as taking on various challenges.

Two of the participants (E12 and E13) mentioned negative perceptions of the consumption of audiovisual content not suitable for all ages:

"Yes, as I mentioned earlier. When someone accesses content not suitable for his age and without adult supervision can give a wrong idea of reality (pornography, violence)" (E13).

Although it was not classified within the negative effects of consumption, it was interesting to find the identification of monetary cost, specifically in video game platforms, in the purchase of the most current devices and paying for services to consume them, as well as in the effects of marketing to consume what is promoted on the different platforms.

B4. Socialization

All the participants agreed that consuming audiovisual content affects socialization, and encourages various degrees of social interaction with family and friends.

"I could get closer to the family or isolate myself from it, we have access to information that resonates with a family member and I can interact, but for that is important to put away cell phones and talk." (E8)

Due to undeniable fact that it is practically impossible to avoid being exposed to audiovisual content, several participants have proposed finding functional forms of consumption that enable consumption regulation (E9), as participant E8 has stated:

"In young people I think it would be essential to create a habit of looking for other ways to consume any type of information." (E8)

Some participants, who were video game users, highlight that one of the benefits of internet is being able to play online with their friends, as well as meeting people and being able to play in a group. One of the participants mentions the following:

"With my friends, this was a way to meet and interact with these people with whom I play and whom I met through this medium." (E7)

Discussion

According to the conducted analysis, television was identified as the historically earliest device used by students to access audiovisual content. The data suggests that the use of television remains prevalent among young people, as indicated by the IFT (2022), which reported that approximately 95% of people in Mexico have a television set at home. Although television use appears to be widespread, it is essential to note that television is now an extension of computers and mobile devices. In other words, students tend to use television to consume content that is also

accessible on mobile devices. Furthermore, the consumption of audiovisual content on televisions seems to be influenced by Internet access and the transition of traditional televisions to Smart TVs.

Video consoles are another device mentioned by participants for the consumption of audiovisual content. Therefore, we recommend a thorough analysis of the role of video consoles as a device for consuming audiovisual content.

Concerning the subjective experience of consuming audiovisual content, the analysis suggests that young people may use audiovisual content, such as videos, to evoke specific emotions. This finding aligns with the proposal of Yamamoto, Kawahara, and Tanaka (2020), who argue that emotional impact increases with age, deepening over time. Consequently, it is crucial to continue investigating this phenomenon in later age stages. It is worth considering that the consumption of audiovisual content, represented by movies and television series, is mounting, with YouTube and Netflix being the primary platforms, followed by Facebook and TikTok.

Reported emotions during the consumption of audiovisual content can range from positive to negative, supporting the hypothesis that audiovisual content elicits emotions such as happiness and sadness. However, it is essential to conduct cross-cultural studies, as the evocation of emotions can vary based on cultural, language, gender, and age differences (Blanco-Ruiz et al., 2020).

The results show that the content itself is usually seen in a positive way when it comes to the perception of audiovisual content use. This finding confirms the previous evidence that this kind of content has a powerful entertainment function (Asociación de Internet MX [MX Internet Association], 2022)

Additionally, participants highlighted the benefits of access to audiovisual content in their learning process, supporting Kwegyiriba et al.'s (2022) proposal that audiovisual content aids in the learning process by motivating students. Moreover, the consumption of audiovisual content appears to influence social interaction through sharing information and experiences in real-time, specifically through video games. However, this phenomenon lacks substantial evidence, and future research is recommended to delve deeper into this aspect, as participants suggested that this interaction extends to social networks and video games.

Regarding the negative impact of consuming audiovisual content, it is more associated with the loss of control over the time used rather than the content itself, which could even be translating into a problematic use of digital media (Wright, Heiman, & Olenik-Shemesh, 2021).

Conclusion

In conclusion, this research highlights the complexity of studying university students' consumption of audiovisual content, emphasizing the elements that influence exposure to audiovisual content and the subjective experience of young people during this process. The design of this study and the investigation of characteristics, such as the time of use, the devices with the highest use, and the media platforms used, have provided the possibility of knowing the digital behavior of young university students and identifying its patterns.

This research is consistent with previous findings that suggest that consuming audiovisual content has a powerful emotional element. Although the consumption of audiovisual content can produce negative emotions (e.g., negative emotion from unregulated consumption), it can be inclined to produce positive emotions in the viewer, as well as a bridge that helps people in their socialization process with others.

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MEDIA AND DIGITAL LITERACY OF PUBLIC RELATIONS EXPERTS IN CRISIS COMMUNICATION

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Abstract

Objectives. This paper delves into the significance of media literacy for PR professionals, especially during crises. Ineffective media communication and poor strategic planning can erode trust, weaken stakeholder relations, and lead to social media crises and a loss of public legitimacy.
Materials and Methods. The Cision Global State of Media Report (2022) reveals a decline in media trust and highlights journalists' preferences for multimedia content. This study examines two crisis situations in Bulgaria: 1) NEXO, a leading digital asset management institution accused of fraud in the USA, and 2) TELUS International Bulgaria's content moderation issues on Facebook. The focus is on communication techniques like official statements, press releases, and media interviews. The communication techniques used for media relations, like official statements, open letters, press releases, press conferences, and media interviews, are considered for the purposes of this publication.
Results. There's a noticeable gap in research on PR professionals' media and digital literacy. The NEXO case underscores the challenge journalists face in understanding crises in specialized sectors and the importance of PR specialists in conveying complex information. The TELUS case highlights failures in crisis communication, ineffective diversion tactics, and improper handling of accusations.
Conclusions. PR professionals must prioritize the media and journalists during significant public crisies. While media communication practices are evolving in the digital age, the relationship between journalists and PR experts is crucial, yet strained by factors like mistrust and poor communication. Both parties play a pivotal role in shaping public discourse during crisies and have an ethical duty to provide clarity to society.

Keywords: media literacy, digital communication, crisis, Bulgaria, public relations.

Introduction

In today's hyper-connected digital landscape, the intersection of emerging technologies, social media platforms, and global events has given rise to an era where information spreads at unprecedented speed and reaches vast audiences. Amidst this informational deluge, the importance of media literacy has never been more paramount, especially for public relations (PR) experts tasked with managing crisis situations. The complications of today’s emerging technological and digital crisis

has have created a critical juncture for PR professionals, necessitating a deep understanding of media literacy to navigate these complex scenarios effectively.

When it comes to media relations in crisis communication, this study argues that media and informational literacy skills are crucial for PR experts, because they are essential for the practice of their profession. Media literacy equips PR professionals with the ability to discern credible sources from misinformation or fake news. Understanding the dynamics of media consumption enables them to develop accurate and informed responses during crisies, preventing the dissemination of inaccurate information that can exacerbate the situation. They can craft appropriate messages for different media platforms, ensuring consistency in communication and reputation management. Being media literate allows them to anticipate potential narratives and respond strategically to mitigate the negative impact of crises on an organization's image and public perception. Media and digital literacy enable PR professionals to stay ahead of emerging trends, public sentiments, and potential issues that may escalate into a crisis. By monitoring digital conversations and news trends, they can proactively address concerns before they escalate, minimizing the impact on an organization's reputation. Understanding media dynamics helps them prepare for interviews, press conferences, and other media interactions. Additionally, during crisis simulations, media literacy aids in assessing how well PR teams handle information dissemination and respond to different media scenarios.

The media landscape continuously evolves with technological advancements. Media literacy empowers PR professionals to stay updated with the latest trends, tools, and digital platforms, enabling them to remain agile and relevant in their crisis communication efforts. Certain occupations, particularly those in the field of communication disciplines, necessitate a solid understanding of media literacy. Public relations are one of those sectors in which professionals must have critical media assessment skills. As a result, it is important for them to make well-informed decisions about which channels to use to effectively engage with their audience. Furthermore, understanding how various channels may reinforce the message is critical (Wilcox and Cameron, 2009). Potter states that media literacy involves a cognitive, emotional, aesthetic, and moral dimension. The cognitive part is concerned with information, which includes details such as dates, names, and definitions. The emotional dimension is concerned with expressing emotions such as love, joy, and dissatisfaction. The aesthetic dimension includes the means for delivering messages. Finally, the moral component is linked to values, demonstrating what is acceptable and unacceptable (Potter, 2010).

Media literacy, according to the Aspen Institute, can be described as "the ability to sensitize, analyze, and produce information for specific results" (Aufderheide, 1993, p. 6). Over the years, this definition has evolved, extending beyond printed materials to encompass various forms of expression and communication, including images and multimedia content. Moreover, social media has facilitated the coming together of groups for collaborative efforts and allowed a vast community of content creators to interact. It is essential to highlight that Hobbs specifically discusses media literacy, defining it as the acquisition of knowledge, skills, and life competencies that empower individuals to engage actively in contemporary society. This involvement includes accessing, analysing, evaluating, and generating messages using diverse media as a product of media education (Hobbs, 2023).

According to Polanco-Levicán and Salvo-Garrido, the significance of literacy in both traditional and digital media cannot be overstated due to the constant influx of messages from various origins. In general, these messages aim to enhance individuals' capacity to assimilate and function effectively today. Therefore, it becomes crucial to promote the cultivation of essential skills like critical

thinking, particularly considering that despite growing up with the Internet, teenagers and young people may not possess well-developed proficiencies in all aspects encompassed by digital literacy (Polanco-Levicán, Salvo-Garrido, 2022). However, Leaning argues that the challenge lies in the fact that media literacy inadequately addresses digital technology, as digital literacy falls short of instilling a critical mindset when compared to traditional media literacy (Leaning, 2019).

The theoretical review made by the two authors of the concepts of media literacy, digital literacy, and social media literacy shows that overall, the examined research agrees on the significance of cognitive skills in social media literacy. Notably, critical thinking is emphasized as a crucial aspect, as most studies suggest its necessity for achieving proper comprehension and assessment of content. Additionally, it plays a pivotal role in being discerning about the reliability and credibility of information and helps in reducing the persuasive impact of mass media by evaluating the intent and authenticity of the content. Consequently, comprehending the algorithms that drive social media becomes crucial, as they tailor information to users based on their preferences and interests (Polanco-Levicán, Salvo-Garrido, 2022).

Roland Deiser and Sylvain Newton develop a model conceptualizing the six dimensions of social-media-literate leadership that can be applied to PR professionals and communication managers in different organizations. According to the authors, they can be grouped into two major levels: the personal level and the strategic/organizational level (Deiser, Newton, 2013). The personal level is composed of three roles, each one requiring a specific skill set: 1) Producer: – develop creative competence (authenticity, storytelling, and artistic vision); 2) Distributer: – needs to understand how the cross-platform dynamic works and what messages go viral, as well as how to build and sustain a follower's base; 3) Recipient: – create resonance via selective replies or links, and make sense through intelligent filtering. The strategic / organisational level is also unfolding into three roles with the relevant competencies: 1) adviser: – enable and support a 350-degree environment in social media usage, coordination, and channeling activation within a span of control; 2) architect: – balancing vertical accountability and horizontal collaborations, leveraging social media for key business functions; 3) analyst: – monitoring the dynamic of the social media industry, and understanding the cultural and behavioral impact (Deiser, Newton, 2013).

PR professionals must navigate the interaction between two fundamentally different approaches as traditional (vertical) broadcast media and modern (horizontal) participatory media merge. The conventional channels, characterized by control-oriented logic, and the new channels, which require a more hands-off approach, allowing the system's dynamics to operate naturally. The experts must understand that once a communication enters the system, they no longer have control over it. Instead, they must understand what circumstances may cause it to go viral, as well as how it might be altered and expanded as it moves through the network. In this environment, distribution competence, which entails controlling how communications move across complex organizations, is as important as the ability to create engaging content. It is also important to acknowledge the awareness of the function of news in society, individual motives for seeking out news, the ability to discover and recognize news, the skill to critically evaluate news, and the capability to produce news (Malik, Cortesi, Gasser, 2013, p. 8–9).

Media relations and crisis communications are vital competencies for communication professionals in a constantly shifting and dynamic environment. These abilities are critical for success in the sector. Knowing the basic requirements for practicing media relations, six strategic steps to develop media literacy in crisis communication were selected for this work: 1) Identification of key stakeholders. Prior to engaging in communication with the media or the target public, it is essential to possess a comprehensive understanding of their preferences, and perceptions of organizations in

crisis. This necessitates conducting thorough research into the targeted media platforms, including their tone, agenda, and extent of influence. Furthermore, identifying key messages, objectives, and suitable spokespersons becomes crucial in crafting an effective communication approach. In anticipation of potential inquiries, challenges, and opportunities, tailoring the communication strategy to align with the audience and objectives is of paramount importance. 2) An open-communication approach and transparency. Demonstrate proactivity and transparency in communication practices, refraining from passively waiting for media or public engagement. Instead, the PR managers need to take the initiative to build and sustain relationships with various stakeholders, including the media and opinion leaders, furnishing timely, accurate, and pertinent information to them. They need to address inquiries and feedback promptly and courteously, and to acknowledge and confront any potential issues or concerns that could have implications for the organization's reputation and credibility. 3) Prevention. Crises are inevitable in any media environment. PR professionals must be prepared for any potential scenarios that may threaten organizational image, operations, or stakeholders. The crisis communication plan outlines roles, responsibilities, and procedures. The team and the spokespeople must be trained on how to handle crises. The other important skills are knowledge of how to monitor the media and public sentiment for any signs of trouble; 4) Adaptation and building knowledge. Media relations and crisis communications represent dynamic domains, continuously subject to transformation and adjustment in response to alterations in the media landscape, public sentiment, and situational variables. Therefore, a vital aspect of effective communication entails demonstrating flexibility and adaptability. This involves a conscientious evaluation of communication outcomes and feedback, fostering a learning process derived from both successes and failures. In turn, PR experts must adeptly modify communication strategies and tactics as dictated by the circumstances. Concurrently, it is prudent to actively seek novel approaches for enhancing communication proficiency and performance. 5) Collaboration and coordination. Media relations and crisis communications demand collaborative efforts and harmonization among the organization's team, and external partners. It is imperative to maintain clear and consistent communication with both internal and external stakeholders. Furthermore, aligning communication objectives and messages with organizational goals and values is of paramount importance. Embracing input and support from colleagues, experts, and allies is essential in this process. Additionally, leveraging networks and available resources becomes instrumental in amplifying the impact of communication initiatives. 6) Ethical and respectful conduct. Embracing an ethical and respectful approach to communication practices is of utmost significance. Adherence to media codes and standards of conduct is imperative, as is the acknowledgment and appreciation of the media's role and rights. It is crucial to display consideration for the public's interests and expectations, while also upholding the dignity and diversity of the audience. Lastly, PR professionals should hold their own integrity in high regard and treat themselves with respect in their professional engagements.

The scale of the incident, its impact on people and society, and the amount of public interest are all elements that influence how much media attention a crisis receives. The following are some examples of common crisis scenarios in business that usually gain media attention: product recalls, financial scandals, data breaches, environmental incidents, workplace misconduct, leadership controversies, product defects or safety issues, legal disputes and lawsuits, corporate layoffs, and reputational issues.

In 1998, Tyner presents a comprehensive overview of media literacy and introduces the concept of "multiliteracies," which entails the understanding and description of various literacy dimensions. Notably, tool literacies such as computer literacy, network literacy, and technology literacy aim to

cultivate an in-depth comprehension of computer and network technologies (Tyner, 1998, p. 97). Concurrently, literacies of representation, encompassing information literacy and media literacy, play a crucial role in encouraging students to critically analyze and evaluate media messages. Moreover, the concept of visual literacy closely aligns with the literacies of representation, but with a specific emphasis on interpreting and analyzing visual images as units of critical examination. The author cautions against an unfortunate tendency observed in some circles that advocates for the promotion of one multiliteracy at the expense of others. Instead, Tyner advocates for a balanced and inclusive approach that acknowledges the significance of all these multiliteracies in navigating the complexities of the digital age.

In 2020, Fullerton, McKinnon, and Kendrick conducted research among 727 public relations students from 115 U.S. colleges and universities about their perceptions of media literacy in organizational structure and functions. Respondents stated that being media literate includes understanding how media sources work and being able to communicate or deliver a message through media technologies. Students in public relations equate media literacy with understanding the inner workings of the media and how media messages are formed. Participants noted that media literacy is concerned with comprehending/knowing many forms of media, not just one. Respondents occasionally explained that media communication is aimed at a specific or vast audience and that a literate media user and creator understands the distinction. (Fullerton et al., 2020, p. 12–13). Most PR students agreed with the assumption that news makes things more dramatic than they really are (55.5%) and that a news story about conflict is more likely to be featured prominently (88.9%) (Fullerton et al., 2020, p. 24).

Assessing motivations, values, and decision-making is of utmost importance for PR professionals when crafting messages, be it through a press release, native advertisement, or any other. According to Holladay and Coombs, recipients of public relations communications often struggle to discern the origins of an issue as rooted in public relations, alongside the inherent biases within the messaging. This phenomenon raises significant concerns regarding the “unseen” essence of public relations practices (Holladay and Coombs, 2013, p. 126). The authors argue that public relations literacy would teach people how to recognize public relations communication practices, analyze such messages, and create their own campaign messages. The insights critical theory has added to public relations have encouraged public relations literacy. Critical theory has provided a much-needed push to reflect on public relations practice and how public relations use power and influence, as well as the consequences for society. Holladay and Coombs define public relations literacy as 'the ability to detect, analyze, and evaluate public relations communications'. To this can be added the capacity to produce public relations messages and comprehend their role in a democratic society to be more consistent with media literacy. Thus, public relations messages are not limited to those created by the 'PR industry' but also include those produced by social movements, organizations, and individuals aiming to influence others through various forms of media as well as in interpersonal and public contexts (Holladay and Coombs, 2013, p. 126).

In the field of public communication, this study assumes that the media literacy framework included the main concepts of creators and publics, which addressed their segmentation, attitudes, and needs; messages and implications, which discussed points of view, communication interpretation, and message impact, and representation of reality, which addressed media filtering of news and data omission. According to Fullerton, McKinnon, and Kendrick, for future communication professionals, media literacy is important not only for critically analyzing messages but also for learning to create public relations messages, advertising copy, audio recordings, video packages, and multimedia content (Fullerton et al., 2020, p. 8). Enhancing media literacy possesses the potential to

augment levels of professional trust. Given the prevailing widespread presence of misinformation and the post-truth climate, strategies to aid the audience in assessing the truthful and false content are imperative. Within this context, public relations practitioners have a vital responsibility in furnishing this service to the broader community.

Nowadays, the correlation between media literacy and digital literacy can be observed. Digital literacy entails the skill of assessing online communications and effectively utilizing Internet platforms for empowerment. These challenges hold equal significance when analyzing PR statements and press releases. The swift proliferation of digital media, encompassing technologies like social media, could complicate the task of scrutinizing information accuracy. This situation might amplify the need for competence in public relations' understanding. Aspects like issue management and CSR can exert influence on individuals both personally and within a broader societal context. For instance, businesses might construct messages advocating for environmental consciousness as a matter of national importance, encouraging individuals to integrate sustainable practices into various aspects of their daily routines. Recognizing that anyone has the potential to adopt an activist role and engage in public relations activities to pursue diverse egoistical or philanthropic objectives, the notion of media mobilization becomes a pivotal consideration in enhancing public relations literacy. Beyond corporate companies, platforms like non-corporate websites, blogs, social media channels and groups offer a medium for concerned individuals to amplify awareness regarding issues like questionable corporate conduct. Furthermore, these platforms can serve as catalysts for motivating others to form alliances aimed at exerting pressure on companies to alter their communication presence.

The relevance of algorithms, user data, and AI-based systems in developing current culture is critical, particularly in the context of multi-sided platforms such as search engines, recommender systems, intelligent household assistants, streaming services, and dating apps. Understanding how algorithmic systems work and how to train them for specific scenarios is becoming increasingly important. Simultaneously, these systems are taking on an increasingly profound and fundamental presence within society, penetrating daily life at all levels.

The scope of public relations literacy should include a broad spectrum of matters: activism, media relations, reputation management, CSR, crisis management and communication, and public diplomacy. Moreover, the concept of public relations literacy should demonstrate an awareness of cultural and vulnerability nuances that impact communication.

Holladay and Coombs argue the importance of public relations literacy in the implementation of crisis response strategies and their reception by stakeholders. It consists of critically exploring the following few questions: 1) Who creates the crisis communication messages? Often, the organization is the source of the strategic response, but there are always alternative perspectives voiced by experts and online opinion leaders. To measure bias, the source of these additional crisis messages must be identified. 2) What advantages does the organization or other entities engaging in crisis communication gain by implementing this crisis response strategy? This inquiry delves into the consequences linked with specific crisis response tactics and can uncover the reasoning behind the made choices. 3) Who else might experience gains or losses during the crisis? The focus should extend to the individuals affected and how their needs are addressed beyond mere safety and reassurance. Additionally, contemplate the potential repercussions for the organization or the entire industry if there is a lack of swift crisis management. Has the root cause been systematically identified and resolved, or is it a temporary, isolated solution? Allowing the underlying issue to persist could lead to further complications in the future. 4) How is the crisis response strategy targeting the stakeholders? Targeting provides another way to investigate potential biases. Does the

response primarily benefit the victims, or is it mainly aimed at reassuring government bodies and non-affected parties that the situation is under control? A focus on reassurance may imply limited concern for the victims and a priority to safeguard organizational interests. 5) Whose voices are acknowledged and notably absent from the crisis response strategies? Are there solely organizational statements included and analyzed, or does the article include–expert voices represented in the messages? Do victims' perspectives get included, or are there inputs from government officials responsible for investigating the organization? If a balanced representation of voices isn't present in the messages, it's important to seek additional sources to ensure a well-rounded perspective (Holladay and Coombs, 2013, p. 138–139).

In the report of the LSE Commission on Truth, Trust, and Technology, following William Beveridge's the five "giant evils" of social policy, the problems confronting governments, companies, and all the participants in the media system of the 21st century are set out: 1) Confusion: – people are less sure about what is true and who they should believe; 2) Cynicism: – people are losing trust even in trustworthy sources; 3) Fragmentation: - citizens have potentially endless information at their disposal, but the quantity of acknowledged facts on which to make societal decisions is shrinking. Citizens are being separated into 'truth publics' with conflicting realities and narratives; 4) Irresponsibility: - organizations with power over meaning lack a developed ethical code of conduct and operate outside of clear lines of accountability and transparency; 5) Apathy: - as a result, citizens are disengaging from existing social structures and losing faith in democracy (Tackling the Information Crisis: A Policy Framework for Media System Resilience, p. 10). In combination, each of those problems poses a threat to the individual decision-making process and could impact the democratic process in general. Their devastating power can be seen in times of long-term crises, such as the COVID-19 pandemic, for instance.

In the field of corporate crisis communication, the media wield considerable influence by magnifying and sensationalizing the turbulent situations that arise. In doing so, they shape the narrative of the catastrophe, thereby altering how the crisis is managed. Their pace is increasingly swift, exerting immense pressure to gather information, often while such information remains scarce. The media emerge as vital partners for disseminating information. It falls upon PR experts to establish a degree of control within this communication framework. However, defining the parameters of a harmonious collaboration proves to be a challenge. Journalists possess access to an array of information sources. In this capacity, they assume a pivotal role, cherry-picking certain aspects of the incident and framing the problem according to the sensitivities of their audiences. Regrettably, the companies often remain disconnected from the media until moments of crisis emerge. This creates confusion and disruptions in the working process through the reorganization of resources. Journalists, on the other hand, are acclimated to navigating crisis scenarios, as their professional environment routinely subjects them to constraints such as speed, timing, and tone selection.

The annual Cision's Global State of Media Report identifies important trends in media ecosystem developments and outlines an important change in journalist and PR experts' work partnerships and dependencies. One of the biggest challenges highlighted in the 2022 report is the limited and declining resources for journalists, smaller staffs, and the pressure to keep up with technological and social media advancements. More than half of journalists (57%) rely on public relations professionals to provide them with data and expert sources when they need them, and 29 percent believe PR professionals can assist them by recognizing and respecting their deadlines. Journalists highlighted that news releases are the most sought-after content from brands and public relations professionals, cited by 76% of journalists. Press releases top the list as the preferred method of

providing authentic, intelligent, and urgent news to the media, and 54% of journalists will cover a story if they are provided with ready-made visual content (photos, videos, and infographics). Sixty-three percent want unique research reports (such as trends and market statistics), and nearly half (49%) want opportunities to attend brand or company events (Cision State of Media Report, 2022, p. 22–23).

Multimedia usage has not only risen among journalists, but they have also expressed a clear interest in obtaining multimedia content from strategic communicators. Furthermore, they are even more open to considering pitches that include multimedia elements. Communications professionals confront similar challenges to link performance to profit, establish a reputation, and fight for attention. That alone gives a solid platform for people making announcements and sharing stories to move beyond "thinking like a journalist" to "thinking with a journalist" and better connect to overcome these common difficulties (Cision Global State of Media Report, 2023, p. 5).

Incorporating multimedia in crisis story pitches is a strategic approach that not only supports journalists in their reporting but also increases the likelihood of the crisis story being picked up, understood, and effectively communicated to a wider audience. Multimedia elements such as images, videos, infographics, and audio clips can significantly enhance the storytelling aspect of a crisis pitch. They provide a visual and interactive dimension that helps convey the story's depth and emotional impact more effectively. Amidst an information-saturated media landscape, multimedia content captures journalists' attention and raises engagement. It helps break through the noise and engage journalists on multiple sensory levels, making them more likely to delve deeper into the story.

Multimedia provides a visual context that can be challenging to convey solely through text. Visuals can help journalists understand the scale, impact, and nuances of a crisis more comprehensively, leading to more accurate and insightful coverage. Complex crisis scenarios can be better explained using visuals. Visual representations simplify intricate concepts, data, or timelines, making the story easier to understand for both journalists and their audiences. Multimedia content is highly shareable on social media and online platforms. When journalists share multimedia-rich stories, it can amplify the reach of the crisis narrative and facilitate broader public awareness. Including visuals, such as images or videos from the crisis scene, can add authenticity and credibility to the story. It helps demonstrate the transparency of the crisis communication effort and builds trust with journalists. Journalists often work under tight deadlines. Multimedia content can convey essential information quickly, saving journalists time and enabling them to produce timely and accurate coverage. Improved collaboration has the potential to empower and inspire journalists and communicators, enabling them to shape the future of the media and construct a media environment that is characterized by greater accuracy, honesty, and trustworthiness.

Material and Methods

This research paper aims to delve into the intricate relationship between media literacy and crisis management in the context of two specific crisis situations in Bulgaria. It seeks to explore the ways in which PR experts can leverage media literacy to comprehend the nuances of these evolving landscapes, effectively communicate with stakeholders, and strategically navigate the multifaceted challenges posed by such crises.

The article examines two cases from the Bulgarian crisis practice, which require specific knowledge and a well-thought-out approach to communicating with media and stakeholders. The first crisis occurred between January and February 2023 and affected the Bulgarian cryptocurrency trading

platform Nexo. The accusations against the company are serious: financial fraud, money laundering, and terrorist financing. In Bulgaria, the topic of cryptocurrencies and, in general, the activities of companies operating in this market is unknown, which creates difficulties, not only for PR experts to communicate the crisis, but also critically for understanding the work and specifics of such financial organizations. The cryptocurrency market is notably volatile. Prices can fluctuate dramatically due to various factors such as technological advancements, regulatory changes, and shifts in market mood. This fundamental unpredictability can precipitate abrupt crisis situations, underscoring the need for robust communication strategies to effectively handle the expectations of stakeholders and preserve confidence in the market. The intricacies of cryptocurrencies and blockchain technology are often not easily grasped by the public. This lack of understanding, coupled with the potential for misinformation, can precipitate a crisis. Therefore, it's crucial to deploy effective communication strategies that educate and inform stakeholders, thereby diminishing the likelihood of panic or confusion. The allure of substantial returns often attracts investors to the cryptocurrency market, leading to heightened expectations. Failure to meet these expectations can result in dissatisfaction and a loss of trust. It's imperative for companies to temper these expectations with transparent and consistent communication. Cryptocurrency companies frequently function internationally, engaging with a varied array of stakeholders such as investors, users, regulatory bodies, and the public from multiple countries. This wide-ranging diversity necessitates a carefully tailored communication approach, one that is capable of effectively addressing the distinct needs and worries of these diverse groups during crisis situations.

The second crises were provoked by a Facebook post by the Bulgarian online media for investigative journalism, BIRD.BG. On November 22, 2022, a post appeared on its official social media profile that featured screenshots of personal profiles of TELUS International employees with aggressive and unsubstantiated accusations that they are part of the META team (a TELUS International client) that moderates Bulgarian-language content for the platform and deliberately blocks profiles of prominent public figures (including BIRD.BG's editor-in-chief) who openly criticized Russia's invasion in Ukraine. These accusations had sparked public outrage against the company and raised suspicion of Russian propaganda support.

This crisis brought TELUS International to the need not only to explain whether its team is involved in content moderation in Bulgarian, but also to explicitly explain how the so-called Facebook community standards are interpreted, and how content is screened and filtered by algorithms and artificial intelligence. Effective content moderation in various languages goes beyond mere language proficiency; it demands a thorough grasp of the cultural nuances specific to each language. Errors in interpretation or decisions that lack cultural sensitivity can provoke considerable public backlash. Therefore, having a crisis communication strategy in place is crucial for managing any negative repercussions from these incidents, showcasing a commitment to cultural sensitivity and prompt response. For a partner’s company, adeptly handling crises is vital to sustaining the trust of their clients, namely the social media platforms. Poor crisis management can tarnish not just the reputation of the company but also that of its clients. Effective crisis communication is key to maintaining this trust and mitigating reputational risks. During a crisis, stakeholders such as users, clients, regulatory authorities, and the public demand transparent and accurate information. A strategic communication plan is crucial for engaging these groups openly and effectively, thereby minimizing misinformation and panic. As the realm of content moderation is constantly evolving alongside technology, crises can emerge from technological glitches or challenges. It's important for companies to communicate these issues clearly, making them comprehensible even to those without technical expertise. Decisions in content moderation can occasionally trigger public uproar or

intense scrutiny from the media. Therefore, it's imperative for the company's PR experts to have a crisis communication plan ready to address both the media and the public with clear and responsible statements. Situations involving data breaches or privacy issues can escalate rapidly into a crisis. Companies need to be prepared to communicate proactively about such incidents, assuring all stakeholders of the measures being taken to safeguard data and privacy.

The case study methodology is employed for the following reasons: first, to provide a comprehensive understanding of crisis communication strategies and to develop knowledge for specific crises; second, to offer real-world context, as case studies are drawn from actual organizational responses to crises that have occurred in real-life events; third, to provide practical insights and lessons for professionals and organizations dealing with crisis situations; and fourth, to contribute to theory-building and the development of conceptual frameworks in crisis communication, even though the methodology focuses on specific instances.

The research questions are: 1) What are the most common PR response strategies and techniques used to communicate with the media during specific crisis situations? 2) To what extend does the media use the company's statements, press releases, and other PR materials to explain the nature of the crisis? 3) What are the deficiencies in media and digital literacy in crisis communication?

This research endeavors to contribute to the existing body of knowledge in crisis communication and media literacy while also offering practical implications for PR experts, organizations, and policymakers. By addressing these vital aspects, the article aims to provide PR professionals with the necessary tools to proactively manage and mitigate the fallout of cryptocurrency breaches and the social media content moderation crisis, thereby fostering a more resilient and media-literate communications landscape.

The first challenge at hand is the rapid proliferation and inherent volatility of the cryptocurrency market. As digital currencies have gained prominence, they have simultaneously become a breeding ground for illicit activities, leading to a series of high-profile breaches of regulations. These instances can trigger severe crises for the organizations involved, causing public relations nightmares that require deft management to preserve reputation and public trust. On the other front, social media behemoth Facebook's content moderation policies have been under constant scrutiny due to their impact on user-generated content, the spread of misinformation, and the potential implications for freedom of speech in times of global crisis. Inaccurate or inflammatory information shared on the platform can have devastating consequences for individuals, businesses, or even entire industries. Managing crises arising from Facebook content moderation challenges calls for a judicious blend of media literacy, strategic communication, and ethical considerations.

Results

Case Study 1: Cryptocurrency and Asset Management Company Nexo is accused of fraud and money laundering.

Description of the Crisis Situation: Nexo was developed in 2017 and run by two Bulgarians, - Kosta Kunchev and Antoni Trenchev. It accepts cryptocurrency deposits and pays interest to clients. Nexo operates through businesses incorporated in the United Kingdom, Switzerland, the United States, and offshore locations. Nexo owns NDS, a corporation with around 600 employees in Bulgaria. On December 5, 2022, the cryptocurrency and asset management company Nexo announced in a blog post on their website its gradual departure from the US. The crisis for the company was caused by violating state regulations and offering deposits to various customers

without the company being licensed to do so. The blog post suggests that discussions with the relevant institutions were ongoing for 18 months. Meanwhile, the Bahamas-based cryptocurrency exchange FTX collapsed, creating a crisis context for all the companies dealing with digital assets.
On January 12, 2023, Bulgaria's prosecution launched a probe against the company, and the operation involved around 300 individuals from several Bulgarian investigation agencies. The Bulgarian police were investigating a large-scale financial fraud scam, and the charges include money laundering, tax evasion, unauthorized bank operations, and computer fraud. Four people have been arrested on allegations that the crypto bank's actions violated sanctions imposed on companies based in the Russian Federation, as well as transactions made to a person implicated in terrorist activity.

Media Coverage

The crisis period is subdivided into two stages: the first is in the period November –December 2022, when the US inspections against Nexo begin. The second is in the January-February 2023 timeframe, when the case gains media attention in Bulgaria and the Bulgarian authorities open inquiries against the crypto bank. The article provides an overview of the second period of the crisis and the media coverage in the following Bulgarian media outlets: Mediapool.bg, the BNT website (Bulgarian National Television), and Money.bg. The content analysis of the selected media outlets is based on the consideration that they are reachable, covering news of national significance; Bulgarian National Television is a public media outlet; and Money.bg has an economic and business angle.
The information portal Mediapool.bg is a private media outlet and presents the crisis through 51 articles, in which informational pieces are predominant. The commentary-analytical materials are considerably limited as they are based on the opinions of politicians from different parties, which creates preconditions for spinning the crisis according to the espoused political ideology. There is only one publication for the reviewed period in which expertise is sought – that of the head of the American Chamber of Commerce in Bulgaria.
The crypto banking case is framed in a political context, with the headlines and leads of the articles focusing on Nexo's political affiliation with the democratic political party because of donations made during campaigns. Authority conceptualization and suggestions of favoritism are also made because one of the founders of the crypto bank is related to a political figure. It should be noted, however, that the quoting of the company's official position is present in all the media's material.
The Bulgarian National Television serves as a public media platform with the primary goal of presenting events in a fair and objective manner. Its official website has featured a total of 16 articles concerning the mentioned case. These articles, however, are purely informational in nature. Notably, they are built upon information from official sources and the involved company. The articles lack any form of commentary, analysis, or in-depth exploration of the regulatory mechanisms within the relevant sector or the broader cryptocurrency market. BNT's focus lies in portraying the institutional responses to the case, specifically highlighting the viewpoints of entities such as the Prosecutor's Office, the National Investigation Service, officials from the State Agency for National Security (SANS), and members of Parliament.
Money.bg operates as an internet-based media outlet concentrating on business matters. Throughout the January –February 2023 timeframe, a total of 14 articles related to the subject were released by the platform. Notably, these articles steer clear of politicizing the case and refrain from emphasizing its connections to donations and indirect involvement with political stances in Bulgaria.
Among the examined articles, it's worth highlighting that Money.bg is the sole source presenting a comprehensive analytical piece on the intricacies of crypto banking and the diverse regulatory

frameworks governing the field. Additionally, another article offers a succinct retrospective overview of Nexo's history, skillfully elucidating the company's regulatory challenges in the United States and other countries with clarity and accuracy.

Crisis Communication Strategy

The following stakeholders in the Nexo case are defined for the purpose of the study: the company and its founders, the Bulgarian prosecutor's office and authorities, the US regulators (Consumer Financial Protection Bureau), the crypto bank's customers, and the media.

Nexo employs its own robust media platforms, encompassing a website equipped with a media center section, a blog, as well as active social media profiles on Twitter and Facebook. As early as December 5, 2022, the company's communication team displayed proactive engagement by sharing a comprehensive article on its official blog. This article delved into the investigations initiated in the US, outlined which of its services were subject to regulatory measures and thus needed suspension, elucidated the impact on client wallets, and expounded on the reasons prompting Nexo's decision to initiate its withdrawal from the US market.

Promptly on the day of the police operation in Bulgaria, the company issued a statement via its official Twitter and Facebook accounts. This statement adheres to the conventions of social media content and aligns with the company's strategy of denying allegations involving money laundering, violations of sanctions against Russia in relation to the war in Ukraine, and the funding of terrorist activities. These allegations constitute a recurring theme within the stance adopted by the Bulgarian prosecutor's office. The core messages are encapsulated in the pronouncements made by the prosecutor's office spokesperson during interactions with the media. Furthermore, these assertions are presented as the driving arguments behind the initiation of an investigation, a topic that was addressed during a press conference where a brief, albeit somewhat inadequately prepared, PowerPoint presentation was used. Nevertheless, these allegations lack substantiated evidence and factual support, rendering them vulnerable to contradiction. Nexo promptly countered these assertions by dispatching two additional statements to BNT and the other major nationwide broadcaster, BTV. Within these statements, the company's leadership asserted their intent to legally challenge Bulgaria, citing claims of financial losses and violations of human rights.

Nexo's communication team consistently and categorically uses the strategy of denying all accusations made against the company in Bulgaria. A spokesperson for the company is one of the founders, Antony Trenchev, who personalizes the company in this crisis. The communication strategy in Bulgaria uses official statements, video statements, open letters to the two largest national television stations in Bulgaria, BNT and BTV, and interviews. In all of them, there is consistency and coherence in the messages – the strategy of denial is followed – the facts from the blog post are repeated, stating that agreements have been reached with all 50 states on administrative violations, that the company has the toughest policy against money laundering and that it has a team of 30 people who check the operations. The platform has not been used to transfer Russian assets because cryptocurrencies are an inconvenient financial instrument because platforms have a public register. The company statements and the public positions of their founder, Antony Trenchev, convey messages also about the incompetence of Bulgarian institutions and their intellectual inability to argue the accusations publicly and to be convincing in them. This is confirmed by the hesitant press conference that was given by the prosecution where the accusations were not convincingly argued.

After reaching an agreement with US authorities about allegations concerning non-compliance with regulations, the company settled it by remitting $45 million in fines and discontinuing the offering

of one of its products. This development was disclosed through a press release issued by the Securities and Exchange Commission. In another statement from New York State Attorney General Leticia James is clarified that Nexo was subjected to a five-year prohibition on product offerings. Moreover, the company was mandated to inform all its US investors, including approximately 3,000 individuals from New York, of the necessity to withdraw their funds from the platform by April 1, 2023. Characterizing the agreement as a significant historical milestone, the company underscored that this settlement ends legal proceedings in all eight US states. The company explicitly highlights the fact that the agreement did not entail any allegations or charges of involvement in fraud or deceptive trade practices. On a contrasting note, the Bulgarian prosecutor's press office released a statement on its Facebook page praising its US counterparts for imposing the fine, interpreting it as evidence of Nexo's culpability.

Case Study 2: TELUS International and the biased content moderation in Bulgarian on Facebook

Description of Crisis Situation: On November 26, 2022, the Bulgarian online investigative media outlet, BIRD.BG, shared screenshots on its official Facebook profile, revealing the profile pictures of individuals publicly identifying themselves as employees of the company TELUS International. The media response followed the imposition of limitations on the Facebook account of editor-in-chief Atanas Chobanov. His profile encountered a 30-day restriction after sharing news regarding the European Parliament's classification of Russia as a state sponsor of terrorism. This act cannot be characterized as disinformation or hate speech. However, Chobanov isn't the sole individual to have experienced the actions of these moderators, whoever they may be. Back in April 2023, a petition was even initiated, calling for a thorough review of content moderation practices within the Bulgarian segment of Facebook. The petition highlighted the mounting instances in which the profiles of notable Bulgarian authors critical of prevailing matters suddenly vanished from the social network.

These individuals are under scrutiny for allegedly purposefully imposing 30-day restrictions on the accounts of Bulgarian users, including public figures, journalists, and online influencers who openly criticize the Russian war in Ukraine. The post highlights profiles of individuals who are either no longer affiliated with the company or are engaged in projects unrelated to content moderation. This situation prompts questions regarding the media and digital literacy of the journalists at BIRD.BG, their comprehension of algorithmic content management processes, the necessary competencies for those performing these tasks, and, more broadly, the identities of the TELUS International employees in Bulgaria who bear the responsibility for assessing flagged inappropriate content violating community policies.

Media Coverage

The analysis of the media coverage of the case will be limited to three Bulgarian online media: "Dnevnik", "OffNews", and "Boulevard Bulgaria". The media sites are among the most widely read in Bulgaria; they have a strategy for managing their social media content, and thus, the topic of content moderation in Bulgaria is important to them. The analysis timeframe spans from November 2022 to February 2023, encompassing the onset of the crisis scenario and TELUS International's resolution to terminate moderation of Bulgarian content from its local office. "Dnevnik" operates as a multitopic online media platform characterized by its informative and analytical orientation. During the stipulated crisis period, they have released five articles chronicling the case's evolution.

The information sources for these articles consist of press releases dispatched by TELUS International, the e-Government and Information Technology Parliamentary Committee, public stances taken by the involved entities, a statement by Jakob Turowski, the Head of Public Policies for Central and Eastern Europe at Meta, conducted by "Kapital," and an interview with Kristina Ivanova, Vice President of Operations at TELUS International. The online media articles encompass viewpoints from both sides of the case, albeit in a concise and interpretative manner. These articles focus on the positions adopted by those engaged in the case, including the Association of European Journalists. "Dnevnik" additionally presented an extensive article outlining the content moderation process and post removal. This piece references insights from experts, bites from interviews conducted with Meta and TELUS International managers by other media outlets, as well as accounts from former company employees. The core message that emerges asserts that TELUS International operates under Meta's directives and does not directly engage in the account-blocking actions in Bulgaria.

"OffNews" extensively covers the crisis through a series of ten articles, systematically tracking the unfolding developments within the case. The information sources inspiring these articles include publicly stated positions on the social media profiles of the affected parties, protests held outside the TELUS International premises, the company's representatives' testimony before the e-Government and Information Technology Committee, and the decision to cease content moderation for Bulgarian content. Notably, the case once again experiences a degree of politicization, stemming from its association with the moderation of reported posts, particularly those expressed by opinion leaders opposing the Russian war in Ukraine. This dynamic establishes conditions conducive for democratic parties within the Bulgarian parliament to align with specific sides and shift the narrative focus of the issue.

"Boulevard Bulgaria" provides comprehensive coverage of the case, featuring nine articles within the mentioned crisis period. Notably, in three of these pieces, the online media's critical stance towards "TELUS International" and "Meta" becomes evident. While these articles are rooted in the companies' official positions, manager interviews, and responses to media inquiries, they go beyond mere quoting by offering interpretations that enhance their depth and informativeness. Unique among the scrutinized media outlets in this case, "Boulevard Bulgaria" also reports on Meta's decision to initiate a two-question poll inviting Bulgarian accounts to express their perspective on Facebook's post-censorship policy. The first question queries, "In your opinion, does Facebook remove too few, too many, or an appropriate number of posts that violate its rules?" The second question delves into whether the user in question has received warnings within the past 7 days about posts infringing upon the social network's community standards. Nonetheless, the essence of the controversy concerning the blocking of user profiles for political stances resides not in the quantity of moderation actions but in the quality of the moderation itself.

Crisis Communication Strategy

The key stakeholders identifiable within this crisis scenario encompass "TELUS International," BIRD.BG media, “Meta”, engaged platform users, and the media.

On the other hand, the communication experts at TELUS International fail to properly consider their communication strategy in the crisis. The official position of the company is published after three days, but in it, although the strategy of denial is represented, the accusations are not addressed substantively. The position highlights messages about "incorrect" claims and opposition against the suggestions inciting violence and self-harm against company employees. This undermines their dignity and their contribution to the company and society. The company's main message is of

“victim”, and it will take the matter to court. The communication tactics used during the crisis are official positions, responses to media inquiries, and interviews. In them, there are contradictions with previous public statements and interviews of META representatives who are admitting the content moderation operations in Bulgaria, unclear messages regarding the substantive accusation of deliberately blocking people’s content that defends Ukraine, shifting responsibility to META, and the "working at the client's request" argument.

Initially, "TELUS International" did not provide an immediate response to BIRD.BG's allegations of biased content removal from the platform. Their inaugural official statement was posted on their official Facebook profile three days later. Notably, this official stance does not directly address the core of the accusation. Instead, it highlights the violation of privacy regarding the profile pictures posted, suggesting a potential risk to the affected individuals' safety. Within this official communication, the company firmly denies any involvement in content moderation. This assertion contradicts a 2019 interview with Gabriela Cech, the Head of Public Policy for Central and Eastern Europe at Facebook, in which she disclosed plans for 150 moderators stationed in Sofia to review content in languages including Bulgarian, Turkish, and Russian.

The second post on TELUS International's official Facebook profile adopts a Q&A format. TELUS International opted to explain "content moderation in Bulgaria," but rather than providing explicit explanations, it appeared to become enmeshed in the details. Nonetheless, the company once again offers vague justifications. Within its statement, it acknowledges that it "provides content moderation services to a diverse range of companies," yet refrains from mentioning Facebook explicitly. The company declines to precisely outline the nature of its work for the social platform. Over the years, it has endeavored to veil the moderation controversy by primarily using press releases for its communication. TELUS also asserts that its employees are "guided by and adhere to the rules and standards set by our customers." However, this implies that the ultimate moderation decisions rest with the customers, avoiding the question of why the voices of citizens, which clearly do not transgress "customer standards," are being blocked.

The specifics of TELUS' moderation procedure remain uncertain. As per the company's assertion, these procedures "prohibit our employees from incorporating personal, political opinions, or beliefs into their tasks." A subsequent sentence within the position statement contradicts this claim, as it states that employees assess content "chosen randomly to determine if it contravenes our customers' policies, standards, and guidelines." While the comprehensive statement doesn't provide precise insight into the exact activities undertaken by the technology firm on the social network, it does underscore that its employees "play a significant role in fostering a positive and secure online environment as well as contributing to local communities."

The third primary communication approach employed by TELUS International in safeguarding its reputation involves an interview conducted with Kristina Ivanova, the Vice President of Operations at TELUS International. This interview was featured in the business media “Kapital”, yet it essentially echoes the core points and messages found in the Q&A post. While Ivanova addresses TELUS International's involvement, she refrains from discussing individuals associated with Meta. Nonetheless, Kapital's report cites a figure of 150 people. Ivanova specifies that the Bulgarian branch of TELUS International, referred to as the registered Bulgarian entity "Clickpoint", acts as the maintenance provider for Meta. She notes that the company operates under "very rigorous commercial contracts" that precisely outline their rights and responsibilities. Despite numerous public inquiries, this "clarity" remains confidential, leaving unanswered questions concerning the subjective role of moderators in reaching decisions.

Meta's representatives forward an official statement to the parliamentary committee for e-government, which convenes a dedicated session focusing on social networks in Bulgaria and the moderation of online content. The document was written by Yakov Turowski, Meta's Public Policy Director for Central and Eastern Europe. Within this communication, Turowski outlines the process of content moderation on Facebook, sharing certain publicly available details. For instance, he underscores that posts and comments on the platform undergo regulation through a combination of artificial intelligence (AI), human content reviewers, and user-generated reports. Turowski highlights that these human teams comprise more than 15,000 expert content reviewers who are proficient in the relevant language. This recognition is grounded in the understanding that grasping the nuanced significance of particular words or comprehending the political context surrounding a post often requires a native speaker's perspective. Moreover, for Bulgarian content, it is important to have linguistic and cultural competence, and thus the content undergoes scrutiny by Bulgarian moderators.

The statement further delves into additional facets of Facebook's moderation policy, covering aspects such as background checks, individual user evaluations, and user-generated reports. However, the pivotal query regarding "why and how citizen voices are suppressed" remains unaddressed. Marilyn Tiffing, a representative from the Canada-based company, defends TELUS International and underlines that the company is unable to represent Meta due to privacy concerns. She underscores that those questions about content review for specific clients, including Meta, will not be discussed. Tiffing also reiterates that TELUS solely enforces the standards and guidelines established by Facebook and is not involved in their formulation.

Disscution

The topic of crisis management and crisis communication has been extensively studied in various fields, but there is still a lack of scholarly articles dedicated to the specifics in the field of new areas such as Web 3.0, blockchain technologies and cryptocurrency companies. No less problematic are the crisis situations that are triggered by the moderation of content on social media, the use of artificial intelligence in the management of posts on social platforms, and the important questions of how this moderation affects democratic processes in different countries during global crises such as COVID-19 and the war in Ukraine.

The review of academic sources underscores the evident gap in research addressing media and digital literacy among PR professionals during crises. This subject holds significant importance not solely due to its role in enhancing communication and professional skills, but also due to the responsibility of communication experts within public communication to foster comprehension and uphold organizational trust.

Conclusions

The cryptocurrency company Nexo is operating within a highly specialized sector, demanding expertise, and in-depth knowledge. In Bulgaria, there are no media outlets covering only the topics of blockchain and digital assets in general. The availability of journalists well-equipped to delve comprehensively into the Nexo crisis remains limited. This observation finds support in the analysis

of articles featured on the news portal Mediapool.bg and the online platform of the public broadcaster BNT.

From an analysis of Nexo's communication strategy, the coherence of their messages becomes evident, with a clear and categorical response strategy founded on the denial of allegations and the openness of the company's owners to media interviews. Nexo's communication team largely succeeds in elucidating the essence of the regulatory issue, informing stakeholders correctly and proactively. The crisis receives a spin-off effect in Bulgaria due to the unsubstantiated accusations against the company and, to a large extent, the inadequate communication stances of Bulgarian authorities, which are grounded in speculation based on American allegations. These stances lack a solid factual foundation, and those presented are easily refutable. PR specialists within Bulgarian institutions lack the necessary digital knowledge and skills to effectively communicate the situation. On the other hand, journalists restate the primary emphasis from press releases and spokesperson statements, creating conditions for misinformation in crises within society. The politicization of this crisis case in Bulgaria provides an opportunity for Nexo's communication specialists to turn a defect into an effect, thus attempting to preserve trust in the company. In the tactical crisis management plan, classical crisis communication practices have been employed, including blog posts, official positions, open letters to the media, press conferences, and interviews with managers.

The crisis involving the outsourcing firm TELUS International in Bulgaria and the company Meta emerged because of a Facebook post by the investigative media outlet BIRD.BG. However, this post exhibited an unethical and confrontational tone. Rather than directly delving into the matter of content moderation in Bulgarian, the post instead directs blame towards company employees who either do not engage in such tasks or have already parted ways with TELUS International. Such a publication casts doubt on the investigative competence of media journalists and raises concerns about the quality of their work.

TELUS International failed to promptly address allegations concerning partial content removal and the blocking of profiles belonging to public figures openly expressing opposition to the unprovoked Russian invasion in Ukraine. This has resulted in an information void and resembles a crisis response marked by a refusal to provide comments. The two statements published on their official profile adopt a denial strategy, but they present conflicting facts. In the first statement, the company avoids acknowledging its involvement in content moderation, while the subsequent Q&A-style communication contradicts this stance. Meta's position affirms content review from Bulgaria. TELUS International's credibility experienced further erosion following the interview with their Manager of Operations. The interview lacks specificity and consistency in viewpoints and showcases contradictory messages.

Both the informative and commentary-analytical perspectives are discernible within the chosen media articles. These selected media outlets strive to craft substantive content that transcends mere surface-level quotations from the involved parties' official stances. The articles encompass insights into content moderation processes on social media platforms, the functionality of Facebook's algorithms, posing valuable questions concerning so-called "community standards," and other aspects related to digital literacy.

In times of public crisis, communication experts must recognize the significance of the media and journalists as essential stakeholders. The media communication techniques explored in this piece, including press releases, official statements, media queries, and interviews, are not novel, but their dynamics are evolving within a digital landscape, underscoring the necessity for acquiring updated media and digital literacy competencies. Amid a crisis, the collaborative essence of the connection between journalists and communication experts becomes particularly evident, yet it also faces

challenges due to multiple factors, including distrust, biased perspectives, communication breakdowns, and difficulties in crafting messages with precision and structure. Media and communication experts both engage in the discourse of public communication and bear an ethical duty to shape the crisis narrative. This narrative significantly influences society's understanding of the issue.

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URBAN NARRATIVES IN A CONTEXT OF ENVIRONMENTAL AND GENERATIONAL INJUSTICE

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Abstract

Objectives. The identity of the place has an effect on citizens' identities. The study presented aims to support the connection between slow violence, environmental injustice, and the use of visual sociology to deepen the experiences and relations of people in the surrounding environment. The target is a neighborhood called Tamburi in the city of Taranto, Apulia.
Methods. After an initial focus group useful to know more about the context, 8 people residing in the target area took photo to understand how the environmental damage has slowly settled on every aspect of life in the neighborhood and to explore concepts like social memories, and socio-semiotic category. The contribution of a non-residing photojournalist was analyzed, in order to improve and complete observation techniques.
Results. Tamburi, literally incorporated by the industry, is a place with a complex identity to the detriment of social life and the new generations' well-being, accompanied by a correlated social and cultural unease as well as a feeling of abandonment and vindication. It is identified as a sacrifice area due to the high rate of pollutants in circulation, premature deaths, and contamination of the urban and vegetable elements present.
Conclusions. Living in territories vulnerable to sacrifice translates into considering the existences therein underestimated. The visual method offers interesting insights into the possibilities of interpreting some phenomena. The images of the neighborhood are a negative stimulus that communicates feelings of fragility in the individual and collective memory and has an impact on the livability and attractiveness of places.

Keywords: visual sociology; environmental violence; narrative images; generational injustice; place identity.

Introduction

Lefebvre states that space is a mentally conceived image, a materially and physically perceived space, and a lived space, that is, the product of the interaction between conceived space and perceived space, a social construct that influences people's practices and their perceptions so the space is transformed and it becomes a place (Lefebvre, 1976, p. 14). Space is not only a number of

objects and boundaries but also an expression of language and interactional practices evident in a community (Scollon & Scollon, 2003).

Individuals entrust meaning and value to places by attributing vitality to them through the exercise of the mind and body. The places therefore acquire such a creative force that crossing them changes the subjects and redefines their identity. Lynch notes that there is an ecosystemic bond between the city and its inhabitants, which is specified in the cognitive, pragmatic, and passionate dimensions (Lynch, 1981, pp. 125-130), that shapes the city's identity and in which processes of distancing or adhesion of citizens to the place take place. The city space, in particular, is perceived as elements in relation to processes of signification; the sense of this depends on the relationships with the surrounding elements and on the value that individuals attribute to it: a wall close to an overgrown field can become a center of aggregation, and a space designed for socializing as a square can exist as a simple place of crossing (Giannitrapani, 2009, p. 35).

A place is therefore the content of memory, both because it is permeated by people's memories and because, through memory, it presents itself as a description; monuments, buildings, symbols, etc. are the scattered descriptive traces resulting from history or urban planning that act as "urban reminders" for the entire community (Lewicka, 2008). Individual memories are closely linked to social and collective memories, which is why the narratives of places have the power to transcend time and exist in the future, in some way, enriching the individual and social imagination. Cities possess symbolic meanings, elements where concepts, feelings, dimensions, and ideas are condensed, towards which citizens project cultural and social meanings (Silchenkova, Likhachev, Desyaeva, Likhacheva, & Sheveleva, 2021). As Remm notes, the urban space is also meaning-generative in a specific way (Remm, 2011). Studies on symbolism underline how often ideas, values, and meanings are expressed more appropriately through images and environmental elements. In cinema and literature, the elements of the environment are metaphors for thoughts; they convey personal and social meanings (Falih Sulaiman, 2019). These elements motivate the opportunities for using the visual approach as a resource for carrying out a territorial study in the social sciences.

Visual sociology is a collection of approaches in which researchers use photographs to portray, describe, or analyze social phenomena. It is possible to use visual methods in multiple ways; the researcher can directly produce visual material to study the phenomenon in question or can analyze the productions of others, whether they are professional and culturally institutionalized, whether they are the result of the personal and family history of individuals, or whether they are produced in place of the verbal interview (Harper, 1988). The visual method is used in territorial studies to read the space and the relationships present in it, or, in other words, its social structures. What characterizes structural violence is its peculiar relationship with the environment. This type of violence has to do with the structure, the context, and, to some extent, the space, whether physical, political, economic, or social. Structural violence shares multiple aspects with slow violence, which is exercised as a form of environmental violence and affects our well-being and that of the entire ecosystem.

Tom Davies, in his "Slow violence and toxic geographies: 'Out of sight' to whom?" deepens and extends the understanding of the concept of slow violence presented by R. Nixon in reference to slow and lasting calamities, not immediately capable of capturing the attention given to events characterized by a certain dose of spectacularism to the detriment of the "poorest" and of future generations (Nixon, 2011, p. 6). Outcomes dilated in time and space disperse the environmental damage, subtracting it from its form and recognizability. Davies acknowledges that it is those "*who experience toxic landscapes, on daily exposure who demonstrate that it is not a formless type of violence but a tangible and extremely real one*" (as cited in Davies, 2022, p. 360). The communities

that experience environmental damage up close are attentive witnesses to the progress of its effects. What makes slow violence persistent but hidden is the lack of importance that is given to those who suffer the most from the consequences by inserting them in a process of ineluctable predisposition to sacrifice.

Life has to do with what can be called the semiosphere: a set of heterogeneous, material and immaterial elements productive of effects. The semiosphere is populated by objects and mental capacities, cultural products and elements that produce meaning (Mangano, 2019, p. 20). This paper aims to investigate the urban context, focusing on human and non-human entities that have effects capable of influencing a community. From a more than human perspective, places are also introduced as subjects of urban scenarios, broadening the understanding of the dynamics therein. It sheds light on the complex socio-anthropological narrative of the community of the target area, a territory with complex socio-environmental issues. That means investigating narratives through multiple and interrelated dimensions, sedimented in memory thanks to experiences and emotions in intragenerational dialogue. The experience of places is part of all the agents and actants involved, giving rise to perceptions and emotions, and from these to actions, projects that guide individual and community choices, modulating responses and interventions in the future. This leads us to consider that:

- Memory is also based on corporeality, which is linked to the emotional world and then to the imaginary.
- Places are imbued with memories, even when they have undergone change, have been destroyed, or have been transformed.
- Understanding these concepts through intergenerational dynamics is important, as urban narratives are interrelated with memories of the past, present, future, and wishes.

Methodology

In this research, the visual approach was used in its specific variation, i.e., asking people to photograph their environment in order to analyze the relationships between the previously expressed concepts. The visual document produced is a look behind the visible to bring out the point of view of the subject (Stagi & Palmas, 2015, p. 29). Through the images, it is possible to contemplate the multiple dimensions and aspects of the individual/environment relationship, memory, and symbolism concepts in a context of slow violence.

8 residents of a district of the city of Taranto, Puglia, were selected as privileged witnesses in the semiotic role of assistant participant, i.e., an observer embodied in an actor who frames the scene and participates in the events (Bertrand, 2002, p.75). Through the images and reflections, it was possible to reconstruct a map of the places that are significant for them, important junctions, and the symbolic and evocative landmarks of the territory.

The subjects involved are over the age of 60 and are currently residents of Tamburi; they represent its historical memory. They also experienced the most representative moments in the neighborhood's history; some of these are actively involved in environmentalist associations, while others have long been promoters of neighborhood theatrical and recreational activities. After an initial meeting between the researcher and the research participants, during which general information was collected to map the historical, social, and cultural context, they were asked to produce photographs to be debated in the subsequent meeting, during which the images produced became a stimulus for comparison.

The first meeting was carried out in focus group mode as a way of obtaining information about a certain issue to enhance the exploration (Paradzik, Jukic, & Bolfan, 2018). The chosen set where they met is a meeting place for some of them, as well as a recreational club and headquarters of a theater association; the other participants involved come from other neighborhood realities. The focus group lasted 50 minutes and developed in the form of free discussion, starting with question: *What was the neighborhood like before? How would you define it now?*

Then, they were asked to produce photographs stimulated by the following questions: *Tell me about yourself through the neighborhood. Which places and which symbols are important to you?*

The photographic interview was conducted in researcher-single participant mode one week after the first focus group to encourage active conceptualization and contemplation (Gauntlett, 2007), like a dive into the depths of your own reflections. Attention is placed not only on the territory but also on its image to attribute meaning and value to the looks of the inhabitants who communicate social value (Parmeggiani, 2006).

At the same time, the photographic material of a non-resident photojournalist commissioned by a digital magazine to create a report on the relationship between citizens and the industrial center in Tamburi was analyzed. The researcher accompanied the photojournalist on his research path to utilize his visual productions as data later. His contribution from a semiotic perspective is interpreted in the role of the assistant, an actor who builds a figurative, descriptive space and ideally precedes the participating actor.

Case presentation

Tamburi as a neighborhood was born with the first rural settlements, which also increased over time thanks to the presence of the steel mill, one of the most important industrial centers in Italy. Historically, the district has been the protagonist of numerous phases and events and is brought to the public's attention for its complex environmental, political, social, and economic issues.

During the first meeting, resentments about all the circumstances that surround the neighborhood emerged immediately. The participants clearly understood the problems related to the environmental aspect: high rates of illness and mortality, neurological and psychological disorders, uninhabited houses devalued by the real estate market, social distress, and illegality, which become more evident because they have the opportunity to grow in a circle capable of self-feeding. The narration of the neighborhood of the past is that of a lively place characterized by an intense social life; when the risks of polluting poles were not yet known to most, this was characterized by important sporting and social aggregation realities, shops, cinemas, families, and movement. However, it would be simplistic to talk about the history of a neighborhood, considering the focal elements and decisive events as compartmentalized. This is what emerges from the reflections in the focus group that embrace the history of the neighborhood that has grown to allow urban regeneration of other areas of the municipal area of reference, a sort of social material that passes from one territory to another and gives it dynamism, that is, it gives it further practices and further meanings. The relationship with the administrations, the political choices, and the working dimension have emerged and are not explored in this research. It is possible to summarize the participants' report, with approximations, in some phases.

1- pre-industrial phase: nucleus with few housing units; there is a prevalence of rural areas, and this element is felt with nostalgia by the community. New economic activities started to shape the neighborhood, among which the refinery and the steel industry.
2- Industrial phase and growth: commercial realities, meeting places, sports realities; during this phase, the neighborhood has its own composite identity; there are different social groups even in contradiction with each other.
3- Phase of crime: this area becomes a scenario of criminal disputes and economic interests.
4- *Phase of decline:* environmental problems linked to industrial emissions begin to emerge with more force and urgency, above all following the nationwide dissemination of ever clearer and more precise data and the premature deaths of children. The age-old work/health issue is revealed.
5- Phase of abandonment: the neighborhood is empty, there are no realities suitable for family life, and there are difficulties for children and young people to fulfill themselves according to their expectations due to the lack of suitable spaces for play and growth. Permanence of mechanisms linked to social distress.

The photographic interview explored some aspects that emerged in the dense initial focus group; many of the places portrayed by the participants also overlap due to the similar cultural, social, and generational backgrounds of some of them and this strengthens the understanding of the link between the individual and collective memory of the social groups. Although many places belong to memory and personal experience, they are inserted in the memory of the community, and around them there are shared narratives.

The photos and related expressions that help with synthesis have been selected and presented here.

Figure 1. ***Soccer field covered by iron snow***

Beyond these walls covered with ferrous residues, on the border with the steelworks, there was a soccer field on which hundreds of boys used to play.
« In the 70s and 80s there were 30–35 amateur teams in the district. Each team brought together… about 100 kids who were taken off the street to play soccer. Today there is no longer a football team, the field has been closed, 685 tons of ore were taken from the ground that hit the field where we played, the children came out black… Do you know how many died? Do you hear this voice? I've

played so many matches on that court, my vocal cords are dehydrated. Do you know how many friends died? CANCER. What a beautiful word, isn't it?»

Figure 2. ***Where we used to figure out the world***

Here was a social center where many used to meet to talk about politics and news.
«There was a social center where we also talked about politics, with the newspapers and that sort of thing, they made it disappear, the empty land remained…It's a desert. »
« Billiards are the center of entertainment; people don't know what to do and go there.»

Figure 3. ***A neighborhood in turmoil***

Here were shops, restaurants, a cinema where participants spent pleasant events for them; they are closed today.
« There was a place where the brides came for a party, so many restaurants. The best restaurants in Taranto were in Tamburi at the time.»

« As the pollution problem has arisen, Tamburi has become a dormitory district, a lot of activities are now closed. »
« How many beautiful films! We used to go out and come back to see them again.»

Figure 4. ***The boys of the wall, where we were trying to grow up***

One of the main streets in the neighborhood. In the past, the site of brutal crime clashes.
« We were the boys of the wall; we were there to eat the melon and to grow up. »
« The streets were full of boys and girls, full of students, very crowded… now it's just G. and me. »
« Yes, everything was ruined because the criminals infiltrated. »

Figure 5. ***My house, my story***

Houses suffer depreciation. Residents are forced to file for reparations to get more out of the sale.

« Can you believe how much I invested in this house? *Now it's worth nothing but I won't sell it off... I never go out on the balcony. »*

« Those who can't get by, come here because they can find a house with little money; they were driven by the need. We are fond of the neighborhood, our history is here, our relatives are here;-we would like to encourage our children not to leave, but how can we do it? »

Figure 6. ***Thus, I was saved***

Meeting place of a theater association. The neighborhood boasts some important theatrical realities for the entire urban area.

« The passion for the theater was passed on to me by my teacher, we used to bring plays to the palaces, I wrote one entitled "Ann Accis u Mar" [Dialect name of the theatrical comedy] *even before this was about the steel mill… I keep this place open for myself and for them even if everyone in the building is dead. The theater saved me. »*

« I took the boys off the street, now they're bored. »

Figure 7. ***The echo of memory***

In the neighborhood, as in the whole territory of Taranto, there are historical remains of the utmost importance. The industrial vocation of the city has ousted further potential.
« At the end of this road, there is a Roman aqueduct, but it is hidden, abandoned; *I always think about it that it is there and no one knows how beautiful it can be. »*
«They have accustomed us to not wanting more; *you see only weeds, we imagine another reality. »*

Figure 8. ***In remembrance of***

One of the symbolic plaques in the neighborhood in memory of those who lost their lives due to a disease related to polluting elements.
«We know that here, when it is windy, it is impossible to leave the house; *sometimes I wonder who will be the next one. »*

Figure 9. ***Can we have a prayer?***

The withered tree is a symbolic reference to life without hope. Next-door is a recently built park thanks to the contribution of a singer who cares about the matter. Unfortunately, it is still difficult to play due to the scarce resources for maintenance and environmental concerns about soil and air.
« I'm sorry for children; *who takes care of them? »*

Figure 10. ***A dangerous pot***

Some areas of the neighborhood where it is necessary to intervene.
« There are many problems I prefer not to talk about. »

The salient passages of the dialogue with the photojournalist, P. Bonetti, are reported.

Figure 11. ***P. Bonetti - Abandoned building, what voice for an urban void***

« Tamburi is, in many respects, a suburban neighborhood like a thousand others in the world…with voids and problems, photographing it was not easy. »
« Banally, looking at photographs taken in places without license plates or red dust, I wouldn't be able to identify it; maybe because there are many dimensions to consider that are linked to the environmental one. »

Figure 12. ***P. Bonetti - Graffiti, please don't break anything***

« Places tell something because they are inserted in the memory of those who have experienced them firsthand or thanks to the media. »

Figure 13. ***P. Bonetti - Past the stacks, past the city***

This is a school in the neighbourhood; in the background, the chimney and the structures are next to each other.

« Then there are the most distinctive elements, the E312 fireplace that towers over the neighborhood…It's incorporated into the industry. »

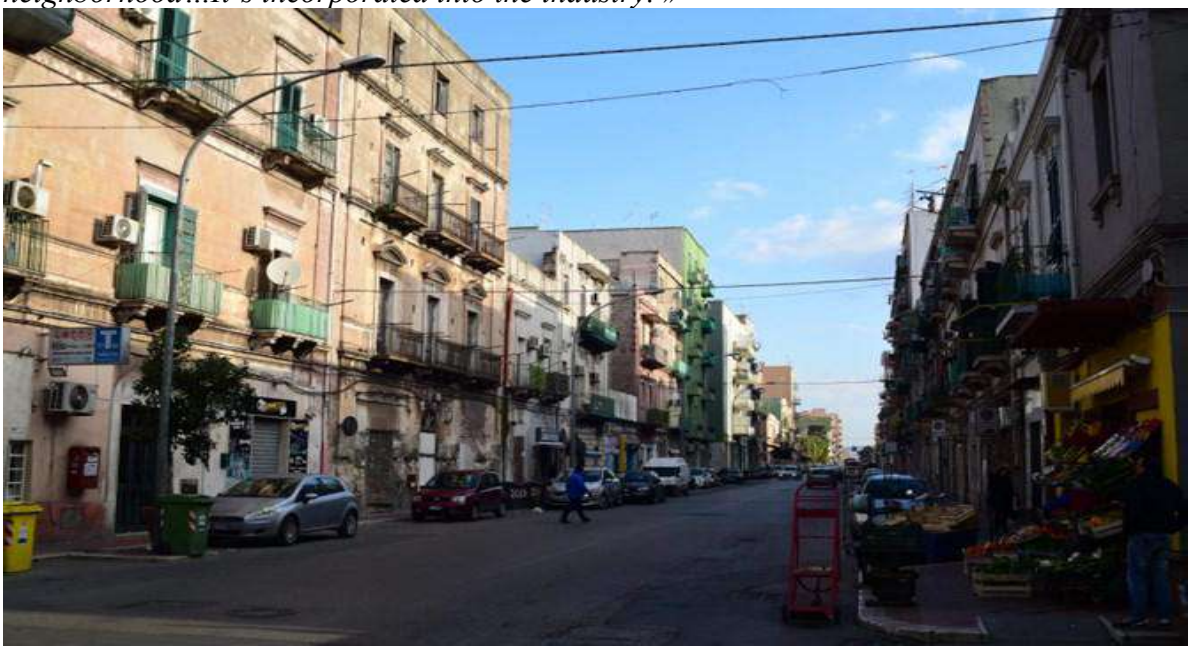

Figure 14. ***P. Bonetti - Through the smell of the street***

One of the main streets of the neighborhood

« I am struck by the total absence of contact with the sea, its presence is almost not felt despite being attached to it. »

Discussion

The initial focus group brought out important elements. The feelings of nostalgia, resentment, and abandonment characterize the relationship that participants have with the reference territory. This translates into low trust and concern about the future of the next generation. The interest in the latter concerns the opportunities to set goals and to have individual and social expectations that can effectively be realized. The space that becomes a place because it is crossed by experiences and memory emerges in the story that the participants tell of their own lives, inserted and lived in the environment and influenced by it.

Emotions are connected with social relations and individual context, an individual's biology, and personal history, but they are also intertwined with the expectations, ideas of the culture and history we inhabit. Vast and varied are the ways we are in the world and how this is vivid within us (Watt Smith, 2015, pp. 10-20). This premise is necessary before we turn to the description of the emotions that the interviewees expressed, which cannot be exactly generalizable but appropriately invokes multiple shades of meaning. Some of these are useful in understanding the relationship the subjects have with the places and the ways of being in this relationship.

Below are some of the emotions that were most presented, an interesting mixture that originates complex individual and collective feelings.

Nostalgia: E. is the owner of a theater association that continues, with difficulty, to offer shows for the neighborhood, trying as much as possible to involve local people and give them a chance to express themselves, engage in something, or cultivate a passion. His “place of the heart” is a room in an uninhabited building; on the walls are posters and photographs through which he tells about his life, anecdotes, and experiences. Thus, a bit of nostalgia emerges. Nostalgia is the result of emotions that originate from a wistful thought about something or someone far away or lost. In it there is the hope of return and the mourning for loss. In the words and images of subjects, there is nostalgia, but there is also resignation; the pleasure of remembering a joy that belongs to the past, but also the feeling that more than what has been attempted, there cannot be. A kind of mourning is also felt, as if something or someone had taken away an important part of one's life that identifies, tells about oneself, about a phase.

Anger is an emotion very present not only among those directly involved in research but also expressed through the manifestations and initiatives carried out over time by the community. Anger has declined differentially through:

Indignation: Political theory scholars state that indignation is an emotion capable of playing a key role in public life. Anger can dominate or alienate individuals, but it also prompts the subjects to participate. *G.* is a member of one of the environmental associations in Taranto. His group, like those of the many others in the area, has been fighting for years to bring out instances, problems, elaborating initiatives of all kinds. Attachment to places, along with health concerns, has been the driving force behind intervening in the debate about the neighborhood. The need for political involvement and transformative engagement is essential for some to feel still able to achieve, keeping alive the neighborhood and its dignity, especially for future generations.

Resentment: It is a form of anger that is suppressed and leads to frustration; it is hidden and only on some occasions emerges, bringing negative consequences for the life of the neighborhood as related to distrust. This is an important aspect of what concerns the relationship with political institutions at multiple levels. The inability to address the real needs could create a feeling of exclusion for a community that lives under its own rules in opposition to the initiatives and actions of an administration, for example. Disaffection for public life, civic engagement, and so on is also a

problem for new generations. Target city is experiencing a phase of urban redevelopment with major high-impact projects, generating good communication and collaboration for the redevelopment of places is conditioned by this emotion.

Acceptance and Hope: a widespread feeling, especially among older individuals, is one of acceptance, which is the background to a now more renunciatory and dynamic attitude. In this trend, a key role is played by hope. In every story heard, among all the emotions and perceptions that emerged, there is a reference to hope by those who have not lost it yet or by those who think about younger people's hope, wondering about their future and how they will handle it.

Those involved felt they have little control over the things that have happened and will happen to the neighborhood, perhaps even over their own lives here, it is to admit a shared vulnerability and strength at the same time.

Memory, as has been mentioned, also functions on the basis of corporeality and, thus, the perceptions that are experienced. The recounting of some past experiences about the places portrayed is built on images, smells, and tastes like: the good taste of the desserts in the now-closed restaurant or the movies seen and reviewed in the biggest cinema in the city; the grass of the soccer field on which they played free and carefree; the streets where they grew up, and so on. Now, the most narrated descriptions and perceptions speak of the dust that has colored everything red due to the deposited iron, of the windy day that prevents children from going to school or playing in the park, and of the abandoned buildings that appear to be painful ruins, generating a sense of abandonment. For memory, this generates strong emotions sometimes even in apparent contradiction; once again, the concern is aimed at the new generations and the possibility of creating new memories because this is made up of stories to tell, old and new stories that are a treasure to cherish.

If some images for the photojournalist are the expression of a form with which the neighborhood gives itself to the world, for the residents, these are also repeated in their own biography, in their identity, and therefore in the social imagination of past and future generations. The ability to remember, recognize, and reconstruct places is a key component of autobiographical memory. In this sense, place constitutes an essential basis for the unfolding of experiences in memory and imagination. Autobiographical memory contributes to a sense of self and identity of place (Lengen, Timm, & Kirstemann, 2019); for some, this translates into a desire to emancipate from some processes; for others, into a form of acceptance. The reference to art as a dimension of denunciation, protection, and resistance is interesting. The recreation center becomes a symbol of the transformative power of the imagination. The reference to the aqueduct is also a symbolic interpretation of one's feeling of abandonment, of a beauty that exists but is hidden.

Residents of the neighborhood are among the first witnesses to violence spread over time, with different shapes and sizes. The matter brings out the issue from the point of view of social inequality. During the photographic interviews, the participants showed moments of discouragement because they are self-perceived as part of a sacrifice, as if there were a scale of importance among human beings, and they were on the lowest rung of this: "If this is the meaning that is entrusted to my life, how can I exercise my abilities fully and flourish?" It is therefore legitimate to ask for a researcher: If slow violence is dispersed in space and time, what future will there be for the children of the neighborhood? As Sen notes, *"enhancement of human freedom is both the main object and the primary means of development. The objective of development relates to the valuation of the actual freedoms enjoyed by the people involved"* (Sen, 2000, p. 53). The tools of freedom are varied and include not only the economic, political, and social aspects but also the environmental ones in mutual interdependence. Therefore, the development of a territory also passes through the freedom

of its citizens. The purpose of development-is to allow people to live in a creative manner, i.e., for a meaningful existence (Nussbaum, 2013, p.185).

The environmental question binds to the social question, and the need for the redevelopment of places emerges forcefully to rethink the identity of the neighborhood and the citizens as a whole. Disadvantaged neighborhoods have fewer resources to succeed in life as society has abandoned them (Mirowsky & Ross, 2003, p. 155). The presence of urban voids where before there were meeting places or commercial activities, the cumbersome presence of industrial structures, the commemorative plaques to evoke the loss, and even the natural elements like the wind take on a different meaning are facts with which the residents relate on a daily basis. Just like human metabolism, urban metabolism too should be sustainable; otherwise, there is a danger that the city will produce waste from dispersion and suffering (Galdini, 2017, p. 85).

The experience of Tamburi is also included in the overall social changes of post-modernity that act as variables and globally raise questions about the fate of urban public space. The presence of shopping malls outside the neighborhood, the advent of social networks, city branding, and other social phenomena are factors that must be taken into account in order not to simplify matters and to plan appropriately, thanks to the daily experience of those who live and make use of the city, although they are not considered (Ferrer, 2022, p. 190).

Analyzing the photojournalist's research path made it possible to follow the steps of an observer not directly involved; He was the bearer of a more objective, never completely, vision of the concepts considered. His sensations of the urban elements portrayed made it possible to grasp an immediate judgment on the image/observer relationship of a descriptive type: "the neighborhood is incorporated into the industry", intuitions not generated by an experience of the place but subsequently analyzed for their evocative value; "the absence of the sea".

The reference to the communicative aspect of the urban environment, the ability to tell oneself in a society where the concepts of branding, attractiveness, and influence are well present, must be taken into account to deepen the relationship between neighborhood and territory.

Conclusion

Visual sociology in its many forms can really contribute to deepening research topics, specifically in the field of territorial studies. The effects of slow violence in some contexts, as in the case of Tamburi in Taranto, are not only evident starting from the physical and descriptive elements of the area in question but also well known by its inhabitants. The high rates of disease and mortality, the contamination of buildings and green areas, or the abandoned places is the narration of a slow but visible change. As witnesses, the residents perceive themselves as not considered, underestimated, and abandoned; this raises feelings of vindication in the adult generation, but the concern is linked to the new generations who could instead grow up in a climate of resignation. These aspects bring out interesting research questions that can be further explored in further investigations with different targets and methodologies. The link with places for the construction of one's identity is fundamental and often not adequately considered. The urban space articulates meanings that act on individual and collective memory, on the identity of individuals and the community, and on their well-being. The urban dimension is a fundamental part of the design of interventions aimed at citizens as individuals and at social groups such as families through a hub capable of creating communication with the place supporting the needs of local society (Bazzini & Puttilli, 2008, p. 49). Places are not a static collection of objects; they are a mixture of activities, ideas, things, forces, and so on that are interrelated (Hammond, Biddulph, Catling, & McKendrick,

2023, p. 240). I. Duhn refers to 'place as assemblage', between a more than human world that acts creatively (Duhn, 2012, p. 99). This is one of the key features of living in "common worlds" and dealing with the mess of the world, where pollution also exists and acts (Taylor, 2013, p. 77).

Therefore, it is necessary to delve deeper into how the new generations generate practices in spaces and understand that assemblage in relation to their own experience and understanding of the world, reworking those of adults. The paper wants to talk about the strength of the meanings of places of memory in vulnerable areas, stimulating the debate on the need for redevelopment to give voice to citizens and their collective memory in "handling with care" these spaces.

On the other hand, however, we must also look at other forms of relationship with the environment that grow as a sort of resistance in those spaces as alternative practices. If we suspend damage, we can be inspired by the prospects that these lived spaces can suggest and encourage initiatives involving citizens, like imaginative experiments, starting from the observation of every-day forms of urban resilience.

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VALIDATION OF THE RUMINATIVE RESPONSES SCALE ON THE ROMANIAN POPULATION - GENDER DIFFERENCES IN RUMINATING RESPONSES

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Abstract

Objectives. The objectives of the study were to develop the Romanian version of the RRS-22 Ruminative Response Scale, thus initiating the process of validating it and exploring gender differences in ruminative-depressive responses with the help of this instrument.

Material and methods. The scale was translated by two English translators. The two variants were compared in order to preserve the semantic content of the items, and the Romanian version of the scale was finalized. Subsequently, the scale was applied to N = 372 participants. Exploratory and confirmatory factor analyses were performed, and internal consistency, convergent validity, and divergent validity were assessed. Gender differences in ruminative-depressive responses were explored.

Results. The criteria required to validate the RRS instrument for the Romanian population have been satisfied. The scales associated with the three latent factors showed satisfactory internal consistency. Its use revealed significant differences between women and men, in favor of women, both in terms of total rumination scores and in terms of the reflection and brooding factor scores. There were also highly significant differences between women and men regarding ruminative themes assessed by the RRS-22.

Conclusions. The Romanian version of the RRS-22 scale proved to have good psychometric properties. Its application confirmed the results of international studies carried out with the help of this instrument, according to which there are important differences between women and men in the

way of coping with a negative mood, expressed through ruminative responses. The tendency to engage in rumination in response to distress is much more pronounced in women.

Keywords: rumination, depression, gender, brooding, reflection.

Introduction

Ruminative responses are negative thoughts that focus the individual's attention on depression, its symptoms, and possible negative consequences of depression, such as the inability to achieve something (Nolen-Hoeksema, 1991).

These responses constitute a special style of relating to reality, a depressive emotional focus that negatively affects all major areas of the psyche (cognitive, emotional, social, motivational value, and self-regulation) and, implicitly, human functioning.

Ruminative responses involve a focus on the affected emotional state, which monopolizes the field of consciousness and restricts the possibility of actively solving the problems facing the individual. In other words, they exacerbate depression—they produce negative cognitions that interfere with instrumental behavior and prevent the individual from calming down.

Distracting individuals with ruminative responses by engaging in activities has been found to produce large decreases in depressive affect, and a ruminative focus on self and mood is not itself depressing but may prolong an existing depressed mood (Nolen-Hoeksema, 1991, 2004).

According to most researchers, rumination is a major vulnerability in depression that increases the duration of depressive episodes. Ruminative responses are considered predictors of the severity of clinical depression (Watkins, 2004; Spasojević & Alloy, 2001; Nolen-Hoeksema, 2000; Kuehner & Weber, 1999; Just & Alloy, 1997).

Pyszczynski and Greenberg (1987) argued that ruminative responses have an individual axiological component. Failures, frustrations, and losses prompt individuals to turn inward to assess whether they are meeting important personal goals and values. Specifically, they evaluate the discrepancy between their ideal self and their actual self, and if this cannot be reduced, they remain self-focused.

Rumination exacerbates depression by magnifying the effects of a depressed mood on thinking, hindering effective problem-solving, impairing instrumental behavior, and diminishing social support (Nolen-Hoeksema, 2004).

According to Watkins and Roberts (2020), rumination exacerbates all forms of psychopathology by acting as an emotional magnifier. Simultaneously, rumination reduces problem-solving abilities. It is characterized by negative, self-critical, pessimistic thinking, which makes problems appear more severe and unsolvable (Lyubomirsky, Tucker, Caldwell, & Berg, 1999).

Lyubomirsky, Kasri, and Zehm (2003) found that rumination impacts instrumental behavior by diminishing concentration ability. Other authors suggest that rumination inhibits instrumental behavior by increasing uncertainty, consequently undermining an individual's confidence in executing their plans (Ward, Lyubomirsky, Sousa, & Nolen-Hoeksema, 2003).

Several studies have indicated that individuals who engage in frequent rumination tend to miss events in their surroundings, demonstrating reduced sensitivity and responsiveness to contextual cues (Tester-Jones, O'Mahen, Watkins, & Karl, 2015; Stein et al., 2012). These findings have been attributed to the abstract thinking style associated with rumination (Watkins & Roberts, 2020). Moreover, research has shown that women are more prone to rumination and emotional focus than men when experiencing sadness or depression. Rumination is thus considered part of a triad contributing to women's vulnerability to depression, along with chronic stress and a sense of low

control over their lives (Nolen-Hoeksema, Larson, & Grayson, 1999; Butler & Nolen-Hoeksema, 1994).

Materials and methods

The 22-item Ruminative Response Scale (RRS) was developed by Nolen-Hoeksema and Morrow (1991) as a subscale of the Response Styles Questionnaire (RSQ). It is the most widely recognized self-report measure of rumination, employed in both research on general populations and clinical practice with individuals exhibiting depressive symptoms. It boasts stable reliability and validity and has garnered international recognition for its strong psychometric properties, having been translated into several languages, including German, Dutch, Japanese, Turkish, and widely used in English (Erdur-Baker & Bugay, 2012). The RRS scale is supported by a well-established theoretical model and substantiated by numerous empirical studies (Roelofs, Muris, Huibers, Peeters, & Arntz, 2006).

The RRS-22 items, designed to assess symptom-based rumination, introspection/self-focus, and the causes and consequences of one's own affect, describe potential responses to depressive states and depressive symptoms and are rated on a 4-point Likert-type scale (Nolen-Hoeksema, 2000).

Some responses are self-focused (e.g., "You think about how lonely you feel"), while others concentrate on symptoms (e.g., "You think, 'I won't be able to concentrate if I continue to feel this way'"), and still, others reflect on the possible ramifications of their negative state of mind ("You think, 'I won't be able to do my job if I don't get out of this'").

Analyzing the congruence with items specific to depression assessment instruments, Treynor, Gonzalez, and Nolen-Hoeksema (2003) categorized the RRS items into three factors: depression, reflection, and brooding. Their analysis revealed that these factors exhibit distinct associations with depression and contributed to the development of a shorter version of the scale, comprising items specific to the reflection and brooding factors, with the latter elucidating the mediating role of rumination in the connection between gender and depression.

Regarding the overlap between the items of the depression factor composition and those of depression assessment tools, it is speculated that this overlap may be attributed to shared wording elements rather than an intrinsic relationship between the constructs.

The psychometric properties of the 22-item scale have been examined in both normal and clinical populations, including individuals with depression, demonstrating its robust validity across numerous studies.

Luminet (2004) reported very high internal consistency for the scale (0.88–0.92) and good test-retest reliability. Additionally, the RRS-22 scale has demonstrated predictive validity concerning the development of depression.

Furthermore, in the context of research conducted on the Romanian population, the RRS-22 scale exhibited satisfactory internal consistency, yielding a Cronbach's alpha coefficient of 0.951.

With respect to gender disparities, studies utilizing various versions of the RRS have consistently shown that women engage in more rumination than men when experiencing depression (Butler & Nolen-Hoeksema, 1994; Nolen-Hoeksema, Larson, & Grayson, 1999).

Moreover, Johnson and Whisman's (2013) meta-analysis, encompassing studies employing rumination rating scales, including the RRS, revealed that women scored higher than men in rumination, reflection, and brooding.

Utilizing the RRS scale, therefore, proves to be instrumental in advancing the comprehension of the connection between rumination and depression, particularly given the twofold increase in the prevalence of major depressive disorder among women (Nolen-Hoeksema, 2002).

Erdur-Baker and Bugay (2012) mentioned the need for cross-validation of psychometric instruments. In this context, the results of applying the scale to the Romanian population contribute to the extension of the cross-cultural validation of the RRS scale.

To achieve the first objective of the study, the validation of the Romanian version of the RRS-22 Ruminative Response Scale, we followed a rigorous translation process. Two English translators independently translated the scale, and the two variants were compared to ensure the preservation of the semantic content of the items. Any differences between the translations were thoroughly discussed, and a finalized Romanian version was established. Subsequently, a Romanian-English retroversion was conducted, with no differences in meaning compared to the original English version.

The scale was administered to a sample of 372 participants, comprising 289 women and 83 men. Participants completed an anonymous internet survey in which the RRS-22 scale was distributed via social media. Exploratory and confirmatory factor analyses were performed and the internal consistency, convergent validity, and divergent validity were assessed.

For the second objective of the study, exploring gender differences in ruminative-depressive responses, the two samples of 289 women and 83 men were compared. Given that the scores for the depression, reflection, and brooding subfactors, as well as the total RRS score, did not exhibit a normal distribution, we employed the nonparametric Mann-Whitney "U" test for independent samples to test the hypotheses.

Results

The Romanian adaptation of the RRS-22 scale demonstrated favorable psychometric properties, with a Cronbach's alpha coefficient of .951. Among the 372 participants in the study, there were individuals exhibiting high levels of symptoms related to rumination and its subfactors, as well as individuals with low levels of rumination (with a standard deviation of 14.02 for total rumination scores and 8.20 for the depression subfactor).

► Exploratory and Confirmatory Factor Analysis

All the 22 items of RRS have been analyzed in a formal 3 factors exploratory factor analysis (EFA), mainly to assess the KMO (Kaiser-Meyer-Olkin) value and Bartlett's test. The overall KMO value was 0.954, and all the KMO values for each item were higher than 0.850. Bartlett's test of sphericity was significant ($p < 0.001$).

If the p-value from Bartlett’s test of sphericity is lower than our chosen significance level (common choices are 0.05 and 0.01), then the dataset is suitable for a data reduction technique. The Kaiser-Meyer-Olkin measure of sampling adequacy is a statistic that indicates the proportion of variance in observed variables that might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with the analyzed data. If the value is less than 0.50, the results of the factor analysis probably won't be very useful.

Based on the above findings, a confirmatory factor analysis (CFA) was used to assess the three-factor ruminative model as proposed by Treynor, Gonzalez, and Nolen-Hoeksema (2003): the *Depression* factor with 12 indicator variables, *Reflection* with 5 indicators, and *Brooding* also with 5 indicators. Analysis was performed with Jamovi, a free statistical software based on the R statistical

language. The DWLS estimation method was used due to the category nature of the data, a Likert scale with 4 levels.

The scales associated with the three latent factors showed a satisfactory internal consistency, with both alpha and omega indices over 0.7. The Average Variance Extracted (AVE), which assesses the degree of shared variance between the latent variables of the model, was above the acceptable value of 0.5, indicating a satisfactory convergent validity. See Table 1.

Table 1. *Reliability indices*

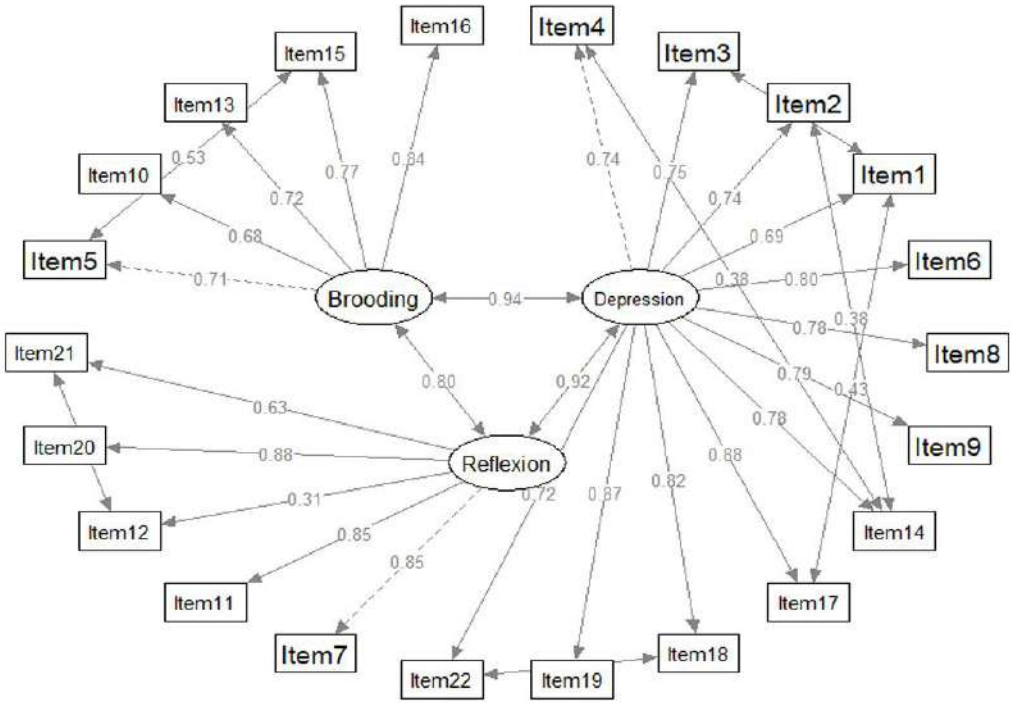
Scale	α	Ordinal α	ω_1	ω_2	ω_3	AVE
Depression	0.931	0.949	0.914	0.914	0.926	0.611
Reflexion	0.808	0.847	0.795	0.795	0.782	0.542
Brooding	0.832	0.864	0.785	0.785	0.798	0.556

Composite Reliability (CR) values were also satisfactory, above 0.7, respectively: 0.926 for Depression, 0.782 for Reflexion, and 0.798 for Brooding, indicating that convergent validity was supported in the dataset. The structural equation model with three factors performed well, showing good fit indices: CFI =.996, TLI =.995, RMSEA =.05 (pRMSEA =.462). All the regression coefficients (factor loadings) were statistically significant ($p<.001$), with almost all beta values over 0.6. However, the beta value for item 12 of the Reflexion scale *("Write down what you are thinking and analyze it")* was only 0.313. This item probably should be removed from the questionnaire.

The invariance of the model was tested for two group types: gender (male versus female) and relation (having a relation versus no relation), and it was concluded that scalar invariance was supported in the dataset. Finding scalar invariance ensures that any statistically significant changes in group means are not caused by variations in scale properties at various groups and supports multi-group comparisons of factor means (e.g., t-tests or ANOVA).

The discriminant validity was assessed using the heterotrait-monotrait ratio of the correlations (HTMT) criterion. HTMT values close to 1 indicate a lack of discriminant validity. Using the HTMT as a criterion involves comparing it to a predefined threshold. If the value of the HTMT is higher than the 0.85 threshold, one can conclude that there is a lack of discriminant validity. The HTMT value of 0.926 for Depression versus Brooding latent factors was higher than the threshold and indicated a discriminant validity problem. The graphical representation of the CFA model is presented in Figure 1 (next page).

Figure 1 – RRS Romanian Structural Model



► **Gender differences**

Statistical analysis revealed significant gender differences ($p < .05$) for both total rumination scores and the reflection and brooding subfactors. As presented in Table 2, there were no gender differences observed in depression subfactor scores. These findings suggest that rumination, specifically related to reflection and brooding, might be a central symptomatology of female depression.

Table 2 *Gender differences in rumination*

Rumination Subfactors	Total (n=372)	Women (n=289)	Men (n=83)	p
Depression	22.17	22.61	20.64	.124
Reflection	9.21	9.52	8.14	.001
Brooding	10.02	10.30	9.04	.015
RRS total score	41.40	42.42	37.82	.016

Gender differences also appear in ten of the 22 ruminative themes of the RRS, as presented in Table 3.

Table 3 *Gender differences in ruminative themes*

Ruminative themes	Total lot (n=372)	Women (n=289)	Men (n=83)	p
1. Think about how alone you feel	1.89	1.94	1.70	.034
2. Think about how you don't seem to feel anything anymore	1.63	1.68	1.43	.011
3. Think about how sad you feel	1.82	1.90	1.57	.003
4. Think about all your shortcomings, failings, faults, mistakes	2.04	2.10	1.83	.025
5. Analyze recent events to try to understand why you are depressed	2.11	2.19	1.86	.012
6. Go away by yourself and think about why you feel this way	1.72	1.78	1.54	.011
7. Analyze your personality to try to understand why you are depressed	1.98	2.07	1.64	.001
8. Think about a recent situation, wishing it had gone better	2.45	2.51	2.24	.007
9. Think "Why do I have problems other people don't have?"	1.68	1.75	1.42	.023
10. Think "Why can't I handle things better?"	2.09	2.16	1.83	.006

Discussions

Most of the criteria required to validate the RRS instrument for the Romanian population have been satisfied; however, some issues must further be addressed to improve the performances and validity. For instance, item 12 having a low loading on the *Reflexion* scale must be removed or revised in Romanian. Discriminant validity (HTMT) is problematic.

Special attention must be paid to the high correlations between the items on different scales, which might influence the discriminant validity. For example, items 1 with 11 and 17 with 11 were highly correlated.

Due to the above problems, it will be necessary to consider the adaptation of a condensed version of the RRS in Romania. Condensed versions have also been proposed by researchers from countries such as China (Lei et al., 2017), Colombia (Ruiz et al., 2017) and Spain (Hervás, 2008). Only two scales should be covered in the condensed version: *Brooding* and *Reflection*. With just ten items, this RRS original-derived measure has demonstrated exceptional psychometric qualities.

To assess the negative emotional states of depression, anxiety, and stress, the DASS-21 questionnaire—which has been validated in Romania—should be used in conjunction with the RRS short form.

The results obtained from the Romanian group regarding the presence of gender differences in rumination, favoring women, are consistent with both the findings of the scale's author and those of other researchers. Response Styles Theory, from its inception, predicted higher levels of ruminative responses in women compared to men, thereby offering an explanation for the higher prevalence of depressive disorders in women (Nolen-Hoeksema, 1991, 2002).

In our sample of N = 372 participants, significant differences emerged between women and men concerning ten distinct ruminative themes.

The initial four ruminative themes, which fall within the depression subfactor, revolve around loneliness, profound emotional numbness, sadness, self-blame, and loss, all of which serve as central facets of the clinical diagnosis of depression. These differences strongly favor women. However, it's noteworthy that, when considering the depression subfactor as a whole, there is no statistically significant difference between genders.

The subsequent three themes, within the realm of the reflection subfactor, pertain to comprehending events, self-exploration in solitude, and self-assessment, and once again, they exhibit significant differences in favor of women. These themes represent an acknowledgment of one's own limitations and an appeal to reason to counterbalance the destabilizing emotions of one's personality and behavior. Moreover, they serve as factors of resilience in the context of depression. Research has demonstrated that reflection, as a ruminative subfactor, is protective and does not exacerbate depression (Nolen-Hoeksema, Morrow, & Fredrickson, 1993).

The final three themes, in which women outscore men, involve the reliving of traumatic events, a perceived inability to solve problems personally, and a sense of implacability regarding one's own fate. These themes fall within the domain of the brooding subfactor, which is considered a risk factor for the prolongation or exacerbation of depression.

As early as 1991, when the scale was originally developed, Nolen-Hoeksema demonstrated that women tend to engage in ruminative responses more often than men when experiencing depression. This tendency amplifies their symptoms and extends the duration of their depressive episodes. In contrast, men tend to distract themselves from their depressed mood, thereby reducing their symptoms. These findings were subsequently supported by additional studies conducted by the same researcher. These studies indicated that men are less inclined to self-focus following a negative event, whereas women are more likely to self-induce a negative mood. However, men often employ potentially harmful distraction mechanisms, such as alcohol consumption, to cope with emotions and hopelessness and to prevent ruminative responses.

A meta-analysis conducted by Johnson and Whisman (2013), which involved 14,321 participants, revealed that women scored higher than men on measures of Rumination, Brooding, and Reflection. Although these gender differences in rumination were statistically significant, the effect sizes were small. Given women's increased propensity to ruminate on their depressive symptoms and distress, they also exhibit approximately twice the rates of depression, as previously indicated.

However, the magnitude of gender differences in rumination varied across studies. Notably, significant differences in rumination emerged not only with the RRS-22 scale but also with its abbreviated version, the RRS-10. Lei et al. (2017) administered the simplified 10-item form to a sample of N = 5,236 participants and found that women engaged in more rumination than men regarding the potential causes of their mood, which had a greater impact on the alleviation of depressive states. Moreover, they established the gender invariance of the scale and demonstrated its acceptability across genders.

Researchers studying differences in ruminative response styles between women and men have concluded that these differences may partly account for the gender gap in adult depression, with women experiencing more than twice the incidence of the disorder.

Upon conducting a critical review of the determinants of gender differences in depressive disorders, Nolen-Hoeksema and Jackson (2001) determined that gender disparities in rumination cannot be attributed solely to differences in distress levels, emotional expressiveness, or the

inclination to provide socially desirable responses. According to their analysis, gender differences in depression and rumination may be linked to adverse childhood experiences, early experiences with depression and anxiety, sociocultural roles associated with adverse experiences, and psychological vulnerabilities. However, these aspects have yet to be thoroughly explored from a gender perspective.

Current research trends tend to overlook observed gender differences. Women tend to experience internalizing depression spectrum disorders and pre-existing anxiety disorders, while men are more prone to externalizing issues, such as binge drinking, antisocial personality, and substance abuse.

Conclusions

This study has demonstrated that the RRS-22 Rumination Response Scale exhibits favorable psychometric properties and strong internal consistency following its translation and adaptation for use with a Romanian population. Its administration to a sample of 372 participants revealed significant gender-based differences, with women scoring higher than men, both in terms of total rumination scores and scores on the reflection and brooding factors.

The findings of this study hold practical implications for clinical psychologists and psychotherapists working with individuals experiencing depression characterized by elevated levels of ruminative responses. Understanding the distinct patterns of reporting depressive symptoms and the consequences of traumatic events, as reflected in ruminative themes based on gender, provides valuable research evidence for practitioners. Such insights can aid in the normalization of ruminative tendencies and the reduction of the magnitude of depressive symptoms.

Several limitations of this study should be acknowledged. Firstly, the data relied on subjective self-reports. Additionally, the use of convenience sampling restricts the generalizability of the findings. Furthermore, the gender distribution among the subgroups was imbalanced, with a higher proportion of women participating in questionnaire completion. In future research, we propose an expansion of the instrument's validation, including a thorough examination of all psychometric properties, on a larger and more gender-balanced population. This should involve exploring the invariance of the RRS and its application in clinical populations, as well as the examination of ruminative responses among specific subgroups, such as those categorized by age, education, and marital status, among others.

In conclusion, this study underscores that rumination represents an ineffective coping mechanism for dealing with negative emotional states. Ruminative responses are implicated in the initiation and perpetuation of depression and have also been associated, through research findings, with symptoms of various other disorders, including anxiety, binge eating, addiction, and self-injurious behaviors. Understanding the nuances of ruminative responses and their intensity can facilitate a more effective clinical and psychotherapeutic approach to depression, with a particular focus on addressing negative thought patterns and brooding tendencies.

Table 4. *RRS with 22 items*

RRS items		
No	English	Romanian
1	Think about how alone you feel	Te gândești cât de singur/singură te simți
2	Think "I won't be able to do my job if I don't snap out of this."	Te gândești: "Nu voi putea să-mi fac treaba dacă nu ies din asta."
3	Think about your feelings of fatigue and achiness	Te gândești la starea ta de oboseală și de suferință
4	Think about how hard it is to concentrate	Te gândești la cât de greu îți e să te concentrezi
5	Think "What am I doing to deserve this?"	Te gândești: "Ce am făcut să merit asta?"
6	Think about how passive and unmotivated you feel	Te gândești cât de pasiv(ă) și nemotivat(ă) te simți
7	Analyze recent events to try to understand why you are depressed	Analizezi evenimente recente și încerci să înțelegi de ce ești deprimat(ă)
8	Think about how you don't seem to feel anything anymore	Te gândești la faptul că nu pare să mai simți nimic
9	Think "Why can't I get going?"	Te gândești: "De ce nu pot să continui?"
10	Think "Why do I always react this way?"	Te gândești: "De ce întotdeauna reacționez astfel?"
11	Go away by yourself and think about why you feel this way	Te retragi în singurătate și te gândești de ce te simți singur/singură
12	Write down what you are thinking and analyze it	Scrii lucrurile la care te gândești și le analizezi
13	Think about a recent situation, wishing it had gone better	Te gândești la o situație recentă dorind să fi decurs mai bine
14	Think "I won't be able to concentrate if I keep feeling this way."	Te gândești: "Nu voi fi în stare să mă concentrez dacă continui să mă simt astfel."
15	Think "Why do I have problems other people don't have?"	Te gândești: "De ce am eu probleme pe care alții nu le au?"
16	Think "Why can't I handle things better?"	Te gândești: "De ce nu pot să gestionez lucrurile mai bine?"
17	Think about how sad you feel	Te gândești cât de trist(ă) te simți
18	Think about all your shortcomings, failings, faults, mistakes	Te gândești la toate deficiențele, ratările, defectele, greșelile
19	Think about how you don't feel up to doing anything	Te gândești la cum nu te simți în stare să faci nimic
20	Analyze your personality to try to understand why you are depressed	Îți analizezi personalitatea, încercând să înțelegi de ce ești deprimat(ă)
21	Go someplace alone to think about your feelings	Mergi undeva singur(ă) să te gândești la sentimentele tale
22	Think about how angry you are with yourself	Te gândești la cât de furios (furioasă) ești pe tine însuți

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AGENDA SETTING AND FRAMING DURING THE FIRST WAVE OF CORONAVIRUS PANDEMIC: A CONTENT ANALYSIS OF NEWS IN GREEK MEDIA

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Abstract

Objectives. Drawing heavily on theories focusing on the ways media represent health issues, and more specifically pandemics, the current research seeks to scrutinize the information conveyed by the Greek media to the public regarding the coronavirus pandemic. It also explores the ways that agenda-setting and framing affect the representations of the coronavirus pandemic. These two (agenda setting and framing) are highly influential concerning the conceptualization of a crisis.
Material and methods. The research method implemented is quantitative content analysis. For the scope of the current research, 2389 research units (TV bulletins news items and online news articles) were gathered and analyzed. This research covers, in temporal terms, the period during which the Greek media started focusing on the coronavirus issue in tandem with the developments of the coronavirus crisis worldwide and in Greece, namely from February 1st until April 30th, 2020.
Results. Our results showed that the time period (either before or after the announcement of the first death in Greece due to the pandemic) was a crucial factor in the media coverage of the pandemic. Second, pandemic issues were presented through thematic frames, which outweighed the episodic ones. Finally, the Greek media were found to place more emphasis on governmental measures decided during the pandemic compared to personal and social precautionary measures.
Conclusions. The media coverage of the pandemic increased dramatically after the announcement of the first death in Greece. In this rationale, the media of our research increased significantly both the time (TV news bulletins) and extent (news sites) of the coverage of the pandemic. Thus, the event of the first death announcement appears to constitute an important milestone and can be used as an independent variable for the examination of the coverage of the pandemic in different countries/media systems. Apart from that, we have seen a prevalence of thematic and human-interest frames.

Keywords: health communication, COVID-19, pandemics, agenda setting, news framing, media

Introduction

Mass media create representations of the world, focusing on issues of public interest, especially when those issues constitute "critical junctures". Such a critical juncture is the global transmission of the coronavirus, which has been officially declared a global pandemic by the World Health Organization (WHO). When a pandemic occurs, individual behavior can be strongly influenced by the way that media and governments share information, since 'effective communication empowers people to respond appropriately' (Lee, 2014: 294). In addition, a pandemic draws intense media attention as it is often related to worst-case scenarios (Vasterman & Ruigrok, 2013, p. 438). Although research on health news has been so far 'largely ignored' (Briggs and Hallin, 2016, p. 3), it is expected to grow exponentially due to the unprecedented impact of the novel coronavirus.

Thus, it is of high interest to explore whether traditional methods of news coverage are still widely applied to hard news, like pandemic issues. Drawing heavily on theories focusing on the ways media represent health issues, and specifically pandemics, this article aims to investigate the Greek media coverage of COVID-19. For the purpose of this study, a quantitative content analysis of TV news bulletins and news sites that provide useful information regarding a set of journalistic practices such as agenda-setting, priming, and framing was conducted in our efforts to scrutinize the Greek media agenda.

Pandemics and media

Agenda setting is regarded as a mechanism that reveals the way that media select certain issues to be disseminated as news and can be divided into two levels: the first one negotiates what to think about a certain issue, while the second one offers certain ways of thinking about it (Weaver, 2007, p. 142). This research delves into both levels. A media technique ascribed to the first level of agenda setting is priming. Priming indicates the salience media give to specific issues, directing the public towards using those issues as benchmarks for evaluating politicians (Scheufele & Tewksbury, 2007, p. 11).

The second level of agenda setting includes the process of framing. Framing implies the process to "select some aspects of a perceived reality and make them more salient in a communicating text" (Entman, 1993, p. 52). This process reveals how political and media elites manage issues, define problems, diagnose causes, make moral judgements, and suggest treatments. While frames are deployed as interpretative schemas to capture public attention, shape public opinion, and guide people about the appropriateness of a policy, news coverage framing during pandemics comprises an indicative technique that describes how the network of journalism, public relations, and health communication works (Lee and Basnyat, 2013, p. 120; McInnes & Roemer-Mahler, 2017, p. 1319; Dan & Raupp, 2018, p. 206). However, it is declared that journalism contains a variety of practices and routines that facilitate journalists' work and reduce the complexity of an issue. Hence, media function as a battlefield of the hegemony between different social groups, institutions, and ideologies, which attempt to shape individuals' understandings (Gamson & Modigliani, 1989, p. 3).

For the scope of the current research, two basic frame categorizations are employed. Drawing on Iyengar's classification (1991), the episodic and thematic news frames are investigated here. Episodic frames are used to present issues fragmented, free from their deepest social causes, as if they had arisen *ex nihilo*, while thematic frames require deeper analyses, comprehensive

information taken from various sources, and more space (for news sites and newspapers) or time (for television and radio programs). Although, according to Woodly (2008, p. 110), news framing tends to be episodic, during pandemics, the prevalence of episodic framing cannot be taken for granted, since Lee & Basnyat (2013, p. 130) have demonstrated that journalists tend to prefer the thematic frame when they cover pandemic news. The second categorization contains the most commonly used frames by journalists (in order of occurrence frequency): the responsibility frame, the conflict frame, the economic consequences frame, the human-interest frame, and the morality frame (Semetko & Valkenburg 2000, p. 105).

The presentation of information by the media about a disease can strongly influence people's behavior (Cinelli et al., 2020, p. 2). Media may influence the public, the government, and health professionals by constructing the social imagination, which comprises a crucial risk management task (Beck, 1992; Dan & Raupp, 2018, p. 203).

Health crises have global effects since they concern unprecedented, unpredictable, and uncalculated hazards (McInnes & Roemer-Mahler, 2017, p. 1316). It is a global phenomenon that requires awareness and even a broader understanding. As a result, governments tend to adopt strategic communication plans in order to respond successfully to a pandemic crisis (Lee, 2014, p. 294-295; McInnes & Roemer-Mahler, 2017, p. 1319). According to Lee & Basnyat (2013, p. 119), "effective communication from governments and health agencies to the public is a key component of pandemic response", as it facilitates public's adoption of appropriate actions in order to deter the proliferation of morbidity by shaping people's minds and highlighting the hazards. As far as Greece is concerned, the media received funding from the state in order to run a social awareness campaign as a means to support ongoing governmental risk management.

Pandemics and health-related crises tend to receive intense media coverage (for instance, see Klemm, Das, & Hartmann, 2016, on H1N1; Abraham, 2007, on SARS; Poirier, Ouellet, Rancourt, Béchard, & Dufresne, 2020 on COVID-19). The media cover the global pandemic under two lenses: they articulate the real via their symbolic representations, while they give specific interpretations of the crisis to the public (Stavrakakis, 2020). Emotions, attitudes, and behaviors become more versatile during the efforts of public health agencies to manage the fear and anger of public opinion (Lee, 2014, p. 300). Demertzis (2020) argues that people, more or less, form a "synthetic experience" either as directly affected by the pandemic or as subjected to the restrictive measures taken by the government. In the core of this experience lies mediatization since media enjoy the monopoly of information while people are obliged to stay at home. Consequently, on the one hand, media "represent important information about public health issues" (Marinescu & Mitu, 2016, p. 7), while on the other hand, they influence individuals' behavior. According to studies on past outbreaks, Medeiros & Massarani (2010, p. 461) estimated that H1N1 coverage led to high levels of public anxiety in Brazil. In the same vein, Uzuegbunam, Duru, Okafor, & Ugbo (2016, p. 32) found that panic, fear, and speculation were also dispersed among people when the Ebola virus infected Nigeria.

A number of studies (Lee & Basnyat, 2013; Pleios & Poulakidakos, 2013) have also recognized that, during pandemics, the media agenda is concentrated on certain parameters that can receive special and often differentiated attention from the media. Such parameters can be the following: number of identified cases/deaths, health institutions' announcements (especially by the WHO), experts' opinions, biomedical issues (e.g., new treatments or vaccines), consequences of the pandemic (political, economic, and social), and prevention measures. Regarding the last, these are important features for disseminating health information since citizens are exposed to an unprecedented risk and there is probably a lack of awareness or detailed knowledge about such types

of hazards (Medeiros & Massarani, 2010; Pleios & Poulakidakos, 2013). Moreover, health journalists traditionally engage with health experts, health institutions, and biomedical insiders as their duties require specialized knowledge, articulating an elite public sphere network (Lee & Basnyat, 2013, p. 120; Briggs & Hallin, 2016, p. 74).

As a result, the media's role is even more crucial when global health crises occur. The past H1N1 outbreak showed that there was a "deep integration of media logics into institutions of public health" (Briggs & Hallin, 2016, p. 9, p. 133). Moreover, several studies (Woodly, 2008, p. 110; Briggs & Hallin, 2016, p. 43) suggest that news coverage is biased in favor of political elites, whose opinions are more salient in the media content (Woodly, 2008, p. 110). The tight relationships between journalists, politicians, and health experts form a unique media landscape. This condition is a systemic aspect of the Greek media context as well, due to the high alignment of mainstream media with political elites (Hallin & Mancini, 2004).

Research questions and hypotheses

Based on our theoretical background, the main purpose of the current research is to investigate the information conveyed by the Greek media to the public regarding the coronavirus pandemic. Stemming from our theoretical background, our study focuses on two research questions (RQ_1): How did the Greek media, in terms of agenda setting, priming, and framing, presented the coronavirus pandemic? and (RQ_2): Have Greek journalists relied on experts' advice in their efforts to effectively communicate the pandemic to the public? More specifically, (RQ_1) can be analyzed into the following supportive research hypotheses:

H.1: According to our theory, pandemics and health-related crises tend to receive intense media coverage (Abraham, 2007; Klemm, Das, & Hartmann, 2016; Poirier et. al, 2020). It is expected that news related to the coronavirus pandemic will be highly covered by the Greek media as well.

H.2: In addition, it is expected that the Greek media will emphasize the coronavirus issue in terms of priming.

H.3: Based on our theoretical framework, pandemic news tends to be more susceptible to thematic framing (Lee & Basnyat, 2013), and responsibility and conflict frames are the most frequently found in media studies (Semetko & Valkenburg, 2000). It is expected that these will be the prevalent ones in the representation of the pandemic by the Greek media.

H.4: Due to being an important parameter in disseminating health information to the public (Medeiros & Massarani, 2010; Pleios & Poulakidakos, 2013), it is expected that prevention measures will also be highlighted by the Greek media.

Research Method

For the purposes of the current research, the research method of quantitative content analysis has been implemented. Content analysis transforms content of quantitative and qualitative nature into a form of data in either qualitative or quantitative form. It can be briefly defined as the systematic, based on scientific criteria, quantitative or qualitative analysis of the characteristics of

various messages (Berelson, 1971; Neuendorf, 2002, p. 1). It constitutes a systematic, reproducible technique of transforming the words of a text into fewer categories of meaning based on specific codification rules (Miller & Brewer, 2003). The primary objective of content analysis is the systematic research of the content of a unit of analysis (text, image, news item, advertisement, web page, etc.). Thus, the content is being examined in a holistic way, and the categories used to encode the text are clearly defined, to enable the repetition and control of the entire procedure. Research making use of content analysis focuses on the main thematics of a text, their comparative meaning, the 'space' and time dedicated to these thematics, and other content characteristics that respond to the main research question and the research hypotheses (Berelson, 1971). Quantitative content analysis is conducted via a coding protocol and aims to produce quantitative data from a specific sample.

The media content under study includes the prime-time news bulletins of the six major Greek TV stations in terms of audience share: the public ERT1, the private MEGA, ANT1, SKAI, ALPHA, and STAR, and six of the most popular Greek news web sites (protothema.gr, in.gr, iefimerida.gr, news247.gr, newsit.gr, and lifo.gr) according to SimilarWeb metrics (i.e.: protothema.gr reaches 26 million monthly visits, iefimerida.gr reaches almost 22 million visits, news247.gr reaches almost 13 million visits, newsit.gr adds up 14.7 million visits, in.gr accepts 12.6 million visits and lifo.gr reaches a total number of almost nine million visits.). For the scope of the current research, 1200 articles and 1189 news items, for a total of 2389 units using a coding frame that includes a rather wide range of parameters regarding coronavirus media representations, have been gathered and analyzed using SPSS 26. The following examination covers the period from February 1st to April 30th, 2020, which can be divided into two sub-periods: the first one (from February 1st to March 15th), when there was no death by COVID-19 in Greece, and the second one (from March 16th to April 30th), when the Greek government had to respond to a tangible health crisis after the official announcement of the first death by COVID-19. The units of analysis of the current research are the news item (for the news bulletins) and the news article (for the news sites). The existence of statistically significant relationships between the different variables was tested via the chi-square test, the Fisher's exact test, the t-test, and the ANOVA at the 95% confidence interval. Lastly, the data entry was conducted by a team of six coders, whose reliability was tested with the use of Cronbach's alpha (Field, 2013).

Results

As far as our first hypothesis, the extent to which media pay attention to the coronavirus pandemic, is concerned, the mean row of the coronavirus news item (for TV news bulletins) was examined, as well as the ratio of the means of news items and coronavirus items, respectively. As already mentioned, in order to discover if there were any differentiations regarding the journalistic focus, our findings were divided into two sub-periods. The first one covers the period until the public announcement of the first death by COVID-19 in Greece, and the second covers the period after the official announcement of the first confirmed death. As it is shown in Table 1, the reference to the coronavirus pandemic dominates the television news, especially during the second examination period. The average order of the coronavirus news item is approximately the third (mean = 3.08 for the second period and the (approximately) twelfth (11.67) for the first period, which provides us with a mean of 7.02 for both periods. In addition, the ratio of the means indicates that a rather high percentage (64%) of the TV news bulletins referred to the coronavirus throughout the period of our examination. More specifically, 31% of the news bulletins regarding the pandemic

appeared in the first period, while the coronavirus news items were overwhelmingly prevalent (92%) during the second one. These results lead us to the partial acceptance of our first and second research hypotheses, regarding the intense media coverage and the high priming of coronavirus news by the Greek media, since the pandemic appears to have "conquered" the TV news bulletins in terms of both coverage and priming during the second period of our research.

Table 5
Ratio: means of coronavirus news items/means of news items per period.

	1st period (until the announcement of the first death by COVID-19 in Greece)	**2nd period (after the announcement of the first death by COVID-19 in Greece)**	**Both periods (mean)**
The mean row of the coronavirus news item (TV news bulletins)	11.67	3.08	7.02
The mean number- of news items per TV news bulletin	26.28	27.21	26.77
The mean number- of coronavirus news items per TV news bulletin	8.14	24.95	17.23
Ratio: the mean number of coronavirus news items/the mean number of news items	0.31	0.92	0.64

Regarding the emphasis given by the Greek media on the coronavirus issue, in terms of priming, the mean duration (in seconds) for the TV stations and the mean length (in words) for the news sites were measured. As it is depicted in Table 2, SKAI (189.20 sec) and protothema.gr (636.54 words) seem to present the COVID-19 issue more "extensively" on TV and news sites, respectively. SKAI is followed by STAR (almost 166 sec) and protothema.gr is followed by in.gr (approximately 583 words).

Table 2
Mean duration (in sec)/length (in words) per each medium (ANOVA p-value = 0.000).

Medium (TV station/news site)	**Mean duration (in** seconds**)/length (in words)**
ERT1	160.05
MEGA	133.97
ANT1	143.03
ALPHA	139.90
STAR	165.95
SKAI	**189.20**
Protothema.gr	**636.54**
Iefimerida.gr	572.30

Medium (TV station/news site)	Mean duration (in seconds)/length (in words)
News247.gr	455.53
newsit.gr	447.61
In.gr	582.71
Lifo.gr	475.76

In terms of the average duration of coronavirus news per type of medium, Table 3 illustrates that TV stations dedicate more than 2 minutes (135.67 seconds) to the pandemic and news sites approximately 528 words.

Table 3
Mean duration (in secs)/length (in words) per type of medium (t-test p-value = 0.000).

Medium (TV station/news site)	Mean duration (in secs)/length (in words)
TV Station	135.67
News site	528.41

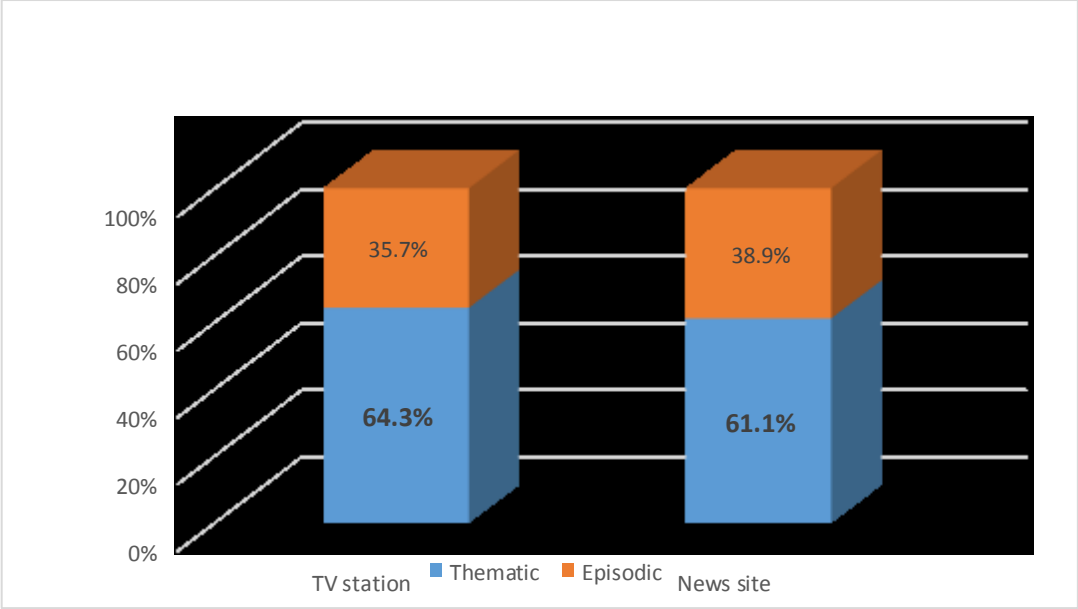
Of particular interest is the mean duration or length when the results are broken down per examined period. The mean duration and length of the second period appear to be significantly longer, according to our t-test, than the first one (Table 4). The rather extensive duration of the news bulletins and length of news sites referring to the coronavirus pandemic lead us to accept our second working hypothesis, about a relatively high journalistic prioritization on the issue, in terms of priming.

Table 4
Mean duration (in seconds)/length (in words) per period (t-test p-value=0.000).

Period	Mean duration (in secs)/length (in words)
1st period (until the public announcement of the first death by COVID-19 in Greece)	304.8
2nd period (after the public announcement of the first death by COVID-19 in Greece)	376.51

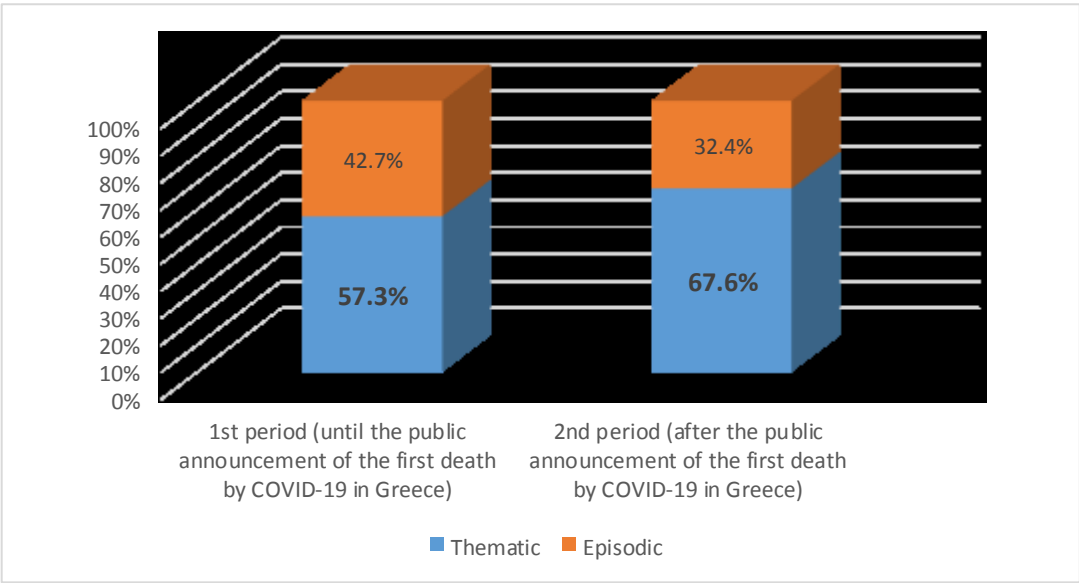
Regarding our third hypothesis on the prevalent frames, as discussed earlier in our theoretical background, we first examined the use of thematic versus episodic framing based on Iyengar's (1991) typology by cross-tabulating the presence of these frames per type of medium. As Figure 1 shows, since thematic framing is prevalent in both TV stations (64.3%) and news sites (61.1%) in similar percentages, our Fisher's exact test does not provide us with a statistically significant difference between TV stations and news sites in terms of the existence of thematic or episodic framing.

Figure 1
Thematic versus episodic framing per type of medium (Fisher's exact p-value = 0.118).



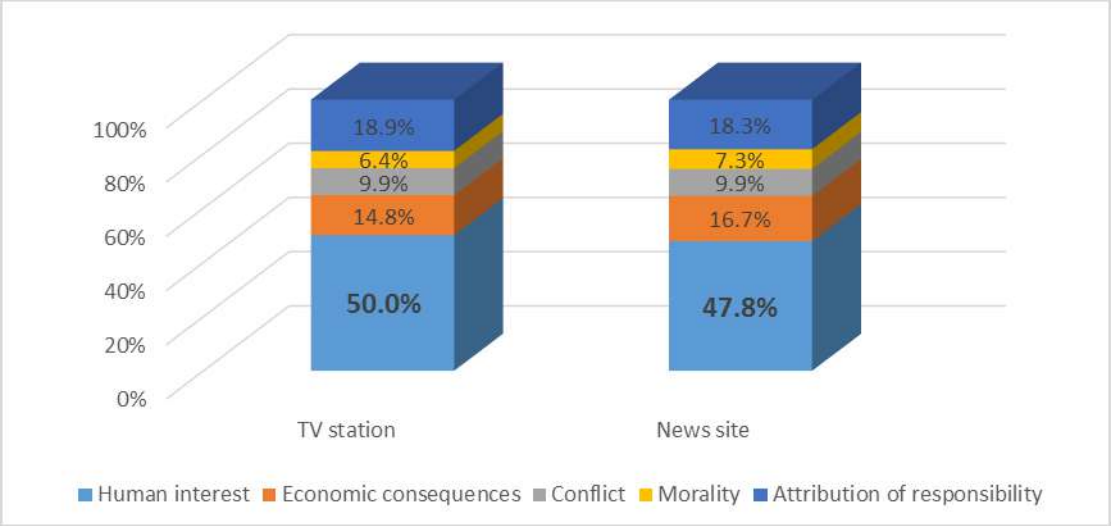
Similar, but with a statistically significant difference between the thematic or–episodic framing of the examined periods, is the salience of thematic framing. In particular, as Figure 2 indicates, during the first period, 57.3% of all news items were thematically framed, while 42.7% were episodically. During the second period, once again, thematic frames (67.6%) outweighed the episodic ones (32.4%).

Figure 2
Thematic versus episodic framing per period (Fisher's exact p-value = 0.000).



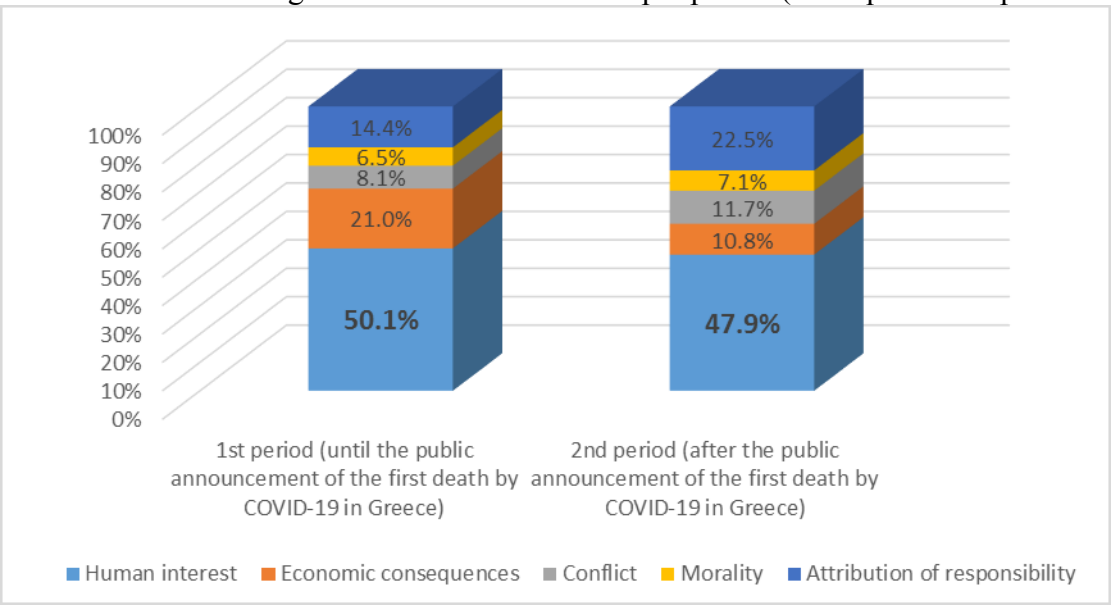
The second aspect of our third hypothesis involved the classification of frames identified by Semetko & Valkenburg (2000). Our findings (Figure 3) showed that human interest was the most commonly used frame in the news regarding the coronavirus, by both TV stations (50%) and news sites (47.8%), followed by the attribution of responsibility (18.9%) and (18.3%) and the economic consequences frame (14.8%) and (16.7%), respectively. Based on this similar distribution of percentages between TV stations and news sites, our statistical test provided us with a p-value of 0.843, designating a statistically non-significant relationship between TV stations and news sites in terms of Semetko & Valkenburg's framing classification. It is noted here that the sample for this cross-tabulation consists of 1189 news items, as there were 1200 analysis units (articles and TV news items) that could not be classified according to Semetko & Valkenburg's framing categorization.

Figure 3
Semetko & Valkenburg's classification of frames per type of medium (Chi square Test p-value = 0.843).



As far as the classification of frames per period is concerned (Figure 4), the human interest frame is the prevalent one in both periods (50.1%, during the first period) and (47.9%, during the second period). Attribution of responsibility comes next (22.5%) and economic consequences third (10.8%) in the second period. On the contrary, during the first period, the economic consequences frame and the attribution of responsibility frame switch positions. Our chi-square test designates a statistically significant difference in Semetko & Valkenburg's frames classification between the two periods that can be mainly attributed to the difference in the percentages of the economic consequences and attribution of responsibility frames.

Figure 4
Semetko & Valkenburg's classification of frames per period (Chi square Test p-value = 0.000).



After the abovementioned results, our third hypothesis on the prevalence of the thematic framing of the pandemic news (Lee & Basnyat, 2013) and responsibility and conflict frames (Semetko & Valkenburg, 2000) is partially accepted, since even though thematic framing prevails, the human interest frame outweighs the responsibility and conflict frames.

Next, regarding the presentation of precautionary measures about the coronavirus pandemic by the Greek media, our variables were divided into three categories. The first category involves personal precaution measures (e.g., mask wearing, handwashing, and avoiding face touching with contaminated hands). The second one encompasses social distancing practices (e.g., avoiding close contacts with sick people, limitation of physical contacts, prohibition of traveling, and home quarantine). The final category refers to actions taken by the Greek government in order to prevent coronavirus spreading (e.g., prohibition of gatherings, border closure, and airport screening). As depicted in Figures 5 and 6, TV stations covered precautionary measures to a greater extent. Looking closely at Figure 5, readers can observe that up to three personal precaution measures were being mentioned on 19.6% of TV stations and 16.3% of news sites. On the contrary, the percentages for social precaution measures (Figure 6), were higher: 30.5% on TV stations and 26.3% on news sites. Our statistical test shows that there is a significant relationship between the type of medium and precautionary measures.

Figure 5
Personal precautionary measures per type of medium (Chi square Test p-value = 0.000).

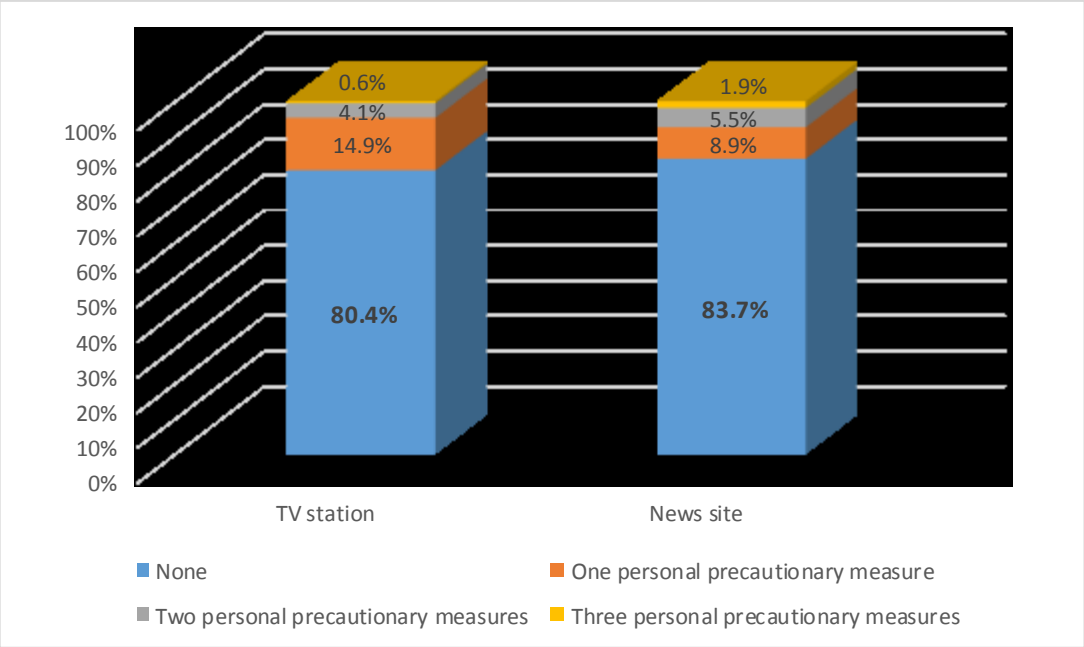
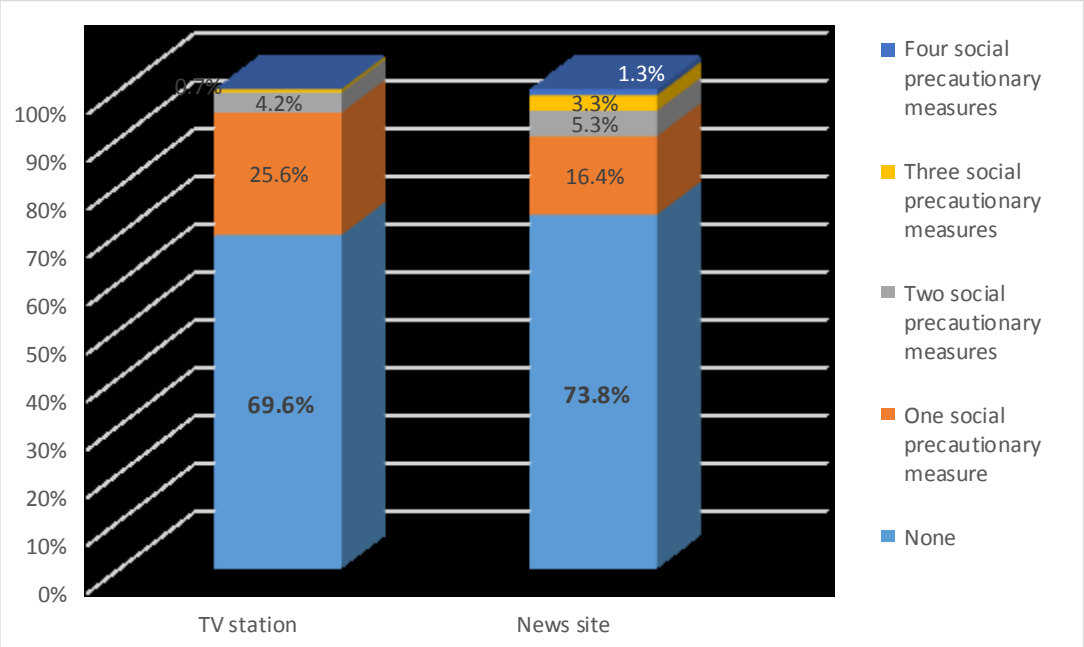


Figure 6
Social precautionary measures per type of medium (Chi square Test p-value = 0.000).



Figures 7 and 8 demonstrate personal and social precautionary measures per reference period. Personal precautionary measures were reported mostly during the first period (19.7%), whereas social precautionary measures were reported during the second period (33.1%). Our

statistical test signifies that there is a significant relationship between social precautionary measures and the period of reference.

Figure 7
Personal precautionary measures per period (Chi square Test p-value = 0.186).

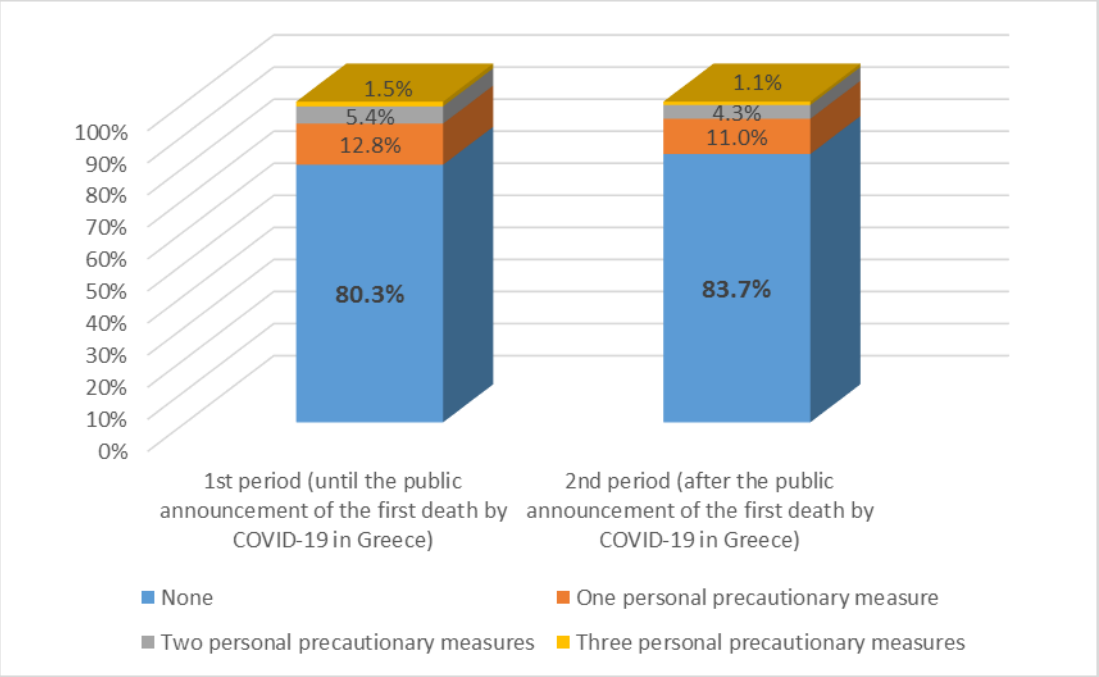
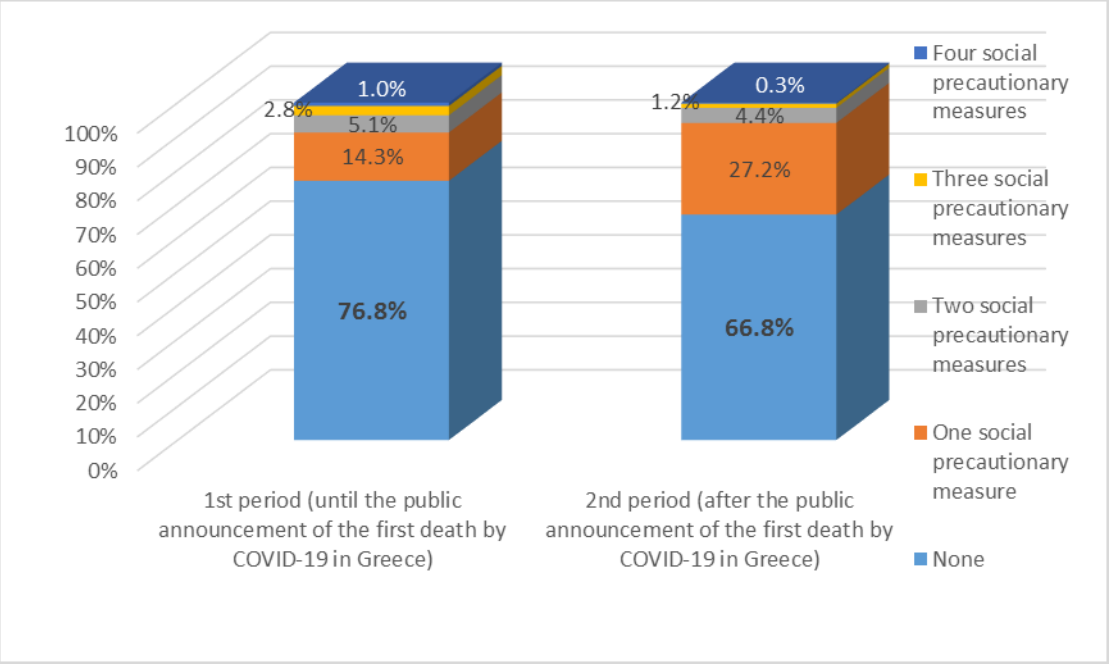


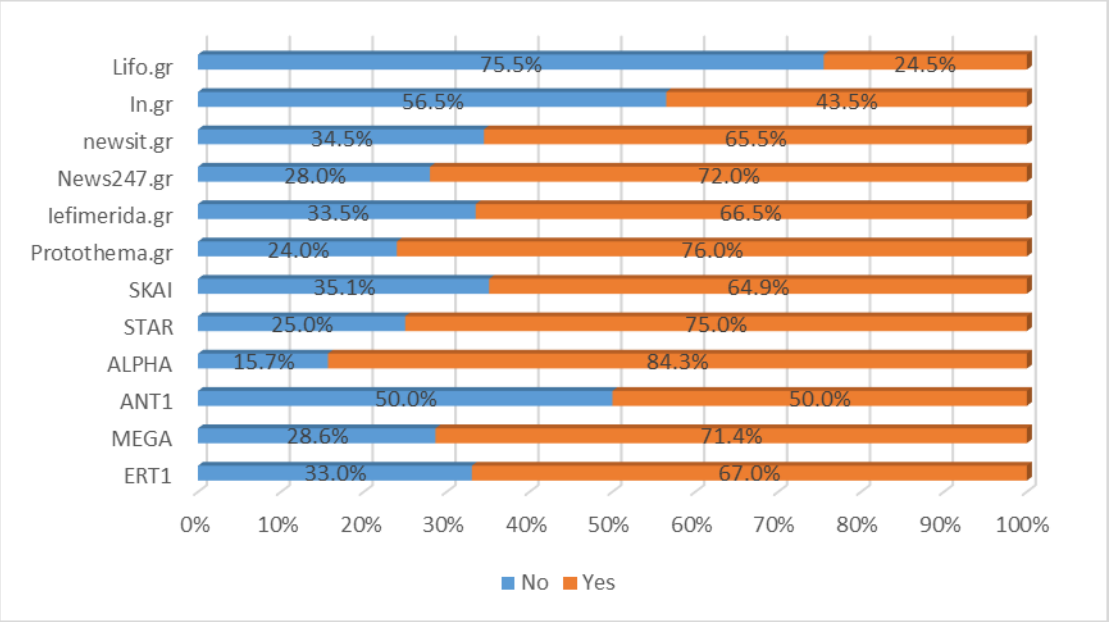
Figure 8
Social precautionary measures per period (Chi square Test p-value = 0.000).



Regarding our third category, the presentation of the measures taken by the government in response to the coronavirus pandemic, most journalists in Greece were engaged in presenting them

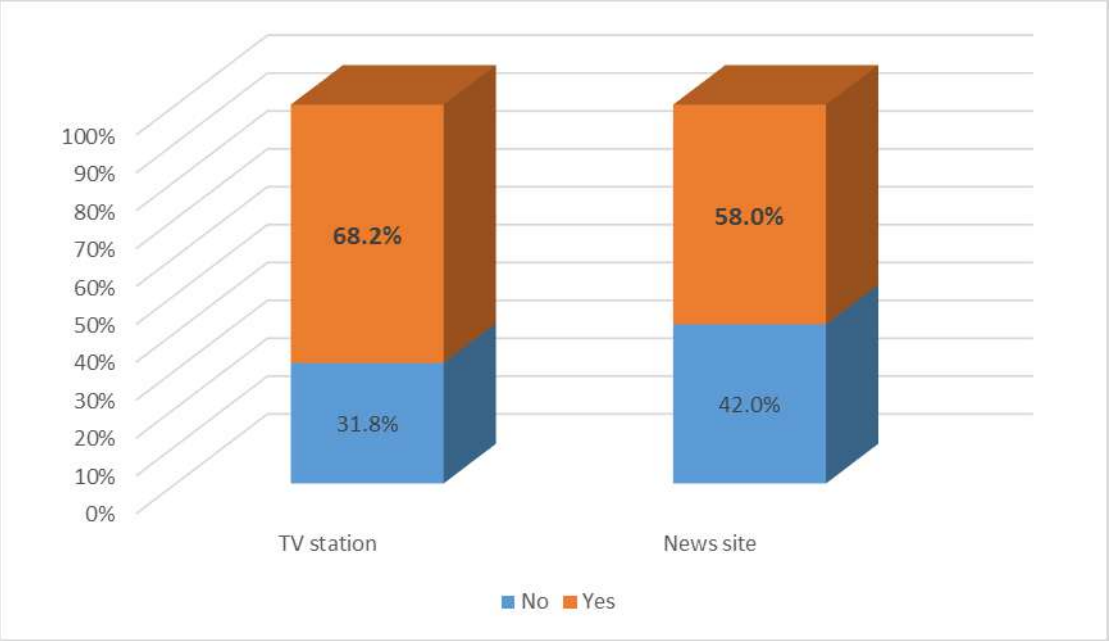
to the public. As it is clearly shown in Figure 9, only two news sites presented the governmental measures in less than 50% of the articles/news items: Lifo.gr (24.5%) and in.gr (43.5%).

Figure 9
Presentation of governmental measures per medium (Chi square Test p-value = 0.000).



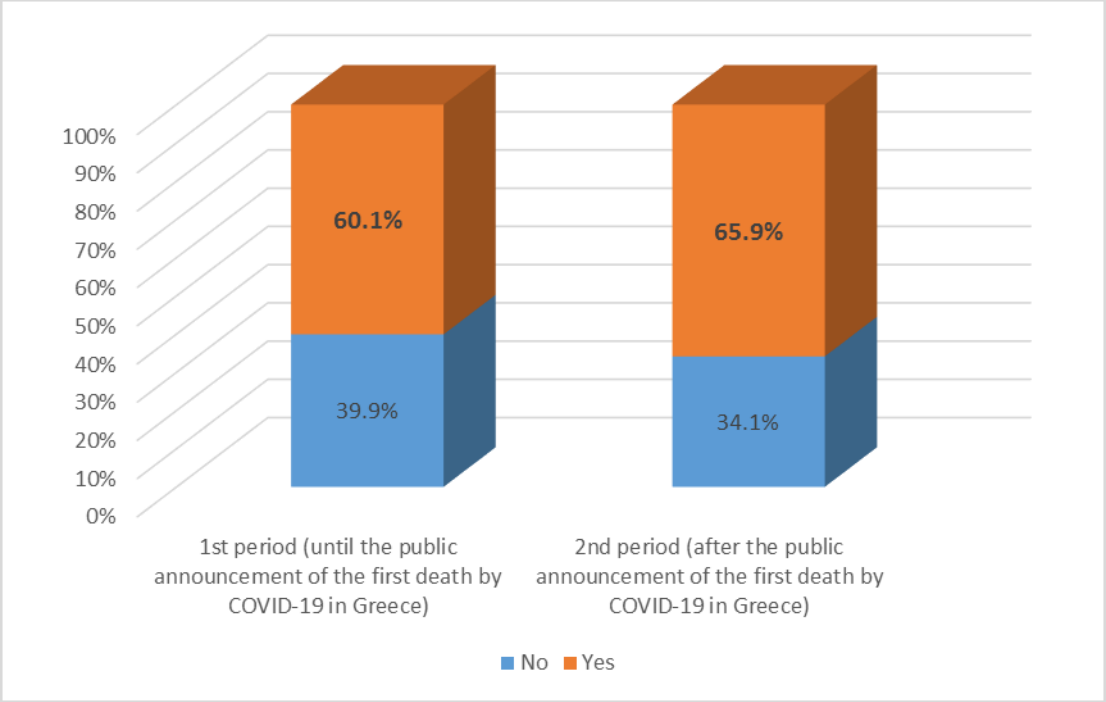
Moreover, TV stations covered governmental actions (Figure 10) to a slightly higher degree (68.2%) than news sites (58.2%).

Figure 10
Presentation of governmental measures per type of medium (Fisher's exact p-value = 0.000).



Lastly, an additional point of interest is that there was a slight increase (65.9%) in reporting such actions during the second reference period (Figure 11).

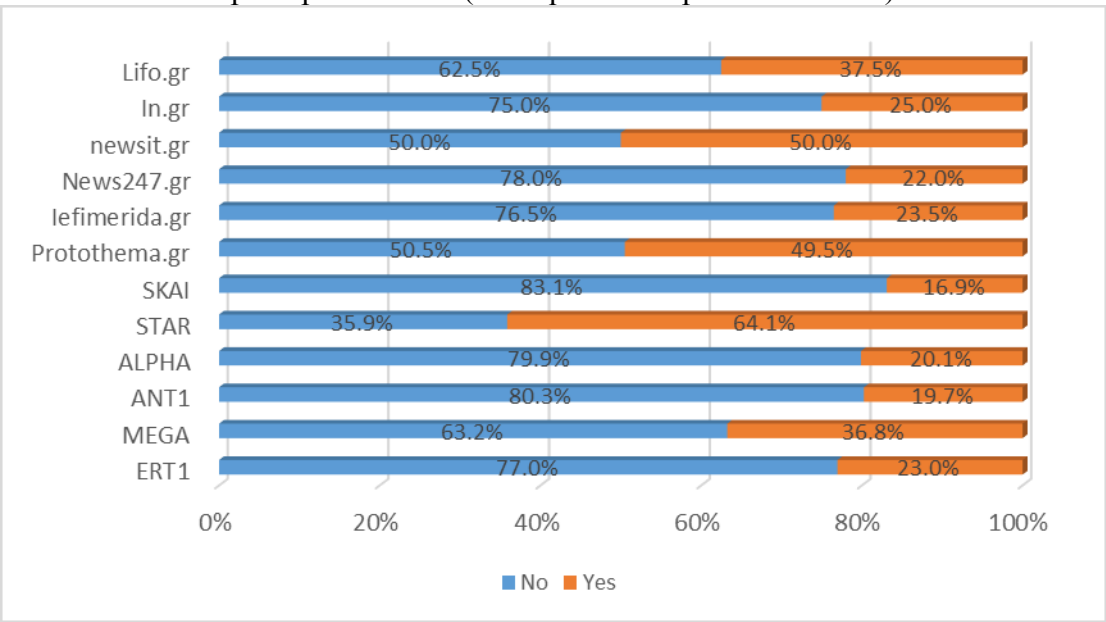
Figure 11
Presentation of governmental measures per period (Fisher's exact p-value = 0.004).



In accordance with the results presented in Figures 5–11, our fourth research hypothesis is accepted only for the governmental measures, since an "escalating" presentation of the various measures against the pandemic by the media was encountered. The lowest percentages in the presentation of personal precautionary measures (in less than 20% of the news items analyzed) were also encountered, followed by social distancing measures (in approximately 30% of our news items), whereas the most frequent references, concerning governmental measures, were encountered in more than 60% of our analysis units. This significant difference in the percentages of the presentation of governmental measures by the media may be attributed to the funding provided by the state as a means to support ongoing governmental risk management.

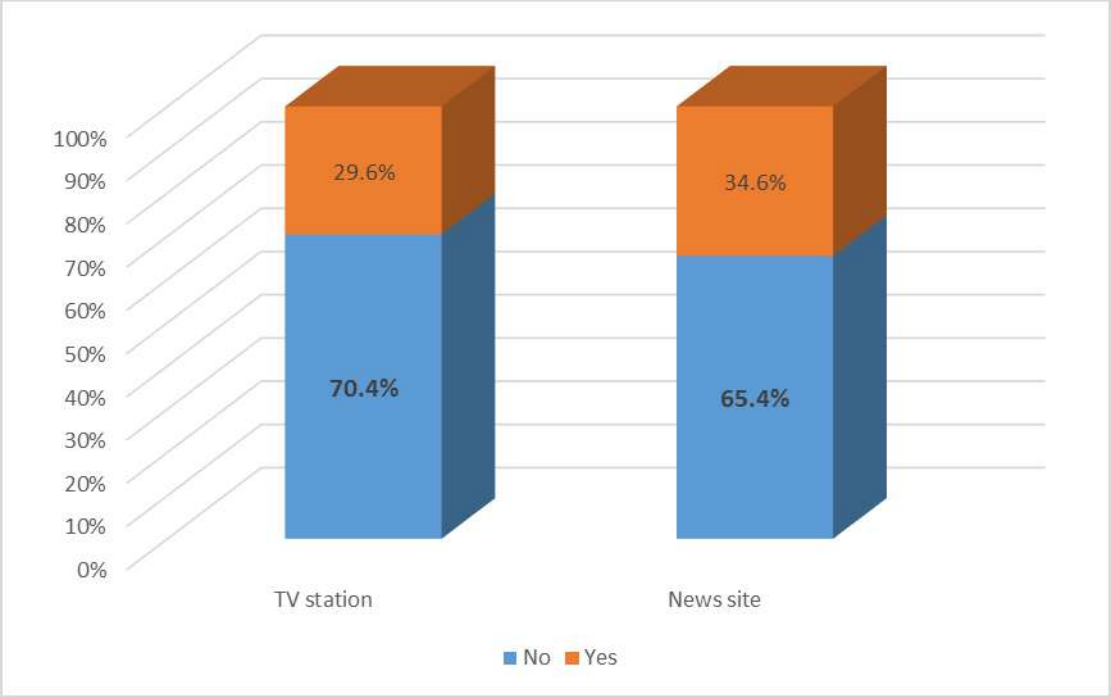
Finally, regarding the presentation of experts' advice by the Greek journalists (RQ_2), it is important to mention at this point that in our research protocol, the World Health Organization experts, the National Public Health Organization experts, and other representatives coming from the public and private health sectors were regarded as official health sources. The findings outlined in Figure 12 reveal that there was a higher reference to an expert's opinion to the following news sites: newsit.gr (50%), protothema.gr (49.5%), Lifo.gr (37.5%), and TV stations: STAR (64.1%), MEGA (36.8%), and the public ERT1 (23%).

Figure 12
Presentation of experts per medium (Chi square Test p-value = 0.000).



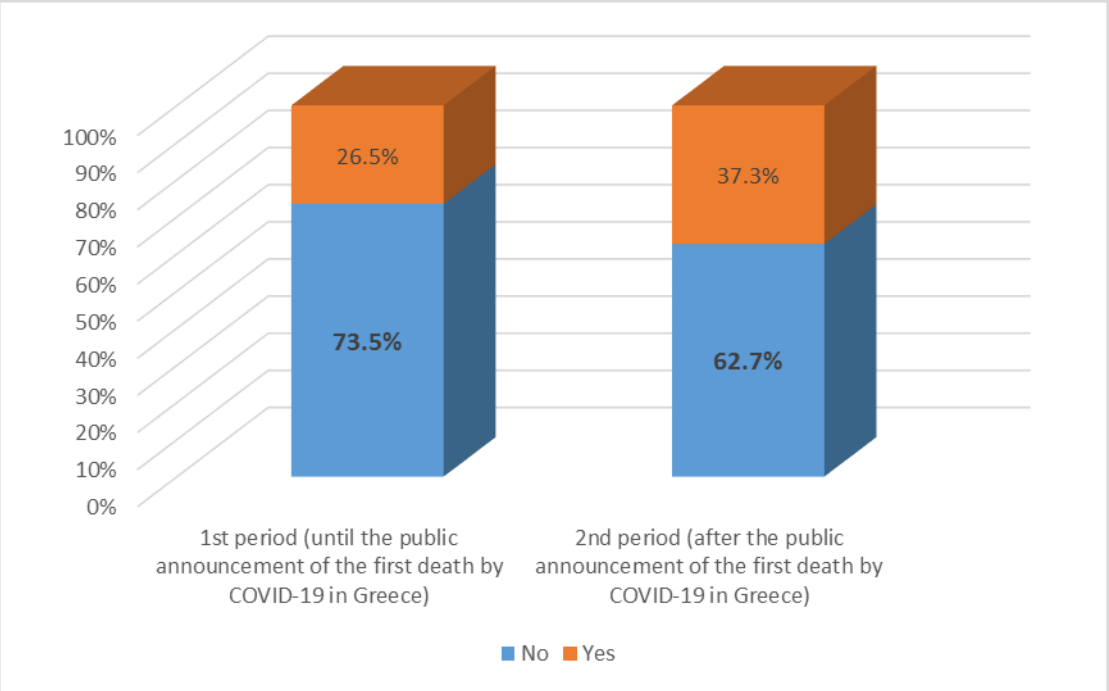
In addition, news sites incorporated significantly more health experts' advice (34,6%) compared to TV stations (29,6%) (Figure 13).

Figure 13
Presentation of experts per type of medium (Fisher's exact p-value = 0.010).



Interestingly enough, there is a statistically significant relationship between experts' advice and the reference period. It seems that journalists relied more heavily on health experts (37,3%) in an attempt to effectively communicate ways to combat coronavirus, especially after the public announcement of the first death in Greece (Figure 14), though experts "appear" in significantly less than half of the news items under scrutiny, either in terms of medium type or reference period.

Figure 14
Presentation of experts per period (Fisher's exact p-value = 0.000).



Discussion-Conclusions

The present study sought to investigate several basic parameters of the presentation of the coronavirus pandemic by the Greek media (agenda setting, priming, framing, reference to personal or governmental measures against the pandemic, presence of experts in the news items or articles).

In summary, our research confirmed that Greek media covered extensively the coronavirus issue in terms of both agenda setting and priming. As our results demonstrated, TV news bulletins were hyper-focused on the pandemic's impact, and news sites prioritized the pandemic. It is worth mentioning at this point that, throughout our analysis, the period of reference (especially the one after the public announcement of the first death by coronavirus) emerged as an important factor in examining the media coverage of the pandemic rather than the type of medium. Hence, the public announcement of the first human loss in Greece during the pandemic acted as a catalyst, so that the Greek media multiplied their journalistic focus on the issue. This finding can serve as a reference point (independent variable) for the comparative examination of a wide variety of aspects regarding the coverage of the pandemic in different countries and/or different media systems.

This study also examined the salience of certain frames as our third hypothesis postulated. Overall, thematic frames outweighed the episodic ones, a finding that is in accordance with previous research, suggesting that pandemic news tends to be more susceptible to thematic framing since, in this way, a pandemic is constructed as a "public" problem that requires collective action (Lee & Basnyat, 2013, p. 130). However, even though thematic framing was confirmed, our results indicated the prevalence of the human-interest frame rather than the responsibility and conflict frames (Semetko & Valkenburg, 2000). It is speculated that the main reasonable account for this focus is, on the one hand, the dangerous and uncertain nature of the coronavirus pandemic leading to personalized news coverage, while on the other, as relevant research has shown, the tendency of the Greek media to overemphasize the dramatic appeal during pandemics (Pleios & Poulakidakos, 2013).

Regarding the presentation of precautionary measures, our findings suggested an "escalating" presentation of actions taken by the government (e.g., prohibition of gatherings, border closure, and airport screening) against the pandemic. More specifically, the lowest percentages appeared in the presentation of personal precautionary measures, followed by social distancing measures, whereas the most frequent references, concerning governmental measures, were encountered in more than 60% of our analysis units. The emphasis placed on governmental measures by the Greek media may be attributed, as discussed earlier, to the "emergency", direct funding they received from the Greek government as a means to support ongoing governmental risk management.

Lastly, the current study explored the presentation of experts' advice in the news coverage of the pandemic. Interestingly enough, even though journalists were found to rely more on health experts during the second reference period, the overall results do not demonstrate an overwhelming dependence on health experts' advice. One possible explanation for this finding may be based on the fact that, although there is an increased need for scientific and precise information, the interpenetration of multiple stakeholders, such as industry, government, and scientists in the health sector, poses significant challenges to journalists nowadays in their efforts to find reliable sources and discover possible conflicts of interest (Stroobant, Van den Bogaert, & Raeymaeckers, 2019, p. 1839).

This research attempted to analyze the Greek media content on the pandemic in order to contribute to a broader view of the coverage of COVID-19. Despite the fact that it concerns only the Greek media landscape, it can lead to a deeper understanding of public health crisis coverage. Furthermore, by analyzing how the same content was articulated, it aims to unravel what really happens in the Greek media. If the same could be done for other media systems or countries, it would be very useful for the scientific community to draw comparative results. At the same time, our research is based on a protocol that includes variables that could be examined in other countries' media content too. Therefore, it can also function as a research tool for conducting research in different countries.

The findings of our study are limited to a content analysis of news bulletins and news sites within the Greek context. In order to gain more in-depth knowledge regarding the media coverage of the coronavirus pandemic, future research could be enhanced through comparative results in diverse cultural settings and by focusing on the ways people perceive news media through the examination of the audience's frames.

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EFFECTS OF FAMILY RELATIONSHIPS IN VIETNAMESE CULTURE ON MENTAL HEALTH PROBLEMS AMONG ADULTS DURING THE COVID-19 LOCKDOWN

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Abstract

Objective. Globally, previous research has shown the negative influence of the COVID-19 pandemic on mental health. In fact, Vietnamese culture emphasizes traditional values, and family relationships have an important influence on well-being. However, fewer studies have examined the correlation between family relationships and mental health problems in crises. Hence, this study aims to evaluate the correlation between family relationships and mental health problems among adults during the COVID-19 lockdown in Vietnam.
Material and methods. A sample of 640 adults aged from 18 to 52 (71.9% female) completed an online survey on mental health from August to September 2021. The survey measured depression, anxiety, stress, family relationships, and socio-demographic and epidemiological factors. Multiple linear regressions were conducted.
Results. Prevalence rates of depression, anxiety, and stress were 31.4%, 43.4%, and 25.2%, respectively. Multiple linear regression indicates that 12% to 14% of the variations in common mental health problems can be explained by the family relationship. In particular, family conflicts were significantly related to higher depression, anxiety, and stress (Beta from 0.14 to 0.16, $p<0.01$); in contrast, an increase in family expressiveness was linked to a decrease in mental health problems (Beta from -0.27 to -0.20, $p<0.01$).
Conclusions. The mental health of Vietnamese adults was affected due to family conflict and family expressiveness, particularly in crises. The current study provides evidence for the prevention strategy of adult mental health problems by reducing conflict and enhancing emotional expressiveness skills for family members, particularly in crisis situations.

Keywords: family relationship, Vietnamese culture, mental health problem, and the COVID-19 lockdown.

Introduction

COVID-19 was a crisis that had profoundly negative effects on people's lives. Vietnam is one of the countries severely affected in all aspects of socio-economic life by the COVID-19 pandemic (Nguyễn, Lê, & Nguyễn, 2022). By December 30, 2021, Vietnam had 1,714,742 cases of coronavirus infection, ranking 31st among 224 countries worldwide in the number of COVID-19 infections (Vietnamese Ministry of Health, 2020). In the period from 2020 to 2021, the impact of the COVID-19 pandemic has brought widespread changes in Vietnamese's lives and health (Phạm, 2020; Đặng, 2021; Hoàng et al., 2021). The interventions mainly focused on preventing the spread of disease to the community and providing medical treatment for patients (Le & Nguyen, 2020). The Vietnamese government enacted prompt and proactive precautions, including the health care system, security forces, and economic policies, along with creative and effective communication campaigns (Tran et al., 2020). However, the consequences of the COVID-19 pandemic have not only affected physical health but also mental health and well-being. Some researchers have identified mental health problems during the COVID-19 pandemic such as fear, boredom, loneliness, anxiety, insomnia, or anger (Shigemura et al., 2020). Therefore, COVID-19 prevention and control measures seem to have only partially solved physical health problems. Meanwhile, less attention has been paid to psychological distress and COVID-19-related post-traumatic stress symptoms (Duan & Zhu, 2020; Xiang et al., 2020).

The family is a unique social group severely affected by the COVID-19 pandemic. Due to the impact of this pandemic, family members have to face negative emotions and more serious mental health problems such as anxiety disorders, emotional disorders, or depression. In fact, economic crises affect people's mental health due to additional risk factors such as unemployment, debt, and families' financial stress. These create severe difficulties and psychological pressure on individuals and families (Nguyễn et al., 2022, p. 262). The implementation of social distancing measures and restrictions on public activities has had a significant impact on human psychology. Although public spaces are an outside environment where people expect social interactions, they were forced to limit mass gatherings. Social distancing policies present the dangers of increasing social rejection and the loss of a sense of community. This made people tend to not want to communicate with others. During the quarantine time, people were required to stay at home. This can generate stress, confusion, anxiety, and depression. Anger, boredom, loneliness, and feelings of loss are quite common. The negative impact of control measures as quarantine experience contributes to serious mental health problems not only for families with quarantined relatives but also for patients infected with COVID-19 (Phạm, 2022). The social distancing solution also caused adults to lose their jobs or switch to working from home. Besides, children had to stop going to school and adapt to online learning (Le, 2022). This sudden change causes family members to have to adjust their personal habits. In the home environment, the role of parents for children became even more crucial than before. Children had only their parents around them, and parents not only took care of home-schooling their children but also managed the children and the housework. This leads to conflicts probably happening within the family. In some special situations, many families and family members also coped with stigma and discrimination related to the COVID-19 infection. Losing loved ones and witnessing their deaths due to COVID-19 has had a negative impact on their mental health. Many family members have experienced moderate-to-severe sleep disturbances and fatigue. Besides, individuals did not receive appropriate and immediate psychological intervention support, and their symptoms worsening. COVID-19 might cause severe psychological problems

among infected patients, such as depression, anxiety, insomnia, and even suicidal ideation (Phạm, 2022).

Family relationships have a significant impact on the mental health outcomes of family members (Chen & Harris, 2019; Moos, 1994). It can be seen that Western culture promotes individuality, while the family unit is very important in Vietnamese culture. This emphasis on collectivity includes an obligation to provide for the welfare of family members. Family members are expected to work and behave in ways that benefit the group as a whole. Many families in Vietnam are extended families, as many generations co-live to take care of each other. Family in Vietnam looks similar to a system of mini societies. Family relationships are a crucial aspect of life in Vietnam, and this proves that family relationships can be protective and risk factors for individuals. Family relationships in the context of the COVID-19 pandemic are a new situation. It has multidimensional effects on the mental health of adults in the family. However, there have not been many studies about the correlation between family relationships and mental health issues. Vietnam is especially one of the countries heavily affected by the COVID-19 pandemic. Hence, in this study, the authors will clarify the correlation between family relationships and mental health issues among adults. The current study aimed to identify strategies to prevent mental health problems in adults by reducing conflict and improving emotional expression skills for family members.

Material and methods

Participants and procedure

The authors conducted a cross-sectional survey with the consent of 640 adults aged from 18 to 52 (71.9% female). The snowball sampling method was applied in the current study. A self-report survey was designed on Microsoft Forms and sent to participants via social networks (Facebook, Zalo) or email. After receiving and completing the questionnaire, participants are encouraged to further share the survey link with other participants. This survey was conducted from August to September 2021, during the Vietnam lockdown due to the COVID-19 epidemic outbreak.

Socio-Demographics and Epidemiological Characteristics

The study collected data on the participants' sociodemographic and epidemiological characteristics through self-designed questionnaires. The information included their gender, age, the level of infection risk in their living area, the average time they spent daily on a smartphone, laptop, or iPad, vaccination status, and any background disease they may have had. More detailed descriptions are shown in Table 1.

Table 1
Socio-Demographics and Epidemiological Characteristics

Variables		Amount (n)	Percentage (%)
Gender	Male	180	(28.1)
	Female	460	(71.9)
Age	Mean (standard deviation)	24.8	(7.2)
The level of infection risk of the living area [(1)]	Green zone	278	(43.4)
	Yellow zone	111	(17.3)
	Orange zone	34	(5.3)
	Red zone	88	(13.8)
	Missing	129	(20.2)
Vaccination status	None	408	(63.7)
	one dose	136	(21.3)
	Two dose or more	96	(15.0)
Background disease	No	529	(82.7)
	Yes	44	(6.9)
	Missing	67	(10.5)
The average time spent daily on a Smartphone/ laptop/iPad	Less than 4 hours per day	328	(51.2)
	4 hours or more per day	312	(48.8)

Note: [(1)] According to the Vietnam National Steering Committee on COVID-19 Prevention and Control, the red zone, orange zone, yellow zone and green zone represents very highest to lowest risk of infection.

Mental health problems

The Anxiety-Depression-Stress Scale (DASS-21) was used to measure the respective mental health problems of adults. This is a commonly used clinical scale to aid in the diagnosis of depression, anxiety, and stress (7 questions each), as well as an effective tool, widely used in public health research. DASS-21 is the short form of the DASS-42, which was developed by Lovibond and Lovibond (Henry & Crawford, 2005; Lovibond & Lovibond, 1995). It is a self-completed questionnaire with 21 items. Each item describes a negative emotional expression of depression, anxiety, or stress with 4 levels of answers, including (0) "*Did not apply to me at all-NEVER*", (1) "*Applied to me to some degree, or some of the time-SOMETIMES*", (2) "*Applied to me to a considerable degree or a good part of time-OFTEN*" and (3) "*Applied to me very much or most of the time-ALMOST ALWAYS*". Item scores from 0-3. Higher scores indicate more severe mental health problems. The total score of all items in the same subscale was multiplied by 2 and collated with the DASS-21 severity rating labels to determine the severity of symptoms of depression, anxiety, and stress. The Vietnamese version of DASS-21 has been determined to be highly reliable and valid (Le et al., 2017; Tran, Tran, & Fisher, 2013). The present study also shows high reliability,

with the Cronbach's Alpha coefficients of depression, anxiety, and stress being 0.88, 0.84 and 0.89, respectively.

Family relationships scale

The Brief Version of the Family Relationship Scale (BFRS) was used to measure family relationships on 3 aspects, including conflict (6 items), cohesion (7 items), and expressiveness (3 items), which was used by Fok, Allen, & Henry (2014). The original version of the BFRS Family Relationship Scale was developed by Moos & Moos (1994), with 27 items (Moos, 1994). This is the first time this questionnaire has been used in Vietnam, so we followed the translation and back-translation process for cross-cultural application given by Brislin (Brislin, 1970) to initially create the Vietnamese. In the current research, Cronbach's alpha coefficient of this scale is 0.74, which ensures its reliability.

Data analyses

In the current research, the authors used descriptive statistics for categorical variables to describe the prevalence of depression, anxiety, and stress. Multiple linear regression analysis was used to assess the relationship between family relationships and mental health problems. In this linear regression model, socio-demographic and epidemiological variables were controlled. All statistics use SPSS 22.0 software.

Results

Prevalence rate of depression, anxiety and stress

The estimated prevalence of mental health problems is shown in Table 2. In the current research, we found that 31.4%, 43.4%, and 25.2% of the adults suffered depression, anxiety, and stress, respectively. Anxiety appears to be the most common mental health problem. 13.3% of adults have severe and extremely severe anxiety. Meanwhile, the prevalence rates of depression and stress at Severe and Extremely Severe levels were only 6.6% and 6.1%, respectively.

Table 2
Prevalence of depression, anxiety and stress among adults during COVID-19 lockdown in Vietnam

	Depression n (%)	**Anxiety n (%)**	**Stress n (%)**
Normal	439 (68.6)	362 (56.6)	479 (74.8)
Mild	75 (11.7)	55 (8.6)	63 (9.8)
Moderate	85 (13.3)	138 (21.6)	59 (9.2)
Severe	23 (3.6)	41 (6.4)	25(3.9)
Extremely Severe	18 (2.8)	44 (6.9)	14 (22)
Total	640 (100)	640 (100)	640 (100)

The correlations between family relationship and mental health problems

In Table 3, after control for confounding factors, multiple linear regression adjusted R square values were 0.14, 0.12, and 0.13 for models that predict depression, anxiety, and stress, respectively. It means 12% to 14% of the variations in common mental health problems can be explained by the family relationship. In particular, family conflicts were significantly related to higher depression, anxiety and stress (Beta from 0.14 to 0.16, $p<0.01$); in contrast, an increase in family expressiveness was linked to a decrease in mental health problems (Beta from -0.27 to -0.20, $p<0.01$). Current study did not find a significantly correlation between family cohesion and mental health problems among Vietnamese adults.

Table 3.
Multiple linear regressions predicting symptoms of common mental health problems from family relationship among adults in Viet Nam

	Depressive symptoms (a)		**Anxiety symptoms (a)**		**Stress (a)**	
	Beta	95%CI	Beta	95%CI	Beta	95%CI
Family conflict	0.16***	0.15; 0.44	.14**	0.10; 0.38	0.15***	0.13; 0.45
Family cohesion	-0.03	-.37; 0.25	-0.10	-.10; 0.49	-0.04	-0.25; 0.44
Family expressiveness	-.20**	-1.44; -.24	-.27***	-1.62; -0.490	-.20**	-1.61; -0.282
Model Adjusted R Square	0.14		0.12		0.13	
* p<0.05; **p<0.01; ***p<0.001 (a) Controlled for gender; age; the level of infection risk in the living area; the average time spent daily on a Smartphone/laptop/iPad; Vaccination status; and Background disease.						

Discussion

This study helps us understand the correlation between family relationships and mental health problems among adults in the unexpected and sudden circumstances of the COVID-19 lockdown in Vietnam. In 2021, governments in many countries around the world implemented social distancing and lockdown policies, including Vietnam (Castex, Dechter, & Lorca, 2021; Glogowsky, Hansen, & Schächtele, 2021; Luu, 2023; Woskie et al., 2021). The initial impact of the unexpected shocks and unprecedented policies on education, health care, and social security appears to have been large. Similar to several studies (Al Dhaheri et al., 2021; Delgado et al., 2021; Ranta, 2022), the consequences of COVID-19 pandemic on the public mental health problems were also presented in this study. It provided statistics and evidence about the effects of COVID-19 on adults' mental health in Vietnam. Particularly, the present study results show that the prevalence of depression, anxiety, and stress symptoms were 31.4%, 43.4%, and 25.2%, respectively during the COVID-19 lockdown in 2021. Remarkably, anxiety symptoms were the most common mental health problem. These findings were similar to those of previous studies in China, India, Spain, Italy, and Iran (Huang & Zhao, 2020; Lakhan, Agrawal, & Sharma, 2020).

Recently, several research papers highlighted the paramount role of family relationships in the face of adversity. According to their claims, mental health partly depends on high-quality family relationships (Daks, Peltz, & Rogge, 2022; Pietromonaco & Overall, 2021; Sommerlad et al., 2021). The present study found that family relationships can either provide social support or cause mental health problems, which is consistent with previous research by Radicke (Radicke et al., 2021). The current study used three domains such as conflict, cohesion, and expressiveness to measure family relationships (Fok et al., 2014). In fact, family life has been influenced since the early stage of the pandemic by the implementation of physical distancing, quarantine, and staying at home to prevent the spread of coronavirus during the outbreak. Because of the social distance, sheltering-in-place makes more frequent interactions among family members, leading to families struggling during lockdown (Buyukcan-Tetik, Aydin, & Eisma, 2023). In this study, statistical analyses indicated that family conflicts were associated with higher depression and anxiety. The result is consistent with the research in Korea. Kim, Han, Park, and Ryu (2023) illustrated that the experience of family conflict was significantly associated with increased depressive mood and stress due to COVID-19. More specifically, in the study of the Korean population, 75.1% of participants indicated that the time spent with family at home increased after the spread of COVID-19, and 37.4% responded that conflicts among family members increased after the COVID-19 outbreak.

On the contrary, this study also indicated that the high level of family expressiveness has had a positive impact on decreasing mental health problems. Several previous studies showed that a protective factor such as family support has reduced the negative psychological impact ([WHO], 2021; Cao et al., 2020; Torales, O'Higgins, Castaldelli-Maia, & Ventriglio, 2020). These figures, therefore, demonstrated that interactions and support within families were regarded as a protective factor in the presence of mental health conditions. Especially for Vietnamese people, the family has a special significance and a crucial role in the person's spiritual life. From that perspective, when a family member is in trouble, they are expected to receive both moral and material support from other members. The importance of family ties extends beyond emotional support to include material and financial assistance. While Western culture elevates individual values, Eastern culture, including Vietnam, tends to prioritize building and promoting family relationships. Some authors have highlighted the importance of the Vietnamese family in providing a central support system (Le, 2021; Thuy, 2018).

The findings provide an important snapshot in time of adults with mental health problems during the lockdown. There was no significant correlation found between mental health problems and family cohesion among Vietnamese adults.

The authors concluded by hypothesizing that the family support system must be adaptable in how it approaches assisting families and children. The results of this study recommend early development of universal assistance and family support services, which aid in identifying unique requirements that require specialized care. This approach inspires a categorisation of family support services in five key policy areas (AIHW, 2020; Hardiker, Exton, & Barker, 1991; OECD, 2009) including: basic material needs, health care, family functioning support services, parenting support and early intervention, and specialized services to address specific or complex needs (Riding, Thévenon, Adema, & Dirwan, 2021). Based on this finding, we can conclude that it is crucial to implement effective community, family, and personalized interventions to improve resilience and reduce the risk of mental health crises. Although the results revealed some negative impacts of the COVID-19 outbreak on mental health, it also presents an opportunity for affected countries to improve their preparedness for future health emergencies. It helps us to prevent psychological

distress in the population. To face future threats, it is obvious that mental health services in terms of family support must be improved more effectively.

Conclusion and implications

Current results show a high prevalence of psychological problems among Vietnamese adults during the COVID-19 outbreak, in which anxiety seems to be the most common. These psychological problems were positively associated with family conflicts. In contrast, family expressiveness was associated with reduced mental health problems. This implies that intervention strategies that focus on strengthening and improving family relationships are a possible solution in crises such as COVID-19. More importantly, enhancing family expressiveness can be seen as an effective preventive strategy for mental health problems. On the other hand, it is necessary to disseminate messages about reducing conflict and enhancing family expressiveness for adults.

Limitations

The study conducted by the authors has certain limitations that need to be acknowledged. Firstly, due to the COVID-19 lockdown enforced in Vietnam in 2021, the study had to be conducted using a web-based cross-sectional approach. It involved voluntary participation of Vietnamese adults in an online survey during the lockdown period. Hence, the possibility of selection bias should be considered while interpreting the results. Secondly, the sudden emergence of the pandemic made it impossible for the authors to assess the mental health conditions of individuals before the outbreak.

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EXPERIENCES OF CORPORAL PUNISHMENT AND ANXIETY AMONG ADOLESCENTS IN ALBANIA

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Abstract

Objectives. This study aims to examine the influence of corporal punishment (CP) on the occurrence of anxiety during adolescence. Specifically, it investigates the prevalence of resilient survivors who do not exhibit clinical levels of anxiety symptoms after severe maltreatment.
Materials and methods. A total of 191 adolescents (94 females and 97 males) with an average age of 14.37 (standard deviation = 0.68) from the Tirana region were included in the study. Participants completed the "Brief Physical Punishment Scale" and the "Hamilton Anxiety Rating Scale (HAM-A)." Statistical analyses, including descriptive statistics, the T-test, Pearson correlation, and multiple regression using SPSS 25, were conducted to examine the relationship between corporal punishment and anxiety symptoms in adolescents.
Results. The findings indicate that adolescents who experienced persistent CP had higher levels of anxiety. The severity of CP was positively correlated with increased anxiety symptoms in both the somatic and psychological dimensions. Gender differences were observed, with females (M = 12.87, SD = 10.42) demonstrating higher overall anxiety levels compared to males (M = 5.73, SD = 8.97), suggesting that females may be more susceptible to experiencing elevated anxiety resulting from CP.
Conclusions The study reveals that CP has a detrimental impact on a child's well-being, with a significant association between CP and increased anxiety symptoms during adolescence. The consequences of childhood CP extend into adolescence, indicating that it is a persistent risk factor for anxiety. Furthermore, females appear to be more vulnerable to anxiety resulting from childhood CP, although males also experience some level of anxiety.

Keywords: corporal punishment, anxiety, adolescence.

Introduction

Adolescence is a critical period characterized by significant physical, cognitive, and emotional changes (Zhang, Xu, Dai, & Jia, 2021; Sabramani et al., 2021; Zhang & Jia, 2023).

During this developmental phase, adolescents often encounter numerous challenges and stressors that can impact their mental well-being (Tsuno, 2022; Pengpid & Peltzer, 2020; Samara et al., 2017). One such factor that has attracted considerable attention in recent years is the use of corporal punishment (CP) as a disciplinary strategy (Fabris, Longobardi, Morese, & Marengo, 2022; Arhin, Oppong Asante, Kugbey, & Oti-Boadi, 2019; Tarafa, Alemayehu, Bete, & Tarecha, 2022; Malaeb et al., 2020). Corporal punishment refers to the deliberate infliction of physical pain or discomfort as a means of behavior modification (Burger, 2022).

Corporal punishment is a disciplinary practice involving using physical force to inflict pain or discomfort upon an individual, typically as a response to perceived undesirable or disobedient behavior (Estric, Calati, & Lopez-Castroman, 2022). This punitive action is frequently administered through physical means, such as spanking, hitting, or slapping, resulting in bodily pain or discomfort (Durrant, Stewart-Tufescu, & Afifi, 2020). CP is commonly employed in child-rearing, educational settings, and certain legal systems (Lokot, Bhatia, Kenny, & Cislaghi, 2020). However, its use remains a topic of extensive debate and controversy, particularly concerning its potential physical and psychological effects, especially within the Albanian context.

The reference to the two dimensions of CP, namely the physical and psychological dimensions, signifies two distinct facets of this disciplinary approach. The physical dimension pertains to the immediate physical consequences experienced by individuals subjected to CP (Breger, Sorensen, Asal, & Willis, 2019). It encompasses the physical discomfort and pain inflicted upon the individual as a direct result of punitive measures, such as spanking or physical reprimand (Stewart-Tufescu, 2023). The physical dimension predominantly addresses the tangible act of administering physical discipline.

Conversely, the psychological dimension of CP alludes to the potential long-term psychological and emotional effects it may exert on the individuals who undergo such punitive measures (Rohner, Kean, & Cournoyer, 1991). This dimension encompasses a range of emotional responses, including feelings of fear, anxiety, aggression, trauma, and various other complex psychological reactions resulting from the experience of CP (Gershoff, 2002). The psychological dimension encompasses the intricate interplay between this form of discipline and its potential impact on the individual's psychological well-being, especially since an intergenerational transmission of violent behavior from the family of origin to the family of procreation was identified (Rada, 2014).

The primary goal of this study is to investigate and elucidate the potential influence of CP on the occurrence of anxiety during adolescence. Anxiety disorders are among the most prevalent mental health issues experienced by adolescents (Bitsko et al., 2022), and their long-term implications can be substantial, affecting academic performance, social relationships, and overall quality of life. Therefore, understanding the factors that contribute to the development and maintenance of anxiety during this crucial developmental period is of the utmost importance.

While previous research (Goulter et al., 2020; Murray et al., 2018; Martin et al., 2021; Chen et al., 2021) has explored the association between CP and various negative outcomes, including aggression, antisocial behavior, and depressive symptoms, the relationship between CP and anxiety remains relatively understudied. It is essential to comprehensively examine this link to determine whether the use of CP represents a potential risk factor for anxiety in adolescents.

By conducting a systematic investigation into this topic, this study aims to contribute to the existing body of knowledge and provide valuable insights into the potential implications of CP on adolescent mental health. The findings will have implications for parents, educators, and policymakers, shedding light on the appropriateness and potential consequences of employing

corporal punishment as a disciplinary measure. Ultimately, the goal is to promote evidence-based practices and interventions that foster healthy and supportive environments for adolescents, conducive to their overall well-being and psychological development.

One study conducted by Nakanishi and colleagues (2022) aimed to examine the long-term effects of CP on adolescent mental health outcomes, including anxiety. The researchers followed a large sample of adolescents from diverse backgrounds over a period of several years. They utilized validated measures to assess the frequency and severity of CP experienced by the participants and also evaluated their levels of anxiety at different stages of adolescence.

The findings of this study revealed a significant association between persistent corporal punishment and heightened levels of anxiety among adolescents. Specifically, adolescents who had experienced frequent and severe forms of CP throughout their upbringing displayed higher levels of anxiety compared to those who had not been subjected to such disciplinary measures. These findings held true even after controlling for other potential confounding factors, such as socioeconomic status and parental mental health.

Another notable study conducted by Fortier et al. (2022) corroborated the aforementioned findings, further strengthening the evidence for the link between CP and anxiety during adolescence. The researchers employed a longitudinal design, following a cohort of adolescents from early adolescence into young adulthood. They assessed the occurrence of CP experienced by the participants at various stages and measured their levels of anxiety using standardized self-report measures.

The results of this study consistently demonstrated that individuals who had experienced persistent CP exhibited significantly higher levels of anxiety symptoms throughout adolescence and into young adulthood. Moreover, the researchers found that the relationship between CP and anxiety was partially mediated by factors such as low self-esteem and impaired emotion regulation skills. These findings suggest that the adverse effects of CP on anxiety may be mediated by internal psychological processes.

The relationship between the severity of CP and anxiety in adolescents has been a topic of interest in research, as understanding the impact of the intensity of punishment on anxiety levels can provide valuable insights into the potential mechanisms underlying this association. This analysis explores the evidence surrounding the idea that the more severe CP, the greater the anxiety experienced by adolescents (Neaverson et al., 2022). Furthermore, it investigates how CP may affect the onset of anxiety in both somatic and psychological dimensions.

These studies (Gershoff & Font, 2016; Martin et al., 2021; Toseeb & Wolke, 2022; Memba & Ostrov, 2023) suggest that the severity of CP plays a crucial role in exacerbating anxiety symptoms in adolescents. The more extreme and intense the punishment, involving physical harm or emotional distress, the higher the likelihood of increased anxiety levels (Xiong, Wang, Wang, Wang, & Ren, 2023; Huang et al., 2022; Zheng et al., 2023; Wang, Yao, Patel, & Li, 2023). The physical pain and fear associated with severe CP may contribute to heightened somatic symptoms of anxiety, such as increased heart rate, muscle tension, and headaches (Estell et al., 2009; Pronk et al., 2020; Fang et al., 2022; Healy, Thomas, Sanders, & Scott, 2022).

Additionally, CP can impact the psychological dimensions of anxiety in adolescents. Research by Fortier et al. (2022) found that adolescents who experienced severe CP reported higher levels of cognitive and emotional symptoms of anxiety, such as excessive worry, difficulty concentrating, and feelings of apprehension or fear. The psychological distress caused by severe punishment may lead to maladaptive cognitive patterns and negative self-perceptions, contributing to the development and maintenance of anxiety disorders.

Furthermore, studies (Heinze, Cook, Wood, Dumadag, & Zimmerman, 2018; Goulter et al., 2020; Lv & Li, 2023; Forsberg & Thorvaldsen, 2022; Valles, 2007) have explored potential mechanisms through which CP influences the onset of anxiety in adolescents. One proposed mechanism is the disruption of secure attachment bonds between caregivers and adolescents (Totura & MacKinnon-Lewis, 2011; Ttofi, Bowes, Farrington, & Lösel, 2014; Andersen, Orm, Fossum, Øie, & Skogli, 2023). CP can create fear, mistrust, and a sense of insecurity, compromising the formation of healthy attachment relationships. This insecurity and lack of emotional support may contribute to the development of anxiety symptoms (Tang et al., 2023; Valente et al., 2023; Gong et al., 2023).

Another mechanism is the impact of CP on the adolescent's self-esteem and self-efficacy. Severe punishment can lead to feelings of shame, worthlessness, and a negative self-concept, which are known risk factors for anxiety disorders (Koele, Blankenstein, Schreuders, van Duijvenvoorde, & Güroğlu, 2023). Moreover, the use of physical force as a disciplinary strategy may inhibit the development of effective emotion regulation skills, leaving adolescents more vulnerable to anxiety symptoms (Bäker & Schütz-Wilke, 2023; Hunt, Peters, & Rapee, 2012; Goodman & Goodman, 2009).

It is important to acknowledge that the findings presented in this review highlight a correlational relationship between CP and anxiety among adolescents. While the results are compelling, they do not establish causality. It is possible that other confounding factors not accounted for in the studies may contribute to the observed association. Additionally, the subjective nature of self-report measures used to assess anxiety may introduce biases in the findings.

Nevertheless, the cumulative evidence from multiple studies (Mills-Koonce, Towe-Goodman, Swingler & Willoughby, 2022; Rothenberg et al., 2023; Ng, Chua, & Shorey, 2022; Peng et al., 2019) suggests a strong association between persistent CP and elevated levels of anxiety among adolescents. These findings underscore the potentially detrimental effects of relying on physical punishment as a disciplinary strategy, emphasizing the importance of exploring alternative, non-violent approaches to shaping adolescent behavior.

The implications of these findings extend to parents, educators, and policymakers. It is crucial for parents and caregivers to be aware of the potential psychological consequences of CP and consider alternative, more positive, and constructive methods of discipline. School systems and policymakers should also prioritize the dissemination of evidence-based practices that promote positive parenting techniques and emphasize the importance of creating safe and nurturing environments for adolescents.

In conclusion, the existing evidence supports the notion that the severity of CP is positively associated with increased anxiety levels in adolescents. Severe CP affects both the somatic and psychological dimensions of anxiety, potentially contributing to the onset and maintenance of anxiety disorders. The physical and emotional distress caused by severe punishment, along with the disruption of secure attachment bonds and negative self-perceptions, may underlie this relationship. These findings emphasize the importance of promoting non-violent, positive discipline strategies and creating supportive environments that foster the well-being and mental health of adolescents.

Materials and methods

Participants

A total of 191 adolescents from the Tirana region, Albania, were included in the study. The parents and teachers of the participating schools were informed about the research aims in a

meeting. The study received ethical approval from the Commission on Ethics in Research and Teaching at the University of Tirana. Anonymity and confidentiality procedures were carefully explained to the participants and their parents or legal guardians in the written consent form. Participants were recruited from two public schools in the region. Out of the total sample size of 191 adolescents, 8.4% were 13 years old, 48.7% were 14 years old, 40.3% were 15 years old, and only 2.6% were 16 years old. The sample's ages ranged from 13 to 16 years, with a mean age of 14.37 years (SD = 0.68). These values indicate a relatively homogeneous age distribution among the participants. Of the total sample, 49.2% were female, while 50.8% were male. The majority of participants were either 14 or 15 years old, with a smaller proportion at the ages of 13 and 16. The gender distribution was nearly equal between females and males.

Measures

The "Brief Physical Punishment Scale" was used to assess the participants' experiences of CP. The "Brief Physical Punishment Scale" was used to assess both the physical and psychological dimensions of CP. It consists of 15 questions, with the first eight measuring the extent of physical punishment and the subsequent seven measuring the 5-point psychological punishment. The scale utilizes a Likert-type response format with five options on a rating-scale from 0 (no manifestation) to 4 (severe manifestations).

The reliability coefficients for the measures employed in the study demonstrate strong internal consistency. Specifically, Cronbach's alpha coefficient for the overall construct of CP was found to be $\alpha = 0.87$, indicating a high level of reliability in assessing this disciplinary practice. Furthermore, the physical dimension of CP exhibited a Cronbach's alpha coefficient of $\alpha = 0.88$, signifying robust internal consistency in capturing the immediate physical consequences of such punishment. Similarly, the psychological dimension displayed a high level of reliability, with a Cronbach's alpha coefficient of $\alpha = 0.91$, highlighting the consistency in measuring the long-term psychological and emotional effects stemming from CP. These findings underscore the reliability of the instruments used to assess CP and its associated dimensions in the study.

The "Hamilton Anxiety Rating Scale" (HAM-A), a widely used instrument in anxiety research, was employed to evaluate anxiety symptoms. It consists of 13 items, assessing the somatic (9 items) and psychological (4 items) dimensions of anxiety. Similar to the Brief Physical Punishment Scale, the HAM-A utilizes a Likert-type response format with five options ranging from 0 (no manifestation) to 4 (severe manifestations). The reliability coefficient of the pilot study indicated good internal consistency for both instruments. The study also collected demographic data, including age, gender, location, and school affiliation.

The inventory exhibits a high level of internal consistency, as indicated by a Cronbach's alpha (α) coefficient of 0.94. It is important to emphasize, however, that this inventory does not possess the specificity required for diagnostic purposes.

These instruments and demographic information provided valuable data for analyzing the relationship between CP and anxiety symptoms during adolescence.

Procedure

All schools in the Tirana region were invited to participate in the study, and two schools agreed to take part. The research aims were presented to parents and teachers in a meeting to ensure transparency and informed consent. The written consent form, approved by the Commission on

Ethics in Research and Teaching at the University of Tirana, was provided to the participants and their parents or legal guardians. The participants completed the scales in a group setting within their respective schools, following clear instructions provided by the researchers.

The participants completed the Brief Physical Punishment Scale and the Hamilton Anxiety Rating Scale as part of the study. The scales were administered in a group setting, and participants were given clear instructions on how to respond to each item. The data collection took place in the two public schools.

Statistical Analysis

The collected data were analyzed using SPSS 25. Descriptive statistics were calculated to summarize the demographic characteristics of the sample and the scores on the scales. A T-test was conducted to examine the differences in anxiety levels between females and males. Pearson correlation analysis was used to explore the relationship between CP and anxiety symptoms. A multiple regression analysis was performed to determine the extent to which corporal punishment predicts anxiety symptoms in adolescents.

Results

The descriptive statistics related to the CP experienced by the participants include physical and psychological dimensions. The mean score for the physical dimension was 0.48, indicating a relatively low level of physical dimension experienced by the participants on average. The standard deviation (SD) was 0.62, suggesting a moderate amount of variability in the reported levels of physical dimension. Regarding the psychological dimension, the mean score was 0.94, indicating a slightly higher level of psychological dimension experienced by the participants compared to the physical dimension. The standard deviation was 0.70, indicating a moderate degree of variability in the reported levels of psychological dimension. These findings provide a descriptive overview of the levels of physical and psychological dimensions experienced by the participants. The data suggest that, on average, the participants reported relatively low levels of physical and psychological dimensions. However, there is some variability in the reported levels of CP, indicating that some participants experienced higher levels of CP than others. These results set the stage for further analyses examining the relationship between CP and anxiety symptoms during adolescence.

Pearson correlation coefficients between physical dimension and psychological dimension were found to be .519**. This indicates a moderately positive and statistically significant correlation between the two variables. The p-value associated with the correlation coefficient was .000, indicating that the correlation is significant at the 0.01 level (2-tailed). These findings suggest that there is a significant positive relationship between the physical dimension and the psychological dimension. As the physical dimension increases, the levels of the psychological dimension also tend to increase.

The mean score for psychological anxiety was 0.82, indicating a moderate level of psychological anxiety experienced by the participants on average. The standard deviation (SD) was 0.93, suggesting a considerable amount of variability in the reported levels of psychological anxiety. Regarding somatic anxiety, the sample size and range of scores were the same (N = 191, 0.0 to 2.5). The mean score for somatic anxiety was 0.46, indicating a relatively low level of somatic anxiety experienced by the participants. The standard deviation was 0.55, suggesting a moderate degree of variability in the reported levels of somatic anxiety.

These findings provide an overview of the levels of psychological and somatic anxiety experienced by the participants. The data suggest that, on average, the participants reported a moderate level of psychological anxiety and a relatively low level of somatic anxiety. However, there is variability in the reported levels of anxiety, indicating that some participants experienced higher levels of anxiety than others. Further analyses can explore the relationship between anxiety and other variables of interest, such as the experience of CP, to gain insights into the impact of different factors on anxiety symptoms during adolescence.

The correlation coefficient between psychological anxiety and somatic anxiety was found to be .806. This indicates a strong positive and statistically significant correlation between the two variables. The p-value associated with the correlation coefficient was .000, indicating that the correlation is significant at the 0.01 level (2-tailed). These findings suggest that there is a significant positive relationship between psychological anxiety and somatic anxiety. As psychological anxiety levels increase, so do the levels of somatic anxiety. This implies that individuals who experience higher levels of psychological anxiety are also more likely to experience higher levels of somatic anxiety. Understanding the interconnectedness of psychological and somatic anxiety can help inform interventions and treatment approaches for individuals experiencing anxiety symptoms.

The Pearson correlation coefficients indicate no statistically significant correlation between age and the occurrence of CP (physical dimension, psychological dimension) among the participants. This suggests that age is not a strong predictor of CP in this study.

The results of the independent samples t-tests conducted to examine the mean differences in corporal punishment based on gender for the physical dimension revealed no significant difference between females and males in terms of the physical dimension, with a t-value of 0.787 and a p-value of .434 ($p > 0.05$). The t-test did not reveal a significant difference in CP between females and males, with a t-value of 0.969 and a p-value of .334 ($p > 0.05$). This implies that gender is not a significant factor in determining the occurrence of CP in this study. The t-test revealed a significant difference in total anxiety between females and males, with a t-value of 5.069 and a p-value of .000 ($p < 0.05$). Females exhibited significantly higher levels of total anxiety compared to males. The t-test indicated a significant difference in psychological anxiety between females and males, with a t-value of 4.734 and a p-value of .000 ($p < 0.05$). Females reported significantly higher levels of psychological anxiety compared to males. For somatic anxiety, there was a significant difference between females and males, with a t-value of 4.853 and a p-value of .000 ($p < 0.05$). Females exhibited significantly higher levels of somatic anxiety compared to males. In summary, the results indicate that there are significant gender differences in anxiety levels among the participants. Females showed higher levels of total anxiety, psychological anxiety, and somatic anxiety compared to males. These findings suggest that gender plays a role in the manifestation of anxiety symptoms in the studied population.

The objective of this analysis was to assess the extent of the correlation between anxiety levels and physical dimension, psychological dimension, and total CP. The correlation analysis revealed a significant positive correlation between total anxiety and physical dimension, with a Pearson correlation coefficient of .411 ($p < .01$). This indicates that higher levels of physical dimension are associated with increased levels of anxiety. Similarly, a significant positive correlation was found between total anxiety and the psychological dimension, with a Pearson correlation coefficient of .460 ($p < .01$). This suggests that higher levels of psychological violence are associated with higher levels of anxiety. Furthermore, there was a significant positive correlation between total anxiety and overall CP, as indicated by a Pearson correlation coefficient of .500 ($p < .01$). This indicates that higher levels of overall CP, encompassing both physical and psychological

dimensions, are associated with increased levels of anxiety. In summary, the results demonstrate that there are significant positive correlations between total anxiety and different forms of CP, including physical corporal punishment and psychological corporal punishment. These findings suggest that experiencing higher levels of CP, whether physical or psychological, is associated with increased anxiety levels.

Table 1

Pearson correlation between anxiety levels and physical and psychological dimensions

		Anxiety
Physical dimension	Pearson Correlation	**.411****
	Sig. (2-tailed)	.000
	N	191
Psychological dimension	Pearson Correlation	**.460****
	Sig. (2-tailed)	.000
	N	191
Corporal punishment	Pearson Correlation	**.500****
	Sig. (2-tailed)	.000
	N	191

***. Correlation is significant at the 0.01 level (2-tailed).*

This analysis aimed to examine the extent to which physical and psychological CP contribute to the prediction of total anxiety. The regression model yielded the following results: the constant term (intercept) was found to be 2.678 ($p = .015$), indicating that when the predictors (physical and psychological dimensions) are zero, the estimated mean value of total anxiety is 2.678. For the predictor variable of physical dimension, the unstandardized coefficient (B) was 3.920 ($p = .002$), suggesting that a one-unit increase in physical dimension is associated with a 3.920-unit increase in total anxiety. The standardized coefficient (Beta) for the physical dimension was .236, indicating that the physical dimension accounts for 23.6% of the variance in total anxiety. This coefficient represents the relative contribution of the physical dimension to the prediction of total anxiety, taking into account the scale of measurement of both variables. Similarly, for the predictor variable of psychological dimension, the unstandardized coefficient was 4.980 ($p < .001$), indicating that a one-unit increase in psychological dimension is associated with a 4.980-unit increase in total anxiety. The standardized coefficient (Beta) for the psychological dimension was .338, indicating that the psychological dimension explains 33.8% of the variance in total anxiety. The overall model fit was statistically significant, as indicated by the F-value of 31.76 ($p < .001$). This suggests that the predictors (physical and psychological dimensions) collectively contribute significantly to the prediction of total anxiety. The coefficient of determination (R2) was calculated to be .253, indicating that approximately 25.3% of the variance in total anxiety can be explained by the predictors included in the model. In summary, the regression analysis revealed that both physical and psychological dimensions significantly contribute to the prediction of total anxiety. The physical dimension accounts for 23.6% of the variance, while the psychological dimension explains 33.8% of the variance in total anxiety.

Table 2
Regression analyses between physical and psychological dimension *with anxiety*

Model	Unstandardized Coefficients		Standardized Coefficients	t	P
	B	Std. Error	Beta		
(Constant)	2.678	1.089		2.460	.015
Physical violence	3.920	1.226	.236	3.198	**.002**
Psychological violence	4.980	1.088	.338	4.577	**.000**

$F=31.76$, $R^2=.253$

These findings highlight the importance of considering both forms of CP when examining their impact on anxiety levels.

Discussion

The findings of this study align with previous research (Pittman & Farrell, 2022; Goodrum et al., 2020) that has established a clear link between violence exposure and anxiety among adolescents. The significant predictive power of both physical and psychological dimensions on anxiety levels further reinforces the notion that the nature of CP, rather than its specific form, plays a critical role in eliciting emotional distress and contributing to anxiety symptoms (Townsend et al., 2020; Dark et al., 2020; Heinze et al., 2018). These results emphasize the detrimental impact of CP exposure on adolescent mental health, highlighting the urgent need for interventions that address both physical and psychological dimensions (Heleniak et al., 2021; Gollub, Green, Richardson, Kaplan, & Shervington, 2019; Heleniak, King, Monahan, & McLaughlin, 2018; Company-Córdoba, Gómez-Baya, López-Gaviño, & Ibáñez-Alfonso, 2020).

Comparing our findings with those of previous studies, we observe a consistent pattern of association between violence exposure and anxiety. For example, Cadely, Mrug, & Windle (2019) found that adolescents who experienced higher levels of CP exhibited increased anxiety symptoms, mirroring our results. Moreover, Hashemi, Fanslow, Gulliver, & McIntosh (2022) reported a positive correlation between violence exposure and anxiety, providing further support for the link established in our study. The convergence of these findings suggests that the relationship between CP exposure and anxiety holds across different populations and settings, reinforcing the generalizability of these associations.

While previous studies have examined the impact of CP exposure on mental health outcomes, our study adds value by considering physical and psychological dimensions as separate predictors. This approach allows for a more comprehensive understanding of the complex interplay between violence and adolescent mental health. By analyzing these dimensions independently, we reveal distinct contributions of the physical and psychological dimensions to anxiety levels, shedding light on the unique mechanisms through which each dimension of CP affects psychological well-being. This nuanced perspective enriches our understanding of the underlying processes and offers valuable insights for targeted interventions.

However, it is important to acknowledge the limitations of this study. First, the cross-sectional design restricts our ability to establish causal relationships between CP exposure and anxiety. Longitudinal studies would provide more robust evidence of the temporal sequence and potential causal mechanisms involved. Additionally, the reliance on self-report measures introduces

the possibility of response bias or social desirability effects. Future research should consider utilizing multiple data sources, such as objective measures or reports from caregivers and teachers, to enhance the reliability and validity of the findings.

To build upon these findings, future research should investigate potential moderating or mediating factors that influence the relationship between CP exposure and anxiety. For instance, exploring the role of social support networks, coping strategies, and resilience may help identify protective factors that buffer the negative impact of CP exposure on mental health outcomes. Such insights would guide the development of more targeted and tailored interventions that address the specific needs of adolescents exposed to CP.

By considering both physical and psychological dimensions as separate predictors, we offer a nuanced understanding of the impact of CP on adolescent mental health. Our findings underscore the urgency of implementing comprehensive interventions that address both forms of CP to promote the well-being of young individuals. By targeting these factors and exploring potential moderating and mediating factors, we can strive towards developing more effective prevention and intervention strategies that mitigate the adverse effects of CP exposure on anxiety levels and enhance adolescent mental health outcomes.

Implications of Findings

The findings highlight the urgent need for comprehensive prevention and intervention strategies that address both the physical and psychological dimensions experienced by adolescents. Such strategies should aim to reduce the occurrence of violence and provide support to individuals who have been exposed to CP, with a particular focus on mitigating the impact on anxiety symptoms.

The results emphasize the importance of raising awareness about the detrimental effects of CP exposure on adolescent mental health, especially in terms of anxiety. Education programs targeting parents, caregivers, teachers, and the wider community can help foster a supportive and violence-free environment for adolescents.

The significant gender differences observed in anxiety levels and CP exposure call for tailored interventions. These should consider the unique challenges faced by females and males and address the specific needs and vulnerabilities associated with each gender.

Professionals working with adolescents should adopt a multi-dimensional approach to assessing CP exposure and anxiety. This involves considering both physical and psychological dimensions and recognizing the potential impact of each dimension on anxiety symptoms. Comprehensive assessments can guide targeted interventions and facilitate early identification and support for individuals at risk.

To establish causal relationships and better understand the temporal dynamics between CP exposure and anxiety, longitudinal studies are needed. These would provide valuable insights into the long-term effects of CP and help identify critical periods for intervention and support.

The findings call for policy-level changes to address the systemic issues related to CP exposure and its impact on adolescent mental health. Policymakers should prioritize the implementation of evidence-based interventions, allocate resources for mental health support in educational settings, and advocate for legislation that protects adolescents from CP.

Overall, the implications of the findings emphasize the importance of recognizing and addressing the impact of CP exposure on adolescent mental health, particularly anxiety symptoms. By implementing comprehensive prevention, intervention, and support strategies, stakeholders can

contribute to the well-being and resilience of adolescents, promoting healthy development and positive mental health outcomes.

Conclusions

In conclusion, this study provides valuable insights into the relationship between CP exposure and anxiety among adolescents. The findings underscore the detrimental impact of physical and psychological dimensions on adolescent mental health, highlighting the need for comprehensive interventions to address these forms of CP.

The positive correlation between CP exposure and anxiety aligns with previous research, emphasizing the robustness of this association. By considering physical and psychological dimensions as separate predictors, this study contributes to a more nuanced understanding of the complex interplay between CP and adolescent mental health.

In conclusion, this study highlights the significant association between CP exposure and anxiety among adolescents and underscores the importance of prioritizing mental health support for this vulnerable population. The findings contribute to our understanding of the complex relationship between CP and mental health outcomes and provide a foundation for future research and the development of effective interventions to promote adolescents' well-being.

Abbreviation

CP: Corporal punishment

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PARENTAL SUPPORT AND ITS ROLE ON YOUTH AND ADULT SELF-EFFICACY

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Abstract

Objectives. Parental support has become an important element for the complete development of today's child, who will become the young person and adult of the future, as well as for effective parenting. This study aimed to determine the extent to which parental support is experienced and its impact on youth and adult self-efficacy.
Material and methods. This study was conducted on a sample of 247 respondents, 226 (91%) female, 20 (8%) male, and 1 respondent who did not state gender. The method used was the indirect survey, and the research instrument used was the questionnaire.
Results. A significant effect of the established relationship with parents on parental support was obtained, $F(2, 70.50) = 4.31$, $p = .01$, $p < .05$. A statistically significant difference ($t = - 6.33$, $p < .001$) was established between the variance of the self-efficacy means in the case of respondents whose feelings were recognized by their parents, as a specific strategy for parental support compared to respondents who did not experience this strategy during childhood. A significant effect of the relationship established with the parents on the self-efficacy level of the respondents was identified and perceived parental support was associated with self-efficacy.
Conclusions. The study demonstrates the importance of parental support for the acquisition of self-efficacy and subsequent development of the young person, recognizing that it becomes all the stronger as it is provided equally by both parents.

Keywords: parental support, self-efficacy, recognition of feelings.

Introduction

Parental support refers to a wide range of activities, such as guidance, connection, and involvement in children's lives (lifestyle, academic achievement), so that children perceive the positive resources they can obtain from their relationship with their parents (Youn, Napolitano, Han, Lee, & Rounds, 2023).

Along with parental support, self-efficacy is a key concept in the psychology of learning, as it has strong implications for achieving success. Young people must build a strong sense of self-

efficacy to be able to cope with the situations to which they are exposed and to support their perseverance and courage at an optimal level in subsequent situations that will require different skills, capacities, and competences (Pânișoară, 2019).

Parental support

Thomas (1974) defines parental support as the behavior shown by a parent towards his child, making him feel comfortable in the parent's presence, which conveys in the child's mind that he is accepted and approved as a person by the parent. For example, parents show support when they praise their children, show them affection, and pay attention when children talk.

A differentiation between the concepts of parental involvement and parental support is necessary. According to Ruholt, Gore, & Dukes (2015), parental involvement refers to the presence of the parent in the child's daily life and school activities, and parental support considers the emotional role the parent has in the child's life, the role of support in situations varying in level of challenge, focusing on the child's feelings.

From the perspective of the child's growth and education, parents with a high level of parental support will demonstrate more qualities in terms of the parenting practices used, showing care and warmth towards the children, but also the willingness to communicate openly with them, also showing the tendency to approach parenting authoritatively. While children who benefit from parental support develop harmoniously multilaterally, those who are not supported by their parents or whose level of support is low frequently experience negative emotions, an inability to cope with stress, and an increased risk of consuming banned substances (Mills, Mann, Smith, & Kristjansson, 2021).

Studies show that parental support is a stimulus, model, or support for young people and is correlated with academic performance and the adoption of healthy habits (Moral-García, Urchaga-Litago, Ramos-Morcillo, & Maneiro, 2020). The same authors emphasize the significant importance of parental support in the education and training of young people.

From the point of view of the parental support offered to improve the academic results of young people, in agreement with UNESCO (2021), the following was found: parents from lower socioeconomic backgrounds or minority groups often face obstacles of both material and psychological nature when they want to get involved in the education of children so that the latter achieve academic performance. Parents from ethnic or minority groups, as well as parents of migrant or refugee children, show a low level of confidence and believe that they do not have the necessary skills to guide their children. This level of self-efficacy perceived by parents becomes lower as children advance in the school curriculum and the tasks present a high degree of difficulty.

Parental influence on their children's behaviors can be related to social learning theory regarding the regulation of human motivation and action (Aguilar, Vergara, Velásquez, Marina, & García-Hermoso, 2015). Parents must be aware that their role and the support they offer to children are very important in shaping healthy habits. Parents with a high level of emotional intelligence demonstrate a high level of parental competence as a result of the specific emotional intelligence strategies they use in the parenting process (Șițoiu & Pânișoară, 2023) being more able to demonstrate parental support. Even though parental support is essential for both genders, it appears that maternal modeling of healthy habits has a greater influence on children compared to paternal modeling (Schoeppe, Vandelanotte, Bere, Lien, Verloigne, Kovacs, Van Lippevelde, 2017; Jacobi, Caille, Borys, Lommez, Couet, Charles, & Oppert, 2011).

Self-efficacy of young people

Self-efficacy comes from the principles set out in Bandura's work involving social cognition and social learning theory (Bandura, 1977) and is defined as representing the evaluative perception that a person builds about his abilities and capacities in a certain activity to achieve success (Ghita, 2019).

Unlike self-esteem, which focuses on "being", expressing, for example, the feeling that the person is accepted as he is (Ackerman, 2018) self-efficacy focuses more on "doing", representing the ability of the individual to manage the challenges encountered. Starting from the conceptual differentiation of the two terms, it is recognized that a high level of self-esteem improves the level of self-efficacy, with the reciprocal effect also valid: increased self-efficacy determines a high level of self-esteem (Ackerman, 2018).

Garrido (2023) presents the conceptual differentiation of the terms motivation and self-efficacy, highlighting the fact that a person's motivation has in mind the desire to achieve a goal, while the self-efficacy of that person is represented by the confidence that he can achieve that goal.

Ghita (2019) indicates that the level of self-efficacy influences personal adaptation, motivation, and performance. The key principles of self-efficacy include:

a) personal performance measures, in which the individual methodically considers possible outcomes before implementing an action;

b) indirect learning, in which the perception of social reality is based on observational experiences and the results associated with those experiences;

c) verbal persuasion, incorporating coaching techniques and constructive feedback during the performance and

d) evaluation of the emotional state of the individual during the performance of the task.

Tsang, Hui, & Law, (2012) describe the four psychological processes through which a person's self-efficacy beliefs operate:

1. Cognitive processes refer to the self-evaluation of one's capacities, abilities, and resources to achieve the objectives, as well as the anticipation of success or failure scenarios in the context of achieving the proposed objectives. Cognitive processes are also represented by the selection of optimal solutions for solving problems, respectively, by maintaining focused attention on the performance of the task.

2. Motivational processes consider three cognitive motivators that influence beliefs about self-efficacy, namely: attribution, the value of results, and the clarity and value of the objectives that the individual wants to achieve.

3. Affective processes are represented not only by the individual's self-perception of coping skills but also by threat management to effectively manage anxiety symptoms when the person is exposed to stress factors.

4. Selection processes influence a person's self-efficacy beliefs through personal and professional life decisions. From this perspective, people with a higher level of self-efficacy are more proactive in selecting and creating a physical and social environment based on their own resources and capabilities.

Carey & Forsyth (2009) admit that self-efficacy is also highlighted when the individual has control over his motivation, behavior, and the social environment he is part of. This control influences the achievement of set goals, the amount of energy mobilized to achieve the goal, but also the increase in the chances of achieving performance from a behavioral point of view in different contexts.

Ackerman (2018) describes a series of situations in which individual behaviors indicate a high level of self-efficacy, as follows: a student who is not intellectually gifted but has confidence in his ability to learn better; an individual who has not been successful in terms of romantic relationships but has a positive perception of his ability to handle the next date; a mother-to-be who feels stressed about caring for her child but realizes that she has all the skills to succeed even if the challenge is very great; a recent graduate who accepts a highly challenging job, often suited to experienced people in the field, but is confident that she will be able to cope with the challenges. The last situation described by Ackerman (2018) is represented by the entrepreneur, who uses all his resources to open his business but has the power to implement his new idea when the newly opened business encounters difficulties that have no solution.

Studies on the relationship between parental support and youth self-efficacy

It has been demonstrated that in educational environments, young people are characterized both by different objectives and by different levels of self-efficacy. Support from teachers and parents alike becomes necessary in this context because, as young people engage in the task, they acquire problem-solving skills, creative thinking, and self-evaluation of learning progress. All this contributes to the development of self-efficacy. The more correctly the adult's support is perceived by the student, developing a positive perception of the progress made, the more the levels of self-efficacy and motivation increase and the learning skills improve (Schunk, 2001; Betoret, Rosello, & Artiga, 2017).

More recent studies (Youn, Napolitano, Han, Lee, & Rounds, 2023) found that parental support is essential in underpinning youth career self-efficacy. In anyone's life, self-efficacy plays an important role in building confidence and the ability to perform tasks. Studies show that parents have a significant role in shaping the self-efficacy and emotional intelligence of young people (Nordin, Talib, Saputra, Shah, Ab Raji, & Mokhtar, 2023).

Positive self-perceptions (e.g., self-efficacy, self-esteem) and perceived supportive relationships (social support, parental support) are conceptualized in the literature as resources that promote successful youth adjustment (Saunders, Davis, Williams, & Williams, 2004). A positive self-image and confidence in one's abilities are also valuable in helping youth successfully cope with emotional difficulties (DuBois, Burk-Braxton, Swenson, Tevendale, Lockerd , & Moran, 2002).

Parental support is also represented by the resources that parents have and can provide to their children, but this support involves competition for those resources. According to resource depletion theory, middle-aged parents face more challenges in terms of time and energy devoted to children, and children from large families experience less success in everyday life and benefit from fewer resources from parents and implicit parental support (Fingerman, Miller, Birditt, & Zarit, 2009).

Other research has concluded that parental support impacts youth self-efficacy through each of four sources of self-efficacy (Lent, Ireland, Penn, Morris, & Sappington, 2017): (1) achievement, (2) vicarious experience, (3) verbal persuasion, and (4) emotional state. For example, parents act as "socializers" and "primary providers of encouragement," shaping how their children perceive their abilities and how they feel about the decisions they make (Turner & Lapan, 2002). A recent study (Di Giunta, Lunetti, Gliozzo, Rothenberg, Lansford, Eisenberg, & Virzì, 2022) emphasizes the importance of parental involvement in adolescent emotional regulation, such that maternal rejection was associated with depressive symptoms and lower self-efficacy.

Hayek, Schneider, Lahoud, Tueni, & de Vries (2022) draw attention to the need to adopt interventions aimed at optimizing positive parenting strategies because they found in their study that self-efficacy and the intention to get good grades mediate the relationship between parenting style and school performance. Adolescents with authoritative parents develop stronger self-efficacy beliefs and higher intentions and are subsequently more likely to achieve better results in school.

Therefore, studies in the literature emphasize the close relationship between parental support and child/youth self-efficacy, with effects in multiple areas of life, such as emotional regulation, psychosocial adjustment, school performance, and career choice.

Current study. Objectives and research questions

The present study aims to investigate the impact of parental support on youth self-efficacy. Along with this general objective of the study, it is identified how the parent-child relationship influences not only perceived parental support but also the self-efficacy level of young people. The independent variables analyzed in the research are represented by the parent-child relationship, adopted parental strategies, and parental support. The dependent variables analyzed are parental support and self-efficacy level. It is found that the parental support variable is treated alternatively both as an independent variable and as a dependent variable.

Research questions and hypotheses

To investigate the aforementioned objectives, the following research questions and hypotheses were formulated:

RQ1: Can the parent-child relationship be an indicator of parental support in youth/adults?

RQ2: Is the level of self-efficacy of youth/adults higher in the case of parenting practices based on the recognition of feelings as opposed to youth/adults who have not benefited from such parenting practices?

RQ3: How does the level of self-efficacy of young people/adults vary depending on the relationship established with their parents?

RQ4: Is there a positive association between parental support and youth/adult self-efficacy?

H1: The parent-child relationship is an indicator of parental support perceived by young people/adults.

H2: There are differences in the level of self-efficacy in the case of young people/adults depending on the parenting strategies adopted.

H3: As the youth/adult has a close relationship with both parents, a high level of individual self-efficacy is found.

H4: A high level of parental support is associated with a high level of youth/adult self-efficacy.

Material and methods

Participants

The sample for this research consisted of 247 respondents: 226 (91%) female, 20 (8%) male, and 1 respondent who did not state gender. The age ranges vary from under 20 years old to over 45 years old, with the predominant ones being under 20 years old in the case of 38 respondents (15%),

21–25 years old for 69 respondents (28%), and over 45 years old in the case of 44 respondents (18%).

Procedure

Data for the present study were collected online by disseminating the form in a virtual format, predominantly in social media groups. There were no exclusion conditions for participating in the study, and the data was collected from respondents, including adults. Regardless of the respondent's age, he received the recommendation to complete the retrospective questionnaire regarding the relationship he had with his parents, especially during his childhood. Participants gave their consent to participate and were informed that they could withdraw from the study at any time. In addition to completing the instruments, they also provided a range of demographic information (age, gender).

The collected data were later processed using the Excel database and statistically interpreted using the Jamovi program.

Instruments

To identify the level of parental support experienced by respondents, the Perceived Parental Autonomy Support Scale (P-PASS), validated by Mageau, Ranger, Joussemet, Koestner, Moreau, & Forest (2015), was used and translated into Romanian by Raluca Livinți. The scale is composed of 24 items distributed in 6 factors as follows: Factor 1 – Choice Within Certain Limits; Factor 2 – Rationale for Demands and Limits; Factor 3 – Acknowledgement of Feelings; Factor 4 – Threats to Punish; Factor 5 – Performance Pressures; Factor 6 – Guilt-Inducing Criticisms. The responses are provided on a five-step Likert scale, ranging from 1 (to a very little extent) to 5 (to a very large extent).

To identify the level of self-efficacy of respondents, the General Self-Efficacy Scale (GSE) (Schwarzer & Jerusalem, 1995), translated into Romanian by Roxana Dimache and Coralia Sulea, was used. The scale is composed of 10 items. The responses are provided on a five-step Likert scale, ranging from 1 (to a very little extent) to 5 (to a very large extent).

The reliability coefficients (Cronbach's alpha coefficients - α) in the present study were: α = .82 for the Perceived Parental Autonomy Support Scale (P-PASS) and α = .89 for the General Self-Efficacy Scale (GSE).

Results

Descriptive statistics

The means, standard deviations, standard error, minimum, maximum, skewness, and kurtosis for each variable are presented in Table 1. The value of skewness varies between – 1.02 and .44, and the value of kurtosis varies between – 1.19 and .96. Both ranges of values are statistically acceptable. Therefore, after the normality of the research variables was analyzed, all skewness and kurtosis values were within an acceptable range.

Table 1
Descriptive statistics for parental support and self-efficacy variables

	Score Perception of parental support	Factor 1: Choice Within Certain Limits	Factor 2: Rationale for Demands and Limits	Factor 3: Acknowledgement of Feelings	Factor 4: Threats to Punish	Factor 5: Performance Pressures	Factor 6: Guilt-Inducing Criticisms	Self-Efficacy Score
N	247	247	247	247	247	247	247	247
Missing	0	0	0	0	0	0	0	0
Mean	61.83	12.64	13.31	13.23	7.11	8.99	6.56	40.42
Median	64	13	13	13	7	9	6	41
Standard deviation	10.70	3.06	4.55	4.47	2.37	1.62	2.28	5.96
Minimum	28	4	4	4	4	5	4	18
Maximum	80	18	20	20	12	13	12	50
Skewness	-1.02	-.95	-.22	-.30	.10	.10	.44	-.53
Std. error skewness	.15	.15	.15	.15	.15	.15	.15	.15
Kurtosis	.96	.52	-.85	-.78	-1.19	-.21	-.96	.23
Std. error kurtosis	.31	.31	.31	.31	.31	.31	.31	.31

Verification of Hypothesis 1: The parent-child relationship is an indicator of parental support perceived by youth/adults.

To determine how parental support perceived by young people and adults varies depending on the relationship they have established with their parents, an Anova analysis of variance was performed between the dependent variable perception of parental support and the categorical independent variable parent-child relationship. The categorical variable distributed the sample into three groups, namely: the respondents who declared that they have a closer relationship with the mother (N =136), the respondents who declared that they have a closer relationship with the father (N = 29), and the respondents who stated that they have an equally close relationship with both parents (N =82), respectively. Following this analysis, a significant effect of the relationship established with parents on parental support was obtained: $F(2, 70.50) = 4.31$, $p = .01$, $p < .05$.

From the analysis of the averages obtained in terms of parental support, the respondents who have an equally close relationship with both parents obtained an average of 63.79, followed by those close to the mother with an average of 62.01, respectively, and those close to the father with an average of parental support perceived by 55.48 (Table 2). Based on these results, the hypothesis that the parent-child relationship is an indicator of parental support perceived by youth and adults was confirmed.

Table 2
Mean scores of parental support perceived by the respondents according to the relationship with the parents

	The parent with whom a closer relationship was created	N	Mean	SD	SE
Score Perception of parental support	Close relationship with mother	136	62.01	10.04	.86
	Closer relationship with father	29	55.48	14.34	2.66
	Close relationship with both parents	82	63.79	9.50	1.05

Testing Hypothesis 2: There are differences in the level of self-efficacy in the case of youth/adults depending on the adopted parenting strategies

To compare the means obtained for the variable self-efficacy according to the recognition of feelings by the parents, the T-test for independent groups was performed. Through the T-test, a statistically significant difference was identified ($t = -6.33$, $p < .001$) between the variance of the self-efficacy means in the case of respondents whose feelings were recognized by their parents as a strategy specific to parental support, N = 116 respondents, mean = 42.78, compared to respondents who did not experience this strategy frequently during childhood, N = 131, mean = 38.32 (Table 3). Since the result is statistically significant, the difference in means whose value is -4.46 can be generalized to the entire population of young people and adults; thus, the hypothesis that there are differences in the level of self-efficacy in the case of young people/adults according to adopted parenting strategies was confirmed.

Table 3
Mean self-efficacy scores of respondents according to the level of recognition of feelings by parents

	Group	N	Mean	Median	SD	SE
Self-Efficacy Score	The low level of recognition of feelings by parents	131	38.32	38.00	5.80	.51
	Increased level of recognition of feelings by parents	116	42.78	44.00	5.22	.48

Testing Hypothesis 3: As the youth/adult has a close relationship with both parents, a high level of individual self-efficacy is found

In order to determine how the level of individual self-efficacy depends on the relationship that respondents have established with their parents, an Anova analysis of variance was performed

between the dependent variable self-efficacy of individuals and the categorical independent variable parent-respondent relationship: $F(2, 76.71) = 3.35$, $p = .04$, $p < .05$.

The categorical variable divided the sample into three independent groups, namely: respondents who declared that they have a closer relationship with their mother (N = 136), respondents who declared that they have a closer relationship with their father (N = 29), and respondents who stated that they have an equally close relationship with both parents (N = 82), respectively. Following this analysis, a significant effect of the relationship established with the parents on the level of self-efficacy of the respondents was obtained.

From the analysis of the averages obtained from the perspective of self-efficacy, the respondents who have a close relationship with the father obtained an average of 42.3; they are 29, not representing a majority category at the sample level. The respondents who established a close relationship with the mother, numbering 136, obtained an average self-efficacy of 39.58, while those respondents who have an equally close relationship with both parents, numbering 82, obtained an average self-efficacy of 41.13 (Table 4). Based on these results, the hypothesis that, as the youth/adult has a close relationship with both parents, a high level of individual self-efficacy is found was partially confirmed, with no significant differences in the means of self-efficacy according to the close relationship of the adult/young person to one or both parents.

Table 4

Mean self-efficacy scores of respondents according to relationship with parents

	The parent with whom a closer relationship was created	N	Mean	SD	SE
Self-Efficacy Score	Close relationship with mother	136	39.58	6.16	.53
	Closer relationship with father	29	42.31	6.07	1.13
	Close relationship with both parents	82	41.13	5.37	.59

Testing Hypothesis 4: High level of parental support is associated with a high level of youth/adult self-efficacy

Following the correlation analysis between the independent variable parental support and the dependent variable self-efficacy, a positive, statistically significant association was obtained, demonstrating that as the level of parental support increases, so does the level of self-efficacy (Table 5).

Table 5

Correlational analysis between perceived parental support and youth self-efficacy

		Score Perception of parental support	Self-Efficacy Score
Score Perception of parental support	Pearson's r	—	
	p-value	—	
Self-Efficacy Score	Pearson's r	.21	—
	p-value	.001	—

To determine how the level of self-efficacy varies according to parental support, a regression analysis was performed between the two variables. The regression coefficient R = .21 indicated a statistically significant association between the two variables ($p < .001$), and the value of the coefficient $R^2 = .04$ demonstrated that 4% of the variability of self-efficacy was due to the level of parental support.

In Table 6, a correlation can be observed, which indicates the relationship of association between the variables self-efficacy and perceived parental support of the respondents.

Table 6

Model Coefficients - Linear regression between respondents' self-efficacy variable and perceived parental support

Predictor	Estimate	SE	t	p
Intercept	33.36	2.18	15.27	< .001
Score Perception of parental support	.11	.03	3.28	.001

Following correlational analysis and regression analysis, the hypothesis that high levels of parental support are associated with high levels of youth/adult self-efficacy was confirmed.

Discussions

This study examines the impact of parental support on youth/adult self-efficacy and how the parent-child relationship influences youth/adult perceived parental support and self-efficacy.

Self-efficacy is represented by a set of beliefs from several perspectives that have the role of influencing the way a person feels, the way they think, and also the way they motivate themselves, and the behaviors they adopt in front of tasks, respectively. This is strongly dependent on the young people's life experiences and skills, as well as the challenges encountered in different fields of activity that contributed to the individual's personal development (Tsang, Hui, & Law, 2012). Along with the self-efficacy variable, the variable considering parental support is also analyzed. This is

highlighted when parents are constantly emotionally available to children, and they perceive them as reliable persons when they need advice or when they want to communicate openly (Ruholt, Gore, & Dukes, 2015).

The role of self-efficacy in Youth/adult development

From an academic perspective, the self-efficacy of young people contributes to increasing their level of motivation in the early periods in which they have contact with educational activities. For these reasons, parents and teachers must take into account the current level of self-efficacy of young people to guide them toward achieving academic performance (Betoret, Rosello, & Artiga, 2017).

Individuals' perceptions of their abilities to perform in various domains or perceptions of self-efficacy represent a cognitive mechanism that explains behavioral changes (Cervone, 2001). The level of self-efficacy of young people explains individual differences regarding motivation, attitude, learning, and performance in tasks (Liu, 2023), which is perceived as an essential element of an individual's well-being and also represents a psychological mediator of health and academic achievements.

Mani & Mahendra (2019) admit that the level of self-efficacy determines the level of effort that individuals will mobilize to complete a task, how persistent they will be in achieving the proposed objective, especially in stressful situations, but also how much resistance they will prove themselves in the face of challenges.

Armum & Chellappan (2015) refer to the concept of social self-efficacy, which determines among individuals, when it is at a high level, the reduction of the risk of experiencing social phobia, thus leading to the formation of productive social behaviors. Along with social self-efficacy, the aforementioned authors analyze the concept of emotional self-efficacy, according to which young people's mental health and resilience are ensured to deal with negative emotional challenges during their development.

The Influence of parental support on Youth/adult development

Parental support becomes important for the development of young people, but at the same time, it represents a protective factor against addictions such as the consumption of alcohol or other prohibited substances that can affect the process of their harmonious growth and development. It was also found that as young people perceive a high level of parental support, the risk of anxiety and depression is reduced (Mills, Mann, Smith, & Kristjansson, 2021).

Dutton, Choi, & Choi (2020) analyze the form of parental support represented by financial support offered to young people. Although this form does not require direct interaction between parents and children, the latter may feel important and valuable as a result of parental investment in tutoring, allowance, or other activities beneficial to their development. Financial parental support contributes to increased self-esteem, self-efficacy, and optimism but does not reduce the risk of anxiety or depression. Even if all forms of parental support are beneficial for the development of young people, the importance of emotional and informational support is noted, which determines the achievement of an increased level of emotional well-being.

As parents noticed that young people were successful in different areas, they demonstrated a higher rate of parental support, represented by managing emotions, giving advice, actively listening, or accompanying them in different activities (Fingerman, Miller, Birditt, & Zarit, 2009).

Parents who highlight the role of effort to achieve the proposed goal, at the same time motivate children to accept failure, encouraging them to think of solutions to solve the problem, thus providing constant parental support and getting involved in their education. When parents believe that children's difficulties are evidence of their low abilities, they tend to provide reduced levels of parental support (Jiang, Liu, Liu, Guo, Zhou, Lv, Liu & Luo, 2019).

To raise awareness of the importance of parental support for the development of young people, training programs are needed to contribute to the consolidation or modification, when appropriate, of parental attitudes, beliefs, and practices (UNESCO, 2021).

Limitations and furture directions

Along with the implications of this study that consider parental support, self-efficacy, and the relationship between young people/adults and their parents, one of the identified limits is represented by the unequal number of respondents who declared that they have a closer relationship with their mother compared to those who stated that they have a closer relationship with their father or both parents. In this sense, the testing of hypotheses that aim to measure the level of perceived parental support and the level of self-efficacy in the relationship between young people/adults and their parents remains debatable. In this context, in the future expanding the research sample is necessary.

Conclusions

This study highlights the importance of parental support and the relationship between parents and the youth/adults on their self-efficacy. The results indicate that the respondents who declared that they have a close relationship with both parents obtained a higher mean score for the perceived parental support variable. As young people/adults experience parental support, represented by the recognition of feelings during childhood, they demonstrate a high level of self-efficacy throughout their development.

The analysis of variance Anova demonstrates that the level of self-efficacy of young people/adults varies according to the perceived relationship with parents, but the analysis of the means of the self-efficacy scores according to the establishment of a close relationship with the mother, with the father, or with both parents does not reveal significant differences in its level under the impact of the established close relationship with one or both parents.

The obtained results also indicate the importance of parental support for improving the self-efficacy of individuals, a positive, statistically significant correlation being established between the two variables, and the fact that self-efficacy varies with perceived parental support.

Based on the present research, the results indicate the importance of parental support for the development of the individual both during childhood and during adulthood, exerting its effects on the self-efficacy of the latter, which can improve the quality of life of individuals and implicitly the skills in various fields of activity. In this context, parents are recommended to pay more attention to the parental support offered to children and to approach some parenting strategies that make the adult look at the evolution of his child in perspective.

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TREATING NARCISSISTIC PERSONALITY DISORDER WITH SCHEMA THERAPY – A CASE STUDY

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Abstract

Objectives. This case study endeavors to provide an in-depth understanding of the schema and mode structure of narcissistic personality disorder (NPD) and to illustrate a possible therapeutic approach using schema therapy (ST).
Material and methods. The recorded material from a 2-year therapeutic journey of a 38-year-old female client diagnosed with NPD was transcribed and systematically analyzed, together with the results of questionnaires that were given to the client at the start of therapy and at the end of the process.
Results. The Millon Clinical Multiaxial Inventory (MCMI-III) was initially used to confirm the presence of NPD in the client. Concurrently, the Young Schema Questionnaire (YSQ) and Schema Mode Inventory (SMI) were employed to measure changes across the course of treatment. The MCMI-III confirmed the existence of NPD. The YSQ revealed a high presence of schemas in the domains of disconnection and rejection, as well as schemas of subjugation, entitlement, and approval seeking. The SMI indicated elevated scores on Vulnerable and Angry Child Modes, Detached Self-Soother and Self-Aggrandizer, Punitive and Demanding Parent. The scores for Happy Child and Healthy Adult were medium. Upon completion of therapy, a reevaluation of the questionnaire's scores demonstrated a reduction in narcissism on MCMI-III from 89 to 78, indicating that the client no longer met the criteria for NPD but only for narcissistic personality traits. The scores for YSQ and SMI also decreased significantly.
Conclusions. The use of schema therapy was an adaptive and successful approach to addressing the narcissistic personality pathology of the client. The utilization of a limited reparenting stance allowed empathic confrontation of the main narcissistic modes. The utilization of mode conceptualization and schema understanding reduced feelings of shame and promoted participation of the client's Healthy Adult Mode in the therapeutic process.

Keywords: personality disorders, narcissistic personality disorder, schema therapy, coping modes.

Introduction

Treating narcissistic personality disorder (NPD) is a difficult endeavor (Behary, 2022, p. 25), demanding a deep understanding of narcissistic pathology and efficient clinical interventions in these cases (Dimaggio & Attinà, 2012, p. 922). NPD is notoriously resistant to therapy, primarily due to the limited self-awareness and avoidance of NPD individuals (Malkin, 2016, p. 43).

Typically, clients seek therapy when confronted with the imminence of losing something important to them, often due to co-morbidities (Behary & Dieckmann, 2012, p. 449). Individuals with NPD have an increased tendency to minimize their problems so that they do not lose the allure of the greatness they surround themselves with.

Schema therapy (ST) is an integrative psychotherapeutic approach that was developed by Jeffrey Young (Young, Klosko, & Weishaar, 2006) to address individuals with personality disorders, especially borderline personality disorder, and other populations who did not respond well to cognitive-behavioral therapy.

Various studies have shown that ST can be of great value in working with challenging clinical presentations such as personality disorders of moderate to severe intensity, eating disorders, and complex trauma (Giesen-Bloo et al., 2006; Jacob & Arntz, 2013; Bamelis, Evers, Spinhoven & Arntz, 2014; Talbot, Smith, Tomkins, Brockman & Simpson, 2015; Keulen-de Vos et al., 2017; Peled, Bar-Kalifa & Rafaeli, 2017; Huntjens, Rijkeboer & Arntz, 2019; Simpson & Smith, 2020; Yakın, Grasman & Arntz, 2020; Bernstein et al., 2021).

Schema therapy posits that the inappropriate fulfillment of emotional core needs will lead to the development of early maladaptive schemas (EMS). An EMS can be defined as a broad, pervasive theme or pattern comprised of cognitions, emotions, bodily sensations, and memories (Young et al., 2006, p. 7), which influence the ways we view ourselves and our relationships with others. EMS forms in childhood or adolescence and can be reinforced throughout our lifetime, maintaining various degrees of dysfunctionality and self-defeating patterns (Rafaeli, Bernstein, & Young, 2010, p. 13). When these schemas are activated, a person will also display different schema modes.

Modes are defined as transitory states that manifest in the here and now and comprise emotions, thoughts, and behaviors (Farrell, Reiss, & Shaw, 2014, p. 7). There are four main categories of modes: Child modes, Critic/Parent modes, Maladaptive Coping modes, and Healthy modes. There are around eighty modes described in the literature, and the number is expanding (Edwards, 2021). The number of modes can be endless (Roediger, Stevens, & Brockman, 2018, p. 42), but the preservation of simplicity can help with conceptualization and client communication.

Upon a client's arrival in therapy, their initial presentation will be the result of the manifestation of their Coping modes. Hence, the first phase of the therapy will imply the identification and awareness of the modes, acquiring the skills for their management, and bypassing them. The goal is to unveil and unravel the underlying dynamics of Parent and Child Modes (Farrell et al., 2014, p. 10). Within this dyadic dynamic, the initial hurt that led to the formation of schemas can be discerned, granting the opportunity to address those emotional wounds by teaching the client to meet their emotional core needs in the present moment. The strategies used encompass a blend of cognitive, emotional-focused, and behavioral techniques.

For clients with narcissistic features, the main coping modes, according to the literature, are: overcompensation modes: Self-Aggrandizer, Perfectionistic Over-controller; Avoidant modes: Detached Self-soother. Usually, these clients have a very strong Demanding Parent mode and a very lonely and deprived Vulnerable Child (Arntz & Jacob, 2012; Behary, 2012). The Healthy Adult in NPD clients can be confused with the overcompensation modes, especially when there is a Perfectionistic Over-controller which is very efficient and effective. Those with NPD do have access to healthy features, but these need to get decontaminated from the overcompensation coping modes.

The goal of schema therapy with NPD clients is to strengthen the Healthy Adult mode by using limited reparenting in the therapeutic relationship. The phases of treatment always start with assessment and case conceptualization, which helps the client become aware of their own schemas

and modes while drawing the links between current life problems and early unmet needs and EMS emerging from these experiences. In the next phases of therapy, empathic confrontation and limit setting are often used to bypass the maladaptive coping modes and facilitate emotionally focused experiences (imagery and chair work exercises). This work leads to uncovering the Parent/Critic modes that need to be addressed by combating them at times or changing their toxic messages and converting them into a healthier dialogue with the self. Uncovering and healing the Vulnerable Child follows within this process, an endeavor first taken by the therapist but ultimately taken on by the Healthy Adult of the client. The therapeutic process also follows phases of awareness of the modes, management of the modes, and the final phase of Mode change.

The therapeutic relationship with NPD clients may face considerable strain due to the specific activation of therapists' schemas. Schemas of subjugation and self-sacrifice, defectiveness and unrelenting standards, emotional deprivation, and abandonment can be especially triggered when working with narcissists (Behary, 2022). The typical interpersonal cycles that can emerge in therapeutic relationships involve idealization, competition, and attachment/caregiving (Dimaggio, Semerari, Carcione, Nicolo, & Pocacci, 2007). Therapists working with this population might feel anger, resentment, and dread at always being questioned by the client and might end up avoiding, distracting themselves, or fantasizing about ending therapy (Betan, Heim, Zittel Conklin, & Westen, 2005). When the therapists feel the client is criticizing and hostile, they might react with criticism and disapproval. (Tanzilli, Colli, Muzi, & Lingiardi, 2015). Translated to ST terms, it is considered that in interacting with narcissistic clients, the therapists might tend to activate their Detached Protector mode or a Hopeless Surrender, or, at times, overcompensating modes such as Scolding Over-controller or Self-Aggrandizer can come to compete and set the client in their place. Addressing this in personal therapy or supervision and working with one's schemas and modes to remain in the Healthy Adult is crucial to the therapeutic process with NPD clients. It is only in HA mode that the therapist can maintain the role of limited reparenting, set healthy boundaries, and use leverage and empathic confrontation.

In the case of MC, there were two main challenges in the therapeutic relationship. Firstly, the Self-Aggrandizer coping mode would appear every time the therapist tried to contact the Vulnerable Child. It presented itself as very strong, tougher than others, and self-sufficient. Secondly, confrontation with the Guilt-Inducing Critic/Parent Mode was very much opposed by the client. The client feared that working with this mode in therapy would lead to her losing the relationship with her mother, who was the only being she felt ever loved her. There was a big pull for the therapist to go into an Overcompensator Mode and contradict the client or convince her otherwise, but chair work was used instead to reflect back on the coping modes present in the room and the subsequent mode cycles. The emphasis was placed on the fact that activation in the therapy room can offer an opportunity to observe similar dynamics outside of the office. This allowed the client to reframe her perspective and become more cooperative in noticing how her coping modes interfered with meeting the needs and goals of therapy.

Methodology

The qualitative method of systematic case study (Edwards, 2019) was chosen for this paper, as it can better demonstrate the effectiveness of schema therapy in the work with NPD and also the challenges that appear in the therapeutic relationship. The therapeutic journey with an NPD client was recorded, transcribed, and analyzed for this paper, together with the results from the questionnaires that were administered at the beginning and end of therapy.

Case presentation

This case study examines MC, a 38-year-old female client presenting symptoms of depression (anhedonia, feeling of hopelessness, low self-esteem, feelings of sadness, suicidal ideation), work-related stress, and difficulties in forming romantic relationships. At the moment of her arrival in therapy, MC was single, with no children, and living alone in a rented apartment. The client presented herself as a strong, independent woman, perfectly dressed, and always in charge. She did not want to let anyone see her as vulnerable, including colleagues at work, prospective romantic interests, friends, and her therapist. Throughout our interactions, she consistently projected an image of comprehensive knowledge, but this did not contribute to the therapeutic process of change. She utilized an overintellectualizing coping strategy to keep herself away from emotional material. In her home, she used food for self-soothing, along with the consumption of drugs and alcohol, in an attempt to cultivate an image of self-sufficiency and an absence of relying on others. Paradoxically, this attitude was the opposite of what she really wanted and what motivated her to seek therapeutic help.

History of the problem

MC considers that she always had a low mood, but her symptoms were accentuated around a year ago, when her boss made some harassing remarks. She realized she had no one to protect her, and for many years, her aspiration has been for this perception to be held by others regarding her. Ageing has resulted in her thinking more about the future and all the failures in her life, especially not having children, but she was afraid to show this to others.

Assessment

For assessment, the following instruments were used: the Millon Clinical Multiaxial Inventory (MCMI-III), the Young Schema Questionnaire (YSQ), the Schema Mode Inventory (SMI), the Adverse Childhood Experiences Questionnaire (ACEQ) and the Beck Depression Inventory (BDI) at the beginning and at the end of the therapeutic process. As part of the assessment process, the life history of the client and variations of imagery for assessment (Van der Wijngaart, 2021, p. 33) were used.

MC scored 74 on depressive personality and 89 on Narcissistic personality (MCMI-III), meeting criteria for narcissistic personality disorder with depressive elements. A BDI score of 20 represents severe depression. For the YSQ, MC scored very high for the following schemas: emotional deprivation, abandonment/instability, mistrust/abuse, social isolation, defectiveness/shame, subjugation, entitlement/grandiosity, and approval and recognition seeking. For the SMI, very high scores were obtained on the following modes: vulnerable child, angry child, detached self-soother, self-aggrandizer, bully and attack, punitive parent. The Demanding Parent mode has a moderate score, as well as the Heathy Adult mode. The ACE score was 5 out of 10, which increases the risk of suicide attempts by 37.5% and the development of somatic and mental diseases (Nelson, Bhutta, Burke Harris, Danese, & Samara, 2020).

Retrieving **the life history** of the client was also used in the assessment phase to assess the unmet needs and the formation of early maladaptive schemas. From this, several focal points resulted, summarized in the table below. (Table 1.).

The client was the only child of an alcoholic and very influential father and a very submissive and manipulative mother. She was severely abused both physically and emotionally by her father until the age of 16. Her mother showed her warmth and love but also asked her to grow up and study in order to save her from her abusive husband. In addition, her mother used to blackmail her emotionally and threaten to leave every time MC would try to oppose her and disobey her. MC was a very good student and dreamed that she could use her intelligence to escape her home.

Table 1
Core memories, formation of EMS and modes

Age	Situation	Unmet needs; EMS; Modes
4 years old	Being left alone with an abusive father for several days	**Unmet needs:** Safety, security, empathy, predictability, trust **EMS:** Abandonment, emotional deprivation, mistrust/abuse, Defectiveness. **Modes:** Vulnerable child (abandoned, lonely) – "I am all alone, unloved and unprotected." Compliant surrender – "I am defenseless, I better disappear." Spaced-out protector – extreme detachment. Punitive Parent – "I am worthless"
Childhood and adolescence	Violently beaten by her father, humiliated, and cursed by him.	**Unmet needs:** Safety, protection, unconditional love and support, acceptance; healthy limits. **EMS:** Mistrust/abuse; entitlement/grandiosity **Modes:** Vulnerable child (abused and alone.) Coping mode – Self-Aggrandizer – "I will show him that he cannot pin me down. I am not like my mother" Bully and attack – she confronted her father. She smiled when beaten. Demanding Parent – "I have to be strong"
4 years old to 10 years old	Being taken by her father to his mistresses' house, where she witnesses sexual intercourse, father being drunk and violent	**Unmet needs**: Safety, protection, privacy, care, and nurture, having a voice and being able to say "no". **EMS:** Mistrust/abuse, emotional deprivation, enmeshment/underdeveloped self (with mother). **Modes:** Vulnerable child "I am helpless and weak." Detached self-soother – eating and watching loud TV to avoid seeing what is happening. Self-aggrandizer – "I will be more beautiful than these women, so he can look at me" Punitive Parent – "I am an unlovable and betraying mother"
4 years old to adulthood	Witnessing her father's violence towards her	**Unmet needs:** Safety and protection, healthy boundaries, being seen and heard.

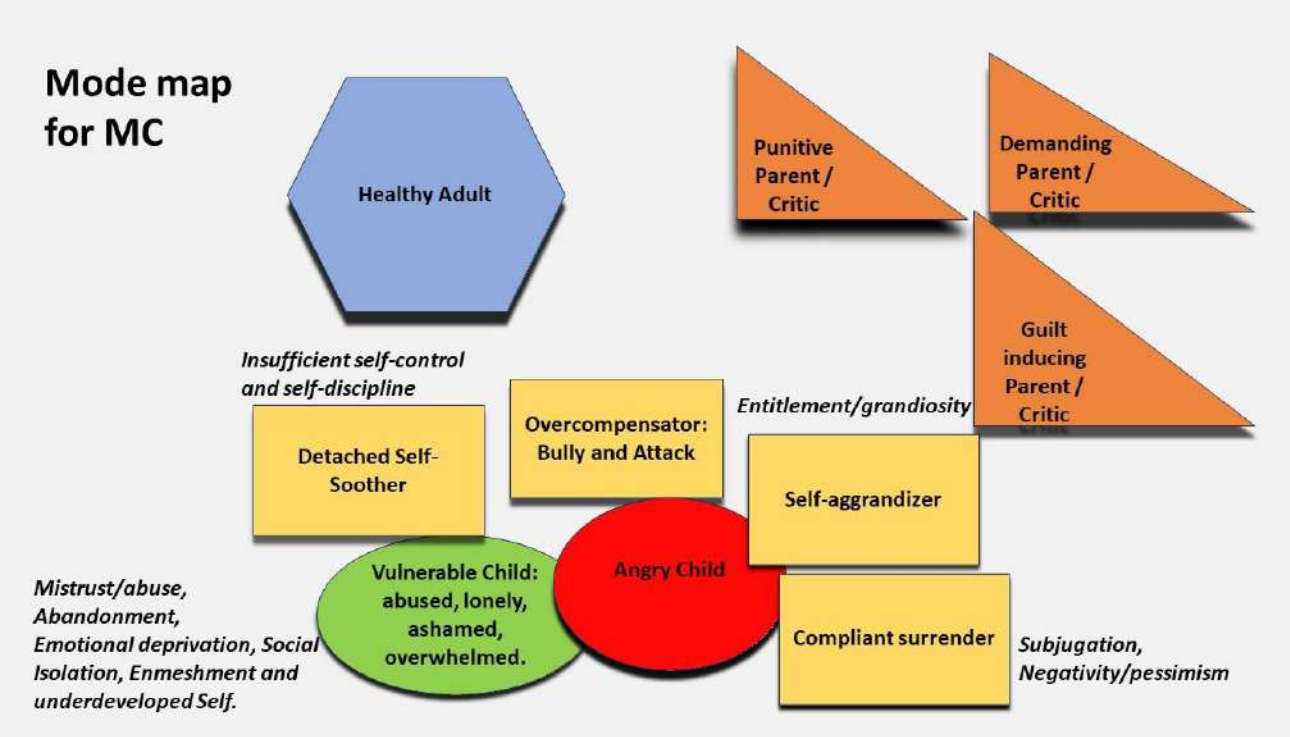
Age	Situation	Unmet needs; EMS; Modes
	mother and her getting subjugated.	**EMS**: Mistrust/abuse, enmeshment/underdeveloped self, subjugation. **Modes:** Vulnerable child – abused. Self-aggrandizer – "I am strong; I am the only one who can protect my mother." Compliant surrender – "I will give up my needs to help her." Demanding Parent "I need to be strong and don't show any vulnerability"
12 years old	Mother promised her they would leave her father if she entered a good high school and broke the promise.	**Unmet Needs**: Security and trust. **EMS:** Mistrust/abuse, negativity/pessimism. **Modes:** Vulnerable child: hopeless. Bully and attack – anger outburst towards mother. Guilt-Inducing parent – "She is only weak, and she is the only one who ever loved me." Compliant surrender – "I need to give up my needs so I don't lose the only person who ever loved me."
14 years old	Discovered by her father in the apartment of a neighbor with other colleagues, she was severely humiliated in front of them and beaten violently at home. He told her she was a whore, and she went there for sex.	**Unmet Needs:** Safety, privacy, dignity. **EMS:** Mistrust/abuse, defectiveness/shame, social isolation. **Modes:** Vulnerable Child – abused and ashamed, isolated. Avoidant protector – "I will avoid exposing myself to these kinds of situations and avoid peers who can find out about my family. " Demanding parent "I have to be strong"
16 years old	She runs away from home and sleeps for a year at her boyfriend's. Interrupts contact with both parents for fear of being found.	**Unmet needs:** Safety, acceptance, and love. Healthy boundaries. **EMS:** Emotional deprivation **Modes:** Healthy Adult – sets boundaries and reaches out for her needs. Vulnerable child –guilty for leaving mom. Guild-inducing parent – "You know you have to protect your mother because she might die without you."

She started earning money from modeling and managed to pay for her own rented apartment. She eventually resumed contact with her mother, hiding where she lived out of fear that her father might follow.

Case conceptualization in terms of schemas and modes

In collaboration with the client, a mode map was constructed, serving as a mutual framework for case conceptualization and the basis for later therapeutic work. The act of sharing the case conceptualization with the client is customary practice in schema therapy, as it sets the premises for a good therapeutic alliance, building trust and motivation for active participation in the therapeutic endeavor. Some of the schemas and modes listed in the mode map do not correspond with those revealed by the questionnaire, as they were discovered during the exploration in therapy with the client. (Figure 1.)

Figure 1
Mode map of the client



Phases of treatment

Creating the therapeutic relationship and establishing working goals constituted the **first phase** of therapy. Initially, the client's Surrender Mode facilitated an easy rapport while avoiding abandonment or abuse. Confrontation was avoided at this stage, and internal dynamics were presented and discussed, in terms of modes and schemas. The Compliant Surrender mode interfered with the process of change, giving way to over-compensatory modes during emotional distress. The following goals for therapy were agreed upon:

1. Reducing suicidal ideation by addressing the Vulnerable Child Mode, who sought relief from overwhelm and suffering.
2. Develop healthy boundaries by confronting the Over-compensator modes who thought she was the only one who could save her mother and was stronger than others.
3. Counteract the negative influence of the Parent Modes.
4. Foster a healthy romantic relationship by bypassing the Coping Modes and learning to meet the needs of the Vulnerable Child in the present.

In the **second phase**, bypassing coping modes proved difficult and time-consuming. Each attempt to venture outside the comfort zone triggered a shift from Compliant Surrender mode to Over-controller mode, which resisted change and tried to show me the proper way therapy is done. Many sessions felt like a battleground, requiring efforts to remain in my Healthy Adult mode and refrain from using Coping Modes. Empathic confrontation, metaphors, story-telling, and chair-dialogue were used to raise the client's awareness of the dynamic present in the room and the parallels between the therapeutic process and external relationships.

"Th.: So, let's have a look at what is going on in the therapy room and in our relationship at this very moment.

Cl.: I suppose you would say I am defending myself, but I am not (looking in my eyes and preparing to say more)

Th.: (I raise my eyebrow and smile) – but you did stop yourself from continuing…

Cl.: Well… I am not stupid…

Th.: I don't think that was even in question, but I am wondering how you would name the way you were talking just earlier

Cl.: Passion?

Th.: Passion for what?

Cl.: (Starts smiling) – for arguing… look, I know you want to help me and you are not telling me these things to criticize me… it is hard to let go.

Th.: And what do you do when the other person acts like you and you want to help them so they can feel better?

Cl.: I argue with them too!

Th.: And does it work?

Cl.: No, it doesn't.

Th.: So what part of you does that?

Cl.: I would say is my Self-aggrandizer who is trying to show you I know things.

Th.: And what would happen if you didn't know?

Cl.: I would need to fade away, to disappear…

Th.: Just like…

Cl.: yes, just like when I was little. This part of me helped me stay alive."

Employing humor, metaphors, and storytelling contributed to preserving a strong therapeutic alliance while confronting the maladaptive coping modes and negotiating with them for the welfare of the Vulnerable Child. This kind of empathic confrontation was helpful in contacting the Vulnerable Child and offering them comfort and care, which many times led to the activation of the Parent/Critic Modes.

The **third phase** involved addressing toxic messages from Parent/Critic modes. Implementation of imagery rescripting and chair-based mode dialogues posed difficulties due to the intense fear of the client that nobody could confront her father and come out alive from the confrontation, even at a symbolic level.

In a powerful session of imagery rescripting and using the resources of imaginary rescripting and the endless possibilities it offers (Van der Wijngaart, 2021), I reframed first her perception regarding the invincibility of her father by emphasizing how alcohol reduces his strengths and sense of coherence. In order to be able to address both her fear of the father and also her mistrust in men, I constructed the rescripting around the idea that 10 powerful men, the kind you see playing with their daughters and wearing lipstick and hair clips, would also come with me to help take her and mom out of the house and put them in a safe house, far away from him, where he could never find them. This was a very important moment in therapy and helped her gain more trust in men and also connect for the first time with little MC.

Also, the Guilt-inducing Parent/Critic Mode was addressed in chair-work, at first, and then in imagery rescripting. This process was more sinuous as the client strongly defended the mother, who inspired this mode, and affirmed that she preferred dying herself to abandoning the mother. At that point, we could clearly track the appearance of the Self-Aggrandizer early in childhood, as this mode clearly helped the client feel less powerless and overwhelmed. This strong Coping Mode also had the role of protecting the mother and resisting the abuse as a proof of toughness.

Limited reparenting of child needs and purposely redirecting anger of the Angry Child happened in the last stage of therapy. This transformation occurred as the client began accepting that her Vulnerable child mode could receive support and nurturing from external sources, including the therapist, without the expectation of reciprocity. Another pivotal change in this phase of therapy was represented by the client's spontaneous and healthy expression of needs and recognition of anger as a valuable signal of unmet needs. The client's Healthy Adult mode was used to reestablish emotional balance.

In a session, the client confessed she was very angry with me, and I took the opportunity to use my Healthy Adult Mode to model a different reaction than she was expecting. Using humor and mode language, I invited her to express her anger, and this helped her discover that the angry part was only around 4 years old. Using chairs, I invited her into her Healthy Adult Mode to draw from the energy of anger and confront her mother. This moment led to a great catharsis and an important realization in terms of why she could not let go of the anger.

Throughout therapy, strengthening the Healthy Adult Mode, while disentangling it from the Over-compensation modes was an important endeavor. The strengthening of the Healthy Adult mode was needed so that the Over-compensators could step back from their role. This allowed the client to make significant life changes, including ending a relationship that was not meeting her needs and successfully confronting her boss to secure a job promotion.

Using the resources from the Happy Child Mode, more fun and enjoyment were brought into the therapy session and made empathic confrontation more tolerable and less shaming: *"I really appreciated your sense of humor and the fact that we could laugh together at things, even what I was doing wrong. It helped me not to crawl into a corner and isolate myself. I felt I was not alone, and when we were laughing together, my inner child knew you were not going to abandon us."*

Terminating the therapeutic process was of paramount significance (Tsai, Gustafsson, Kanter, Plummer Loudon, & Kohlenberg, 2017), as it marked the client's first experience planning a healthy and collaborative relationship ending (Goode, Park, Parkin, Tompkins, & Swift, 2017). During this phase, the therapeutic journey was summarized, addressing benefits, challenges, and areas for improvement.

A chair exercise was organized to invite each mode to reflect on the therapeutic process and discuss future collaboration and potential challenges. Imagery was used to reinforce the collaboration between the modes and to set anchors for safety, confidence, and well-being. *"It was*

very useful to do the exercise and have my healthy part talk to the others. I felt that at the beginning of therapy, none of my parts wanted to talk to each other; they were all feeling comfortable in isolation, but now they are happy to meet and talk, and they are not ashamed of who they are. Each of them has a role."

Discussions

MC sought therapy for depressive symptoms, including suicidal ideation, difficulties in establishing romantic relationships, and work-related stressors that led to anger outbursts. Assessment revealed the client met the criteria for NPD. This diagnosis fueled a conflict between her desire to feel better and her strong, self-sufficient image (Caligor, Levy, & Yeomans, 2015).

These features inherent to NPD pose challenges in various areas of the client's life, exacerbating symptoms of depression, feelings of loneliness, and hopelessness, thereby intensifying suicidal ideation (Gabbard, 2022).

In the context of schema therapy conceptualization, it becomes evident that the history of severe deprivation, the traumatic abuse inflicted by her father, and the helpless passivity of her mother played an important role in the formation of schemas from the first domain, which greatly impacted the functioning in many areas of the client's life. Emotional deprivation and defectiveness/shame were the schemas underlying the Vulnerable Child mode, as highlighted by Young (2006). In this case study, the typical schemas associated with NPD, are complemented by the mistrust/abuse schema, particularly activated in relation to men.

The client oscillated between Surrendering and Overcompensation modes, a dynamic that affected her work and personal relationships. A cycle entailed sequences of overcompensation modes, followed by intense depressive symptoms and feelings of giving up life, which can be translated as a Surrender Coping Mode. Addressing this mode cycle within therapy proved challenging, since bypassing a mode would usually lead to the other one appearing with more intensity and activating the Parent/Critic Modes. These mode sequences were explored, and cognitive and emotional-focused techniques were employed until there was a shift in behavior and symptoms. Mode maps and mode cycles maps were drawn and emphasized through the use of mode dialogues and mode interviews in order to emphasize the role of coping modes in preventing the attainment of the clients' therapeutic goals and meeting their emotional needs.

The term Vulnerable Child was not very much used at the beginning of therapy as it triggered the overcompensation mode and a strong reaction from the Parent/Critic Mode. The leverage was set through reminders of the therapeutic objectives and current goals rather than insisting on the Vulnerability.

The client additionally used fantasies about perfect future relationships, creating a perpetual feeling of being disappointed by day-to-day encounters. This can be understood as a blended mode (Edwards, 2021, p. 3) formed by a Self-Soother and a Self-aggrandizer mode, which were cooperating to both avoid emotional pain and loneliness and enhance feelings of strength and being above others.

In this case study, the therapeutic strategies suggested by Jeffrey Young (2006) and Wendy Behary (2012) for addressing the symptoms consistent with those who have NPD were used. Empathic confrontation worked especially well at addressing the coping modes of the client, helping her to become aware of their appearance and understand their role in her psyche. Linking present behaviors to the past and EMS formation was important in reducing the shame and building trust in the therapeutic process.

The utilization of ST case conceptualization proved instrumental in fostering a nuanced understanding of the intricate issues of this client, benefiting both the therapist and the client. Mode language was used to help the client disidentify with the Maladaptive Coping Modes and Critic Modes and build a more balanced and flexible perception of the world from a Healthy Adult stance.

Chair work was used as a powerful technique for MC, as it allowed her to observe, not only at a cognitive level but also at an emotional level, the different perspectives of the various modes. This led to uncovering more subtle facets of the modes, their role, function, and present consequences upon meeting her emotional core needs.

Full imagery rescripting was possible later in therapy; however, its effects lay in facilitating a profound emotional connection between the client and her Vulnerable Child Mode. The integration of emotional-focused techniques, coupled with the insights derived from the complex case conceptualization, played a central role in sustaining the client's commitment to therapy and fostering active engagement throughout the therapeutic process, even in the face of encountered challenges.

The findings in this particular case study provide evidence supporting the idea that schemas can be diminished, consequently resulting in a reduction of NPD symptomatology to an extent where the client no longer meets the diagnostic criteria for the disorder.

At the end of therapy, the scores obtained on the MCMI–III were reduced to 71 from 89 on the narcissistic personality scale, which signifies the client did not meet criteria for NPD anymore. Also, her depression score on the BDI lowered to 8, meaning she was no longer clinically depressed. Modifications appeared as well on YSQ and SMI, thus reducing the intensity of schemas and modes significantly.

Conclusions

Although NPD is characterized by significant interpersonal difficulties and increased risk for suicide, not enough studies are conducted on this type of personality disorder, and many therapists avoid working with clients exhibiting narcissistic traits.

When working with narcissists, it is important that the therapist remains in their Healthy Adult mode and learn to protect their Vulnerable Child mode from the attacks of the narcissistic coping modes of the client.

Cultivating meta-awareness skills, orienting one to the "here and now" and towards the hidden Vulnerable Child mode of the client, necessitates the development of the ability to tolerate frustration while remaining emotionally connected. This can be attained only if the therapist preserves congruent communication, a coherent sense of identity that remains unthreatened by client presentation, and a lot of compassion for the self and others.

Schema therapy proves to be an exemplary framework for addressing narcissistic personality pathology, as evidenced by the outcomes of this case study. The use of a meticulous and thorough case conceptualization and the application of cognitive, emotion-focused, and behavioral techniques, with an emphasis on therapeutic alliance via "limited reparenting" and empathic confrontation, equip the therapist to adeptly navigate the myriad challenges presented by the NPD client.

List of abbreviations:

NPD – Narcissistic Personality Disorder
ST – Schema Therapy

MCMI – III – Millon Clinical Multiaxial inventory
YSQ – Young Schema Questionnaire
SMI – Schema Modes Inventory
EMS – Early Maladaptive Schemas
ACEQ – Adverse Childhood Experiences Questionnaire
BDI – Beck Depression Inventory
Th. – Therapist
Cl. – Client

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TRAFFICKING IN WOMEN AND PROSTITUTION – LEGISLATIVE MODELS, INSTITUTIONAL PRACTICES AND RISK FACTORS

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Abstract

Objective. The objective was to analyze the impact of institutional practices on the physical and mental health of women victims of human trafficking and prostitution, as well as to highlight the main risk factors for them.
Material and methods. By using several databases, the number of studies included in this meta-analysis was 25. Scientific articles, doctoral theses, dissertations, presentations at conferences, book chapters, or reports were taken into account. There were longitudinal or cross-sectional studies. The meta-analysis totaled 455,406 subjects, the heterogeneity being a significant one (Q = 5062,288, df = 24, p = 0.000), and we increase the average effect, 38% of the variance of the results being due to the studied variables (95%: 1.08 % – 0.31%).
Results. The hostile attitude of the authorities towards sex workers and the refusal to offer protection were identified as the most widespread consequences of institutional practices. Other consequences that arise as a result of the direct interaction of sex workers with the authorities are risky behaviors such as drug use, violent sexual acts, or discontinuation of drug treatment. The key risk factors for women in this category are psychological difficulties, gender and economic inequalities and an inadequate sexual history.
Conclusions. There is a continuous interaction between the legislative model, institutional practices, and the physical and mental health of sex workers. Awareness and understanding of the problems that these women face when they practice prostitution would facilitate the improvement of the management capacity of this phenomenon.

Keywords: prostitution, human trafficking, legislative model, risk.

Introduction

Concepts and theories

Although they represent widespread phenomena at the global level, prostitution and human trafficking are minor topics in academic circles. In the few debates, the academic environment concluded that gender inequalities, migration, and the effects of globalization are the main elements in their development. One of the concerns of society refers to the question of whether this type of sexual practice should be legalized or not (Liberato & Ratajczak, 2017).

In the literature, there are two schools of thought that argue for the reconsideration of prostitution, with women prostitutes being seen as "victims of coercion in a society that serves men by objectifying and subordinating women" (Freeman, 1989). Thus, if the abolitionist movement takes steps to put an end to this phenomenon by criminalizing the men who pay for such services and who traffic women (Farley et al., 2004), the liberal movement considers prostitution as an occupation that should be legalized, a job like any other (Freeman, 1989).

The followers of the liberal movement see this legalization of prostitution as a real challenge; the problem consists in finding an argument that can legally cover the fact that the purchased product is the human body itself (Jeffreys, 2009). They characterize the liberal feminist position as an expression of choice and progress against sexual violence (Jeffreys, 2009). Since the 1980s, when liberals promoted the notion that pornography was not an abusive factor for women, this idea of prostitution has undergone major changes. Vanwesenbeeck (2013) considered that prostitution is a "rational, financially motivated choice by adult women in a context of limited (other) career possibilities", a "natural" choice based on a rationale that refers to financial profit. Another follower of this perspective is Dorfman (2011), who suggests that prostitution should be seen as a way to combat poverty, with the woman offering sexual services in exchange for sums of money. Thus, prostitutes are not victims but rather women who work for money.

Among the arguments of this school of thought is the fact that the sale of sex must be associated with any type of work, being compared to dancing or another form of art, while women who practice prostitution show considerable techniques and skills (Campbell, Smith, Leacy, Ryan, & Stoica, 2020).

The other category, the radical feminist perspective, brings to attention the avoidance of a key question, both at the political and societal level, namely, "How could women choose?" (Bromberg, 1997). Regarding this ability to choose, the radicalists bring another vision, specifying that the woman does not choose whether or not she wants to prostitute herself but only has the perception of the fact that she has chosen the "lesser evil" (Kesler, 2002).

Researcher Melissa Farley claims that prostitution is one of the deadliest forms of organized crime, with women being constantly harassed and beaten (Farley, 2004). She believes that prostitutes cannot exercise their autonomy over the situation, in front of the one who pays (Farley, 2017). Also, she thought that the type of sex practiced in the framework of prostitution is a coercive one (Moran & Farley, 2019).

Another element brought to the attention of public opinion by the radical perspective is the history of black women in the United States of America, namely a deeply patriarchal society in which African-American women were subjected to sexual abuse. Hursh (2007) describes this vulnerability as "gender captivity", determined by both race and sex. In this context, although prostitution existed due to the demand for sex from men, black women became vulnerable through the prism of their identity.

At the same time, the trafficking of women is seen in close connection with the phenomenon of globalization and the migration of populations from one region to another. Jeffreys (2009) sees this as a process of "externalization of women's subordination", considering that along with globalization, the trafficking of poor women in much richer countries has also increased. A counterargument of the liberal perspective to this opinion is the idea that some women "follow the money", so they travel or migrate to other states (Vanwesenbeeck, 2013; Beegan & Moran, 2017).

Legislative models for the management of human trafficking and prostitution

According to specialized literature, there are five major legislative models implemented at the level of society and intended to control the crimes of human trafficking and prostitution (Vanwesenbeeck, 2013; Vanwesenbeeck, 2017).

The first model, that of complete criminality, stands against these crimes and prohibits any form of sex work, including selling or buying sex. It is very well developed in certain regions of the USA, South Africa, or Sri Lanka (Duff et al., 2017).

The partial model penalizes only certain aspects of sex work, such as organizing sex work, running a brothel, or involving third parties in such businesses. This principle has been observed in Canada, since 2014, in India, and in England, except for the northern part of Ireland (Argento, Chettiar, Nguyen, Montaner, & Shannon, 2015).

The third model, that of the criminalization of the purchase of sex, accuses and supports the punishment of participation in the sex trade, being very well represented in countries such as France, Northern Ireland, Norway, and Serbia (Scoular & Carline, 2014).

The regulation model supports the sale of sex, even giving it legal status, but under certain conditions, such as licensed brothels, where HIV testing is carried out. This principle has been observed since 1999, when Sweden banned the purchase of sex but not the sale of sex. Other states that support this legislation are Germany, Mexico, Senegal, and certain regions of Australia (Levy & Jakobsson, 2014).

The model of full acceptance appeared in 2003, when New Zealand removed criminal sanctions for adult sex workers. This model aims to regulate the industry of women's trafficking and prostitution by establishing work safety standards (Abel, 2014).

As can be seen, all five prohibit the presence of minors in this type of activity, as well as the use of coercion or other types of violence. In reality, the implementation of these legislative measures differs, even in the case of the same state, from one region to another (Campbell, 2015).

Sweden was the first country to ban the purchase of sexual services, defining prostitution as "a serious form of male violence against women" (Hinde, 2008). According to the Swedish model, the prostitute should not be penalized, as she should be given specific assistance in order to get out of this vicious circle. Norway also adopted this legislation in 2009, and in 2014, the Canadian Parliament accepted the Nordic model (Government of Canada, 2014).

In Romania, the crime of human trafficking has been regulated since 2001, after the signing of the Protocol on the Prevention, Suppression, and Punishment of Human Trafficking, especially of Women and Children, executed in Palermo on December 13, 2000. Later, Romanian legislation underwent certain changes, and the New Penal Code of 2014 included the offenses of the special law (Alexandroiu, 2019). According to Horhogea (2020), "Romania could be considered one of the main sources of victims who fall prey to human trafficking", taking into account that in 2020 alone, more than 596 victims of human trafficking were identified, of which 255 were former minors (Ministry of Internal Affairs, 2022).

As far as prostitution in Romania is concerned, this is an illegal activity, being prohibited by Law No. 61/1991, the normative text specifying as follows: "It is a contravention to commit any of the following acts, if they are not committed in such conditions that, according to the criminal law, they are considered crimes: attracting people, in any form, committed in premises, parks, on the streets, or in other public places in order to practice sexual relations with them in order to obtain material benefits, as well as urging or determining, for the same purpose, a person to commit such acts". Therefore, prostitution is a misdemeanor punishable by a fine.

Toader (2022), through his attempt to transpose the legal truth into social reality, believes that due to the "mild" sanction with which prostitution is treated in Romania, it becomes a legal activity but unregulated from a legal point of view. Another argument he brings in support of his opinion is that the use of sexual services does not bear any sanction, so the consumer of sexual services is encouraged to return to benefit from them.

According to official data provided by the National Agency Against Trafficking in Persons, at least 100,000 Romanian women work as prostitutes in Europe, with several thousand being registered with a work permit by the Swiss authorities (Ministry of Internal Affairs, 2022).

As can be seen, the legalization of sex work facilitated the existence of areas where prostitution is accepted, being seen as a normal practice. Although the authorities try to control the phenomenon of prostitution and human trafficking for sexual exploitation, organized crime groups manage to collect many victims (Farley et al., 2011).

Material and methods

Purpose

The purpose of this study was to explore the existing research on the topic of the health of sex workers from the perspective of the consequences of the application of legislative models as well as the risk factors.

The general objective of the study

The general objective of this study was to analyze the impact of legislative implications and institutional practices on the health of women victims of human trafficking and prostitution and to highlight the main risk factors in this regard.

Specific objectives

This literature review has two specific objectives:

O1. To elaborate an analysis of the existing information in the specialized literature regarding the consequences of the application of the legislative models related to prostitution and human trafficking by the authorities for the victims of the two phenomena.

O2. To carry out an analysis of the existing data in the specialized literature regarding the factors associated with high-risk situations regarding the health of sex workers.

The analysis of the studies and their results focused on the following research questions:

1. What is the impact of institutional practices on the health of sex workers?
2. What are the risk factors for mental and physical health problems in the case of sex workers?

Search strategy

Fifteen databases were explored, not only by means of keywords but also by combining them. The key terms were trafficking, people, prostitution, sex workers, and mental health. The combinations of words consisted of: human trafficking; human trafficking and prostitution; mental health of sex workers; prostitution and health; human trafficking and mental health.

Scientific articles, presentations at conferences, book chapters, or reports, as well as three doctoral theses and a dissertation, were considered. Among the databases used are ProQuest, Social Since Database, Elsevier, PubMed, Web of Science, Academic Search Complete, PsychInfo, and Science Direct.

In order to expand this search, the bibliographic references of each identified study were analyzed, which led to other materials. The main search engine in this case was Google Scholar. The search covered the period 2015–2021.

Data extraction and study selection

The data were extracted in two distinct stages, taking into account studies in Romanian and English. All the identified materials were analyzed based on the previously established selection criteria.

In the first stage of the selection of the studies, the period of publication was taken into account, and research was selected only from the interval 2015–2021, with the aim of analyzing the most recent data. At the same time, it was sought to indicate significant information regarding the design of the study, its methodology, and its results in the abstract. In this first stage, 133 studies were selected.

The second stage involved an analysis that included the scientific background part, the presentation of the objectives, the research design, the sample size and its average age, the study population, and the location. After applying these inclusion criteria, 87 studies were excluded.

The third stage of selection focused on the description of the statistical methods used, reporting the results according to the methods used, and summarizing the results. At the end of this stage, the number of studies included in this meta-analysis was 25.

These were longitudinal or cross-sectional studies. The sample size varied from 66 to 5,792 participants. Most of the time, the results were obtained by using regression or correlation statistical techniques.

Publishing error

Considering the risk determined by the publication error, namely the impossibility of access to certain studies due to the presentation of only positive results and therefore the lack of data on the ineffectiveness of certain techniques or, on the contrary, the presentation of only the negative ones, in addition to the fact that a wide range of materials were taken into account, the search stage was extended, including the examination of bibliographic references. Thus, reports, book chapters, newspaper articles, manuscripts, scientific articles, works presented at conferences, and unpublishable works were analyzed.

Also, for this purpose, the studies included in the meta-analysis were tested for publication error using the "Comprehensive Meta Analysis" program.

Results

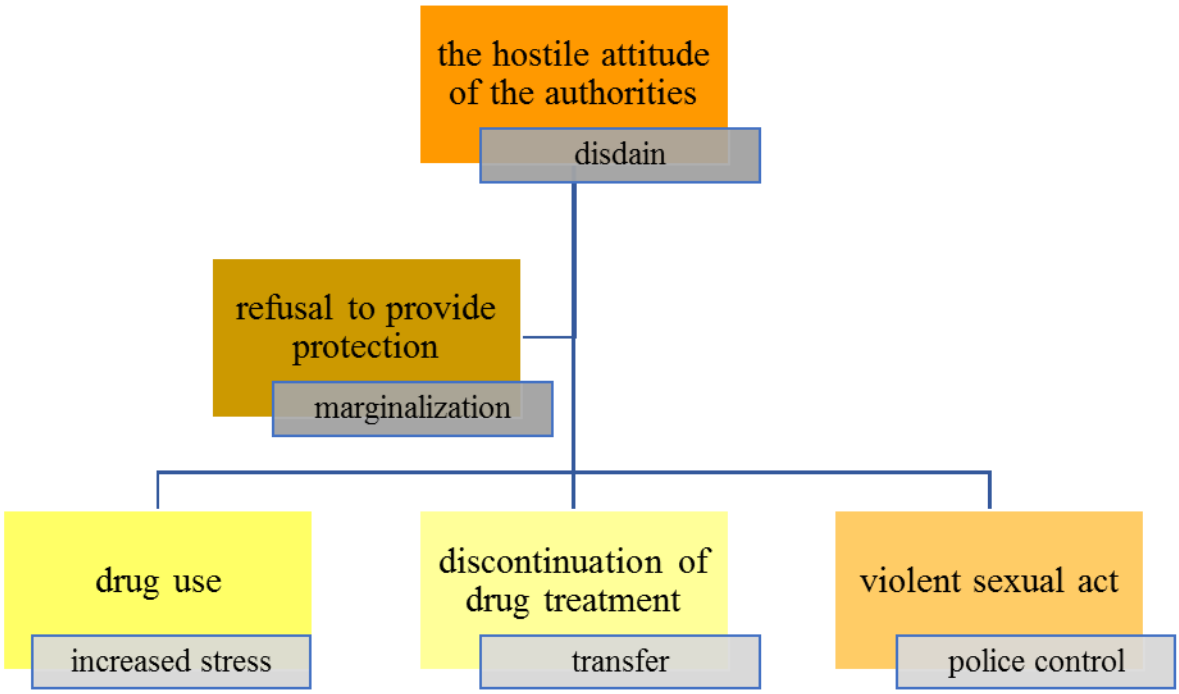
The studies included in this meta-analysis were 25 in number and covered the period 2015–2021. Of these, 15 had a cross-sectional design and 10 had a longitudinal design.

The regions where these studies were carried out are the USA, Africa, India, China, Iran, Belgium, Norway, and Brazil. Out of the 25, only one research study analyzes (research is an uncountable noun) a male sample; the remaining 24 have female participants.

The meta-analysis totaled 455,406 subjects, the heterogeneity being significant (Q = 5062,288, df = 24, p = 0.000), and an average effect size of 38% of the variance of the results being due to the studied variables (95%: 1, 08%–0.31%).

Considering the first question, *What is the impact of institutional practices on the health of sex workers?*, out of the 25 studies, 10 analyzed these implications. According to them, approximately 60% of the victims of human trafficking and prostitution affirmed the hostile attitude of the authorities towards sex workers and the refusal to offer protection. Other consequences that come from the interaction of sex workers with the authorities are risky behaviors, such as drug consumption reported in approximately 55% of sex workers, violent sexual acts with a frequency of 6 out of 10 cases, or the interruption of drug treatment in approximately 45% of victims.

Figure 1
The impact of institutional practices on sex workers



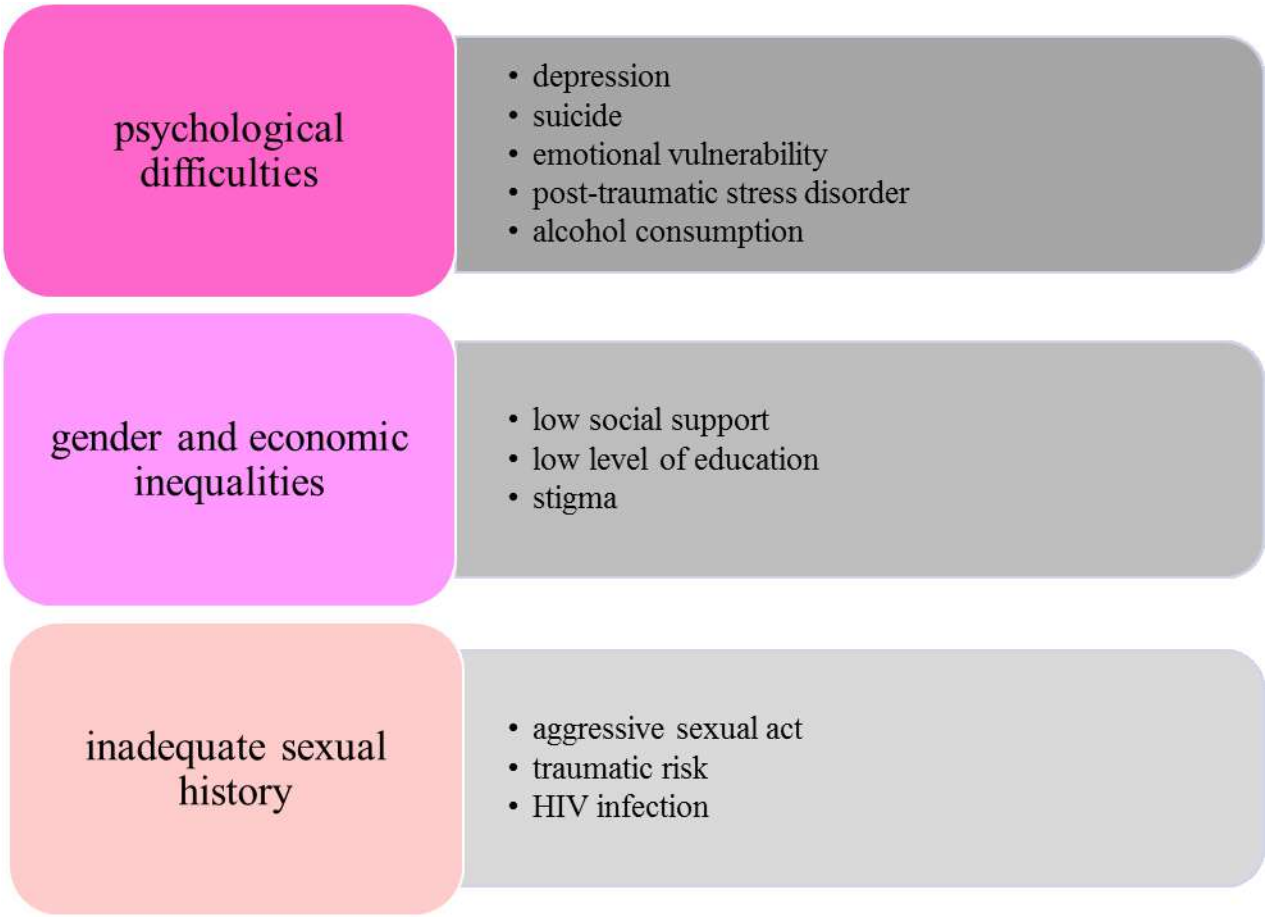
For the second question, *What are the risk factors regarding mental and physical health problems in the case of sex workers?,* the main dimensions evaluated referred to the predisposition towards a depressive state of people involved in prostitution or human trafficking. According to the analyzed studies, the key risk factors for women in this category are psychological difficulties

(depression, post-traumatic stress disorder, addictive behavior—alcohol consumption) found in more than half of them, gender and economic inequalities (support low social status, stigma), about 70% reporting these elements, and an inadequate sexual history (sexual violence, history of unprotected sex, multiple sexual partners, HIV infection) in about half of them. Regarding psychological difficulties, severe depression was correlated both with sex without a condom and with the availability of moving to another city. Also, the state of emotional vulnerability was associated with the number of sexual partners and with the harmful consumption of alcohol. The existence of a history with traumatic potential was linked to the lack of a stable home and the process of stigmatization.

From the point of view of physical health, the HIV virus was associated with the lack of condoms, suicidal ideation, depression, and alcohol consumption.

Figure 2

Risk factors regarding the physical and mental health of sex workers



Discussion

Institutional practices and their consequences

Several authors talk about the attitude of the authorities towards women, who, although they are victims of human trafficking, are labeled as sex workers and therefore marginalized (Socias et al., 2015; Lyons et al., 2017). Whether it is a lack of involvement or support, or aggressive behavior on the part of the authorities, has been documented, particularly in arrest situations, with a history of arrest being linked to physical violence (Lyons et al., 2017).

This harassing behavior of the authorities has a higher probability of manifestation in situations where the person has a prison history (Socias et al., 2015). In this context, the inappropriate behavior of the authorities also manifests itself even in the case of people facing health problems, even if this fact constitutes a vulnerability factor (Sou et al., 2017). In this sense, the specialized literature highlights correlations between the non-compliant institutional practices of the authorities (transfer from pre-trial detention to a detention unit or transfer between detention units) and the limitation of access to drug treatment, in the case of people infected with the HIV virus (Goldenberg et al., 2017; Beattie et al., 2015).

Negative police interaction with women who practice prostitution has implications even in terms of sexual health safety measures, namely the use of condoms on a regular basis (Erausquin, Reed, & Blankenship, 2015). Also, among these consequences are the use of non-injectable drugs, especially in situations with increased stress, such as police checks (Duff et al., 2017), the application of extortion techniques to police officers in order to obtain information from women who practice prostitution (Wirtz et al., 2015), as well as with an increase in violent behavior during sexual intercourse by clients (Muldoon et al., 2017).

From the point of view of the adopted legislative model, it seems that the implementation of laws that completely criminalize the buying and selling of sex leads to a decrease in the prevalence of sexually transmitted infections (Jung, 2017). However, according to American researchers, the health of sex workers is put at risk since they enter prostitution, which occurs through a series of predisposing factors involving family neglect and sexual abuse (Dodsworth, 2012; Wilson & Widom, 2015). Farley (2017) states that "familial sexual abuse functions as a training ground for prostitution" (p. 98). At the same time, Raphael et al. (2015) found that 71% of the participants in their study reported being recruited into prostitution, with 21% describing acts of violence committed against them by their pimp during the initial period of recruitment. Moreover, in their study, Raphael et al. (2015) identified that, from the time of recruitment to the time of interview, participants who experienced medium or high levels of coercive control from their pimp experienced progressively higher levels of violence.

Also, the Swedish model uses policies that are similarly predominantly repressive, considering the problem of Swedish prostitution as a harmful practice of gender inequality and one that should be eradicated (Östergren, 2017). However, evidence that repressive laws have eliminated prostitution remains weak. Furthermore, it has been noted that the law has had the effect of displacing sex work into less visible spaces that serve to increase the alienation between protective and health services and sex workers (Östergren, 2017; Hinde, 2008).

Even the partial model, which penalizes only certain aspects of sex work, does not fully manage to supervise the health of sex workers. For example, Canada, which supports men's right to sex on demand by accepting street prostitution but banning brothels, faces the impossibility of stopping the trafficking of women and maintaining control of prostitution. The concentration of Canadian policies on the perfect victim, i.e., the immature teenager with family or financial difficulties, determined a weak control over adult victims, assaulted by pimps (Lowman, 2016).

Regarding the model of criminalizing the purchase of sex, difficulties arise from the perspective of the rule of law, the safety and well-being of victims of trafficking. Such a situation is

present in Norway, where, although the authorities offer sex workers temporary residence permits in exchange for providing valuable information to the police, the victims often refuse to testify in a legal process because of the fear they face of pimps. Thus, by refusing to declare the truth, they continue to be hidden victims without being able to benefit from the support of the authorities (Jahnsen & Skilbrei, 2018).

Regarding the model of complete acceptance, Radačić (2017) points out that, despite state policies and organizations that contribute to building a community of sex workers, their stigmatization leaves a strong mark on their mental health. At the same time, while there are relatively privileged sex workers because they work in an indoor setting, the less privileged come from disadvantaged backgrounds and live in precarious conditions.

Risk factors

Psychological difficulties

Patel, Ganju, Prabhakar, & Adhikary (2016) found that more than a quarter of the sample of participants representing women who practice prostitution (n=2400) manifests major depression. The differences regarding the probability of occurrence are given by the availability of travel to another city and the experience of violence in the last 12 months. Therefore, those who exhibited mobile behavior regarding the practice of prostitution by moving to other regions or were assaulted presented a higher probability of major depression. Also, Coetzee et al. (2018) bring to attention the symptoms of severe depression in the case of women who were involved in crimes of human trafficking and prostitution, with 68.7% of the total sample reporting this fact (n = 508). Ortblad et al. (2020) talk about the link between depression and physical health, considering that they are in a direct relationship. In addition to depression, suicidal ideation is reported by over 10% of sex workers (Grosso et al., 2019), as is the state of emotional vulnerability. Roberts et al. (2018) recorded associations between the state of emotional vulnerability and involvement in sexual intercourse.

Post-traumatic stress disorder belongs to the category of psychological difficulties. The existence of a potentially traumatic history facilitates the appearance of characteristic symptoms, especially for these people (Jain et al., 2020). Dependent behavior stands out as another aspect, with the prevalence of alcohol consumption among sex workers being 45.5%. It therefore appears that harmful alcohol consumption was three times more likely to occur in this context (Abelson et al., 2019; Bitty-Anderson et al., 2019).

Gender and economic inequalities

Barnhart et al. (2019) draw attention to the financial difficulties that sex workers face. For reasons of poverty, they can either become victims of human trafficking or choose to have sex for certain amounts of money. At the same time, they talk about the impact of the environment of origin, the support group, and the examples from the entourage, but also about the social vulnerability determined by gender, especially when these people end up being involved in human trafficking. A low level of education and the lack of a job are factors that complete these inequalities. Another risk factor identified was the stigmatization process, which increases the probability of involvement in these actions (Coetzee et al., 2018).

Inadequate sexual history

One of the main risk factors regarding the sexual activity of sex workers is HIV infection (Marra et al., 2018; Rhead et al., 2018; Vorsters et al., 2016). According to da Costa et al. (2018), the risk of HIV is found especially in the 17–21 age group, with the prevalence estimates being: HIV 5.3%; active syphilis 8.5%. In turn, Bitty-Anderson et al. (2019) found that the existence of the HIV virus had an estimated prevalence of 12.5% in this context. According to several authors, the HIV virus is correlated not only with alcohol consumption but also with emotional vulnerability (Bitty-Anderson et al., 2019; Grosso et al., 2019; Ortblad et al., 2020). At the same time, it seems that there are links between the HIV virus and condom use (Shen et al., 2016; Ortblad et al., 2020; Jain et al., 2020).

Shokoohi et al. (2018) draw attention to the number of sexual partners in the case of sex workers, finding positive correlations between the large number of partners and the lack of stable housing. Also, Roberts et al. (2018) found that people who have emotional problems can have up to five times more partners in a month, unlike those who do not show these symptoms ($p = 0.002$). At the same time, a potentially traumatic sexual history is a risk factor for victims of human trafficking or sex workers, as this is directly related to sexual behavior (Coetzee et al., 2018).

Conclusion

It cannot be said that there is a perfect legislative model to control prostitution and maintain the health of sex workers at an optimal level. Although there are various attempts for this purpose, social-cultural factors tend to influence the behavior of the authorities in their interactions with sex workers, and therefore, the institutional practices are not in absolute compliance with the legislative model. Taking into account this aspect, we consider that for a legislative model to be successful, it must take into account the cultural particularities of the respective region, and more than that, it must be built according to the social image that the prostituted person represents at the level of the population. Most of the time, the impact of their social image not only disfavors them but also facilitates a decrease in their chances of getting out of this context. By expressing hostile behavior by the authorities, sex workers tend to be even more engaged in this lifestyle.

The lack of viable work alternatives and poor sex education turn sex workers into safe victims. This habit of using the condom only with new clients raises a strong alarm signal regarding not only the education of the population regarding sexual protection but also the meaning of the concept of health itself. The consumption of alcohol, drugs, psychological difficulties, and infection with the HIV virus represent factors that require special attention, as they can become triggers both in the prevention and in the spread of the phenomenon.

As can be seen, there is a continuous interaction between the legislative model, institutional practices, and the physical and mental health of sex workers. A complex understanding of the needs of these people and the provision of personalized assistance, depending on the history of each one, would facilitate the control of this social phenomenon. Awareness and understanding of the problems these women face when they practice prostitution would facilitate the improvement of their capacity to manage this phenomenon.

The psychological difficulties, major depression, and emotional vulnerabilities that most sex workers face are aspects that point to the fact that these people are part of a category that needs specialized support, and simply incarcerating them cannot ensure the solution to the problem.

Future studies should use validated instruments and consistent time intervals to allow more rigorous comparisons between them.

Tabel 1
Studies included in the meta-analysis

Author and year	Place of study	Study design	Dimensions	N	Median age
Abelson et al. (2019).	Cameroon	Cross-sectional	Violence, depression, unprotected sex.	2.165	30.1
Lyons et al. (2017).	Africa	Cross-sectional	Sexual violence, physical violence, the attitude of the authorities.	466	27.3
Coetzee et al. (2018).	South Africa	Cross-sectional	Depression, stigmatization, post-traumatic stress disorder.	508	34. 8
Bitty-Anderson et al. (2019).	Africa	Cross-sectional	Alcohol consumption, psychological difficulties.	937	25
Patel, Ganju, Prabhakar, & Adhikary, (2016).	India	Cross-sectional	Depression, the experience of violent experiences.	2400	>22
Roberts et al. (2018).	Kenya	Cross-sectional	Depression, PTSD, alcohol and drug use.	283	33.5
Ortblad et al. (2020).	Uganda Zambia	Longitudinal	Suicidal ideation, depression.	1.925	25
Shen et al. (2016).	China	Cross-sectional	Depression, condom use.	653	>21
Erausquin, Reed, & Blankenship, (2015).	India	Cross-sectional	HIV risk behavior, negative police interactions.	1.680	35.5
Goldenberg et al. (2017).	Vancouver	Longitudinal	Institutional practices and the HIV virus.	66	35.5
Duff et al. (2017).	Canada	Longitudinal	Institutional practices, stress.	545	35
Socias et al. (2015).	Canada	Longitudinal	Prison history, hostile behavior of the authorities.	720	34.5
Wirtz et al. (2015).	Rusia	Cross-secţional	Police extortion techniques and drug use.	754	35
Jung, (2017).	South Korea	Longitudinal	Sexually transmitted infections, legislative model.	2.009	27
Sou et al. (2017).	Canada	Longitudinal	Health, arrest and harassment.	742	35
Shokoohi et al. (2018).	Iran	Cross-sectional	Number of sexual partners, history of forced sex, lack of stable housing.	1.295	28
Beattie et al. (2015).	India	Cross-sectional	Arrest, violent behavior.	5.792	25
Muldoon et al. (2017).	Africa	Cross-sectional	Legislative model, sexual violence.	400	21
Marra et al. (2018).	Norway	Cross-sectional	HIV infection.	304	29
Vorsters et al. (2016).	Belgium	Longitudinal	HIV infection.	1.334	26
da Costa et al. (2018)	Brazil	Longitudinal	HIV infection.	4.245	>21

Author and year	Place of study	Study design	Dimensions	N	Median age
Barnhart et al. (2019).	Tanzania	Longitudinal	Risk factors, depression and PTSD.	66	>21
Grosso et al (2019).	Togo	Cross-sectional	Suicidal ideation.	2.739	>18
Rhead et al. (2018).	Zimbabwe	Cross-sectional	HIV infection.	3.402	>18
Jain et al. (2020).	Mexico	Longitudinal	HIV infection.	295	>18

Tabel 2

Confidence interval for meta-analysis studies

Author and year	Sample size	Events	Crude OR (95% CI)	*P* value
Abelson et al. (2019).	2.165	1.067	1.4 (1.1– 1.8)	0.013
Lyons et al. (2017).	466	103	2.4 (1.5 - 4.0)	0.005
Coetzee et al. (2018).	508	349	1.4 (0.8– 2.4)	0.2
Bitty-Anderson et al. (2019).	937	223	1.0 (0.7– 1.4)	1.0
Patel,Ganju, Prabhakar, & Adhikary, (2016).	2.400	696	3.3 (2.7– 4.0)	0.001
Roberts et al. (2018).	283	93	1.8 (0.6– 5.5)	0.3
Ortblad et al.(2020).	1.925	708	1.1 (0.8– 1.6), 1.4 (0.9– 2.1).	0.6, 0.11
Shen et al. (2016).	653	342	1.0 (0.7– 1.4)	1.0
Erausquin, Reed, & Blankenship, (2015)	1.680	606	1.6 (1.2–2.1)	0.10
Goldenberg et al. (2017).	66	38	1.0 (1.0–1.0)	0.069
Duff et al. (2017).	545	168	0.26 (0.14–0.38)	0.01
Socias et al. (2015).	720	347	1.82 (1.35–2.45)	0.05
Wirtz et al. (2015).	754	164	3.0 (0.7–12.8)	0.05
Jung, (2017).	2.009	427	0.29 (0.16–0.52)	0.01
Sou et al. (2017).	742	292	1.57 (1.15–2.13)	0.05
Shokoohi et al. (2018).	1.295	745	0.86 (0.47–1.58)	0.001
Beattie et al. (2015).	5.792	231	1.8 (0.9–3.5)	0.05
Muldoon et al. (2017).	400	149	1.61 (1.03–2.52)	0.05
Marra et al. (2018).	304	238	10.27 (4.21-25.10)	0.05
Vorsters et al. (2016).	1.334	556	10.3 (3.2–33.8)	0.05
da Costa et al. (2018).	4.245	224	1.0 (4.4 -6.2)	0.05
Barnhart et al. (2019).	66	5	7.1 (3.7-13.3%	0.05
Grosso et al (2019).	2.165	303	14.9 (51/343)	0.001
Rhead et al. (2018).	3.402	1973	1.62 (1.02–2.59)	0.042
Jain et al. (2020).	295	112	3,63 (1,24-10,67)	0.05

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SWOT ANALYSIS OF UNDERGRADUATE AND POSTGRADUATE MEDICAL TRAINING PROGRAMS IN OCCUPATIONAL HEALTH

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Abstract

Objectives. Carrying out SWOT analysis of undergraduate and postgraduate training programs to identify factors that may affect the quality, sustainability, and relevance of the program, with the aim of contributing to the training of occupational health and safety specialists.
Material and methods. The SWOT analysis was carried out on four curricula, which were developed and applied in the period 2021–2023, within the *Nicolae Testemitanu* State University of Medicine and Pharmacy from the Republic of Moldova. Occupational health training programs are intended for students, residents, and physicians.
Results. The SWOT analysis of the "Occupational Health" curriculum underscores its comprehensive approach to workplace health and the delivery of essential competencies. Strengths include clearly defined, relevant objectives, integration of related disciplines, and broad topic coverage. Nevertheless, challenges may arise from limited intersectoral collaboration and resource constraints. Opportunities lie in cross-disciplinary integration and industry partnerships, while threats stem from the rapidly evolving field and potential program stagnation. In the case of "Occupational Medicine and Occupational Diseases," it offers a practical approach but demands prerequisite knowledge and updates for sustained effectiveness. "Occupational Medicine" boasts diversity and accessibility but faces duration and funding challenges. "Workplace Health Promotion" addresses contemporary concerns but necessitates adequate funding and resources.
Conclusions. Through a strategic approach and collaboration with stakeholders, the quality and relevance of the program can be ensured, contributing to the preparation of occupational health specialists for the current and future needs of the labor market.

Keywords: SWOT analysis, curriculum, occupational health, occupational medicine.

Introduction

Modern occupational pathology studies the whole spectrum of occupationally determined health disorders, including the development of diseases related to the profession. However, the weak point of the occupational health service is still the principles of organizing the actual model of providing workers' occupational medicine services. In this sense, in order to detect the early forms of the disease, performing qualitative medical examinations of workers is very important, and for medical universities, a primary objective is to train specialists multilaterally trained in this field, i.e., on clinical and hygienic issues of occupational medicine (Deleu, Meşina, & Russu, 2016).

Human resources in the field of occupational health and safety must be trained in accordance with international requirements and regulations. In the Republic of Moldova, there is a need to train a new category of specialists in this field (Cheptea et al., 2022; Jelamschi et al., 2022). In this sense, it is important to take into account in the training of the respective specialists the skills required of an occupational medicine physician, as accepted by the European Association of Schools of Occupational Medicine (EASOM), the Occupational Medicine section of the Union of European Medical Specialties (UEMS), and the European Network of the Occupational Physicians Society (ENOPS). At the same time, it is necessary to take into account the national context and carry out system research to provide decision-makers with evidence to justify reforms (Gold, 2016), including through machine learning (Doupe, Faghmous, & Basu, 2019).

The current occupational health and safety services and workers' health surveillance in the Republic of Moldova require a reorientation of content and activities. Therefore, for the Republic of Moldova, which is currently in the early stages of reformulating the main tasks in the organization of occupational health services, taking over the experience of the countries of the European Union, which have gone through similar transitions, would be of great help. The Government of the Republic of Moldova recently ratified Convention 161 on occupational health services and work is currently underway to develop national policies, laws, and programs on occupational health services. Of major importance is the development of training programs for specialists in the field and the creation and consolidation of sustainable partnerships in order to promote European dimensions in the field (Deleu et al., 2016; Deleu, Cebanu, & Cheptea, 2020).

Material and methods

SWOT analysis is a method for identifying and analyzing internal strengths and weaknesses and external opportunities and threats that shape current and future operations and help develop strategic goals.

Data collection

In order to conduct the SWOT analysis of the degree programs, relevant data and information were collected from a number of sources. These sources include: (i) curricula: existing study boards and curricula were examined in detail, including objectives, structure, content, and teaching methodology; (ii) external data: research was carried out to obtain information about the external environment, which can influence the study process, such as employment opportunities, contemporary trends, motivation, competition, and accessibility; (iii) analysis of official documents: the official documents of the educational institution were examined in order to understand the context and the requirements for future specialists in the field of occupational health.

The material analyzed

To achieve the proposed goal, the following curricula from the *Nicolae Testemitanu* State University of Medicine and Pharmacy from the Republic of Moldova were analyzed: (i) "Occupational Health" Curriculum intended for IV year students, Public Health Specialty; (ii) Curriculum "Occupational Medicine and Occupational Diseases" intended for V-year students, Faculty of Medicine; (iii) "Occupational Medicine" Curriculum intended for residents, Occupational Medicine specialty; (iv) Curriculum "Workplace Health Promotion" intended for specialists within the National Agency for Public Health.

Evaluation period

The curricula that were developed, updated, and implemented in the 2021-2023 study period were retained for evaluation.

Evaluation methods

To assess the study programs, document analysis was employed to thoroughly examine the curriculum's content and objectives, aiming to pinpoint both strengths and weaknesses. Additionally, the approach of benchmarking study programs against academic standards and best practices in the field was utilized to gauge their level of adherence and innovation.

Creation of the SWOT matrix

Utilizing the gathered data and evaluations conducted, we constructed the SWOT matrix. This visual representation illustrates strengths, weaknesses, opportunities, and threats, enabling the identification of interrelationships and connections among these elements.

Interpretation of the results

The results of the SWOT matrix were analyzed to obtain a detailed and in-depth picture of the study programs. Aspects requiring improvement were identified, and recommendations were proposed to optimize the curricula.

Validation of the analysis

The accuracy and pertinence of the SWOT analysis were guaranteed by seeking input from experts in the field and referencing specialized literature.

Results

General characteristic

A curriculum is a detailed presentation of a specific course or discipline. It serves as a roadmap for a course and provides a comprehensive overview of various aspects related to that course, including the content (subject), the teaching, learning, research, and evaluation methods

used, and the way the course is organized: theoretical and clinical activities (lectures, seminars, clinical activities, etc.).

In the context of university education, a curriculum is formulated for every subject. These curricula undergo a process of discussion, analysis, revision, and approval every two years. This occurs initially during the primary unit's meeting, followed by a review by the Quality Assurance and Curriculum Evaluation Commission in the specific field, and finally, this is approved by the Faculty Council.

The postgraduate training through residency in each specialty is carried out on the basis of the mandatory theoretical and practical training program, with strict compliance with the requirements for postgraduate training, and aims at the resident obtaining a professional qualification according to national and European requirements. The development of postgraduate training programs through residency is carried out according to the form PR 8.5.1, "Postgraduate training programs through residency". Every 5 years, the program is discussed, analyzed, updated, and approved consecutively by the department, the Scientific-Methodical Committee, the Council of the Faculty of Residence, and the University Quality Management Council. It is subsequently approved by the Rector and the Ministry of Health.

SWOT analysis of the "Occupational Health" curriculum

The main strengths of the occupational health curriculum:

Occupational health is regarded as a foundational discipline within the realm of public health, playing a pivotal role in community medicine. This underscores the significance and essential nature of incorporating the study of occupational health into the professional training program, as it helps nurture the specific skills required for this field.

The goals of the "Occupational Health" discipline are explicitly outlined, encompassing tasks like advising on the implementation of professional work under physiological and hygienic standards, sustaining optimal work capacity, and preventing both occupational ailments and job-related diseases. These objectives are precisely defined and directly pertinent to the training of public health competencies.

The integration of the "Occupational Health" discipline with other hygiene-related disciplines and the significance of these connections in the training process are emphasized. This integration enhances a more holistic comprehension of health-related issues and fosters the acquisition of skills required to recognize and tackle these issues in the context of the workplace.

The curriculum encompasses a broad spectrum of subjects pertinent to occupational health, including the hygienic and physiological aspects of work activities, preventive hygienic oversight, and the methods employed in prophylactic medical examinations.

The allocation of hours among lectures, practical work, and individual study is well-balanced, allowing students to grasp and apply theoretical knowledge effectively in practical contexts.

The training objectives encompass various industries and sectors, offering a comprehensive perspective on occupational health.

The objectives at the application and integration levels underscore practical skills and the capacity to apply knowledge in real-world scenarios.

The topic is well organized and addresses specific aspects of various industries and areas of activity.

Some vulnerabilities highlighted within the "Occupational Health" curriculum can be mentioned:

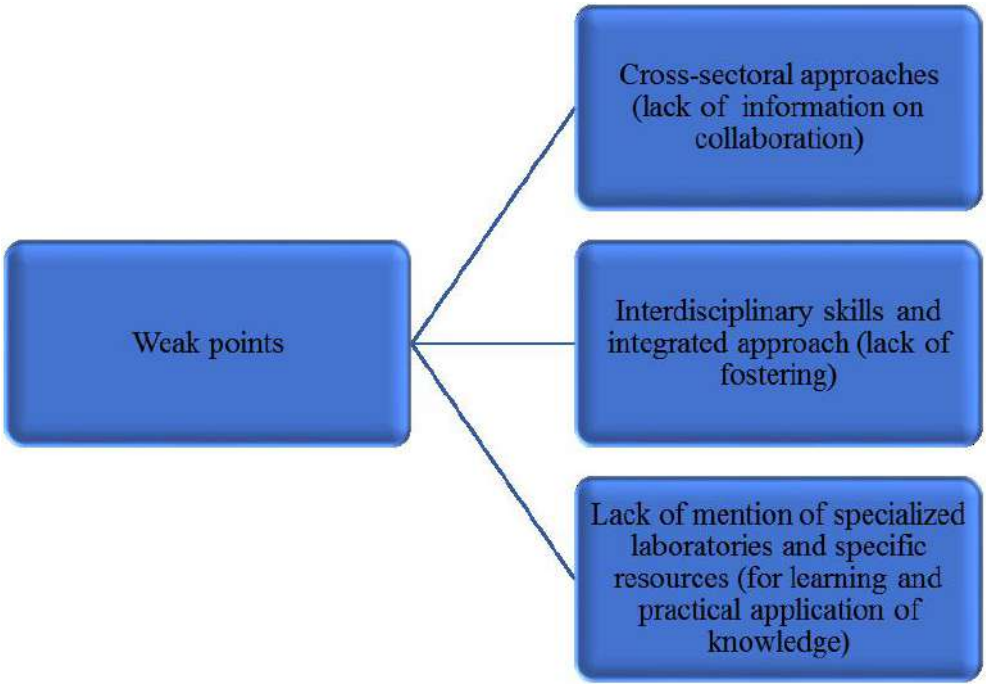
A potential limitation pertains to cross-sectoral approaches. Although the text references intersectoral collaboration in the context of occupational health as a goal of professional training, it does not offer information on how this collaboration is encouraged and facilitated within the program. This could be a limitation in fostering interdisciplinary skills and an integrated approach to addressing occupational health issues.

There is no mention of the existence of specialized laboratories or other specific resources that could support learning and the practical application of knowledge.

In Figure 1, the "cross-sectoral approaches" represent the first limitation discussed. "Interdisciplinary skills and integrated approach" represent the consequence of the first limitation. "Lack of mention of specialized laboratories and specific resources" represents the second limitation.

Figure 1

Visualizing weaknesses in the "Occupational Health" curriculum



Here are some of the study options that the "Occupational Health" curriculum provides:

Integrating occupational health with other relevant disciplines such as food health and human nutrition, environmental health, human ecology, and others provides an opportunity to approach health holistically and develop a comprehensive understanding of the factors influencing the condition of population health.

The training of specialized skills is of interest. Studying occupational health within the professional training program offers students the opportunity to develop specialized skills and knowledge in the field of public health. This can be a real opportunity to access a variety of jobs and professional opportunities in the field of occupational health.

The discipline can benefit from integrating technology into the learning process, such as using simulations or other interactive tools to reinforce understanding and practical application of knowledge.

Collaboration with occupational health professionals and industry can provide opportunities for students to better understand the practicalities and challenges of the field.

Expanding research programs in occupational health could enhance the research skills of students and contribute to the development of knowledge in the field.

The primary challenges identified in the "Occupational Health" curriculum can be noticed:

An overview of the discipline "Occupational Health" is provided, but no specific information is provided regarding the details of implementation, evaluation, or available resources. This can pose a threat to the correct understanding and application of skills and knowledge in practice.

In the context of occupational health, norms, and knowledge can change rapidly as technology and the occupational environment evolve. Therefore, a potential threat could be to ensure that the curriculum and subject content are regularly updated to reflect new findings and demands of the field.

Lack of financial resources and rising inflation can limit access to modern technologies or other tools necessary for effective learning.

Political instability and legislative or regulatory changes may require constant updating of content and teaching methodologies.

The lack of a system for monitoring and evaluating graduation and the results obtained can make it difficult to measure the success of the education program.

Migration of medical personnel and health specialists abroad.

SWOT analysis of the "Occupational Medicine and Occupational Diseases" curriculum

The following advantages are characteristic of the "Occupational Medicine and Occupational Diseases" course:

The discipline "Occupational Medicine and Occupational Diseases" addresses medical aspects from various fields, such as medical semiology, internal medicine, physiology, oncology, etc., which allows a complex approach to occupational diseases.

The curriculum provides both theoretical knowledge and practical skills through laboratory work, seminars, and hands-on work, preparing students for the application of knowledge in medical practice.

The curriculum has clear, well-defined training objectives that cover aspects related to knowledge, understanding, application, and integration of medical knowledge specific to the field of *occupational diseases*.

Systematic work in the library and media library indicates a rigorous and dedicated approach to obtaining relevant and up-to-date information.

Ability to extract the essentials and interpretive skills, highlighting logical thinking and flexibility.

Systematization of the informational material obtained through own activity, reflecting a high level of organization and synthesis capacity.

Analysis of relevant bibliographic sources and compilation of the report according to requirements, highlighting attention to detail and an orientation towards quality and coherence.

There are certain limitations in the "Occupational Medicine and Occupational Diseases" curriculum that came to our attention and need to be addressed:

To study the discipline "Occupational Medicine and Occupational Diseases", a clinical base equipped with specific equipment as well as specialists from different fields is necessary. This may present a challenge, at the moment, to the national health service.

The content and caliber of the thematic education plans need to be continuously adapted to the evolving national legislative requirements, currently in the process of alignment with European legislation. The pace of this alignment and adjustment is sluggish and challenging, which diminishes students' trust.

Graduates in the field of "Occupational Medicine and Occupational Diseases" face a lack of consistent and enduring employment opportunities, and there are no advantages or incentives provided to them.

In Figure 2 (see next page), the "clinical base and specialist availability challenges" represent the first limitation discussed, related to the need for a well-equipped clinical base and access to specialists. "Thematic education plans' adaptation" represents the second limitation regarding the need to continuously adapt education plans to legislative requirements and the challenges it presents. "Lack of consistent and enduring employment opportunities and incentives for graduates" represents the third limitation concerning the employment prospects and incentives for graduates in the field of "Occupational Medicine and Occupational Diseases".

The following study opportunities in the field of "Occupational Medicine and Occupational Diseases" can be highlighted:

Engaging in the study of the discipline "Occupational Medicine and Occupational Diseases" provides students with the chance to enhance their expertise and understanding in diagnosing, treating, and preventing occupational diseases. These acquired skills can be applied in subsequent medical practice.

Medical disciplines like medical semiology, internal medicine, and radiology can be incorporated into "Occupational Medicine and Occupational Diseases", allowing students to broaden their comprehension and practical abilities within a broader context.

Students have access to up-to-date electronic resources, allowing them to explore information pertinent to the subject they are studying.

The opportunity to cultivate clinical reasoning and enhance logical and interpretive thinking skills is provided.

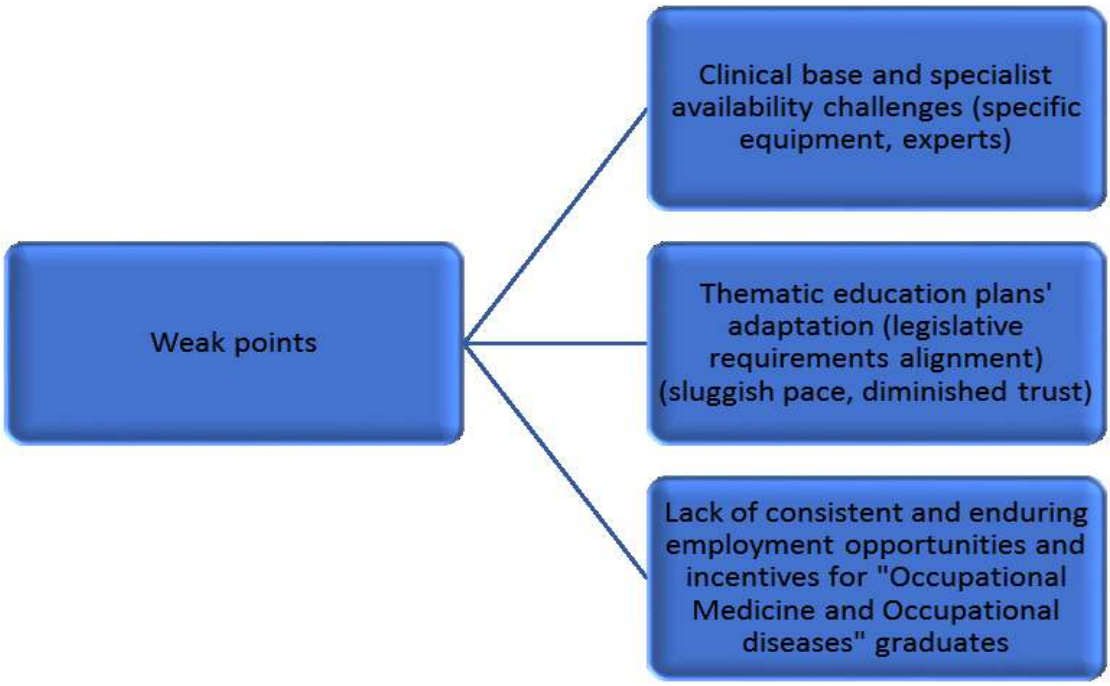
The chance to organize and analyze informational material is offered, which will facilitate the development of comprehension and synthesis skills.

The principal obstacles encountered in the curriculum of "Occupational Medicine and Occupational Diseases" are:

Given the complexity of the discipline, a thorough understanding of related and foundational disciplines is essential for the study of occupational diseases.

The limited knowledge base and professional diversity create challenges in achieving substantial progress, particularly when individual efforts, backed by students and appropriately coordinated by instructors, are not encouraged and enforced.

Figure 2
Visualizing weaknesses in the "Occupational Medicine and Occupational Diseases" curriculum



SWOT analysis of the "Occupational Medicine" curriculum

Exploring the Key Benefits of the "Occupational Medicine" Curriculum:

The program's diversity and comprehensive coverage of various areas of study empower residents to cultivate knowledge and skills across multiple facets of occupational medicine.

The integration of foundational knowledge such as anatomy, physiology, and pathophysiology into clinical practice enables residents to apply theoretical knowledge to diagnosing and treating occupational diseases.

The emphasis on fostering practical skills in examining patients with occupational diseases facilitates the formation of a timely and suitable clinical approach.

Clinical internships and the encouragement of residents to take on increasing independence in their practical activities, with guidance from teaching staff, offer valuable opportunities for hands-on learning and the application of theoretical knowledge.

The utilization of diverse teaching methods, including lectures, clinical case presentations, and conferences, enhances the comprehension and application of knowledge.

Access to research opportunities and involvement in clinical trials within the field of occupational medicine can significantly enrich residents' knowledge and skills, as well as contribute to innovative advancements in the field.

Collaboration with the practical sector and medical institutions can offer residents valuable internship opportunities and real-world practice experience. This collaboration also aids in gaining insight into the challenges and solutions within the practical sector.

Access to experts and specialists in various fields related to occupational medicine, including toxicologists, ergonomics specialists, and hygienists, can offer a comprehensive perspective on workplace health and safety.

Networking opportunities and collaboration with fellow residents and medical specialists from various disciplines through conferences, congresses, and educational activities can greatly enhance the exchange of knowledge and experiences.

The training program encompasses all pertinent aspects of the specialty.

Certain *shortcomings identified in the "Occupational Medicine" curriculum could be brought up:*

The extended duration of the training program, spanning four years or 192 weeks, can be viewed as demanding for residents, necessitating a substantial investment of time and effort.

Certain disciplines may demand more focused attention and supplementary training, which can be challenging to accommodate within the confines of the residency program.

The considerable number of subjects that residents must study is worth noting.

The restricted number of weeks designated for certain subjects might constrain the extent of in-depth study in those specific areas.

The constrained capacity to specialize in a particular area within occupational medicine may diminish residents' adaptability to meet the specific demands of certain industries and could restrict career opportunities in their areas of interest.

The requirement to consistently update one's knowledge in an ever-evolving field and remain current with new discoveries and research can present challenges for residents.

Sustaining a tenuous connection between higher education institutions and employing organizations, as well as between universities and other collaborative partners.

In Figure 3 (see next page), each weak point is represented with its associated challenges, providing a clear and structured presentation of the concerns mentioned in the text.

The "Occupational Medicine" curriculum opens up the following study opportunities:

The growing societal concern for occupational health and safety could result in heightened demand for occupational medicine specialists and create employment opportunities across various industrial sectors.

Technological advancements and investigative methods have the potential to enhance the diagnosis and treatment of occupational diseases.

Engaging in collaborations with other medical specialties and related disciplines can enhance the multidisciplinary approach to addressing workplace health issues.

Partnering with academic institutions and international organizations in the field of occupational medicine can create new opportunities for exchanging experiences and participating in research projects.

The utilization of advanced technologies in diagnosing and treating occupational diseases, including digital technology, artificial intelligence, and telemedicine, has the potential to enhance the efficiency and accuracy of diagnoses and streamline long-term patient monitoring.

The central issues observed in the "Occupational Medicine" curriculum are:

Legislative changes and regulations related to occupational health and safety can impact the practice of occupational medicine and may necessitate adaptations to the training program.

Competition in the job market for occupational medicine specialists can indeed pose a challenge and potentially limit employment opportunities.

Political and economic shifts at both the national and international levels can have an impact on investments in occupational health and safety. These changes may subsequently affect the

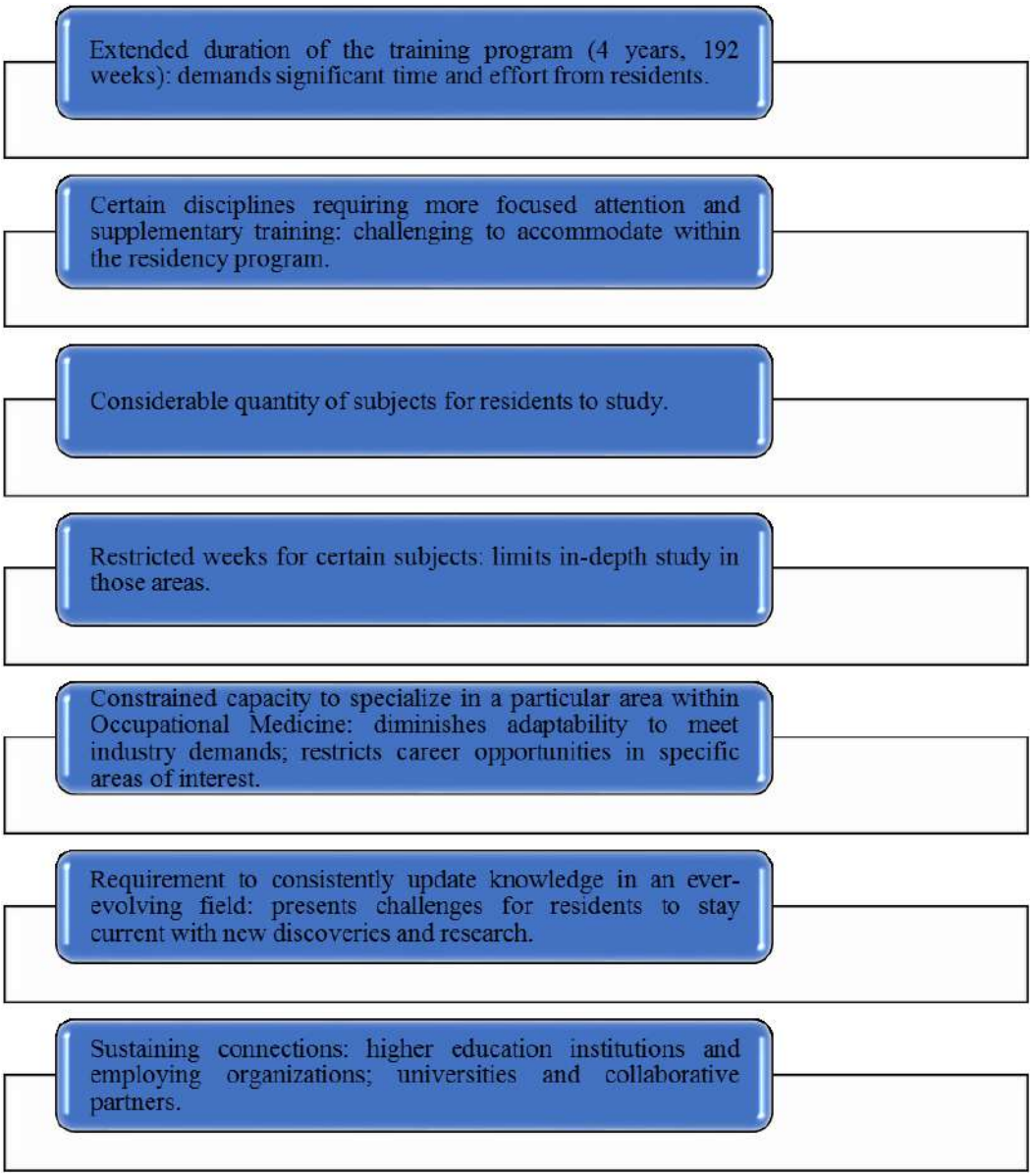
availability of resources and funding required for the development of the occupational medicine residency program.

Competition from other medical specialties or health professionals who offer similar services or adopt an interdisciplinary approach to occupational health has the potential to restrict the demand for and recognition of occupational medicine specialists.

Emerging workplace threats, including risks related to new technologies, materials, and chemicals, may demand new skills and specialized knowledge. Residents must be ready to address these evolving challenges.

Figure 3

Illustrating the "Occupational Medicine" curriculum's shortcomings



SWOT analysis of the "Workplace Health Promotion" curriculum

Examining the Fundamental Advantages of the Curriculum "Workplace Health Promotion":

The course tackles a timely and significant concern within the realm of public health, with a particular emphasis on promoting health in the workplace.

The course is designed to provide professional training to hygiene and epidemiology specialists, equipping them with the skills needed to develop and implement effective health interventions in workplace settings.

The course advocates for an interdisciplinary and intersectoral approach, bolstering collaboration among various stakeholders engaged in promoting workplace health.

The course focuses on preventing occupational diseases and reducing the burden of non-communicable diseases, providing tools and knowledge for identifying and managing risk factors.

The program has generated substantial interest among healthcare workers, signifying a strong desire and dedication to ongoing professional development and the promotion of workplace health. This enthusiasm can serve as a solid foundation for the program's success.

The program benefits from a cadre of well-trained experts and teaching staff capable of delivering current and pertinent information to participants. This can guarantee a high level of quality and professionalism in the courses.

The program can be designed with flexibility to meet the diverse needs and work schedules of participants. By providing online or distance learning options, it becomes accessible to individuals with shift work schedules or time constraints.

There are a couple of drawbacks that have been highlighted in the "Workplace Health Promotion" curriculum:

The course is exclusively taught in Romanian, which may restrict access and participation for individuals who are not proficient in the language or do not have an advanced level of proficiency in it.

The overall duration of the course is 75 hours, which could be perceived as too lengthy for certain participants or pose a time management challenge for busy professionals.

One of the primary challenges could be the availability of adequate funding to ensure the program's sustainability over the long term. Without consistent funding, the program might face difficulties in maintaining essential resources and delivering a high-quality learning experience.

Lack of access to adequate facilities and resources, including updated learning materials or modernized learning environments, could potentially have a detrimental impact on the program's effectiveness and its value to participants.

The presence of other continuing health education programs could pose a challenge to attracting and retaining participants. To be competitive, the program must distinguish itself and offer added value to stand out in the market.

In Figure 4 (next page), a structure is represented, providing an organized view of the weak points in a schematic manner.

The following potential avenues of study within "Workplace Health Promotion" curriculum could be investigated:

The data presented emphasizes the significance of workplace health promotion and underscores the necessity of addressing this aspect within the current landscape of public health.

This presents an opportunity for the development and growth of continuing education programs in this field.

The course can foster collaboration among healthcare professionals and key stakeholders in both the public and private sectors, as well as with national and international organizations specializing in public health and health promotion.

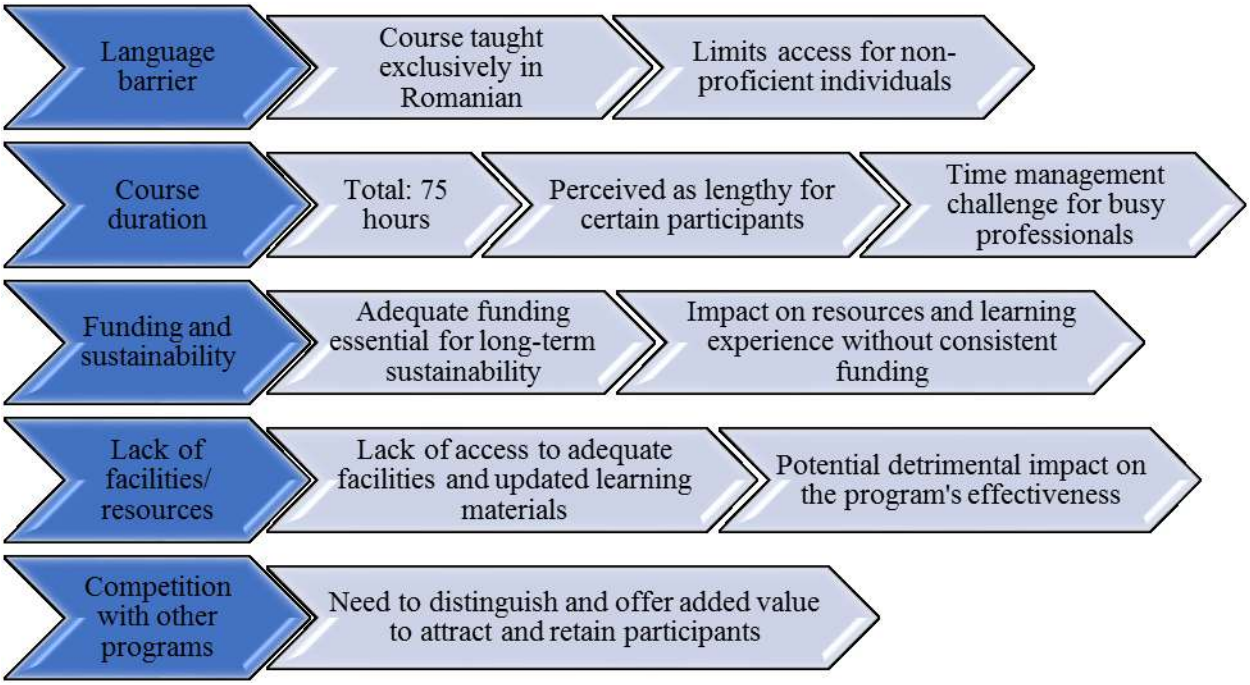
The program has the potential to identify and cultivate robust partnerships with pertinent organizations in the realm of health and workplace health promotion. This can yield advantages such as access to supplementary resources, experts, financial support, promotional opportunities, and heightened visibility for the program.

There is an opportunity to customize and tailor the program to align with the individual needs and interests of the participants. Through the collection and analysis of feedback and relevant data, the program can be enhanced and fine-tuned to ensure an optimal learning experience.

The program can capitalize on the current context, characterized by a growing emphasis on workplace health promotion. Opportunities to address health concerns and workplace stress can underscore the program's significance and relevance.

Figure 4

Illustrating deficiencies in the "Workplace Health Promotion" curriculum



The core struggles recognized in the "Workplace Health Promotion" curriculum are:

Insufficient funding for the development and execution of continuing medical education programs, including those in workplace health promotion, could indeed jeopardize the program's sustainability and ongoing existence in the future.

To maintain a high-quality course, it is imperative to have access to adequate resources, including current learning materials, updated learning facilities, and well-qualified teaching staff.

The absence of these resources or subpar working conditions can impact the program's effectiveness.

The presence of other continuing health education programs may create competition for participant enrollment. It is crucial to identify and highlight the program's strengths to set it apart and capture the interest of potential participants. Being proactive in this regard is essential.

The field of occupational health is continually evolving, with new discoveries and innovations that can impact the ongoing education requirements. It's crucial to maintain the program's relevance by consistently updating it to incorporate the latest information and practices in the field.

Limited interest from the Ministry of Health and a challenging business environment for academic partnerships and cooperation can impede the training of specialists.

The diminishing prominence of the field in the Republic of Moldova and a lack of motivation in selecting a specialization within the field can be discouraging factors.

Discussions

Several significant challenges are evident. The absence of detailed information regarding program implementation, evaluation, and available resources can impede the comprehension and proper application of skills and knowledge in practice. Additionally, constraints related to limited financial resources and increasing inflation may restrict access to modern technologies and other essential learning tools. In the field of occupational health, norms and knowledge evolve swiftly with technological advancements and changes in the occupational environment. This presents a potential threat, as it becomes vital to ensure that curricula and subject content are regularly updated to encompass new discoveries and address the evolving demands of the field. Legislative and regulatory changes may also require constant updating of content and teaching methodologies (Carter, 2000; Boczowski, 2002).

There are significant opportunities available as well. Continuous program updating and development to align with the latest findings and practices in occupational health is one such opportunity. Given the intricacy of the discipline, adopting an interdisciplinary approach can aid in learning about occupational diseases and cultivating more comprehensive skills. Collaborating with other medical specialties and related disciplines can enhance the student experience. To ensure the program's sustainability, the teaching staff should concentrate on identifying and promoting the curriculum's strong aspects to pique the interest of potential participants. In this regard, the educational institution can develop strategies and offer an appealing and pertinent program (Persechino et al., 2016; Cegolon, Heymann, Xodo, & Lange, 2017).

The absence of a monitoring and evaluation system for graduates and their accomplishments can render it challenging to gauge the success of the training program. Additionally, the limited knowledge base and professional diversity can impede significant progress, particularly when there is a lack of coordinated efforts led by instructors and supported by students.

The field of occupational health is in a constant state of evolution, with new workplace threats often necessitating new specialized skills and knowledge. Therefore, it is imperative that we remain prepared to adapt the program to address these evolving challenges and anticipate future changes. Promoting student motivation to specialize in occupational health and ensuring that this choice is acknowledged and valued in the labor market are essential steps in attracting and retaining students in the program.

Conclusions

- In general, the professional training of occupational health specialists in the Republic of Moldova ensures the development of the fundamental competencies required of occupational health professionals.
- The curriculum underscores the significance of the "Occupational Health" discipline in shaping the specific competencies required for the professional training program in public health.
- During the teaching of the subject "Occupational Medicine and Occupational Diseases," it is advisable to consider the unique context of each student's individual work, the subject's objectives and prerequisites, as well as the assessments and feedback provided by the instructor or peers.
- The SWOT analysis is a tool for evaluation that tries to emphasize both a topic's positive and negative elements as well as identify prospective possibilities and dangers, which is vital to keep in mind. The findings of this study can be used as a foundation for creating strategies and action plans in the area of occupational medicine to build on strengths, reduce weaknesses, take advantage of opportunities, and defend against threats.
- The continuing medical education program on "Workplace Health Promotion" exhibits notable strengths, including the enthusiasm and dedication of its participants, expertise, and flexibility. Nevertheless, it is not immune to weaknesses such as reliance on funding and resource limitations. The program also presents opportunities for collaboration and tailoring to specific needs, yet it must confront threats like competition, technological advancements, and financial constraints.
- The training program encounters substantial challenges and opportunities. By addressing these matters strategically and through cooperation with stakeholders, it is possible to guarantee the quality and pertinence of the program while enhancing its contribution to the education of occupational health specialists to meet the present and future demands of the labor market.

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EMOTIONAL STABILITY AND AFFECTIVE DISTRESS AMONG ADOLESCENTS AND YOUTH DEPRIVED OF LIBERTY FOR CRIMES COMMITTED WITHOUT VIOLENCE

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Abstract

Objectives. This study aimed to investigate the affective state of young people in custody of the penitentiary system for nonviolent crimes.
Material and methods. The answers provided to the *5-Factor Personality Questionnaire* (CP5F) (*emotional stability scale*) and the *Affective Distress Profile* (PDA) of 52 boys aged between 18-25 deprived of liberty were processed. The main statistical techniques used were the independent samples *t*-test and effect size calculation (Hedges' *g* indicator).
Results. Convicted persons from the urban environment presented higher scores of emotional stability in contrast to those from the rural environment ($t(47) = 2.28$, $p = 0.02$). Young people who did not receive a visit in the last month presented a higher level of functional negative emotions in the "sadness/depression" category ($t(50) = 2.46$, $p = 0.01$, $g = 0.68$), reported higher levels of total ($t(50) = 2.03$, $p = 0.04$, $g = 0.56$) and global distress ($t(50) = 3.78$, $p = 0.00$, $g = 1.05$), but also a higher level of positive emotions ($t(50) = 3.42$, $p = 0.00$, $g = 0.95$). Participants involved in an intimate relationship obtained higher scores for dysfunctional negative emotions in the "worry/anxiety" category ($t(50) = -2.32$, $p = 0.02$, $g = 0.62$) and for total distress ($t(50) = -2.02$, $p = 0.04$, $g = 0.53$). Those who grew up in a disadvantaged area registered higher scores of functional negative emotions in the "sadness/depression" category ($t(50) = -2.10$, $p = 0.04$, $g = 0.60$) and of functional negative emotions in the "sadness/depression" and "worry/anxiety" categories ($t(50) = -2.04$, $p = 0.04$, $g = 0.58$).
Conclusions. Policies to prevent recidivism among young people deprived of liberty for nonviolent crimes need to target actions aimed at reducing the level of emotional distress.

Keywords: nonviolent crime, emotional stability, affective distress, young people.

Introduction

Current changes in society make it difficult to distinguish adolescence from youth. Verza (1993, pp. 104-105) mentioned that adolescence is divided into three sub-periods: preadolescence (14-16 years), adolescence proper (16-18 years), and prolonged adolescence (18-20/25 years). However, referring to the subperiod of prolonged adolescence, Verza (1993, p. 105) stated that

although many authors included it in the period of adolescence, some consider it to belong to the period of youth.

The World Health Organization (n.d.) defines adolescence as the age range between 10-19 years, while young people are defined as people aged 15-24 years.

Arnett (2000, p. 470, as cited in Roth et al., 2016, p. 13) proposed the redefinition of life stages, introducing a new age stage, which he called "emerging adulthood", placing it in the interval 18-25 years old. According to this model, people between the ages of 18 and 25 are neither teenagers nor adults, but rather can be called "emerging adults" (Roth et al., 2016, p. 13).

Currently, the United Nations (n.d.) uses the term "youth" to refer to people aged 15-24, highlighting that the definition of this term changes according to circumstances.

Adolescence and youth can be seen as an age of intensification of the person's desire for affirmation, accompanied by some affective instability (Verza, 1993, p. 105), which sometimes leads to conflicts with authority figures, be it parental, school, or social authority. This attitude is normal as long as it does not exceed the limits imposed by law and society. When these boundaries are violated, the young person is considered a delinquent.

To better understand the phenomenon of delinquency among young people, it is necessary to take into account inter-individual differences. In this sense, the theory of the criminal personality developed by Jean Pinatel (1966, as cited in Turliuc, 2007, p. 99) is relevant. According to this theory, what drives some people to commit and others to refrain from committing criminal acts is the delinquency threshold: while some people commit crimes under strong internal and external incentives, others may switch to the criminal act on the background of mild incentives. Two of the essential factors that can contribute to the commission of crimes are the emotional distress felt and the level of emotional stability available to the person.

Stability in the context of personality was defined by "few emotional or mood changes" (VandenBos, 2013/2020a, p. 534), respectively by "predictability and consistency of emotional reactions, in the absence of rapid mood changes" (VandenBos, 2013/2020b, p. 535). Its opposite is neuroticism, which indicates a chronic level of emotional instability and the existence of the person's tendency toward psychological distress (VandenBos, 2013/2020c, p. 380). Distress consists of a negative response to stressful situations, characterized by excessive stimulation, the effects of which can be harmful to health (VandenBos, 2013/2020d, p. 180).

One of the characteristics of adolescence is affective instability, which begins to improve with advancing into adulthood (Trentacosta & Izard, n.d.). However, the life context in which the young person is or was at a given time (the environment in which he lives or which he lived, the events encountered, and the support received from those around him) can exert some influence on his emotional balance (Aneshensel & Sucoff, 1996; Kawamoto, 2016; Scardera et al., 2020).

Emotional stability and distress have frequently been the subject of psychological research in the judicial field. Most of the time, however, they are discussed in the context of violent crimes (eg: Ortiz-Tallo, Cardenal, Blanca, Sánchez, & Morales, 2007; Shoham, Askenasy, Rahav, Chard, & Addi, 1989; Garofalo & Velotti, 2017). Violence attracts more public attention, as it stimulates the reticular activating system (Barber, 2016). This can explain the abundance of news about murders, rapes, human trafficking, etc., but also the interest shown by researchers in the field of forensic psychology in the study of violent criminality.

In Romania, the age at which the person acquires criminal liability is 14 years, this being limited up to 16 years (the minor is criminally liable only if it is proven that he had discernment at the time of committing the act), following that from this age, the young to obtain full criminal liability (*New Criminal Code; New Code of Criminal Procedure - 2nd Ed., revised by Petruț*

Ciobanu, 2014, p. 58). According to the Romanian legislative system, minors who have committed criminal acts and are criminally liable are subject to educational measures that may be non-custodial or custodial (*New Criminal Code; New Code of Criminal Procedure – 2nd Ed., revised by Petruț Ciobanu*, 2014, p. 58). The present paper focuses on adolescents and young people aged between 18-25 years, to whom were applied the educational measure of internment in an educational or detention center, respectively on those in penitentiaries.

According to the latest report of the National Administration of Penitentiaries, in April 2022, 801 of the persons deprived of liberty in the custody of the Romanian prison system were youths between 18 and 21 years old, and 252 were minors (ANP, 2022). Although the total number of minors and youths in penitentiary units decreased compared to April of previous years (ANP, 2021; ANP, 2020; ANP, 2019; ANP, 2018), the fact that it still remains in the order of hundreds, makes criminality among them to continue to constitute a pressing social problem.

The level of emotional balance that the young convict has and the emotions he has during the detention period can influence the efficiency of the social reintegration process carried out in the penitentiary system. A high level of emotional distress during deprivation of liberty, coupled with a low level of emotional stability as a personality trait, can maintain conflicts with staff and fellow inmates, affecting the purpose of placing the young offender in an educational or detention center, respectively of serving the sentence in a penitentiary.

At the same time, taking into account the fact that disadvantaged areas present a higher level of criminality (Krivo & Peterson, 1996), this paper takes into account the characteristics of the neighborhood in which the participants grew up. Knowing that beyond the low socioeconomic status, specific to disadvantaged areas, the residents of these environments may face several social stressors, such as exposure to drug use and trafficking (Shaw, Egan, & Gillespie, 2007) or violence (de Courson, Frankenhuis, Nettle, & van Gelder, 2023), the disadvantaged area in this study was defined as a poor neighborhood where violent incidents occurred or where drugs were sold.

Non-violent crimes are defined as those criminal acts that do not involve harm or the use of force against another person, most often taking the form of theft (Bussa, 2016). Taking into account this definition and taking into account the criminal law in Romania (New Criminal Code; New Criminal Procedure Code - 2nd Ed., revised by Petruț Ciobanu, 2014), within the category of crimes that do not involve violence can be including theft, aggravated theft, drug trafficking, smuggling, fraud, driving a vehicle without a license, setting up an organized criminal group, etc.

In Romania, theft represents the second criminal act, in descending order of frequency, for which minors and young people end up carrying out custodial educational measures (ANP, 2022). As the share of crimes committed without violence represented, according to the reporting for April 2022, approximately 26.30% of the total crimes committed by minors and young people (ANP, 2022), the percentage remaining constant compared to April 2021 and registering a slight upward trend compared to April of 2020 (25.31%) (ANP, 2020), this paper aims to analyze the affective state of those convicted for crimes committed without violence, to identify some levers aimed at reducing the risk of repetition of this antisocial behavior after release.

Material and methods

Participants

The 52 participants were selected from a sample made up of 186 boys between the ages of 18 and 25 interned in Buziaș Educational Center, Târgu Ocna Educational Center, Brăila-Tichilești

Detention Center, and Arad Penitentiary. Out of the 186 questionnaires, only those completed by young people who, at the time of data collection, were serving the educational measure of deprivation of liberty, respectively the prison sentence for acts committed without violence, were retained.

Research purpose and objectives

To achieve the purpose of the research, the following objectives were formulated:

- To identify differences in the level of emotional stability and affective distress depending on the socio-demographic characteristics of the participants, their criminal history and the social support received by them during detention.
- To develop recommendations as guidelines for the process of social reintegration of adolescents and youth detained for non-violent crimes.

The socio-demographic variables taken into account were age, background, marital status, history of placement in a foster care center, and living in a disadvantaged area. The criminal history was defined by the variables of criminal recidivism, the duration of the sentence received and the time served in the penitentiary institution until completing the questionnaire. The social support received during the execution of the custodial sentence was assessed by the following elements: the frequency of visits received in the last month and the moral support received from fellow detainees and staff from penitentiary institutions.

Research methods and tools

The questionnaire-based survey method was used for collection. The data collection tools were:
- An omnibus questionnaire with 58 simple or compound questions (divided into several items). It was made up of several sections, a first section referring to some socio-demographic data (age, background, marital status, level of school education, etc.), another section referring to the criminal history, following, in order, the section relating to situations within the family where the participant grew up, within his group of friends, within the penitentiary institution in which he was in custody at the time of completion, a section on alcohol consumption, one on drug consumption, a another about sexuality and one about risky behaviors;
- *The 5-Factor Personality Questionnaire* (CP5F), validated on the Romanian population by Albu (2008, as cited in Albu & Porumb, 2009). It contains six scales, totaling 130 items, with response options ranging from 1 – "it suits me very little" to 5 – "it suits me very much";
- *The Rosenberg Self-Esteem Scale (RSES)*, adapted on a sample of Romanian teenagers by Robu (2013). This scale allows both the calculation of a global self-esteem score and the calculation of a score for the following two dimensions: own qualities and self-acceptance;
- *The Affective Distress Profile* (PDA), validated on the population of Romania by Opriș and Macavei (2007). The complexity of this questionnaire lies in the seven subscales made up based on the 39 items describing both functional and dysfunctional negative emotions in the "sadness/depression" and "worry/anxiety" categories, but also positive emotions. At the same time, PDA also allows the calculation of a global score of affective distress;

The toolkit used ends with a question that invites the participant to describe in approximately 200 words the circumstances of the offense for which he was convicted.

This questionnaire, which requires mainly quantitative answers, is complemented by an interview guide, which initially consisted of seven items. Having been revised following a pilot survey, the current version of the guide totals 16 questions. These refer to the change in the perception of one's own person after incarceration, to the models that the young person follows, to his needs, to the experiences lived in childhood, etc.

For this study, the answers obtained to some of the socio-demographic items, those recorded on the emotional stability scale of the CP5F, and the scores recorded on the PDA were processed.

Procedure

The data was collected between November 15, 2021, and August 24, 2022.
To involve the participants from the Buziaș Educational Center in the research, online visits were scheduled, via Skype, with the principal investigator, during which they provided verbal answers for each item, the answers being recorded by the researcher.

At the Târgu Ocna Educational Center and the Brăila-Tichileşti Detention Center, all young people in custody were notified about the possibility of participating in the research activity, being involved in the investigative approach all those who consented.

In the case of the data collection at the Arad Penitentiary, given the larger number of eligible inmates and the short time allotted for the application of the questionnaire, young people from three detention wards intended for the execution of custodial sentences in a closed regime were recruited for the research.

Ethical aspects of research

To start the investigation, the approval of the Ethics Commission of the "Constantin Rădulescu-Motru" Institute of Philosophy and Psychology of the Romanian Academy (no. 80 of 19.03.2021) and the agreement in principle of ANP (no. 7786 of 29.04.2021). In addition, at the request of the Buziaș Educational Center, a collaboration protocol was concluded between the penitentiary unit (no. 36381/02.12.2021) and the "Francisc I. Rainer" Institute of Anthropology of the Romanian Academy (775/19.11.2021).

CP5F and PDA instruments were applied for research purposes based on approval sent by email by COGNITROM, respectively *International Institute for the Advanced Studies of Psychotherapy and Applied Mental Health*. To apply the selected RSES variant, the agreement of the author of the validation study of this scale was obtained.

Before completing the questionnaires, the participants were instructed regarding the confidentiality of the answers, the anonymity of the respondents, the conditions for keeping the questionnaires, possible risks and benefits, etc. Each participant involved in the study first completed an informed consent form and an acceptance form. All respondents were rewarded with a predetermined number of credits.

Research hypotheses

H1: Younger participants (18-21 years old), those who grew up in disadvantaged areas (ex: a poor neighborhood, where violent incidents took place or where drugs were sold), those who were

admitted to a foster care center, and those who are not in an intimate partner relationship show a lower level of emotional stability and a higher level of affective distress.
H2: Criminal recidivism, longer length of sentence received, and serving a larger portion of the sentence are associated with lower levels of emotional stability and higher levels of affective distress.
H3: Young people who receive social support during detention are more emotionally stable and have a lower level of emotional distress.

Data analysis

The resulting data were entered and processed in the SPSS Statistics 17.0 program (SPSS 17.0 Statistical Analysis for Social Science, 2022).

For the items with multiple answer options (marital status and the number of visits received in the last month) and for those with free answers (the duration of the conviction and the fraction of the sentence served), two groups were created, as follows: alone/in a relationship, visited/not visited, length of sentence less than three years/length of sentence more than three years, less than one year/more than one year. To apply the *t*-test for independent samples, these categories were made, to establish the appropriate statistical framework.

Little's MCAR test was used to test the null hypothesis that responses to items that were omitted by participants are not missing at random. This statistical analysis revealed that the null hypothesis was rejected for the CP5F emotional stability scale (Chi-Square = 234.39; $DF = 215$; $p = 0.17$), for the PDA scale (Chi-Square = 505.49; $DF = 469$; $p = 0.11$), but also for the following PDA subscales: functional negative emotions from the "sadness/depression" category (Chi-Square = 15.97; $DF = 14$; $p = 0.31$), functional negative emotions from the "worry/anxiety" category (Chi-Square = 17.28; $DF = 19$; $p = 0.57$), functional negative emotions from the "sadness/depression" and worry/anxiety" categories (Chi-Square = 46.26; $DF = 51$; $p = 0.66$), dysfunctional negative emotions from the "worry/anxiety" category (Chi-Square = 13.24; $DF = 12$; $p = 0.35$), positive emotions (Chi-Square = 82.77; $DF = 65$; $p = 0.06$), meaning that data were missing in a completely random way. However, the null hypothesis could not be rejected in the case of the dysfunctional negative emotions subscale from the "sadness/depression" category (Chi-Square = 56.48; $DF = 34$; $p = 0.00$), which is why this subscale was excluded from subsequent data analysis.

Missing data were replaced through the expectation-maximization algorithm, this procedure being applied separately for each retained PDA subscale and separately for the CP5F emotional stability scale.

To find out the effect size, the calculator available at Social Science Statistics (n.d.) was used.

Results

Following the process of sorting the questionnaires, it emerged that 52 of the participants were convicted of non-violent crimes: theft, aggravated theft, fraud and organized criminal group, driving without a license, driving under the influence of alcohol, smuggling, drug trafficking, fraud, computer fraud, escape. Table 1 shows the frequency of specific offenses within the sample.

Table 1
Frequency of crimes within the sample

Variable	*N*	*%*
Theft	13	25.0
Aggravated theft	23	44.2
Driving without a license	5	9.6
Smuggling	2	3.8
Drug trafficking	2	3.8
Escape	2	3.8
Other crimes (privacy violation, driving under the influence of alcohol, fraud, computer fraud, deception, and organized criminal group)	5	9.6

The convicted persons ranged in age from 18 to 25 years (M = 20.40; SD = 2.52), mostly from urban areas. Most were in an undocumented relationship, and the last graduating class was most commonly reported as belonging to middle school. At the time of data collection, most of the young people surveyed were not continuing their studies. More than half of the participants had not previously lived in a foster home and had not grown up in an underprivileged area, such as a poor neighborhood where violent incidents occurred or a neighborhood where drugs were sold. As for the infrational trajectory, the majority of the sample was at their first conviction. The duration of the sentence received was less than 3 years in more than half of the respondents, the minimum sentence was nine months and the maximum of seven years and 3 months, and most had served less than one year by the time of completing the questionnaire. Most of the sample reported visits in the past month, as well as moral support from fellow inmates and staff. Among the mentioned visitors were parents, brothers, concubines, uncles, grandparents, cousins, brothers-in-law, and friends, while the staff who offered moral support to the young people were supervisors, psychologists, educators, social workers and including the director of the center (in the case of a young person interned in one of the educational centers). Table 2 provides an overview of the sample structure.

Table 2
Sample structure

Variable	*N*	*%*
Place of detention		
Buziaș Educational Center	6	11.5
Târgu Ocna Educational Center	16	30.8
Brăila-Tichilești Detention Center	15	28.8
Arad Penitentiary	15	28.8
The environment of origin		
Urban	39	75.0
Rural	10	19.2
No answer	3	5.8
Marital status		
Single	22	42.3
In a relationship	29	55.8
No answer	1	1.9

Last school graduated		
No school, primary school (4 grades)	17	32.7
General school (5-10 grades), vocational, apprentices	30	57.7
High school	5	9.6
Continuing school courses at the time of data collection		
No	29	55.8
Primary school (4 grades)	6	11.5
General school (5-10 grades), vocational, apprentices	15	28.8
No answer	2	3.8
History of placement in a foster care facility		
No	39	75.0
Yes	10	19.2
No answer	3	5.8
History of living in a disadvantaged area		
No	27	51.9
Yes	24	46.2
No answer	1	1.9
Criminal history		
Imprisoned with execution on first conviction	27	51.9
Recidivists	24	46.9
No answer	1	1.9
Sentence length		
Less than three years	33	63.5
More than three years	18	34.6
No answer	1	1.9
Period executed		
Less than a year	30	57.7
More than a year	22	42.3
Exercising visitation rights in the last month		
No	24	46.2
Yes	28	53.8
Moral support received from colleagues in difficult situations		
No	10	19.2
Yes	41	78.8
No answer	1	1.9
Moral support received from staff in difficult situations		
No	16	30.8
Yes	35	67.3
No answer	1	1.9

The *t*-test for independent samples revealed that emotional stability did not differ significantly in young people aged 18-21 years compared to those aged 22-25 years ($t(50) = -0.13$, $p = 0.89$). The scores obtained on this CP5F scale did not differ significantly depending on marital status, history of admission to a placement center, living in a disadvantaged area, criminal

recidivism, duration of conviction received, period served, exercise of visitation rights in the last month, support received from fellow detainees and support received from staff. The only independent variable according to which the two groups of participants registered significant differences in the scores obtained for emotional stability was the environment of origin, with the convicted persons from the urban environment showing higher scores of this trait ($t(47) = 2.28$, $p = 0.02$).

Regarding affective distress, most differences were registered between those visited in the last month and those not visited. Young people who did not receive a visit during the last month before applying the questionnaire showed a higher level of functional negative emotions in the "sadness/depression" category. They also reported higher levels of total and global distress, as well as higher levels of positive emotions. The statistically significant differences obtained according to the exercise of visitation rights in the last month are summarized in Table 3.

Table 3
Significant affective differences depending on the exercise of visitation rights

PDA subscale/scale	Unvisited		Visited		*t*(50)	*p*	Hedges' *g*
	M	*SD*	*M*	*SD*			
Functional negative emotions in the "sadness/depression" category	17.77	5.94	13.96	5.20	2.46	0.01	0.68
Total distress	68.59	23.81	55.51	22.51	2.03	0.04	0.56
Global distress	113.02	22.71	90.58	20.03	3.78	0.00	1.05
Positive emotions	44.43	10.06	35.07	9.62	3.42	0.00	0.95

N=52

Another factor involved in the differences obtained on two of the PDA subscales was marital status. Participants involved in an intimate relationship scored higher on dysfunctional negative emotions in the "worry/anxiety" category and on total distress.

At the same time, differences regarding distress were also outlined depending on the negative characteristics of the environment in which the young convicts grew up. In this regard, those who grew up in a disadvantaged area, described either by poverty or by selling drugs or violent incidents, recorded higher scores of functional negative emotions in the "sadness/depression" category, as well as functional negative emotions in the "sadness/depression" and "worry/anxiety" categories.

The statistically significant differences obtained according to marital status and history of living in a disadvantaged area are summarized in Table 4.

Table 4
Significant affective differences depending on marital status and environment of origin

Independent variable	PDA subscale/scale	No		Yes		*t*(49)	*p*	Hedges' *g*
		M	*SD*	*M*	*SD*			
In an intimate relationship	Dysfunctional negative emotions in the "worry/ anxiety" category	10.32	4.39	13.88	6.52	-2.32	0.02	0.62
	Total distress	54.20	17.48	66.83	27.02	-2.02	0.04	0.53
History of living in a disadvantaged area	Functional negative emotions in the "sadness/ depression" category	14.18	4.18	17.60	6.94	-2.10	0.04	0.60
	Functional negative emotions from the "sadness/ depression" and "worry/ anxiety" categories	28.95	7.97	35.02	12.40	-2.04	0.04	0.58

$N = 51$

Discussions

Implications of the developmental environment for young people deprived of liberty

The environment in which a person grows and develops influences the shaping of their personality (American Psychiatric Association [APA], 2013/2016). In the case of the studied sample, living conditions in rural areas of Romania do not seem to allow the cultivation of emotional stability to the same extent as it is achieved in urban areas. This result is supported by that obtained by Pushpalatha (2021), which revealed that 30 students aged 19 to 22 at an urban college in India had a higher level of emotional stability compared to another 30 students of the same age at a rural college.

Different results were obtained by Kumar (2018), who found no significant difference in emotional stability between rural and urban middle school students in the Moga district of India ($N = 100$). Another research conducted in India also indicated that there were no significant differences in emotional stability between two groups of boys ($N = 50$) between the ages of 13 and 18 studying in different schools, one from an urban environment and the other from a rural environment (Singh, Singh, & Singh, 2018). However, a study involving 113 male offenders, with an average age of 15.2 years, showed that rural youth presented a greater tendency toward internalizing symptoms such as somatic complaints, anxiety, and depression (Nelson, Coleman, & Corcoran, 2010).

The difference depending on the area of origin can be explained by the differential access to resources of people from the rural environment and those from the urban environment. A list of resources to which teenagers from rural areas have limited access was presented by Șoitu (2013): "financial (budget and donations), human (specialized staff with higher and secondary education), educational (a smaller number of schools and accessible specializations)" (p. 122). Although he referred to teenagers in foster care centers in rural areas, the explanation can be extrapolated to the level of living conditions in villages and communes in Romania.

Beyond the administrative-territorial organization of the areas where young people live, the importance of the neighborhood climate is noted. The influence of a poor neighborhood, drug sales, or violent incidents in the neighborhood can be seen in relation to higher levels of functional negative emotions in the "sadness/depression" and "worry/anxiety" categories. Studying a sample of 270 former and current adult drug users in Baltimore, Curry, Latkin, and Davey-Rothwell (2008) observed an indirect association between neighborhood violent crime and depressive symptoms, with the relationship between the two variables being mediated by the perception of disorder in the neighborhood and by violent experiences in the neighborhood. The results were similar for teenagers. Analyzing data from 4,464 adolescents in California, Goldman-Mellor, Margerison-Zilko, Allen, and Cerda (2016) found that adolescents who perceived their neighborhood to be unsafe were twice as likely to report severe psychological distress, unlike those who perceived the neighborhood as safe. In contrast, they found no significant differences between levels of distress comparing the group of adolescents who lived in an area characterized by a higher level of objective violence and the group of participants who lived in safer areas. However, Alloush and Bloem (2022), investigating the situation in South Africa, found that both higher levels of perceived and objective violence were closely related to higher levels of depressive symptoms and a higher likelihood of people being exposed to the risk of depression. Regarding young people deprived of their liberty, some authors found in a longitudinal study involving 1216 male adolescents arrested for moderate crimes (eg theft, vandalism – graffiti) that a neighborhood of lower quality was associated with a higher level of anxiety and depression symptoms at the initial time of assessment (Baker et al., 2022).

The emotional state of young people deprived of liberty must also be taken into account even after release, as this may have implications on the criminal trajectory. Forry, Kirabira, and Rukundo (2019) showed in 414 adult prisoners in Uganda that there is an association between depression and criminal recidivism. They also observed an association between anxiety and the category of crime committed.

The role of social support received during detention

There is scientific evidence to support that the stability of emotional and instrumental social support received from family and friends has implications for the positive self-evaluation of the mental health of recently incarcerated men (Fahmy, 2021), an aspect also supported by the results of the present study, according to which recently visited participants have reported less emotional distress.

However, the fact that incarcerated youth in an intimate partnership relationship reported higher levels of emotional distress might suggest the existence of relational problems between the partners. Usually, relational problems between intimate partners can be associated with poor functioning in the behavioral, cognitive, or affective sphere. Among the affective problems that can be encountered in such situations are chronic sadness and apathy (APA, 2013/2016, p. 716).

In the context of deprivation of liberty, the higher level of distress faced by young people in a relationship can also be explained by the awareness of the distance between themselves and their partner. The geographical positioning of the penitentiary units, the cost of travel, the limited number of visits available to convicted persons over the age of 18 and the legislative difficulties encountered in obtaining intimate visits are just some of the factors that can contribute to the amplification of negative emotionality during the execution of the sentence. At the same time, the young age of the participants suggests that their intimate relationships are not yet stable and consolidated over time.

Although this investigation revealed that youth who received visits in the past month showed lower levels of affective distress compared to those who did not, they also reported lower levels of positive emotions. This result is in contrast to the observations made by Duncan and Balbar (2008), based on a qualitative study of a program of voluntary visits in a prison in Canada, which showed that the positive emotions experienced by inmates during the visits persisted after they had ended. The result revealed by this research can be explained by the fact that meetings with close people in the penitentiary environment, although they reduce sadness, depression, anxiety, and worries, do not always bring positive experiences. The restrictions imposed by the legislation in force regarding the framework for conducting visits in the penitentiary units in Romania, the awareness of the condition of being a prisoner, which prevents participation in usual events held in the family or the groups of friends, represent some elements that can influence the reduction of positive emotions such as joy, delight, or excitement.

However, the positive influence of reference persons in the process of social reintegration is acknowledged. The guide for penitentiary psychologists (Pripp, Decsei-Radu, David, & Gheorghe, n.d.) reminds us about the importance of maintaining and strengthening the connection of the convicted person with the family, and in the case of minors, the legislation supports maintaining relationships with support persons, with whom they have family relationships or strong affective ties, by supplementing the right to physical, online visits and telephone conversations (Parliament of Romania, 2013).

Regarding the young convict's relationship with other inmates and staff, although this study did not reveal significant differences regarding the emotional distress faced by those who receive moral support from people in the penitentiary and the level of distress of those who stated that they did not receive such support, Biggam and Power (1997) found such a difference in a sample of 125 incarcerated boys with a mean age of 18.8 years. They showed that anxious prisoners received less practical support than that considered optimal from fellow inmates and less practical and emotional support from staff responsible for their reintegration. At the same time, depressed inmates reported less practical and emotional support than that considered optimal, both from colleagues and staff.

Conclusions

Hypothesis H1 was partially confirmed, the investigation indicated that participants from the rural environment presented a lower level of emotional stability than those from the urban environment, and those who lived in a disadvantaged area obtained higher scores on two of the PDA subscales. Hypothesis H3 was also partially confirmed, with the study showing that participants who received a visit in the past month scored lower levels of affective distress but not emotional stability. Instead, the second hypothesis (H2) was disproved, the research not showing significant differences between the participants according to recidivism, the length of the sentence, or the fraction of the sentence served.

Although the therapeutic, psychoeducational, and counseling activities in the Romanian penitentiary units are clearly delimited by age categories 18-21 years (youths) and over 21 years (adults), this research shows that the persons deprived of liberty from the two groups (18 -21 and 22-25 years old), convicted of crimes committed without violence, do not differ significantly in terms of the psychological variables emotional stability and affective distress. Then, these activities are particularly aimed at reducing aggression, suicide risk, and alcohol and drug use. However, the present work shows the need to complete this spectrum of activities with workshops aimed at reducing sadness, depression, worry and anxiety, the target group being convicts between 18 and 25 years of age who are rarely visited and not visited.

The reintegration efforts started in the penitentiary must be continued even after the release of the convicted person. In the case of young parolees, the role of probation services becomes essential for monitoring and supporting them in the process of adapting to social life.

Since the specialized literature indicated associations between emotional distress and recidivism, respectively the criminal category, the development of policies that meet the psychological needs of ex-prisoners could prove useful. The construction of affordable housing for young people in Romania who are released from prisons and who reside in disadvantaged areas, as well as supporting them to enter the labor market, can represent effective solutions to reduce the risk of recidivism. Campaigns are also needed to counter prejudices about people who have been deprived of their liberty and to raise awareness of the role that society has in their recovery.

This work also highlighted the fact that young people deprived of liberty obtained lower emotional distress scores if they were visited in the last month, but not if they benefited from moral support from the people in the penitentiary institutions in whose custody they were (colleagues or cadres). This result draws attention to the importance of the social network outside the penitentiary units, consisting of family, friends, and/or intimate partners, which should become a link between prison and social life. Thus, taking into account the importance of the role that the personal social network has in the recuperative approach of persons deprived of liberty, the necessity of its active involvement in the process of social reintegration can be seen. In this sense, the diversification of the psychoeducational activities carried out in the penitentiary units, to which people between the ages of 18 and 25 with whom prisoners have strong emotional ties are invited, can represent a first step towards improving the mental health of young people deprived of their liberty. At the same time, the co-opting of important people from the lives of young criminals in their re-education process can be a motivating factor that ensures the active involvement of prisoners in psychoeducational programs, as well as the continuity of rehabilitation efforts after release. It is desired that the penitentiary units be no longer seen only as a perimeter that isolates the delinquent person from the rest of society but as an institution in which they are oriented towards identifying the resources necessary to reduce the risk of recidivism.

Limits

Given the low level of schooling of participants, interpreting the data reported in this paper requires a dose of caution. Potential errors in the interpretation of the framing of the criminal act must also be taken into account. As some participants gave vague answers as to the offense they were convicted of – e.g. "driving a car (theft)", which could not always be verified through the IT application for records of persons deprived of liberty in custody, some of the reported facts may have been coded as "theft" instead of "aggravated theft".

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SYSTEMATIC REVIEW: GROOMING BEHAVIOR IN CASES OF CHILD SEXUAL ABUSE: STAGES OF THE PROCESS, RELATION DYNAMICS AND PREVENTION

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Abstract

Objective. The present theoretical review explored the dimensions, stages and factors involved in the grooming process from the perspective of the both victim and the aggressor. Understanding the dynamics of the grooming process is highly relevant for the investigative process and for the forensic psychological assessment of the victim. The analysis was conducted with the purpose of conceptual clarification of factors and processes, emphasizing their relevance for preventing victimization.
Materials and methods. The research method used was a literature review on the concept of grooming. APA PsycNet, ScienceDirect, PubMed and EBSCOhost databases were accessed. Studies investigating the definition and evolution of the concept of grooming, victim vulnerability factors, characteristics of the sexual offender, comparative analysis of the phenomenon in physical versus online environments, and methods of preventing the phenomenon were included, both qualitative and quantitative. The time interval used was 2003–2023.
Results. The analysis revealed a series of stages in the grooming process, depending on the characteristics of the situation and people involved, such as target selection, gaining access, building trust, fulfilling needs, isolating the target, and sexualizing the relationship. Moreover, a number of victim vulnerability factors covering three areas were identified in the literature. Regarding sex offenders, the motivational theories of sexual abuse revealed a number of characteristics of the abuser.
Conclusions. Information about the victim and offender characteristics and the dynamics of the grooming process are discussed in relation to the prevention of the phenomenon, which cannot be done without adequate education about its characteristics.

Keywords: sexual abuse, grooming, sexual offender, victimization, prevention.

Introduction

The importance of defining and understanding grooming behavior stems from the worrying increase in child sexual abuse cases in recent years, with the increasingly prevalent activity of children in the online environment. In this context, it is estimated that between 30-45% of these cases are based on grooming tactics used by sexual abusers (Winters et al., 2022). The need to define grooming behavior has emerged since the 1980s, when this specific behavior of sexual abusers was first described in the literature (Lanning, 2018). Thus, a non-violent behavioral pattern was observed that aimed to create an intimate relationship with the child, within which sexual abuse was possible without being noticed. Since the 2000s, studies on grooming have become more numerous (McAlinden, 2007), however, it is only in recent years that the conceptualization of the phenomenon has gained scientific consistency. At a general characteristic level, grooming is the process by which a sexual abuser emotionally manipulates a potential victim to commit sexual abuse while using a range of tactics to prevent disclosure (Winters et al., 2022; Orrill & Cohen, 2016). Plummer (2018) describes a number of essential features of the grooming strategy, namely gaining the victim's cooperation, eliminating or minimizing the risk of the abuse being discovered, and increasing the likelihood for future sexual interactions.

Recently, several criteria for a more precise definition of grooming have been identified based on exhaustive literature reviews (Winters et al., 2022). This should take into account that grooming is a process within which a series of steps can be identified, based on manipulation, with the aim of facilitating the perpetration of present and future sexual abuse and preventing disclosure. It is unanimously accepted that an operational definition is needed to generate a measurable but, more importantly, predictable construct upon which research, prevention policies, and clinical interventions can be conducted (Orrill & Cohen, 2016; Bennett & O'Donohue, 2014).

One difficulty worth mentioning in attempting to operationally define grooming behavior arises from differentiating normal adult grooming behaviors from those that aim to create a relationship intimate enough to allow for the perpetration of sexual abuse. Indeed, there are a number of behaviors that may be characteristic of normal relationships but that may also characterize the interactions of sexually motivated adults with children. Adult-child play, buying gifts, sharing secrets, and creating alliances can be characteristic of both types of relationships. From another perspective, defining and conceptualizing may be all the more complicated as the literature identifies several types of grooming, from the individual to the social - grooming of the child, the family, and the self, but also the community or the institution (Craven et al., 2006; Katz & Field, 2020; Katz & Barnetz, 2016; Winters & Jeglic, 2017). Also, the characteristics of the behavior may vary depending on the environment, the gender of the abuser, and the initial relationship with the child. Thus, there are differences between the methods used in online and physical environments (Elliott, 2017), particularly with regard to victim identification and gaining access to the victim, which will be discussed in the section on the stages of grooming.

From the perspective of preventing the phenomenon, a difficulty that is highlighted in the literature is related to the fact that grooming is easier to identify after the abuse is committed than before (Winters & Jeglic, 2017). It is readily understood that this is due to the similarity highlighted above between normal, caring adult behavior and grooming. This difficulty entails the very need for rigorous conceptualization and operationalization so that prevention becomes effective.

Given the complexity of the phenomenon that stems from its relational nature and the fact that most studies identify a series of stages of grooming behavior, this review sought to identify a solid descriptive model based on existing research. Another aim was to identify the vulnerability

factors and characteristics of sexual abuse victims in order to raise awareness of those personal and environmental factors that may be predictors of sexual victimization risk. Last but not least, creating a profile of the abuser, based on available data and literature research was necessary in order to identify motivational factors, etiology, personality factors, and other types of traits that may predispose a person to commit sexual abuse. The fundamental aim of the present study was to support prevention by aggregating existing data and matching them to facilitate effective strategies.

Material and methods

The purpose of this study was to explore existing literature on the subject of grooming in order to determine a comprehensive model of the concept, both conceptually and operationally.

Search strategy

The research method used was a literature review on the concept of grooming. The following databases were used: APA PsycNet, ScienceDirect, PubMed and EBSCOhost. Also, an important source has been identified, namely the European Online Grooming Project - Final Report, prepared for and co-funded by the European Commission Safer Internet Plus Programme, which indicated the urgent need for protective measures to support child victims of sexual abuse.

The search covered the period of the last 23 years, from 2000 to 2023, and included studies and literature reviews that resulted from searches using the key terms: grooming, stages of grooming, sexual abuser profile, sexual abuse victim profile, online grooming, physical grooming, prevention of grooming, and child protection against sexual abuse.

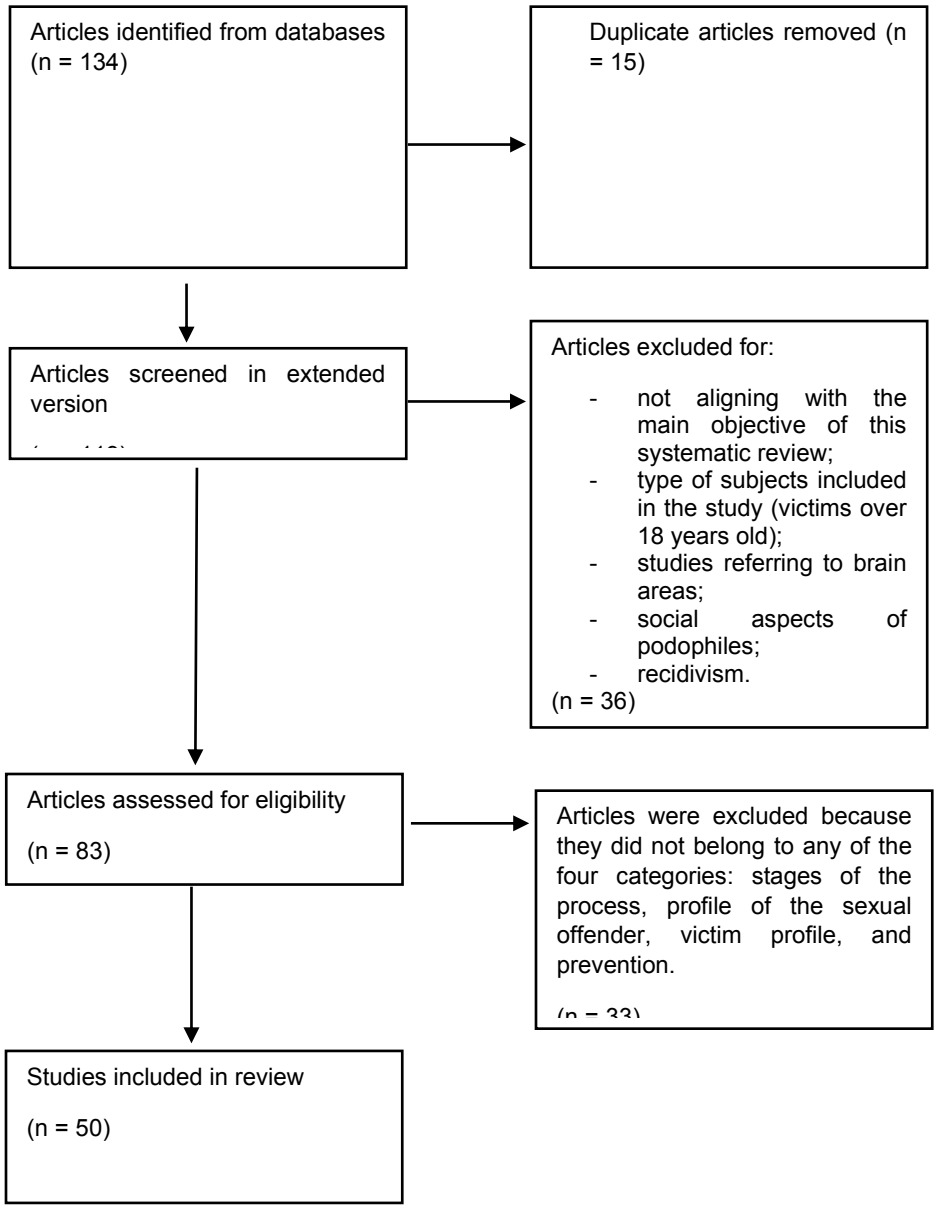
Selection of studies

All three authors independently selected quantitative and qualitative studies in English that were potentially relevant to this paper. The initial selection criteria were based on the title, abstract, relevance of the journal, papers, and articles available in full text. All studies selected were later revised by all authors based on the results and the topics included in the paper. The initial number of studies identified individually was 134. The studies were added to the free program Mendeley Reference Manager (Elsevier, n.d.), which helped organize the works alphabetically and identify duplicates. As a result, 15 of them were identified as duplicate studies, leading to their exclusion. A total of 110 abstracts (articles, meta-analyses, and literature reviews) and 9 book chapters were analyzed. In the Mendeley Reference Manager program, four categories were created: stages of the process, profile of the sexual offender, victim profile, and prevention, with each article being included in one of these categories. Subsequently, each author analyzed and evaluated them to reduce the risk of bias.

Among the exclusion criteria were: not aligning with the main objective of this systematic review; the type of subjects included in the study (victims over 18 years old); studies referring to brain areas; social aspects of pedophiles; and recidivism.

Upon review, 50 articles were selected to be the subject of this review. In these 50 articles, 2 meta-analyses, 7 reviews, and 10 book chapters were included.

Figure 1
The selection process



Results

The results of the literature review on the structure and characteristics of sexual grooming behavior indicated several models agreed upon by the international scientific community. The detailed analysis of these models allowed us to identify some common stages of the model. Thus,

the model widely agreed upon in the literature is composed of five stages: victim selection, gaining access to and isolating the victim, developing trust, desensitization to sexual touch and content, and post-abuse maintenance. These stages are, in turn, detailed into specific behaviors or characteristic sub-stages. A distinction was made between online and physical grooming.

The profile of an individual who engages in grooming and sexual offenses is complex, encompassing a multitude of factors. The main deduction to be made from the following paper refers to the versatility of the abusers' profile. Abusers come from all walks of life, irrespective of a variety of demographic factors. They will often put up a social facade in the community as a way to ease access to the child and carefully cover up their intentions and tracks. According to theories like Ward and Siegert's Pathways Model, predisposing factors can be of emotional, cognitive, or environmental nature. More precisely, emotional dysregulation, particularly for negative emotions, appears to be one of the strongest predictors of offense among sexual offenders. Personality traits, such as psychopathy, neuroticism, and narcissism, and their specific manifestations alongside cognitive distortions add additional layers of complexity to the 'groomers' profile.

Studies have highlighted various factors that shape the profile of grooming victims: personal, familial, and social factors. It is important to take these factors into account when considering the implementation of a prevention program, as simple information may not be sufficient when multiple risk factors are involved.

Psychoeducation in schools regarding what sexual abuse entails, its recognition, and reporting is the most common prevention method aimed at young individuals.

Discussions

Stages of grooming

Various studies on grooming have delineated a series of more discrete or overt stages, starting from identifying a potential victim, gaining their trust, establishing an intimate relationship, sexualizing them, and ending with committing sexual abuse accompanied by secrecy (Winters & Jeglic, 2017; O'Connell, 2003). The architecture of grooming behavior can range from positive to negative. Thus, we may encounter the offering of attention, gifts, and types of care that facilitate access to the child's privacy, such as bathing or dressing the child, but also types of negative attention (Wolf & Pruitt, 2019), such as criticism or name-calling. All of these are directed at increasing the possibility of sexual abuse.

In one of the most extensive works on the subject of seduction and child sexual abuse, Christiane Sanderson has identified a number of stages of grooming: Victim selection; victim recruitment; befriending and gaining trust; building the relationship; introducing secrets; testing the victim's ability to keep secrets; isolating the child; creating the illusion of being loved; introducing non-sexual touching; removing barriers and inhibitions (e.g., through exposure to pornography); manipulating to participate in sexual activities; emotional blackmail; repeating the abuse; recommitting to secrecy; ending the relationship (Sanderson, 2004). Other models vary in complexity, but the stages outlined above comprehensively illustrate the structure of a grooming process as described in the literature.

One aspect that needs to be considered in the present analysis is the difference that can occur between the online and physical environments.

Stages of online grooming

Nowadays, the online space offers an operating environment for sexual abusers that was not possible 20 years ago. Accessibility is an essential dimension that makes up the stage prior to sexual abuse. According to O'Connell's (2003), accessibility is a key criterion in the typology of online grooming, along with opportunity and vulnerability. According to the author, in the online environment, the abuser goes through the following phases: making friends/contact followed by creating the relationship, assessing risks, obtaining relationship exclusivity, and putting it into action (O'Connell, 2003). As we can see, the architecture of the process is relatively similar, but because of the environment, it can be faster and more risk-free. In contrast to this linear process described by O'Connell, other authors have identified a less organized, circular dynamic of grooming, marked by re-framing, maintenance, and reconstruction phases throughout the process.

Thus, Williams, Elliott, and Beech (2013) conducted transcript analysis of chat room conversations and identified three characteristic themes: the relationship-building phase, the introduction of sexual content, and risk assessment. One strategy used to create rapport is to synchronize the abuser's behavior and communication style with that of the victim-in order to create emotional comfort and gain the victim's trust.

Reciprocity within the relationship also involves showing interest in and understanding acceptance of the victim's preferences and life circumstances (Williams et al., 2013). In this context, the abuser often assumes the role of mentor to the victim, on the one hand to stabilize the victim's trust and on the other to negate potential guilt (Online Grooming Project, Webster et al., 2012). Other authors have also identified this tendency of sexual abusers to operate by virtue of the cognitive distortion that they are, in fact, the children's rescuers (Ospina et al., 2010; Williams et al., 2013). The illusion of exclusivity is a component of establishing the relationship, which makes the child feel special and isolates them from significant others. Creating the sexual context involves sexualizing online communication with children and is a stage that, chronologically, is introduced subsequent to relationship creation. However, there is a category of abusers, identified as hyper-sexualized groomers, who are more likely to introduce sexual themes shortly after contact (Webster et al., 2012). Sexualization of the relationship can take various forms, including flirting, pornographic material, sexual photographs, and dirty talk (Ospina et al., 2010; O'Connell, 2003). The transmission of such content creates the ground for subsequent blackmail. Olson et al. (2007) identify two functions of relationship sexualization: desensitization and reframing. The first is to facilitate sexual interaction, and the second is to signify this interaction in a positive way.

Risk assessment is a sub-step within the assessment of the child's environment. Its purpose is to assess levels of trust and vulnerability and to prevent the discovery of the interaction (Williams et al., 2013). Risk management includes measures regarding the technology used. Thus, some sexual abusers use untraceable technological means, such as dedicated email addresses or phones, and avoid meeting their victims near their homes (Webster et al., 2012).

Victim deception in online environments has been shown to be easier than in physical environments (Palmer & Stacey, 2004; Jewkes, 2010). Indeed, concealing identity, real age, or modeling behavior in ways that do not create suspicion is easier to achieve online.

However, Wolak et al. (2008) point out that in most cases of sexual abuse, victims are aware that they are talking to an adult. Moreover, as a result of the grooming process, victims engage in sexual interactions with abusers in an apparently deliberate way. According to Ybarra et al. (2007), many victims who accept physical encounters expect to be involved in sexual interactions and often harbor feelings of love towards the abuser (Wolak et al., 2008).

Stages of physical grooming

Unlike online grooming, physical grooming involves several specific characteristics, some of which are facilitated by direct access to the victim.

The first stage is that of victim selection, which may be based on the vulnerability of the victim, the access the abuser has, or the extent to which the abuser feels attracted to the victim (Lanning, 2010). The child's family background seems to play an important role, so there is a preference of abusers for children from single-parent families or with limited adult supervision. This explains the incidence of sexual abuse in blended families, where the abuser is a stepparent. Williams et al. (2013) highlight the risk that isolated or unsupported children may be selected as victims.

The second stage is gaining access to the victim with the aim of isolating them from significant others to make abuse easier (Lanning, 2010). The emancipation strategy in these cases depends on the status of the potential abuser—family member or outsider. Thus, in the case of family members, a number of specific behaviors may occur: creating alliances with the child, going to the child's bedroom at night, and providing support in the bathroom. In the case of potential external abusers, they often either access environments where they can care for the children or gain the trust of the family (Lanning, 2010). Emotional recruitment of the victim is based on the process of gaining their trust, conceptualized as the ability to cultivate a relationship with the victim and their family to the point where sexual abuse is possible (Olson et al., 2007). According to McAlinden (2006), the process of befriending the child includes showing interest in their concerns, showering them with gifts, and sharing secrets to the point where the relationship becomes "special".

In the later stage of building trust, physical desensitizing behaviors emerge (Winters & Jeglic, 2017; Leclerc et al., 2009). Accidental or innocent touching, activities involving physical contact with the child, and seemingly justified progressive nudity may occur, with the aim of trivializing this type of adult-child interaction. Progressively, they become more intimate and involve invasive touches such as tickling, hand-to-hand fighting, fondling, games with sexual connotations, and massage.

Post-abuse maintenance is the stage that occurs after the abuse, and its role is to prevent disclosure and encourage the child to maintain secrecy and continue to participate in the sexual relationship, sometimes taking responsibility for it (Jackson et al., 2015). In a study that aimed to explore the pattern of sexual grooming, Winters et al. (2020) investigated the views of 18 forensic psychology experts with scientific or practical experience on the topic of grooming. The objective of the study was to validate the five-stage model of grooming, along with subsidiary behaviors: victim selection, gaining access to and isolating the victim, developing trust, desensitization to sexual touch and content, and post-abuse maintenance. The completion of the questionnaire by the experts indicated that all five stages are relevant to the grooming process, resulting in a validated model (Winters et al., 2020), which can help parents or caregivers recognize the risk situations they are exposed to. The model includes, for each identified stage, characteristic behaviors. These cover a wide range of dimensions, from concrete actions involving emotional and physical contact with the child to extensive ones involving strategies for grooming the child's environment.

General profile of the sexual offender

It is crucial to clearly define and portray the aggressor in cases of “grooming” behavior towards children-for a variety of reasons, such as raising awareness, improving the judicial system,

and increasing prevention. However, before discussing some of the characteristics, some clarifying aspects should be mentioned (Lim, Wahab, Kumar, Ibrahim, & Kamaluddin, 2021). Individuals who engage in grooming behavior constitute a heterogeneous population, meaning that they can occur irrespective of gender, sexual orientation, marital status, race, or economic and educational levels (Robertiello & Terry, 2007). In this sense, attention must be diverted from the potential stereotypes of the "pedophile" towards researching other characteristics to be able to spot the groomers. Another important aspect to mention is that not all grooming behaviors end up in sexual abuse, but most sexual offenders will utilize grooming to target children sexually (Craven, Brown, & Ghilcrist, 2007).

Individuals who engage in grooming behavior come from all walks of life. In fact, such offenders will often be an integral part of the community and hold stable jobs. Offenders will find means to make themselves useful and not shy away from "courting", sketching a "too good to be true" portrait of themselves. These behaviors form an extremely useful facade for the offender in their desire to cover up their sexual fantasies (Winters & Jeglic, 2017). According to research such as the one conducted by Craven, Brown, and Gilchrist in 2006, sexual offenders are frequently charming individuals who skillfully employ seemingly innocent behaviors that act as manipulative strategies for the purpose of gaining the trust of the individuals around them. Raising awareness about the versatility of the offender can help break the stereotype and increase the possibility of recognizing them (Craven, Brown, & Ghilcrist, 2007).

With regards to demographics, research suggests that the majority of offenders are male, with female offenders representing only 2.2% of all sex crimes around the globe (Cortoni et al., 2017). In addition, for internet sex offenders, the typology seems similar, with men falling between the ages of 30 and 40, having higher levels of education and employment than offenders who act offline (Merdian, Wilson, & Boer, 2009). These statistics only paint half of the picture. As Cortoni and colleagues (2017) postulate, in one meta-analysis, if self-reportings of sexual crimes are taken into account, the existence of female offenders seems to be much higher than initially believed, approximating at 12%. It is widely accepted that sexual crimes are highly unreported in general. This discrepancy might be even larger for crimes committed by female offenders. One potential explanation for the discrepancy could be that cultural and societal norms shape our perception of gender roles (Mignogna, 2022).

In a study analyzing the portrayal of female sexual offenders as presented in newspaper articles, Christensen (2018) postulates that societal biases may play a role in how women are perceived in society. Precisely, women seem to be believed to be caregivers and nurturers and thus cannot be imagined as perpetrators. This biased misconception can lead to the misidentification of perpetrators. Further supporting this, research suggests that females' perpetrators are more likely to have committed prior offenses, such as drug or property offenses (Mignogna, 2022). In addition to this, female offenders, as opposed to men, are less likely to act alone in crime or to use physical force (Robertiello & Terry, 2007). Furthermore, literature investigating female drug-related offenses portrays females as "specialist criminals". This categorization speculates that females become experts in their ways of committing crimes, covering up their traces and evading detection from the judicial system (James, Gosho, & Wohl, 1979, as cited in Dina et al., 2021). As mentioned, their proficiency in all stages of committing offenses could influence the number of underreported female-conducted crimes.

It is in this sense that we can expect a sexual perpetrator to hide behind any gender, race, or other demographic or psychological variables and act on a variety of plans, be they online or offline, physically or only psychologically. The next part of this paper will aim to profile the sexual offender

from an etiology of motivation for offenses perspective, personality traits, affect dysregulation, cognitive distortions, and finally the behaviors they exhibit.

Etiology – The Pathways Model

In order to accurately profile the person who engages in grooming, it is important to understand the motivations behind such actions that both initiate and also sustain the behavior. A multitude of theories have been proposed to investigate this, but three theories about the etiology of the motivation behind child abuse have been most prominent in the literature, namely Finkelhor's Pre-condition Model (1984); Marshall and Barbaree's Integrated Theory (1990) (Ward, 2002); and Hall and Hirschman's Quadripartite Model (1992) (Ward, 2001). However, in 2002, a new theory that integrates aspects from the previous was proposed by Ward and Siegert. This theory is known as the Pathways Model. For this review, only The Pathways Model has been discussed, being the most influential and researched model to date. Ward's and Siegert's theory suggest that different dysfunctional psychological mechanisms are involved in the etiology of motivation for abuse (Ward & Siegert, 2002). According to this model, the deficits can be attributed to environmental, biological, and cultural factors. The model claims four core mechanisms that give rise to five different pathways that lead to a sexual offense. The authors suggest that while one mechanism may prevail as a core dysfunction in an individual, all mechanisms interact to varying degrees in each case. Emotional regulation, intimacy deficits, cognitive distortions, and distorted sexual scripts are core elements of the theory.

Intimacy and social skills deficits are considered by the theorists to be the core pathways of the explanatory model. Intimacy deficits are believed to stem from the development of an insecure attachment style (anxious or avoidant) developed by the offender during childhood. More precisely, the rise of an insecure attachment could be the result of unresponsive attachment figures during upbringing regarding the child's emotional needs (Sigre-Leirós et al., 2015). As a result of insecure attachment, these individuals often struggle to cultivate close, meaningful relationships, as Ward and Siegert suggest. A difficulty in forming close relationships leads to feelings of rejection, which in turn promotes social isolation (Ward & Siegert, 2002).

Social isolation is a commonly linked risk factor for sexual offenses (Robertiello & Terry, 2007; Marshall, 2010). According to Ward and Siegert, this pathway in the model presents normal sexual scripts, with individuals having adult sexual preferences and even preferring adult relationships. Yet, these individuals can also engage in relationships with children when adult relationships are not an option (Ward & Siegert, 2002).

A second pathway within the Pathways Model known to be dysfunctional are the deviant sexual scripts. According to Ward and Seigert (2002), these scripts are the building blocks of the belief system that guides individuals' sexual behavior, attitudes, and expectations about sex. Fundamentally, these scripts represent a set of instructions for action that, when malfunctioning, can result in abusive, inappropriate, and harmful behaviors. Ward (2002) suggests that abnormal scripts and, in turn, aberrant behaviors might arise from the premature exposure to sexual content or the early sexualization of the offender. Within this explicative pathway, the offender might have experienced sexual abuse during their early upbringing. As a result of such exposures, one's perception of sexual acts can be modified. Consequently, sexual abuse as an early sexual experience may be one of the contributing factors to developing malfunctioning sexual belief systems (Ward & Siegert, 2002). This is in line with results from a meta-analysis demonstrating that a history of

sexual abuse is more prevalent in sexual offenders as opposed to non-sexual offenders (Jespersen, Lalumière, & Seto, 2009).

Emotional dysregulation is another core deficit in the Pathways Model. The incapacity to regulate emotions, in particular negative emotions, develops as a result of an insecure attachment. In turn, the individual develops negative beliefs about others, the world, and the self. Individuals with emotional regulation problems present difficulty tolerating frustration or negative emotions, controlling aggression and impulsivity. Failure to self-regulate may lead to criminal behavior such as sex crimes (Martínez-Catena et al., 2016). Notably, these individuals do not have aberrant sexual scripts, but they still experience difficulties with adult relationships, generating frustration for the individual and pushing them to seek intimacy and comfort from children while fostering frustration. In this pathway, sex becomes a coping mechanism to self-regulate (Wart & Siegert, 2002).

Cognitive distortions represent the fourth key deficit in Ward and Siegert's Pathways Model. These distortions refer to skewed thinking styles that influence one's belief system and attitudes that build up the core of the offender's moral system (Ward & Siegert, 2002). These distortions are created by mental schemes, beliefs, and personal theories that ultimately drive the individual to behave in accordance with dysfunctional belief systems. Individuals with this deficit have antisocial tendencies, including pro-crime attitudes and other illegal acts such as substance abuse and impulsivity. These individuals, according to the authors, do not have sexual script distortions but will have the tendency to act in accordance with their distorted belief system (Wart & Seigert, 2002).

The fifth pathway or multiple dysfunctional mechanisms is considered the pathway to "pure" pedophiles, having a particular interest in sexual relationships only with children.

According to Ward and Seigert (2002), these people are individuals who have a history of sexual abuse or early-life sexual exposure that has generated distorted sexual scripts. With time, these individuals may also develop cognitive distortions and other flawed psychological mechanisms as a method of rationalizing, to themselves and the world, their interest in children (Wart & Seigert, 2002). Within this group of individuals, the idealized relationship type is the relationship between a child and an older person. Ward and Siegert point out that these individuals usually present a range of deficits commonly found in child abusers. Specifically, they exhibit abnormal sexual arousal patterns, intimacy deficits, emotional regulation issues, and cognitive distortions. In this case, offenders suffering from all aforementioned deficits might exhibit early abnormal sexual behavior towards children and might engage in sexual abuse early in life (Wart & Seigert, 2002).

Affect dysregulation

Affect, broadly defined to include emotions, moods, and stress responses (Gross, 2015, as cited in Gunst et al., 2017), serves as a crucial driving force behind human behavior. However, emotions can be problematic when they are not well understood or when they are ignored or repressed. Behaviors that stem from this deficit include difficulty managing and responding appropriately to emotional experiences, in particular negative emotions. Multiple studies have linked difficulties with affect regulation to a variety of psychopathologies, such as bipolar disorder (Mancke, Herpertz, & Bertsch, 2015), aggressive behavior, and sexual violence (Gunst, Watson, Desmet, & Willemsen, 2017).

Early literature has not focused on the role played by emotional states regarding sexual offenses, but demonstrates that the inability to manage emotional states plays a role in sexual

offenses. Emotional regulation issues seem to stem from early life experiences in which adversity has been present. The mechanism of action postulated for the development of this deficit is the interruption of the normal development of adaptive coping strategies. As a result, maladaptive stress coping mechanisms and difficulties with decision-making arise (Dvir, Ford, Hill, & Frazier, 2014; Gunst, Watson, Desmet, & Willemsen, 2017). New literature also links dysregulation in the form of anger-management issues to a high number of sexual offenders (Ward & Hudson, 2000).

To emphasize the above-mentioned, Smallbone and Dadds (2000) state that "men who have experienced insecure attachments and who later engage in rape or child molestation [….] may be responding inappropriately to internal (affective distress) and external (close physical proximity to a child) cues". This suggests that sexual offenses may be a result of inappropriate responses to emotional suffering.

Lastly, a meta-analytic review also found that emotional dysregulation is a good predictor of reoffence among sexual perpetrators (Gillespie, Mitchell, Fisher, & Beech, 2012). In this sense, we can expect the "groomer" to have extreme difficulties in managing emotions, particularly negative emotions, finding it difficult to engage helpful coping mechanisms, often resorting to maladaptive coping behaviors.

Personality traits

One of the most important factors in the profiling of the sexual offender is the personality of the offender. Psychopathy is a personality trait that has been widely researched in the case of sexual offenders due to associated behaviors. Lack of remorse, acting irresponsible and impulsive, and exhibiting antisocial behaviors, all stemming from psychopathy (Merdian, Wilson, & Boer, 2009). However, research linking psychopathy to grooming behaviors is scarce, with most of the literature focusing on sexual offenders.

Literature employing the Five-Factor Model (FFM) of personality has consistently indicated higher scores in neuroticism among sexual offenders. According to Hans Jürgen Eysenck, neuroticism is a construct of low self-esteem, high emotional instability, anxiety, nervousness, and restlessness (Dennison, Stough, & Birgden, 2001; Boillat et al., 2017). While studies on the personalities of sexual offenders generate varied results, neuroticism stands out as the most consistently linked trait to both psychopathy and sexual criminality (Merdian, Wilson, & Boer, 2009).

Additionally, narcissism has also been identified as a prevalent trait among offenders (Baumeister, Catanese, & Wallace, 2002). As a personality trait, narcissism manifests in the form of a sense of entitlement, utilizing the exploitation of others for personal gain. Moreover, narcissism might be behind certain sexually aggressive behaviors as well as manipulative tactics – such as the ones commonly seen in grooming (Baumeister, Catanese, & Wallace, 2002). As such, narcissistic individuals might manipulate and deceive in order to gain access to the victim and engage in desired behaviors, showing no remorse or a lack of remorse. Supplementary research also suggests that the individual who engages in grooming often will be a patient individual, as grooming is a multi-staged process. Its success depends on the skillful and slow gain of trust of the child and the individuals around them (McAlinden, 2006).

Cognitive distortions

Cognitive distortions are a term that encompasses problematic thinking styles, attitudes, and beliefs about others and the world, shaping one's perception of reality and behavior. Cognitive distortions are known to be driving forces resulting in offenses. Maladaptive thinking styles such as excusing, blaming, and rationalizing are often found among sexually abusive individuals (Ward, 2000; Gannon et al., 2007). For example, one study investigating the most frequent distortions found among child offenders shows distortions such as "She enjoyed it.", "This won't hurt her or affect her in any way." and "This is not so bad, it is not really wrong." as commonly occurring between male offenders (Neidigh & Harry Krop, 1992).

The works of the aforementioned and the influential work of Abel and colleagues in 1984 led to the theorization of five broad areas of flawed cognitions. As such, sexual offenders suffer from the following: seeing children as sexual objects (blaming victims and falsely believing victims are enjoying themselves), entitlement (falsely believing that their actions are excusable due to them being superior, children not being actual victims), dangerous world (believing that the world is a dangerous place and believing that relationships with children are safer than with adults), uncontrollability (blaming external forces for their actions, such as being intoxicated or having experienced sexual abuse), and lastly, nature of harm (distortions of minimizing the impact their actions have on the victim) (Steel, Newman, O'Rourke, & Quayle, 2020).

Behaviors

Only 5% of child sex offenders are recognized, and this fact can be attributed to the result of successful grooming strategies (Salter, 2003). Groomers purposefully modulate the environment around them, positioning themselves strategically so their behaviors seem natural and go unnoticed. Moreover, these individuals usually act kind and charming, while slowly building entrance to the child. It is important to earn the trust of both the child and its caretakers to maintain cover while engaging in sexual grooming (van Dam, 2006).

One study conducted by Winters and Jeglic (2017) demonstrated that participants failed to identify grooming behaviors. Participants were given sexual grooming vignettes and non-sexual grooming vignettes. The vignettes described a sports professor and a young boy and different grooming behaviors across all stages of grooming, such as 1) victim selection; 2) gaining access; 3) trust development; 4) touch desensitization; as well as vignettes showcasing all stages. Overall, the results revealed that participants were unable to recognize sexual grooming behaviors, regardless of the grooming stage.

The insidious tactics employed by groomers often go undetected, even when their actions may seem explicit. Covert behaviors, like selecting a potential victim, are inherently discreet and challenging to notice for the individuals outside. However, even more overt actions, such as taking a child out for ice cream, hugging the child, or offering rides home, are often overlooked. These acts, while seemingly innocent, are skillfully thought out and played out with the scope of desensitizing the child to physical touch and cultivating trust, subtly paving the way for abuse.

Behaviors of individuals who groom, such as covert behaviors, can easily go unnoticed (e.g., selecting the victim). Yet, participants seem to not be able to recognize overt actions either, such as hugging the child, taking certain children out for ice cream, or driving the child home, which were meant to desensitize the child to physical touch from the abuser and gain trust. Offenders also tend to groom the adults around them, in particular the ones closest to their victim, to modulate the

environment and gain access to the child more easily (Craven, Brown, & Ghilcrist, 2007). It is possible that one explanation for not being able to recognize an abuser's actions is due to their innocence in nature (Winters & Jeglic, 2017). These findings are in line with past studies showing that sexual grooming is hard to recognize (Carter et al., 2006; Lanning, 2010). In this sense, it is crucial to increase the capacity to profile groomers to raise awareness and increase education about the actions of groomers across all stages of the grooming process.

Victim profile

According to the Sexual Grooming Model (Winters et al., 2022), perpetrators select victims with the following characteristics: they are respectful or trustful of adults; have low self-esteem; are lonely or isolated; face difficulties; are needy; feel unwanted or unloved; lack a close relationship with their parents; come from single-parent families, raised by single mothers, and require a father figure; and they are unsupervised.

Studies have indicated that most victims of online grooming are between 13 and 17 years old (Staksrud, 2013; Wolak, Finkelhor, Mitchell & Ybarra, 2008), are predominantly girls (Wolak et al., 2004), with boys accounting for a quarter of victims, and gay boys or boys who question their sexual orientation are a more vulnerable category, along with those who live in abusive home environments, have social problems, face depression, and show tendencies towards delinquency associated with the use of chat rooms and communication with strangers (Wolak et al., 2008). The authors of another study (Peter, Valkenburg, & Schouten, 2006) identified boredom, curiosity, and inhibition as factors that lead children aged 12 to 14 to communicate with strangers online.

Those who have lived in abusive environments are at greater risk of sexual abuse, as they do not perceive the risk of sexual advances or misjudge it, as childhood trauma, among other factors, is associated with risky sexual behavior (Wolfe et al., 2006, as cited in Wolak et al., 2008). Furthermore, young people who exhibit emotional, psychological, and family instability are more likely to be victims of grooming (Winters et al., 2022).

The study by Wolak et al. (2003) characterizes victims of online sex crimes as having poor relationships with their parents (conflictual relationships in the case of girls, lack of monitoring in the case of boys, and depression in both girls and boys) (Wolak et al., 2003, as cited in Wolak et al., 2004), being single and depressed, gay boys or questioning their sexual orientation, compliant, or statutory victims (persons who develop a strong attachment to the abuser and may collaborate with the abuser to the detriment of justice).

Qualitative research (Quayle, Jonsson, & Lööf, 2012) studied the experiences of minors aged 11 to 17 at the time they were victims of online grooming, resulting in six categories: *I'm missing something, Being someone who's connected, Caught in a Web (e.g. Seeming like a normal relationship, Being groomed, Losing control), Making choices, Others involvement, Closing the box and picking up the pieces*.

Ciurbea et al. (2021) cited Papalia, Olds, & Feldman (1978/2010, p. 411), emphasizing the significance of group membership during adolescence. Group membership plays a crucial role in shaping identity and self-image for adolescents, as the group to which they belong often serves as their reference group (Duduciuc, Ivan, & Chelcea, 2013, as cited in Ciurbea et al., 2021). Healthy peer relationships are considered an important factor in online sexual victimization (Wolak et al., 2008), which is possible when the network of friends is non-existent, the victim isolates himself/herself and thus increases the risk of rapidly developing Internet relationships through self-disclosure (McKenna, Green, & Gleason, 2002, as cited in Wolak et al., 2008). Additionally, erotic

conversations can lead to strong feelings that are difficult for young people to manage (Wolak et al., 2008).

The study by Winters, Kaylor, & Jeglic (2017) analyzed 100 transcripts of online conversations between abusers and fake victims (95 girls and 5 boys) aged between 13 and 15, and in terms of the profile of the alleged victims, found that over 80 of them lived in the same state as the abuser and 10 of them in the same city. Researchers concluded that abusers choose their potential victims based on proximity to facilitate face-to-face meetings, and the research also revealed that none of the victims had sexually suggestive usernames.

Chat rooms can be an attraction for online sexual abusers, with studies showing that teens who communicate through them often have family problems, feel lonely, sad, or may have a history of sexual abuse (Beebe, Asche, Harrison, & Quinlan, 2004; Sun et al., 2005, as cited in Wolak et al., 2008), and young people in their early teenage years may not yet have the ability to respond appropriately to sexual invitations (Greenfield, 2004, as cited in Wolak et al., 2008). The study conducted by Kloess et al. (2019) analyzed the grooming process of five abusers by examining 29 transcripts and 22 interactions, finding that one of them had initial contact with victims in private chat rooms, one on a site that allows video communication, two on social networks, and one on a dating site (although this information could not be confirmed). Later on, four of them exchanged email addresses to send instant private messages.

Two boys and six girls, aged between 12 and 14, victims of online grooming and subsequently experiencing a form of sexual abuse, were interviewed, and the girls included in the study reported considering their abuser as a "friend" at a certain point (Whittle et al., 2014). In five cases, the abuser was the one who initiated the conversation, initially engaging in discussions similar to those with friends, except for two out of the 6 cases where the initial conversation was sexual (Whittle et al., 2014). All respondents stated that they found emotional support discussing their problems, particularly family issues, thereby creating a sense of trust and perhaps dependency and attachment to the abuser through regular interaction, attention, and the abuser's knowledge of their schedule (Whittle et al., 2014). More than three-quarters of the abusers included in the study by Wolak et al. (2004) used multiple communication methods to stay in contact with the victim, with Whittle et al. (2013) considering this a manipulative way in which the child becomes increasingly dependent on the offender.

The European online grooming project - Final report (Webster et al., 2012) classifies victims of online grooming into two categories: vulnerable victims and risk-taking victims. The first category includes people in need of attention and affection, people who have difficult family relationships, are looking for love online and believe they are in a relationship with the perpetrator, and those who do not disclose and wish to continue the relationship; and the second category includes those who seek adventure, feel in control, less known about family risks, and are open to blackmail from the perspective of apparent complicity (Webster et al., 2012).

Regarding the personality of vulnerable children, Sanderson (2004) argues that abusers prefer children who are naive and immature, malleable, shy, and not assertive. In addition, those who feel unloved, lonely, unwanted, or are victims of bullying are more prone to victimization and may often have family problems or be excluded from the peer group, all of which tend to lead to a desire for attention and affection (Sanderson, 2004). Furthermore, the unmet needs of children can pose a risk factor, as pedophiles are highly skilled at identifying and fulfilling them (Sanderson, 2004).

Prevention

According to Uzieblo et al. (2022), special attention should be given to grooming behaviors to avoid confusion with appropriate behaviors. They suggest considering behaviors in conjunction rather than in isolation. O'Leary et al. (2017, as cited in Uzieblo et al., 2022) state that having guidelines regarding appropriate interactions between adults and minors would help in better understanding inappropriate behaviors within institutions. Additionally, there are many similarities between how a relationship is formed and developed online and the stages of online grooming; the differences may be less obvious to young individuals (Bryce, 2010, as cited in Whittle et al., 2013).

Sexual abuse prevention programs can be categorized into two groups: programs aimed at potential victims or victims and programs targeting potential abusers or abusers.

VicHealth (2007, cited in Quadara et al., 2015) emphasizes primary prevention in the context of sexual abuse, similar to violence prevention, where it refers to preventing violence before it occurs; this involves preventing victimization or ongoing victimization through strategies implemented before the abuse takes place, by focusing on addressing the factors that cause abuse (Caffo, Asta, & Scandroglio, 2021). Smallbone, Marshall, & Wortley (2008) argue that in these cases, primary prevention should target two directions: firstly, preventing child sexual abuse, and secondly, preventing potential abusers from committing sexual offenses. Secondary prevention can be applied to individuals who are at risk of victimization or those at risk of committing the offense, aiming either to halt the process before it occurs or to reduce or stop its progression; these interventions can be implemented at the family, school, and individual levels (Smallbone et al., 2008). Within tertiary prevention, according to the authors, we find individuals who have been victims of sexual abuse or who have committed offenses in this area, and the focus here is on reducing the risk of revictimization and recidivism (Smallbone et al., 2008).

According to Smallbone et al. (2008), interventions that take place only after sexual abuse has occurred are prevalent, with prevention campaigns focusing on encouraging people to report abuse rather than focusing on strategies to prevent it. They propose *developmental prevention,* which aims to "*prevent the emergence, over the course of individual social cognitive development, of dispositions and vulnerabilities associated with the onset of child sexual abuse offending*" (Smallbone et al., 2008). Through interventions at key life stages (early attachment relationships, transition to school, transition to high school, and transition to parenthood), the probability of committing sexual abuse can be reduced and prevented. According to the authors (Smallbone et al., 2008), early attachment relationships influence the development of behavioral self-control through the internal model of interpersonal relationships. According to Quadara et al. (2015), such a program has not yet been implemented and tested, so there is no analysis of how it might work.

Quadara et al. (2015) summarize the main existing preventive measures, including: psychoeducation for children, parents, and teachers regarding protective behaviors; preventing crime in high-risk environments such as schools or organizations with many children by implementing strategies to discourage sexual abuse (e.g., clear conduct rules, surveillance cameras, transparent doors); psychotherapy for children and youth exhibiting problematic/abusive sexual behaviors; preventing relapse through psychotherapy; identifying and monitoring individuals who commit sexual offenses; and involving children who have experienced sexual abuse in psychotherapeutic programs to prevent revictimization.

While most prevention programs are implemented at the school level and involve educating children on recognizing, resisting, and reporting abuse, their effectiveness remains a controversial subject (Caffo et al., 2021; Letourneau et al., 2017). On one hand, children are more knowledgeable

about what constitutes sexual aggression; however, on the other hand, it is still unclear whether they will be able to apply this theoretical knowledge when they find themselves in a real-life situation (Topping & Barron, 2009).

The Dunkelfeld Prevention Project, launched in Germany since 2005, addresses pedophiles who have not yet committed sexual offenses but are aware of their preference and seek help; those who have committed abuses but have not been convicted and fear relapse; and those who have committed sexual aggressions and have been convicted but are no longer under judicial supervision and fear reoffending (Beier et al., 2009). The initiators thereby reduce the chances of applicants participating solely due to judicial pressure. This program combines cognitive-behavioral therapy techniques with medication and sexology. The results of this project are controversial; the study conducted by Beier and colleagues (2015) highlighted the program's effectiveness, while the research by Mokros and Banse (2019, as cited in Caffo et al., 2021) challenges this finding, citing methodological issues.

Uzieblo, Smid, & McCartan (2022) state that the use of the *Sexual Grooming Model* (Winters et al., 2022) by clinicians can help to outline the factors that lead to relapse, thus being able to create a prevention plan. Although abusers may not follow the same pattern, it is necessary to know the elements that led to relapse in the past. The model can also be used to inform victims and can lead to reduced self-blame by knowing the manipulative mechanisms behind the abuse (Uzieblo et al., 2022).

Regarding online grooming, Winters and colleagues (2017) cite the study conducted by Black and colleagues (2015), indicating that online abusers may select their victims based on proximity criteria. The authors draw attention to the information children provide on the internet, emphasizing the importance of monitoring their activities and teaching safe internet usage (Winters et al., 2017). Additionally, online offenders attempt to make their victims feel safe and trusting, and providing personal information to strangers increases the risk of online sexual victimization and, subsequently, real-life meetings (Wolak et al., 2008). However, Wolak and colleagues (2008) emphasize that it's not just the publication of personal information itself that represents a risk, but rather engaging in conversations with strangers. The study by Ybarra and colleagues in 2007 suggests that concurrent engagement in multiple risky behaviors online increases the risk of victimization (disclosure of personal information, aggressive behavior towards others, talking to known people online, sexual behavior, downloading images through file-sharing programs). Wolak and colleagues (2008) compile a list of nine risky online behaviors that, when combined, elevate the risk of online victimization: sharing personal information, having virtual unknown friends, communicating with unknown individuals, posting hurtful comments, sharing personal information, engaging in sexual conversations with strangers, downloading images through file-sharing programs, browsing pornographic websites, and posting humiliating comments about acquaintances. This list is not exhaustive, and the researchers acknowledge that there could be other risky behaviors not considered in their study (Wolak et al., 2008).

Wolak and colleagues (2008) argue that minors need honest discussions about sexuality, encompassing both its aspects and its implications; they advocate for comprehensive education regarding appropriate and inappropriate adult behavior; furthermore, they suggest that prevention efforts for young people should prioritize education on safe Internet usage, assertiveness skills, and resistance techniques; and starting from puberty onward, the focus should shift to healthy sexual development, along with providing information about the predatory nature of sexual requests from adults.

Informing young people about the manipulative mechanisms behind online grooming, that offenders also communicate with other people, and that any information shared online can be evidence in the eyes of the law can help raise awareness that a relationship between a minor and an adult can constitute a crime (Wolak et al., 2004).

Wolak et al. (2008) cite Berliner (personal communication, July 17, 2007), who proposes a model of intervention based on *Stages of Change* (Prochaska & Prochaska apud Wolak et al., 2008), by identifying the stage of victimization, increasing motivation, and applying cognitive-behavioral techniques.

Whittle et al. (2014) state that blackmailing young people to send sexually explicit pictures is a clear sign of grooming, and they should be informed about ways to seek help in such situations. Furthermore, some of the participants in this study believed that they were in a romantic relationship with the abuser. The authors consider the need to educate young people regarding the distinction between age-appropriate and inappropriate relationships, as well as recognizing abusive elements, online grooming techniques, and associated consequences (Whittle et al., 2014). The openness and willingness of parents to talk to young individuals are important aspects of prevention. However, researchers also emphasize the importance of educating parents about grooming to prevent them from becoming victims themselves. They highlight the importance of parents and individuals working with children understanding the stages of the grooming process and the tactics used by abusers. Through this understanding, abuse can be stopped before it occurs (Winters et al., 2020).

Prevention should aim to encourage young individuals to disclose when a friend is in a close relationship with someone known online to protect them, especially concerning young people who have difficult relationships with their parents, as they are more prone to forming such relationships (Wolak et al., 2004).

The European Commission has launched the *INSAFE* project in 27 countries, as indicated in the *European Online Grooming Project - Final Report* (Webster et al., 2012). This initiative aims to organize *Safer Internet Day*, encouraging safe Internet use.

Simultaneously, Sanderson (2004) emphasizes the need to provide parents with comprehensive information about the grooming process and its characteristics; this is crucial since, in the absence of such knowledge and awareness, parents themselves can become targets of grooming. The author suggests that parents should be vigilant about the people they allow their child to spend time with and show openness on the part of the parent to discuss the activities the child engages in with that person (and others) and what they feel can help in the early detection of an inappropriate relationship. Additionally, open relationships with parents and teachers based on trust and warmth can reduce the risk of children falling victim to sexual abuse (Sanderson, 2004).

Research has shown that prevention programs should target young people, especially those with risk factors associated with the possibility of victimization, parents and caregivers, victims of abuse when it has occurred, in order to integrate the experience and prevent revictimization, and abusers to prevent re-offending or potential abusers to prevent abuse.

Conclusions

Regarding the stages of grooming, one conclusion that emerged was that, in general, there is a greater number of studies examining online grooming and a greater concern about prevention in the online environment due to the increasing exposure of children to the online environment over the last two decades. Although this public policy strategy is effective, there remains, however, a significant uncovered risk segment with regard to children who are sexually abused in the physical

family environment. The latter are, by their very nature, more difficult to detect and would require attention from researchers and practitioners in order to develop early detection and prevention methods.

This research has implications across a variety of areas. First and foremost, there is a need to broaden the public's knowledge and education level about the construct of grooming and the possible signs and behaviors that these individuals might showcase. The public, parents, professionals, and children could benefit from being informed on recognizing the subtleties of their tactics and schemes.

Furthermore, this paper adds to the existing literature by highlighting internal aspects of the psychological world of such individuals. From literature such as this, more rigorous psychological screening methods could be developed. Assessing individuals prematurely-to identify those at risk of offending before they act could represent a great prevention mechanism-against sexual offenses.

Informing the entire community about the strategies used by sexual offenders can reduce the risk of victimization. Additionally, young people need open discussions about sexuality and information about what is appropriate and what is not. Parents and teachers can provide the necessary framework, highlighting the need for proper education of individuals responsible for minors in their care. Research has found the short-term utility of these programs in educating children, but they have not examined the effectiveness of these prevention programs in the medium and long term, so it is not clear whether they can truly prevent sexual abuse. Therefore, it is important for future studies to investigate the long-term effects of such programs.

Regarding prevention in the case of abusers, there are two directions in the literature: interventions aimed at reducing recidivism when sexual abuse has occurred and interventions aimed at potential abusers. However, similar to programs for children, the results of studies are controversial, highlighting the need for careful research into the ways in which these programs can be implemented as well as the need for longitudinal studies to examine the long-term outcomes of such programs.

Study limitations

One limitation of this study is that, to our knowledge, there is a lack of studies investigating the profile of the individual who engages in grooming behavior. This paper has reviewed literature that investigates the profile of sexual offenders more broadly. There is a possibility that differences between children's sexual molesters and groomers might exist. Additionally, there is a chance that "groomers" could also be further categorized into multiple subcategories. Further research should investigate the profile of groomers to better aid the judicial system in recognizing them and increasing awareness. Moreover, additional research could focus on deciphering differences between groomers who act online and those who act offline to deepen the existing knowledge and understanding of the phenomenon.

It is pivotal to address the limitations of this study based on methodological considerations that may have impacted the findings. Firstly, as this study is a systematic literature review, the inclusion and exclusion criteria utilized for the selection of studies may have introduced potential biases. While the authors aimed to provide as much of an extensive view as possible, it is not unlikely that some relevant research may have been inadvertently omitted. Furthermore, the timeframe for the literature search, while extensive, does not represent the totality of all related literature, and new research may have emerged since the cutoff date used for this systematic literature review.

From a PRISMA guideline perspective (Page et al., 2021), the title, abstract, and introduction are in line with the methodological regulations. However, in regards to the methods, more information could have been mentioned to allow for better replicability. Moreover, this paper could have specified the inclusion and exclusion criteria more thoroughly, and if the variables in the selected studies had any missing or unclear information.

Moreover, the current study could have better described the process used to decide the eligible studies for synthesis and the methods used to assess confidence in the body of evidence. Regarding the results section, this paper did not provide a thorough analysis and description of the studies of each individual study included in the review. Furthermore, from a discussion perspective, this paper has provided a general interpretation of the results in the context of other research as well as discussed, any limitations of the evidence and the review process. However, despite these limitations, our review closely followed the PRISMA guidelines (Page et al., 2021), ensuring a transparent and reproducible approach to literature synthesis and offering an unbiased summary of the existing literature within the constraints of our methodology.

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ASSESSMENT OF EATING HABITS OF HIGH SCHOOL STUDENTS AND MEDICAL STUDENTS

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Abstract

Objectives. The transition from high school student to university student can lead to the modification of eating habits learned in the family. Sometimes the changes are not adapted to the body's needs, an aspect that must be closely followed.
Material and methods. The study was carried out on a group of 162 young people from a high school and the faculty of medicine in Iasi. A weekly food consumption frequency questionnaire was applied.
Results. The dominant intake of milk was once or 2-3 times a week (29.01%), with insignificant differences by collectivities. For meat products, there were 26.54% "no consumption" responses, but the calculated differences are statistically significant ($p < 0.05$) and point to a decrease in consumption among university students. Eggs were present in the menus mostly 2-3 times (41.97%) per week, with significant differences by collectivities ($p < 0.05$). Bread was present daily on the menus of half of the surveyed young people, with insignificant differences by collectivities. The dominant intake of potatoes was 2-3 times a week (47.53%), with statistically significant differences by collectivities ($p < 0.01$), and for fruits, the dominant intake was daily in 29.01% of cases. The calculated differences are still statistically significant ($p < 0.01$) and highlight the reduction in consumption among university students.
Conclusions. There is a change in the students' diet, but it is not one that contributes to maintaining good health.

Keywords: eating habits, adolescent, high school students, university students.

Introduction

Food is an external factor that makes a major contribution to maintaining the health of the population. Particular attention should be paid to the diet of adolescents and young adults, as weight control is now essential for them. Identifying with the current ideal of beauty raises many problems. Young people may have an adequate body weight, but not corresponding to the desired ideal. In this context, problems can arise related to the perception of body appearance and satisfaction with one's

own body, a situation in which the orientation towards exaggerated slimming treatments is manifested, which can represent a major health risk (Zarychta, Chan, Kruk, & Luszczynska, 2018).

When the mother of the family has significant body image concerns, the situation may become much more challenging. Teens, particularly girls, will take up this subject as well. Young women will resort to sometimes uncontrolled dieting that can affect their growth/development (Garcia Meraz, Guzmán Saldaña, López-Rodriguez, & Galván, 2019).

Studies conducted on adolescents must be focused on aspects related to maintaining health, such as global energy intake, body perception, body mass index, and physical activity. Unfortunately, there are many problems related to global energy intake because young people want to correspond to the current ideal of beauty, which represents a great challenge (Dewi & Wirjatmandi, 2019).

In Romania and especially in the Moldova area, there is a strong anchoring in traditions, so eating habits change very little, especially among high school students. The studies carried out in different counties of Moldova have highlighted statistically insignificant differences by communities and classes, an aspect that must be known and carefully studied (Albu, Petrariu, & Onose, 2020; Albu, Ghica, Foia, & Indrei, 2019).

Leaving the family nest during the university student stage can lead to a change in nutrition, an element that must be taken into account. Even well-informed medical students might be tempted to indulge in fast food that can be quickly consumed during the short break between two educational activities. This shift in dietary habits is significant and concerning, as it may not be healthy or advisable.

The study aims to achieve the following objectives: to gain knowledge about the diet of young people; to evaluate the eating habits of students and their adherence to the norms of rational nutrition; to assess the changes in nutrition that are typical during the transition from adolescence to young adulthood.

Material and methods

The study group consisted of 162 young people from C. Negruzzi High School in Iași (79 students, 48.76%) and from the Faculty of Medicine in Iași (83 students, 51.23%). The students from C. Negruzzi High School are between 15 and 18 years old and are in the 10th and 11th grades. The students from the Faculty of Medicine in Iasi are in their fourth year of studies and are between 22 and 25 years old. A weekly frequency of food consumption questionnaire was applied to the young people in the study group. The intake of animal and vegetable products was evaluated. The category of products of animal origin included milk, meat products, and eggs, while the category of vegetable products included bread, potatoes, and fresh fruits. The answer options provided were "no consumption", "once a week", "2-3 times a week", "4-6 times a week", and "daily". The rules of the rational diet state that milk should be consumed daily or 4-6 times a week, while eggs, bread, and fresh fruit should be consumed daily. However, potatoes should only be consumed 2-3 times a week, as other types of vegetables are also recommended. The results were analyzed using Pearson's chi-squared test.

Results

The dominant consumption of milk is 2-3 times or once a week (29.01%). The calculated differences are statistically insignificant ($p > 0.05$) and point to the existence of similar eating habits in the young people surveyed (Table 1).

Table 1
Frequency of milk intake of the study group

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	14	26	20	12	7	79
Faculty	11	21	27	9	15	83
Total	25	47	47	21	22	162
%	15.43	29.01	29.01	12.96	13.58	

Meat products were consumed mostly once (21.60%) or 2-3 times (29.62%) a week. Interestingly, 26.54% of young people opt for "no consumption" of meat. The study also found that there is a statistically significant difference ($p < 0.05$) in the consumption of meat among different groups. University students, in particular, have been observed to consume meat less frequently on a daily basis (Table 2).

Table 2
Consumption of meat products

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	19	13	21	18	8	79
Faculty	24	22	27	9	1	83
Total	43	35	48	27	9	162
%	26.54	21.60	29.62	16.66	5.55	

Eggs were present on menus mostly 2-3 times (41.97%) or 1 time (27.77%) per week. It's worth noting that high school students had a significant number (11.72%) of negative responses. These differences were statistically significant ($p<0.05$), as shown in Table 3.

Table 3
The frequency of eggs intake of the study group

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	15	26	27	10	1	79
Faculty	4	19	41	15	4	83
Total	19	45	68	25	5	162
%	11.72	27.77	41.97	15.43	3.08	

Half of the young people surveyed (49.38%) acknowledged consuming bread on a daily basis. The calculated differences were found to be statistically insignificant ($p > 0.05$). However, it was observed that 8.02% of young people marked the "no consumption" option and 7.40% chose the option "once a week". These results are not ideal for maintaining good health, as per Table 4.

Table 4
The presence of bread in the menus of young people

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	6	8	13	8	44	79
Faculty	7	4	22	14	36	83
Total	13	12	35	22	80	162
%	8.02	7.40	21.60	13.58	49.38	

Potatoes were consumed mostly 2-3 times (47.53%) or 1 time (27.77%) per week, with statistically significant differences among communities ($p < 0.01$). Consumption 4-6 times a week or daily was very rare among university students (Table 5).

Table 5
Weekly consumption of potatoes

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	7	20	29	16	7	79
Faculty	5	25	48	5	0	83
Total	12	45	77	21	7	162
%	7.40	27.77	47.53	12.96	4.32	

According to the data, 29.01% of the participants reported consuming fresh fruits on a daily basis, and an additional 22.22% of young people said they consume fruits 4-6 times a week. A small percentage of 3.08% reported not consuming any fruit at all, while 17.28% marked the option of consuming fruits once a week. The differences between these groups are statistically significant ($p < 0.01$), indicating a decrease in the frequency of daily fruit consumption among university students as shown in Table 6.

Table 6
The frequency of fruits intake of the study group

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	1	7	20	18	33	79
Faculty	4	21	26	18	14	83
Total	5	28	46	36	47	162
%	3.08	17.28	28.39	22.22	29.01	

Discussions

The assessment of the students' diet was carried out with the help of a weekly food intake frequency questionnaire. They are questionnaires that allow the assessment of eating habits and not the strict evaluation of consumption over a certain period of time (Choudhury et al., 2018). The

evaluation of eating habits is essential not only for healthy people but also for children and young people (periods of growth and development). Thus, it will be possible to assess the diet and identify the nutritional mistakes that occur. Starting from this aspect, the correct orientation of nutritional educational programs can be ensured (Wadolowska et al., 2018). Leaving the family nest sometimes leads to the appearance of major changes in eating habits, which can even persist throughout life.

In the study group, the dominant intake of milk is once or 2-3 times a week, which does not correspond to the nutritional recommendations specific to the age group (daily intake or 4-6 times a week). The differences calculated on the collectivities are statistically insignificant, so there is no change in the preference for milk when the diet changes. According to various studies, the consumption of milk among students in different countries varies significantly. In a study carried out on a group of students from the technical college in Bacău, a dominant intake of once (32.07%) or 2-3 times (28.80%) per week was observed (Albu et al., 2019). Only 27.8% of German students reported a major intake of milk (Manz et al., 2019). In Austria, teenagers admit to consuming milk an average of 2.2 (2.1-2.4) times per week (Drenowatz, Greier, & Klein, 2018). Meanwhile, in Sudan, 37.1% of students consume milk daily, but 20.5% of them do not include it in their diet (Missa, Simya, & Siham, 2018). It is worth noting that there are many concerns related to milk consumption that require attention from nutrition experts.

Meat products are less consumed by university students, although they do not require special preparation. However, giving up their frequent consumption is an element that draws attention to the possibility of changing the food habits of the population.

Eggs are present on menus mostly 2-3 times a week and are preferred for their ease of cooking. In Bacău, high school students typically consume eggs 2-3 times per week (Albu et al., 2019). Medical students in Karachi, on the other hand, tend to consume eggs 1-2 times or 3-4 times per week (Fatima, Akhtar, Khan, & Fatima, 2019), which is a similar consumption pattern to that of medical students in Romania. According to Missa et al. (2018), adolescents from Sudan report eating eggs twice a week (37.1%), while those from Rawalpindi, Pakistan, report eating eggs every day (35.1%) (Naser et al., 2018). These studies highlight how eating habits vary across different regions of the world.

Special attention should be paid to the consumption of bread. It is rich in carbohydrates, offering more than 250 kcal per 100 g of product. It is also rich in protein, so its removal from menus is not a positive element (Martin, & Tarcea, 2015). The daily intake is recognized by half of the young people surveyed, with the same answers for high school students and university students. In a study carried out in Romania on students from three high schools in the city of Botoșani, the daily consumption of bread is present in 63.55% of young people, a result that is encouraging (Albu et al., 2020). Unfortunately, giving up eating bread is quite common. Thus, 44.9% of the adolescent students in Rawalpindi, Pakistan, do not consume bread (Naser et al., 2018), while for those from Austria, the average consumption of bread is 3.2 (3.0-3.3), which is totally insufficient (Drenowatz et al., 2018). Medical students in Karachi consume bread mostly 6-7 times a week (46.9%), which is in line with reasonable dietary guidelines (Fatima et al., 2019). There is the same wide variation of results from one geographical area to another, which is good to consider.

Potatoes and fruits are popular choices for those looking to control their body weight due to their low-calorie content. The consumption of vegetables and fruits at the population level is influenced by several factors, including their availability within the household, which is often dependent on the family's socioeconomic status. (Luszczki et al., 2019). In this study group, there is a reduction in consumption among university students, which is not advisable because they are rich in minerals and vitamins.

In this context, it is important to monitor the supply issues of certain products, taking into account their social, economic, and cultural aspects (Begley, Paynter, Butcher, & Dhaliwal, 2019). Although medical students are taught about nutrition in their study program, problems related to nutrition still arise. To address the nutrition of a healthy person, a comprehensive approach must be taken, considering multiple factors (Soriano-Ayala, Amutio, Franco, & Mañas, 2020).

Conclusions

Assessment of students' diets is easily done with the help of weekly food frequency questionnaires. Milk intake is problematic for both high school and university students. Eggs are often not provided in the necessary quantities, an aspect also found in meat dishes. The consumption of bread does not raise problems, which is an encouraging result because often the tendency is to give up and not to reduce the intake. Potatoes and fruits are consumed in moderate amounts, which is not a beneficial aspect. There are numerous problems related to the nutrition of young people that must be known and carefully monitored. Medical students, even if they have the necessary information, do not adapt their diets to the rules of rational nutrition.

Conflict of interests

The authors declare no conflict of interest.

Ethical approval

Not the case.

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THE USE OF BACTERIOPHAGES IN THE TREATMENT OF STAPHYLOCOCCAL INFECTION

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Author's contributions
DI conducted literature review, and wrote the first manuscript; LG revised, added and completed the final text; AF conducted literature review; EC conducted literature review; GB conceptualized the idea and revised the article critically. All the authors approved the final version of the manuscript.

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Abstract
Aim of study. The current rate of increase in the number of antimicrobial-resistant infections is poised to become the leading global cause of loss of human life. The limited discovery of new antibiotics necessitates investment in alternative solutions. Bacteriophages, viruses that target bacteria, offer a potent alternative approach to combating bacterial infections. One area of modern microbiology and biotechnology that has garnered significant interest is the study of bacteriophages, owing to their potential practical application in various branches of medicine.
Material and methods. This study conducted a comprehensive synthesis of specialized reference sources from international open-access databases, examining the impact of bacteriophage therapy on staphylococcal infections and antimicrobial resistance.
Results. The synthesis is based on studies in human clinical trials, including randomized clinical trials, based on data from recent years. Multiple successful cases regarding the use of phages in the treatment of human infections have been reported. The studies conducted provide evidence that the development of phage therapy is a promising alternative for combating bacterial resistance to antibiotics. The effective action of antistaphylococcal phage cocktails against the most common strains has been demonstrated. The mechanisms underlying the phage-antibiotic synergy effect, as well as the advantages of bacteriophages over other forms of treatment, are presented.
Conclusions. Therapy methods using bacteriophages in combination with antibacterial drugs can provide a higher therapeutic effect.

Keywords: Staphylococcal infections, resistance to antibiotics, bacteriophages, phage therapy.

Introduction

In recent years, there have been practically no new antibacterial drugs (ABDs), while resistance to the "old" ABDs has been steadily growing and, in many cases, has already reached a critical level. WHO draws attention to the fact that many discoveries in the field of drug treatment made in the 20th century may lose their significance due to resistance to ABD. As a result, most infectious diseases can simply get out of control (Cisek, Dąbrowska, Gregorczyk, & Wyżewski, 2017). Healthcare-associated infections (HAIs) pose the greatest danger. According to the European Center for Disease Prevention and Control (ECDC), between 3.1 and 4.6 million people hospitalized in acute care health facilities develop an HAI each year, which is consequently responsible for increasing morbidity and mortality rates as well as costs associated with health services. HAI is the most expensive and deadly adverse event, with the expenses generated by it amounting to 6% of the budget of public hospitals (Organisation for Economic Cooperation and Development, 2020). The burden associated with HAI is closely related to the emergence of the phenomenon of microbial resistance to antibiotics (AMR), with most HAIs being caused by resistant microorganisms (Iaconi et al., 2023; European Centre for Disease Prevention and Control, 2022; Balan et al., 2017). The prevalence of staphylococci in the occurrence of bacterial infections, the annual increase in the number of strains of staphylococci resistant to methicillin, and the emergence of strains resistant to antistaphylococcal reserve antibiotics place this pathology among emerging infectious diseases. One of the options for the treatment of multiresistant strains is the use of bacteriophages.

The aim of this synthesis was to study the modern aspects of using bacteriophages for treating infections caused by antibiotic-resistant strains of *Staphylococcus aureus*, as well as successful methods for their application as of early 2022.

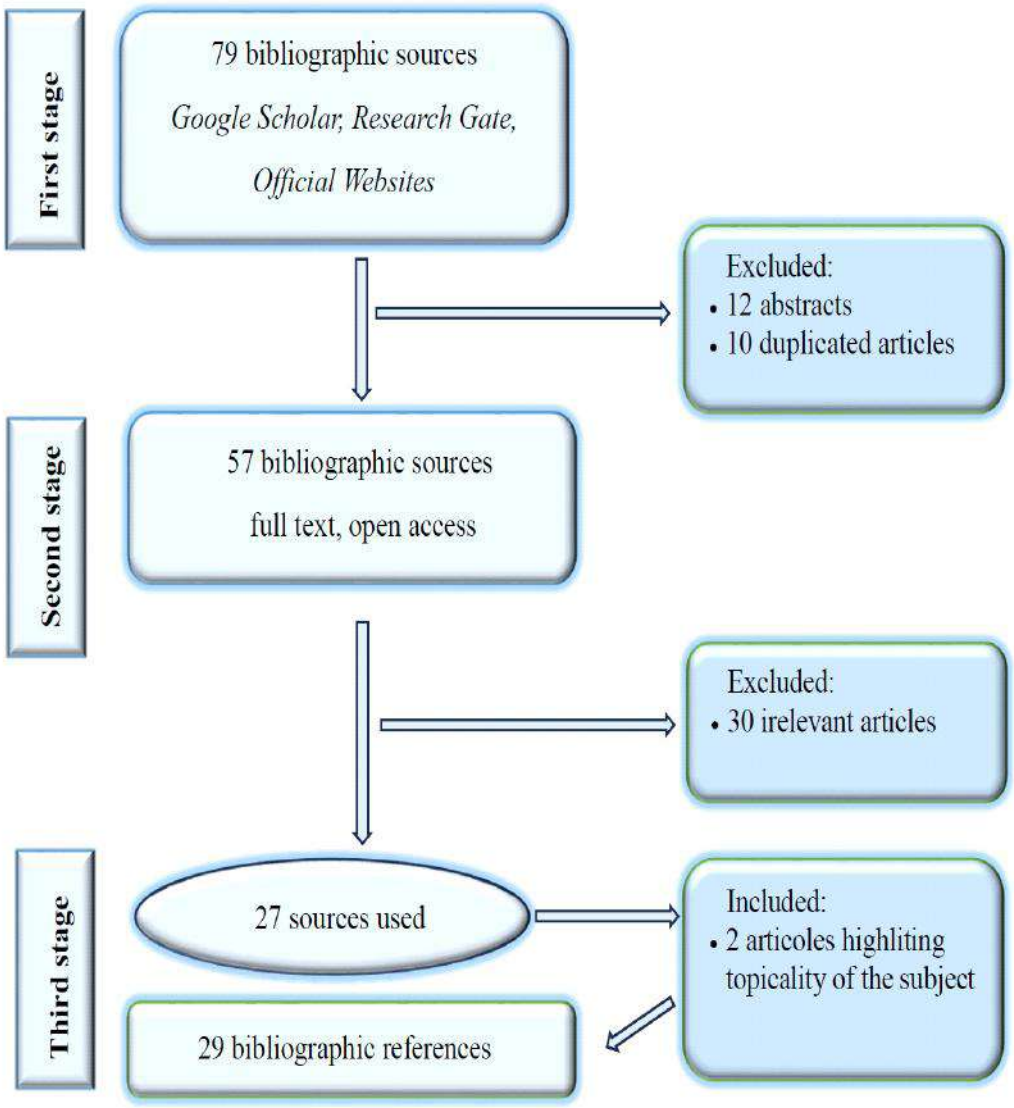
Material and methods

A comprehensive synthesis was conducted by compiling specialized reference sources from international open-access databases. This involved a meticulous examination of publications using keywords such as "bacteriophage therapy," "the phenomenon of antimicrobial resistance," and "staphylococcal infections." The selection criteria for the literature encompassed several key facets, including topic relevance, availability, outcome measures, strain specificity, type of bacteriophage, and comparative studies. The exclusion criteria involved off-topic articles, duplicate studies, and studies that did not focus on bacteriophage treatment.

A total of 79 scientific papers available through open access from both international databases and official websites were reviewed and analyzed. After applying specific selection criteria, 50 publications were deemed unsuitable for inclusion. Consequently, the in-depth research focused on 29 carefully chosen scientific publications (Figure 1).

This study delves into the realm of scientific evidence, aiming to shed light on the profound implications of bacteriophage therapy in the context of infectious diseases caused by staphylococci and its influence on the development of resistance to antimicrobial agents.

Figure 1.
Article selection algorithm



Results

In 1921, J. Meisin and R. Bruynoghe first described a successful method for treating staphylococcal skin infections using staphylococcal phages. Some phages have the ability to selectively lyse only a specific strain of pathogenic bacteria while leaving the rest of the symbionts intact. Additionally, bacteriophages can only circulate as long as bacteria sensitive to them are present in the biotope. Some phages have polysaccharide depolymerases on their tail structures, which can act as an adjuvant to phage infection by disrupting the extracellular matrix of bacterial biofilms. Phages are considered to be quite harmless in relation to human tissues, so the normal human bacterial flora remains intact, which can be explained by their high specificity and rapid

inactivation and elimination from the human body as soon as their host (bacterium) is no longer present in it (Bruynoghe & Maisin, 1921).

In addition, multiple studies have revealed a minimal number of side effects, which include individual intolerance to the components of phage preparations.

There are numerous reasons why phage therapy is increasingly being utilized for therapeutic and prophylactic purposes, and it is likely that it will continue to be used more widely in the future. The situation with this type of therapy is in contrast to antibiotics, the effectiveness of which has drastically decreased, while new antibiotics are quite scarce or are in the early stages of development (Bruynoghe & Maisin, 1921; Ling, Schneider, & Peoples, 2015).

Staphylococcus aureus is ubiquitous, abundantly colonizing the skin and mucous membranes, and can cause respiratory and wound infections, osteomyelitis, sepsis, arthritis, and endocarditis. *S. aureus* is known to possess a high variability of biochemical properties, which is why it often acquires polyresistance to modern chemotherapeutic drugs (Cisek, Dąbrowska, Gregorczyk, & Wyżewski, 2017).

Bacteria can develop resistance to the effects of a particular antibiotic through several mechanisms simultaneously. The selective pressure caused by antibiotics, through mutations and recombinations, can quickly lead to the emergence of multiresistance in strains that were previously sensitive to a wide range of drugs. In general, resistance results from mutational changes or the acquisition of genetic material encoding resistance. In one study, 35 different vancomycin-resistant mutants were sequentially isolated and identified during a 3-month vancomycin treatment of a patient with hospital-acquired *S. aureus* infection (Герасименко, 2022).

Bacteriophages are viruses with a DNA or RNA genome encapsulated in a protein capsid, which sometimes ends with a tail and more or less complex appendages. Bacteriophages can be cubic, filamentous, or tadpole-shaped. The bacteriophage head contains a nucleic acid (DNA or RNA) enclosed in a protein shell (capsid), and below is the tail process, consisting of a contractile sheath and an internal rod.

The bacteriophage attaches to the receptors of the bacterium's cell wall with the help of fibril legs, fastened in the center with a basal plate. The size of a bacteriophage is tens to hundreds of times smaller than that of microbial cells. They attach to specific receptors on the surface of bacteria and subsequently introduce their genomes into bacterial cells, after which one of two outcomes can occur. The first outcome involves the manipulation of the bacterial metabolic machinery to produce viral proteins and copy the viral genome. Subsequently, the viral particles are assembled, and the bacterial cell is lysed, releasing many new phages. This situation is similar to that of virulent phages, which only perform lytic cycles and, as a result, form clear halos (plaques) on bacterial lawns. The second possibility is the lysogenic cycle, during which phages insert their DNA into the host cell, and then such a cell may undergo lysis (Sattar, Ullah, & Khanum, 2022; Peng et al., 2022).

In some cases, the entire pathogenic potential of the causative agent of an infectious disease is determined by a specific interaction with only one prophage (as seen in diphtheria, cholera, and botulism). However, for the majority of pathogenic and opportunistic microbes, the realization of pathogenic potential depends on horizontal genetic exchange involving temperate phages. Furthermore, each of the prophage genes can contribute to an increase in the pathogenic potential of a lysogenic bacterium (as observed in staphylococcal, *Pseudomonas aeruginosa*, and *Proteus* nosocomial infections) (Cisek, Dąbrowska, Gregorczyk, & Wyżewski, 2017).

Other disadvantages of using bacteriophages include a special dosing regimen, a longer treatment course, and a longer onset time for the effect (Kuptsov et al., 2022; Brix et al., 2020).

Bacteriophage treatments have been infrequently described for different infections in case studies (table 1).

Table 1.
Summary of recent published clinical reports of phage therapy in staphylococcal infections

Case report	Phage treatment and route of administration	Outcomes	References
Staphylococcal enterocolitis	combined therapy: nifuroxazide + "bacteriophage 1" or azithromycin + "bacteriophage 2", orally (10-12 days)	the duration of symptoms of staphylococcal enterocolitis in children receiving combination therapy was 1.2-1.4 times less than in the group of children receiving only antibacterial drugs	[Ayzenshtadt A., et al., 2018]
Ulcerative foot osteomyelitis	Staphylococcal bacteriophage suspension, injectable (once a week during 7 weeks)	ulcer healing	[Kutter E., et al., 2018]
Recurrent prosthetic joint infection caused by *S. aureus*	Cocktail of 6 bacteriophages, topically	no clinical signs of persistent infection were observed	[Nepal R., et al., 2021]
Diabetic foot ulcer, monoinfected with MRSA and MSSA,	AB-SA01 phage cocktail (J-Sa36, Sa83, and Sa87) intravenously	led to positive changes in 83% of patients	[Goerke C., et al., 2009]
Chronic dermatoses of staphylococcal etiology	Bacteriophage „Staphefekt"	Clinical response for elimination of *S. aureus*	[Lysko K. A., et al., 2013]
Prophilaxis of respiratory infections	Staphylococcal bacteriophage, orally (21 days)	The dynamics of the incidence of acute respiratory infections decreased by 1.7 times	[Akimkin V. G., et al., 2016]
Prophilaxis of respiratory infections (staphylococci were isolated in 25% of people includet in study)	"Sexta-phage", orally (21 days)	No staphylococci were isolated from any person	[Akimkin V. G., et al., 2016]

In a study conducted between January 2017 and December 2018 at an infectious diseases hospital in the city of Astrakhan, the results of treating 158 children aged 1 to 12 months diagnosed with staphylococcal enterocolitis were analyzed. The elimination of staphylococcus on days 10-12 of combined therapy (nifuroxazide + "bacteriophage 1" or azithromycin + "bacteriophage 2") was

achieved in 21 (51%) and 24 (64%) patients, respectively, while with monotherapy (nifuroxazide or azithromycin), it was achieved in 12 (31%) and 14 (35%) patients, respectively. It was found that the efficiency of staphylococcus elimination increased during azithromycin therapy when combined with "bacteriophage 2". At the same time, the duration of symptoms of staphylococcal enterocolitis in children (fever, diarrhea) who received combination therapy was 1.2-1.4 times shorter than in the group of children who received only antibacterial drugs. As a result of combination therapy, by 10-12 days from the start of treatment, there was also a significant (1.7-2 times) decrease in the number of patients with lactase deficiency, while with monotherapy with antibacterial drugs it was 1.3-1.4 times ($p<0.05$). By 10-12 days from the start of treatment, the proportion of patients with intestinal dysbiosis who received combination therapy decreased by 1.4-1.8 times, and with monotherapy it decreased by 1.3 times ($p<0.05$) (Ayzenshtadt & Sadovnikova, 2018).

In the presence of *S. aureus* in the body, a number of studies have demonstrated the effectiveness of phages specific to it and endolysins through various animal experiments, followed by clinical trials. For instance, animal models of joint prosthesis infection have been utilized to evaluate the effectiveness of the φMR-5 phage in combination with linezolid to reduce bacterial adherence, resulting in a quicker recovery of lower limb motor function (Gupta & Prasad, 2011). A recent publication documented the successful use of a highly purified staphylococcal bacteriophage for treating ulcerative foot osteomyelitis in a diabetic patient who declined amputation and/or long-term antibiotics. Injections (0.7 mL) containing the phage suspension were administered once a week for 7 weeks until the ulcer healed (Kutter et al., 2018). Similarly, topical injection of a selected cocktail of 6 bacteriophages infecting *P. aeruginosa* and *S. aureus* was employed in a patient with a recurrent *S. aureus* prosthetic joint infection. In this instance, the treatment was deemed safe, and no clinical signs of persistent infection were observed (Nepal et al., 2021).

AmpliPhi Biosciences Corporation is also advancing an expanded *S. aureus* control program through the development of the bacteriophage drug AB-SA01, specifically designed to treat severe infections. Their studies have demonstrated that AB-SA01 therapy was well tolerated, with virtually no side effects, and resulted in positive changes in 83% of diabetic foot ulcer patients monoinfected with both methicillin-resistant (MRSA) and methicillin-susceptible *Staphylococcus aureus* (MSSA) (Goerke et al., 2009). The treatment of chronic dermatoses of staphylococcal etiology with Staphefekt phage endolysin and *Pseudomonas aeruginosa*, sensitive only to colistin, along with a bacteriophage preparation, was also highly successful. The gold standard for clinical trials is randomized clinical trials (RCTs). Thus far, only 1 RCT (the PhagoBurn study) has been published using a phage cocktail according to GMP ("good manufacturing practice") and GCP ("good clinical practice") guidelines against *E. coli* and *P. aeruginosa* burn wound infections (Lysko et al., 2013).

The PhagoBurn study was conducted at burn wound centers in France and Belgium. This study highlights the importance of phage stability and composition, as phage titers decreased after formulation, and patients in the experimental group received formulations with lower titers than expected. Despite the slow clinical effect in the phage therapy group compared to the group receiving standard treatment (sulfadiazine, silver cream), there was a corresponding decrease in bacterial load and fewer side effects (Lee et al., 2018). The development of anti-staphylococcal phage cocktails has shown that mixtures with six different phages are effective against the most common resistant strains (Alvarez et al., 2019).

For the treatment of multiresistant staphylococci in life-threatening cases, antibiotics based on methicillin and vancomycin are typically used, but strains resistant to them have recently emerged. Fortunately, there is both old and new clinical data confirming the existence of numerous

virulent staphylococcal phages, such as the φ812 phage, capable of infecting hundreds of strains of *S. aureus* (Alvarez et al., 2019; Brix et al., 2020). Such sensitivity to phages is not characteristic of other bacteria and makes staphylococcal infection particularly suitable for phage therapy (Luong et al., 2020).

It has recently been demonstrated that, irrespective of a bacterium's antibiotic resistance status, sublethal doses of some antibiotics increase the degree of phage virulence. In particular, they synergistically increase the number of viruses produced and reduce the density of bacteria. It has been shown that the mechanism underlying the phage-antibiotic synergy (PAS) effect is associated with triggering cell elongation under the action of antibiotics, which promotes phage replication and potentially facilitates external attachment to bacteria due to increased cell surface area (Nepal et al., 2021).

Let us consider in detail another study on the antibacterial efficacy of two commercially available compositions of *Staphylococcus aureus* bacteriophages, specifically strain MRSA ATCC 43300. Following calorimetric analysis, 50 μL of culture, along with corresponding 10-fold serial dilutions, were plated on blood agar for colony counting. The minimum bactericidal titer of phages was defined as a decrease in the number of bacteria by more than 3 log10 CFU/mL (colony-forming units per mL) compared to the initial amount of inoculum in CFU/mL. Phage lytic activity against methicillin-resistant *Staphylococcus aureus* biofilms was determined using isothermal microcalorimetric (IMC) testing and sonication. IMC analyses were recorded for 48 hours at 37°C. The minimum heat inhibitory concentration of phage (MHICP) was defined as the lowest titer inoculated with bacteria at the starting point of the experiment that inhibited growth-related heat production during 24 hours of microcalorimeter incubation by more than 90% compared to the untreated control (growth control) (Kondo et al., 2021).

The viability of MRSA was examined in real time for 24 hours using IMC, measuring the heat generated by MRSA in the presence of phages and counting the CFU after treatment with phages. An untreated growth control was also added. Sb and PYO bacteriophages rapidly inhibited MRSA growth in a titer-dependent manner compared to untreated growth control. Indeed, heat generation was not observed in the presence of 107 plaque-forming units per mL (PFU/mL) of both phage formulations during 24 h of incubation, indicating that the 107 PFU/mL titer corresponds to MHICP (Kondo et al., 2021).

The interaction between bacteriophages and biofilms

S. aureus was also analyzed in real time using microcalorimetric measurements. Both Sb (monophage) and PYO (polyphage) inhibited bacterial replication in a titer-dependent manner compared to the growth control, resulting in the suppression of heat production during 48 hours of incubation. Simultaneously, a decrease of more than 90% in the total amount of heat generated by cells embedded in the MRSA biofilm was observed at titers of 107 PFU/mL for both phage preparations. This study strongly suggests that PYO and Sb bacteriophages show promise for preventing bacterial colonization and disrupting previously formed biofilms. In the future, further research should explore the potential of phages against other clinical strains in more detail and evaluate the effectiveness of treating systemic infections using complex models involving laboratory animals (Cisek, Dąbrowska, Gregorczyk, & Wyżewski, 2017).

Within the framework of this study, military personnel were divided into groups. The first group comprised individuals who received streptococcal bacteriophage for 21 days in the form of a solution for oral administration, as well as for local and external use. The second group consisted of

individuals who received staphylococcal bacteriophage in the form of a solution for oral administration. In the third group, subjects received "Sextaphage," also in the form of a solution for oral administration, over the same period. The fourth group included individuals who received a single injection of bicillin-5 (Akimkin et al., 2016).

It was observed that after the prophylactic course, the number of isolated streptococci in Group No. 1 decreased by 2.4 times. In the second group, streptococci predominated in the structure of isolated cultures, being isolated in 23 (71.9%) individuals: *S. pneumoniae* in 5 (15.6%) and *S. pyogenes* in 18 (56.3%). *S. aureus* was isolated from 9 (28.1%) individuals. However, after the prophylactic course, the number of isolated staphylococci in the second subgroup decreased by 1.8 times, while a combined carriage of *S. pneumoniae* and *S. aureus* (8.2%) was detected. The incidence of acute respiratory infections in the second group significantly decreased by 1.7 times after the prophylactic course of staphylococcal bacteriophage. In the third group, streptococci dominated initially in 12 (75.0%) individuals, while 4 (25.0%) had *S. aureus*. After a prophylactic course, *S. pneumoniae* was isolated only in 8 servicemen, and other pathogens were not detected. Meanwhile, no statistically significant differences were found in the structure of pathogenic cultures isolated from individuals of groups 4-1 before the use of bicillin-5 and after its single administration (Akimkin et al., 2016).

Discussions

This synthesis emphasizes the importance of phage therapy in the treatment of infections caused by *S. aureus*. *S. aureus* is a common pathogen responsible for both healthcare-associated and community-acquired infections worldwide. It is one of the most significant pathogens in terms of antimicrobial resistance, as it has developed resistance mechanisms against nearly all agents used against it. This species can readily demonstrate adaptive evolution to antimicrobials, as it has shown a unique ability to rapidly respond to each new antibiotic by developing resistance mechanisms, from penicillin and methicillin to the latest ones like linezolid and daptomycin (Foster, 2017).

Given the increasing number of documented studies on bacteriophage therapy, it emerges as a promising alternative for treating bacterial infections caused by multidrug-resistant or antimicrobial-sensitive microorganisms. However, due to the lack of data from controlled randomized trials, phages are currently primarily used in the treatment of severely ill patients who have not responded to conventional therapies. Nevertheless, the potential applications of phages are diverse, and they may serve as substitutes for antimicrobials. By employing phages in the treatment of infections caused by antibiotic-resistant bacteria and limiting the use of antibiotics, we can potentially prevent the emergence of further resistant strains. Bacteriophages have applications not only in human health but also in animal health and environmental contexts (Fernandez et al., 2018; Buttimer et al., 2017; Chan & Abedon, 2015).

Multiple studies have demonstrated the high efficacy of bacteriophages against various strains of *S. aureus*, including MRSA. Despite the use of different phage doses, administration methods, and infection forms in these studies, no negative side effects have been described. It is worth noting that the analyzed studies have shown that the antibacterial effect can be enhanced through improved phage administration methods, the use of phage cocktails, or their combination with antibiotics, as well as through their use in prophylaxis. Additionally, regulated procedures for phage production are necessary to ensure their safe clinical use, as the effectiveness of phage therapy largely depends on maintaining phage stability.

The development of bacterial resistance to bacteriophages is indeed possible, as bacteria have the capacity to evolve various mechanisms to prevent viral infections (Seed, 2015). For example, the *S. aureus* protein A located on the surface of the bacterial cell inhibits the adsorption of bacteriophages (Nordström & Forsgren, 1974). Combining antibiotics with bacteriophages, using phage cocktails, or administering a higher quantity of phages can minimize the development of bacterial resistance to phages. If bacteriophages can kill pathogens faster than they can reproduce, using a large inoculum is associated with a lower risk of bacteria developing resistance to phages. Therefore, when selecting therapeutic phages, it is essential to consider each phage's ability to create bacterial resistance and estimate the necessary dosage to prevent the formation of bacterial resistance.

Another significant issue regarding phage therapy for *S. aureus* infections is the lack of clinical studies, specifically the absence of double-blind randomized trials. Current treatments primarily rely on case reports or clinical studies with a small number of patients.

Furthermore, studies are needed to evaluate whether phages should be used alone, in cocktails, or in combination with antimicrobials. Due to the potential synergistic effect of combined treatment demonstrated in some studies, it has the potential to be used in medical practice to mitigate the development of antimicrobial resistance. The therapeutic outcome of combined therapy applied to *S. aureus* infections has, in most cases, shown synergy, as demonstrated by a decrease in bacterial concentrations and a substantial increase in survival rates. This underscores that the dosage, administration method, and choice of antimicrobial can influence treatment effectiveness.

Conclusions

The antibiotic resistance of *Staphylococcus aureus* remains a significant problem in modern medicine, the relevance of which continues to increase every day with the emergence of new resistant strains. Methods of therapy using bacteriophages against antibiotic-resistant strains of *Staphylococcus aureus* have recently gained increasing usage both in our country and worldwide, serving as one of the main alternatives to antibacterial drugs.

Bacteriophages destroy pathogens without interacting with human body cells at all; therefore, patients do not require subsequent intake of drugs for intestinal dysbacteriosis. Additionally, phages do not suppress immunity and do not have a toxic effect on the liver and kidneys.

It was found that regardless of the bacteria’s resistance state to antibiotics, sublethal doses of some antibiotics increase the virulence of phages. Specifically, they enhance the production of viruses and decrease bacterial density synergistically. It is also important to note that the use of bacteriophages in combination with antibacterial drugs can yield an even greater effect in treating these diseases, highlighting the need for a further search and comprehensive study of bacteriophages with inhibitory effects on *S. aureus*.

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COVID-19, ANOSMIA AND ALZHEIMER'S DISEASE. A CASE REPORT OF A 81-YEAR-OLD PATIENT

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Abstract

Objectives. Among people over the age of 65, the prevalence of olfactory disorders can reach nearly 14%. The buildup of beta-amyloid plaques and tau neurofibrillary tangles in neurons in the hippocampus and entorhinal cortex causes olfactory dysfunction, a decline in memory and learning processes, and, eventually, Alzheimer's disease. According to current research, people aged 57 to 85 who have hyposmia are twice as likely to develop dementia within five years as people of the same age who do not have hyposmia. Anosmia is one of the most common COVID-19 symptoms.
Methodology. An 81-year-old female patient is referred to the psychiatry clinic by her family physician after presenting with a two-year history of panic attacks, anxiety, and anosmia following the SARS-CoV-2 infection. At the first visit, the patient was examined neurologically, psychiatrically, and neurocognitively with the Mini-Mental State Examination-2 and Cognitive Reserve Questionnaire. The patient was recommended for laboratory tests, magnetic resonance imaging scan, and a complex neuropsychological evaluation.
Results. The score on the Mini-Mental State Examination-2 (standard version) was 28/30, with fluent language, high cognitive reserve (score of 168), normal muscle tone and strength, and no evidence of cerebellar dysfunction or balance impairment with a normal gait. The extensive neuropsychological evaluation scores were: Mini-Mental State Examination-2 (extended version) 42/90; three words from 25 retained from short story recall; Montreal Cognitive Assessment 20/30; poor verbal fluency (patient was able to produce only six animal names and one word that starts with the letter F in one minute); and impaired visuospatial and executive abilities. Brain imaging results reveal-moderate cortical atrophy, cerebral microangiopathy modifications with leukoaraiosis, and cerebral lacunarism.
Conclusions. Olfactory impairment is a possible sign of prodromal dementia. Infection with the SARS-Cov-2 virus has worsened cognitive decline in patients with Alzheimer's disease.

Keywords: anosmia, Alzheimer's disease, COVID-19, cognitive decline, cognitive reserve.

Introduction

Olfactory function loss begins at 60 years of age and worsens significantly after 70. In many cases, olfactory disorders are the result of a disease. Smell evaluation can reveal various types

of olfactory deficits. Anosmia is defined as the inability to detect all (total) or some (partial) odors. A reduced sensitivity to odors is known as hyposmia or microsmia. Dysosmia is a distorted sense of smell. Olfactory agnosia is defined as the inability to identify odors despite normal detection and discrimination abilities. Phantomtosmias are olfactory hallucinations. Many common diseases can impair one's sense of smell, either permanently or temporarily. The diseases that cause olfactory disorders range from common colds to neurodegenerative diseases. Local nasal diseases (allergic rhinitis, nasal polyposis and sinus disease), head trauma, and upper airway viral and bacterial infections are the most common causes of olfactory loss. Some neurodegenerative diseases, such as Alzheimer's disease (AD) and various forms of Parkinson's disease (PD), are accompanied by olfactory disorders even in their early stages (Fioretti, Fusetti, & Eibenstein, 2011).

Since the 1950s, studies have suggested that microbial infections induce neurodegenerative disorders. Scientists suspected at the time that acute viral infections might induce long-term brain damage (Ball, 1986). Despite accumulating data supporting this relationship, the virus's mechanism of neurodegeneration remains unexplained. According to one prevalent view, viral infection generates an aberrant immune response that lasts for years and finally leads to neurological damage linked to certain brain illnesses (Ball, 1982). Evidence that viral infection plays a role in Alzheimer's disease has long been studied (Liu, Jiang, & Li, 2023).

According to new research focusing on older adults, a diminished sense of smell is linked to a faster accumulation of Alzheimer's disease-related pathologies seen on brain scans. The findings add to the growing body of evidence that loss of smell (anosmia) is a key early indicator of Alzheimer's disease-related cognitive impairment and the accumulation of harmful proteins like amyloid-beta and tau (Tian, Bilgel, Moghekar, Ferrucci, & Resnick, 2022).

Researchers in Argentina, in collaboration with the Alzheimer's Association Consortium on Chronic Neuropsychiatric Sequelae of SARS-CoV-2 Infection, followed 766 adults aged 55 to 95 who had been exposed to COVID-19 for a year, administering a battery of physical, cognitive, and neuropsychiatric tests. In the study group, 88.4% were infected, while 11.6% were not. Clinical testing revealed that two-thirds of infected participants had functional memory impairment, which was severe in half of them. Another set of cognitive tests revealed three groups with poor performance ("Persistent Loss of Smell Due to COVID-19 Closely Connected to Long-Lasting Cognitive Problems", 2023):

- 11.7% had memory-only impairment,
- 8.3% had attention and executive function impairment, and
- 11.6% had multidomain (memory, learning, attention, and executive function) impairment.

According to statistical analysis, persistent loss of smell was a significant predictor of cognitive impairment, but the severity of the initial COVID-19 disease was not (de Erausquin et al., 2022).

Autopsy studies have connected odor identification loss to plaques and tangles in the olfactory bulb, entorhinal cortex, and cornu ammonis areas of the hippocampus. Several clinic-based, case-control, cross-sectional, or chosen participant investigations have discovered associations between olfactory loss and cognitive decline, moderate cognitive impairment (MCI), or Alzheimer's disease (AD) dementia. This shows that odor identification impairment may be a risk factor for Alzheimer's disease-induced amnestic MCI (aMCI) or predict progression from aMCI to AD dementia. Furthermore, anosmia has been connected to Lewy bodies, meaning that decreased olfaction might be a sign of Lewy body dementia or vascular dementia. Several longitudinal investigations on olfactory impairment and development from MCI to dementia have been performed (Roberts et al., 2016).

Common neuropathologies linking anosmia and MCI in older adults are cerebral neurodegenerative and microvascular lesions (Dong et al., 2022).

Tian et al.'s (2022) findings revealed that each lower performance point on the smell identification test was associated with a 22% increased risk of developing MCI. Even after the researchers controlled for age, gender, race, education, smell test version, apolipoprotein E (APOE 4) gene carrier status, smoking, increased depressive symptoms, and vascular disease, the relationship remained similar.

Lower olfactory scores were associated with higher levels of Alzheimer's pathology in the brain, particularly in regions associated with the sense of smell, such as parts of the orbital frontal cortex, and memory and learning regions, such as the temporal lobe, according to PET brain scans of this subset of participants. Furthermore, participants who experienced a greater decline in olfactory function over time had higher levels of amyloid and tau in some areas related to both smell and memory function (Tian et al., 2022).

Because the olfactory sensory epithelium and the olfactory bulb are so close together, COVID-19 infection may still have an impact on cognitive function even after recovery. Some people with neurodegenerative diseases like Alzheimer's and Parkinson's disease have been found to have a connection between dementia and a disordered sense of smell. Damage to the bulb causes anxiety and a depressive-like state, according to animal studies. The idea that "viral invasion of the [central nervous system] can be a trigger for neurodegeneration resulting in later neurological deficit, is not a new one" (Kay, 2022). As the quoted author showed, it is supported by previous flu pandemics.

All human coronaviruses (CoVs) are opportunistic pathogens of the central nervous system (CNS), including SARS-CoV-2 (Desforges et al., 2019). SARS-CoV-2 infection causes neurological symptoms such as confusion, headache, hypogeusia/ageusia, hyposmia/anosmia, dizziness, epilepsy, and acute cerebrovascular disease (Jiménez-Ruiz, García-Grimshaw, & Ruiz-Sandoval, 2020). These symptoms are caused by the virus's direct entry into the central nervous system (CNS) and the subsequent interaction between the virus' spike protein and the angiotensin-converting enzyme 2 (ACE2).

New research suggests that SARS-CoV-2 could cause CNS damage either directly or indirectly by activating the host immune response, resulting in demyelination, neurodegeneration, and cellular senescence. As a result, it may accelerate brain aging, promoting the development of neurodegenerative diseases like dementia (de Erausquin et al., 2021).

Moderate correlations between measures and subjective ratings of olfactory perception are frequently explained by the semi-conscious nature of olfactory perception in comparison to other human senses. People are more likely to overestimate their olfactory capacity as hyposmia develops gradually, such as with aging or neurodegenerative diseases (White & Kurtz, 2003). Overestimation and underestimation of abilities are caused by deficits in metacognitive knowledge, a concept known as anosognosia, which is relatively common in neurodegenerative diseases. Olfactory awareness, in particular, is negatively related to age (cognitive decline, particularly in memory and executive control such as attention) (Tahmasebi, Zehetmayer, Stögmann, & Lehrner, 2019).

Methodology

Neuropsychological tests, neurological and psychiatric examinations, laboratory tests and brain imaging were performed to evaluate the patient. Three neuropsychological assessments of 60–

90 minutes each were required. The patient and the caregiver participated in a semi-structured clinical interview conducted by the psychiatrist and neuropsychologist.

Case presentation

An 81-year-old female patient is referred to the psychiatry clinic by her family physician after presenting with a two-year history of panic attacks, anxiety, and anosmia following the SARS-CoV-2 infection. Previous medical history indicates hypertension, dyslipidemia, and vitamin D deficiency.

A highly educated patient, she cares for her immobilized husband after a stroke. The patient worked as an architect and then as an interior designer. She is passionate about painting, gardening, and spending a lot of time in the garden of the house, where she repairs and paints old flowerpots (she rehabilitates them). After the COVID infection, sleep disturbances and anxiety with panic attacks occur. Feelings of worthlessness are also increasing: "I don't smell anymore, I don't make food as good, I'm afraid I'll leave the gas open."

The patient received treatment from a family physician for olfactory disorders and insomnia for two years. At the first visit, the patient was examined neurologically, psychiatrically, and neurocognitively with the Mini-Mental State Examination-2 (MMSE-2).

- the score on the Mini-Mental State Examination 2 (standard version) was 28/30, with fluent language;
- normal muscle tone and strength, and no evidence of cerebellar dysfunction or balance impairment with a normal gait.

Despite the fact that the MMSE-2 cognitive assessment score was 28, indicating that there was no cognitive deficit, the neurologist decided that the patient should undergo two more complex neuropsychological assessments, including a cognitive reserve assessment, and that she should be accompanied by her daughter to the subsequent appointments.

At the second session, the patient and her daughter completed the "Cognitive Reserve Index - R-IRCq" Romanian version questionnaire. The high score of 168 implies a strong cognitive reserve and, as a result, resistance to potential brain pathology.

The score for the MMSE-2 extended version is 42/90; three words from 25 are retained from short story recall; and 11 point at the processing speed (item), which measures perceptual-motor speed and incidental learning (i.e., symbol pair formation). Based on these results, the neurologist decides that the patient should have various blood tests, vitamin B12 and folate supplementation, and a brain MRI.

The third neuropsychological evaluation was performed after 30 days to eliminate the test-retest learning effect. This time, the Montreal Cognitive Assessment (MoCA), Trail Making Test A (TMTA) and B (TMTB), Digit Span forward and backward, and the verbal fluency test (F letter and animal category) were employed. The neuropsychological assessment scores are presented in Table 1.

Table 1
Results of the neuropsychological assessment

Assessment	Score	Cognitive impairment
MoCA	20/30	Impaired moderately
TMT A	67 sec	Impaired
TMT B	356 sec	Impaired
Digit span forward/backward	(F) 5 digits / (B) 4 digits	Impaired
Verbal fluency - F	1/11	Impaired
Verbal fluency - animals	6/25	Impaired

Figures 1 and 2 illustrate the MMSE-2 items and how the patient resolved them.

Figure 1
Praxis, drawing two intersecting pentagons

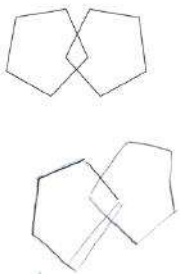
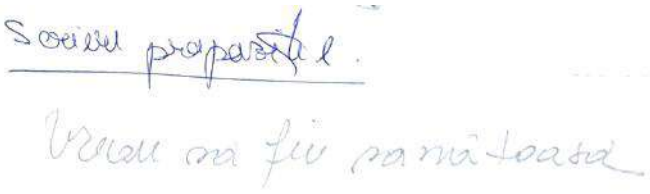


Figure 2
Sentence writing



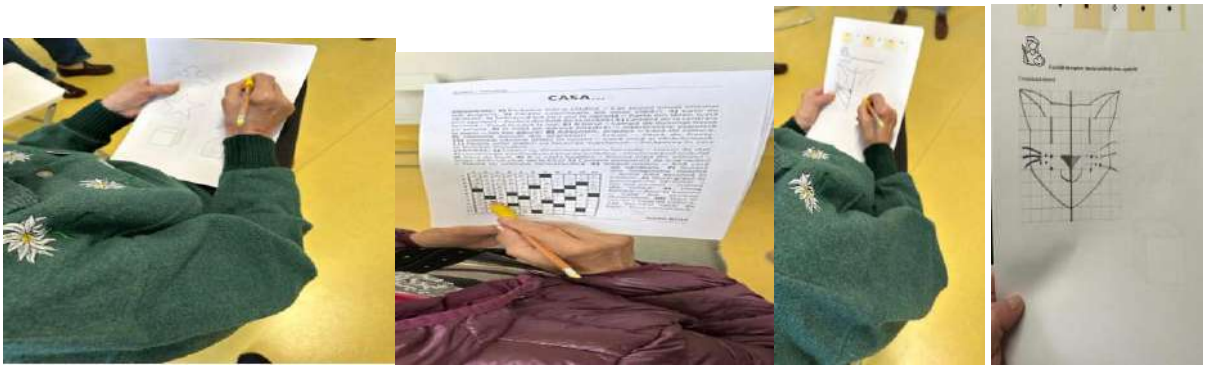
The latest neuropsychological evaluation shows ~~a~~ moderate cognitive deterioration. Brain imaging results reveal moderate cortical atrophy, cerebral microangiopathy modifications with leukoaraiosis, and cerebral lacunarism.

Figure 3
Brain magnetic resonance imaging

Following the psychiatric assessment, the patient was diagnosed with anxiety-depressive disorder and prescribed an antidepressant and anxiolytic (if needed) for panic attacks and insomnia. Treatment for the diagnosis of Alzheimer's dementia is given by the neurologist, memantine, the dose going up to 20 mg/day, and every six months injections with a brain trophic or perfusable (if the patient prefers this mode of administration).

To improve cognitive skills and reduce anxiety-depressive symptoms, the patient was recommended to participate in psychoemotional support groups and cognitive stimulation activities. Figure 4 shows some of the cognitive stimulation activities in which the patient participated.

Figure 4
Cognitive stimulation activities



Discussions

The effects of environmental enrichment on brain health and cognition were first discussed by Diamond, Krech, and Rosenzweig in 1964. Rats that are kept in complex environments with toys, space, equipment for climbing and exercising on, and plenty of social interactions with their cage mates have a cortex that is thicker and more developed cognitively than rats that live miserable solitary lives in basic, unenriched housing (Diamond, Rosenzweig, Bennett, Lindner, & Lyon, 1972).

The presence of AD pathology in the entorhinal cortex, hippocampus, and other temporal regions results in an inability to store and retrieve smell memories and, as a result, correctly identify odors. Olfactory loss in Alzheimer's disease and Parkinson's disease is caused by cholinergic deficits caused by a variety of mechanisms, including damage to the nucleus basalis (a key cholinergic nucleus that projects to brain regions involved in olfaction) (Roberts et al., 2016).

Infectious agents, particularly viruses, are thought to play a role in the pathogenesis of Alzheimer's disease. According to this theory, the viral particles evade the host immune system, resulting in chronic infection and the accumulation of Aβ and phosphorylated tau in the brain. While several AD-related candidate viruses have been documented in previous studies, the specific mechanisms are unknown. Furthermore, these research findings are correlational rather than causal. This hypothesis is still being validated, as therapeutic strategies targeting it are being questioned. The frequent neurological manifestations of SARS-CoV-2 have prompted researchers to consider the resulting epidemic of neurodegenerative diseases. Several studies have found cognitive impairment in COVID-19-infected people, implying that COVID-19 contributes to the development of Alzheimer's disease (Liu et al., 2023).

Anosmia serves as a bridge between AD and COVID-19 because loss of smell is an early-determining symptom of AD and an early marker of COVID-19. As a result, anosmia could be the missing link between these two pathologies. Anosmia is characterized by neurological complications that are frequently linked to AD and COVID-19, both of which involve neuro-psychiatric impairments. Thus, treatment strategies aimed at alleviating anosmia may have a significant impact on the progression of both AD and COVID-19. Overall, anosmia, the missing link, may become the common link for treating global crises (Mohammad Azizur et al., 2021).

To detect the potential long-term neurological consequences of SARS-CoV-2 infection, a longitudinal follow-up of COVID-19 patients, particularly older adults and severe cases, is required. Biomarkers, in this scenario, represent reliable tools for early monitoring of COVID-19 patients and early detection of those at high risk of developing neurological sequelae, such as Alzheimer's disease (Ciaccio et al., 2021).

Conclusions

Complex neuropsychological assessments, along with the incorporation of the cognitive reserve assessment for highly educated individuals, aid in the early detection of Alzheimer's disease. When cognitive decline is present, engaging in cognitive stimulation activities helps sustain a cognitive plateau.

Early research points to cognitive symptoms brought on by COVID-19-induced degenerative processes. All of this evidence points to the likelihood that dementia develops in many of these cases as a result of long-term cognitive damage (Kay, 2022).

The significance of routine long-term neurocognitive evaluations following COVID-19 infection recovery has been underlined. Since cognitive impairment may impair social and professional functioning, early intervention may enhance the quality of life for those who are affected (Shariff et al., 2023).

Healthcare services must develop plans to address the changing requirements of patients with dementia and cognitive impairment, as well as those with psychological and neuropsychiatric symptoms. In addition to identifying strategies to address the rapid progression of cognitive and behavioral symptoms faced by many individuals with pre-existing cognitive impairment, whose care has been significantly disrupted during the pandemic, initiatives need to address the screening, treatment, and monitoring of such symptoms during the ongoing pandemic (Palmer, Kivipelto, Gianni, Banaj, & Spalletta, 2021).

For a variety of reasons, cognitive training is regarded as an efficient nonpharmacological intervention. In recent times, this therapy has gained popularity due to its lower risk and contraindications compared to pharmaceutical techniques (Giuli et al., 2016).

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MEANING, SATISFACTION, AND QUALITY OF LIFE IN OLDER ADULTHOOD: A COMPARATIVE STUDY BETWEEN ELDERS IN RESIDENTIAL CENTERS AND THOSE LIVING INDEPENDENTLY

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Abstract

Objectives. This study is relevant to understanding the quality of life (QOL) among elderly individuals in Romania. With an increasing aging population, it is crucial to examine the factors contributing to older adults' well-being and life satisfaction. By investigating the connections between the meaning of life, QOL, and life satisfaction, this study sheds light on the subjective experiences and perceptions of elderly individuals residing in private homes and institutions.
Material and Methods. The sample included 200 individuals aged sixty or older from Bucharest, evenly distributed between the two groups.
Regression analysis, using perceived social support as a mediator and life satisfaction as the dependent variable, utilized the "presence of meaning" subscale from Steger's Meaning in Life Questionnaire. IBM S.P.S.S. software facilitated data analysis, employing Kruskal-Wallis and Pearson correlation tests alongside descriptive statistics. Education, health, children count, and residence's impact on meaning in life were explored.
Results. A significant positive influence of "presence of meaning" and "perceived social support" on life satisfaction was found, explaining 44.8% of its variance. Sobel's mediator test confirmed the significant role of perceived social support in mediating the link between the presence of meaning and life satisfaction.
Meaning varied significantly across education levels, with higher education correlating with greater meaning. Institutionalized and childless individuals reported lower meaning compared to those at home and with children.
Furthermore, positive correlations emerged between meaning and self-rated health and the EQ Index reflecting health preferences. Stronger personal meaning related to better self-rated health and higher EQ Index scores.
Conclusions. This study underscores personal meaning's predictive value, the mediating role of perceived social support in life satisfaction, and the influence of education, living situation, children count, and perceived quality of life on meaning perception among older adults. These findings enhance comprehension of factors impacting satisfaction and meaning perception in this demographic group.

Keywords: meaning in life, quality of life, life satisfaction, perceived social support, elderly.

Introduction

The importance of the meaning of life for the development of human consciousness is a topic that has been explored by many researchers and theorists. Viktor Frankl's theory of the will to meaning (Frankl, 1963), Erik Erikson's self-identity stages, the Presence and Search Model, the Meaning-Making Model, the Meaning-Seeking Model, and Richard Barret's model all highlight the importance of meaning in life for human well-being and personal growth. Understanding the concept of meaning in life and its relationship to well-being can have important implications for individuals, as well as for organizations and society (Steger, Frazier, Oishi, & Kaler, 2006).

By promoting a sense of purpose and meaning in life, individuals may be better equipped to navigate life's challenges and achieve greater levels of fulfilment and satisfaction (Ryff & Singer, 2008). Research has shown that a meaningful life is more satisfying than a life focused on pleasure (Steger, Kashdan, & Oishi, 2008). Therefore, to achieve true well-being, it's essential to focus on the meaning of life and strive for self-actualization (Frankl, 1963), purpose, and engagement (Seligman, 2011).

Erik Erikson's theory of self-identity stages also highlights the importance of the meaning of life in human development. According to Erikson, individuals go through a series of stages in which they must resolve a crisis related to their sense of identity. The final stage, which occurs in adulthood, involves the search for meaning and purpose in life (Erikson, 1968).

The Meaning-Making Model developed by Crystal Park (Park, 2013) proposes that individuals can find meaning in life through a process of making sense of difficult or challenging experiences. This process involves cognitive and emotional processing, as well as the integration of new insights and perspectives.

T. P. Wong's Meaning-Seeking Model (P. Wong, 2014) emphasizes the importance of a proactive approach to finding meaning in life. According to this model, individuals can actively seek out opportunities for personal growth and engage in activities that align with their values and goals.

Richard Barret's model, The Development of Human Consciousness (Wiedemann, 2020), proposes that individuals go through a series of stages in which they develop a greater awareness of themselves and their place in the world. The final stage, which involves a sense of unity and interconnectedness with all of humanity, is characterized by a deep sense of meaning and purpose.

Research Model: Steger's Presence and Search Model assumes that meaning in life is important to human beings, and when people feel their lives are meaningless, they will search for it (Steger, 2012). This model is in line with Frankl's theory (Frankl, 1963), which refers to the search for meaning as a primary human motivation. The model consists of two components: the presence of meaning the and search for meaning. The presence of meaning refers to the extent to which individuals feel that their lives are meaningful, purposeful, and significant. Search for meaning refers to the active pursuit of meaning in life, which can involve exploring new experiences, engaging in self-reflection, and seeking out opportunities for personal growth. The model proposes that individuals who have a high presence of meaning and engage in a search for meaning are more likely to experience positive outcomes, such as greater well-being, higher levels of life satisfaction, and lower levels of depression and anxiety.

Research has shown that a sense of purpose and meaning in life is associated with better physical and mental health outcomes (Steger et al., 2008). This sense of purpose can be derived from engaging in meaningful activities, maintaining social connections, and having a sense of belonging to a community or family (Rada, 2021).

In addition to meaning in life, social support is crucial for the well-being of elderly individuals. Research conducted by Cohen and Wills in 1985 found that higher levels of social support are associated with lower levels of psychological distress, which in turn positively affects overall well-being.

Furthermore, the concept of "successful aging" emphasizes the importance of maintaining a positive outlook and adapting to the challenges of aging. This includes maintaining physical health through regular exercise and healthy lifestyle choices, as well as maintaining cognitive health through mental stimulation and engagement (Rada, 2020b).

Overall, the well-being of elderly individuals is influenced by various factors, including social support, family dynamics, a sense of purpose and meaning in life, and physical and mental health. By understanding and addressing these factors, individuals, families, and society can work together to promote the well-being and quality of life of older adults. This can involve providing social support networks, promoting meaningful activities and engagement, and creating an inclusive and supportive environment for older individuals to thrive.

Research questions

Does the relationship between the meaning of life and satisfaction with life in later life moderate the perception of social support?

Are there differences in the perception of the meaning of life among elderly people depending on their level of education, where they live, and how many children they have?

Do perceptions of the meaning of life vary among elderly people according to their perceived quality of life?

Material and methods

Participants and procedure

The present research included 200 people aged between 60 and 95 years (M_{age} = 70, SD = 7.95), 66 males (M_{age} = 69.5, SD = 8.03), and 134 females (M_{age} = 70, SD = 7.90) from Bucharest. The sample was divided into two equal groups of 100 participants. The first group consisted of people institutionalized in Residential Centers belonging to the Municipality of Bucharest to the General Directorate of Social Assistance. The second group included people who lived alone or with their families and had their own homes.

For this study, participants completed four questionnaires to assess their scores on the presence of meaning in life, seeking meaning in life, perceived social support, quality of life, and life satisfaction. A specific questionnaire was used to collect socio-demographic data.

Data collection was centralized and statistically analyzed with IBM SPSS software.

Measures

Meaning in Life Questionnaire (MLQ) was developed in 2006 by Michael Steger and collaborators (Steger, Frazier, Oishi, & Kaler, 2006). It consists of 10 items and is designed to measure two dimensions of meaning in life on a seven-point Likert scale. The Presence of Meaning subscale measures the respondent's assessment of the presence of meaning in his or her personal life. The Search for Meaning subscale measures the extent to which subjects are engaged and motivated

in their efforts to find meaning in their lives or to deepen their understanding of the meaning of their lives. The MLQ is valid and reliable in assessing meaning in life and can be used to investigate meaning in other patients from different socio-demographic populations (Naghiyaee, Bahmani, & Asgari, 2020).

The Multidimensional Scale of Perceived Social Support (MSPSS) was developed by Gregory Zimet (Zimet, Dahlem, Zimet, & Farley, 1988) and published for the first time in the *Journal of Personality Assessment*. The scale consists of 12 items that measure the perception of social support about one's family, friends, or significant others on a 7-point Likert scale. Scores on this scale can range from a low of 7 to a high of 84. Strong social support is indicated by scores between 69 and 84. Scores between 49 and 68 indicate moderate social support. Scores between 12 and 48 indicate low social support (Grey et al., 2020). The MSPSS has been shown to have good internal reliability, good validity, and a fairly stable factor structure across many studies. The scales have been translated into many different languages.

The European Quality of Life (Eq-5D-5L) is a generic self-administered scale for use in evaluation studies and health status research (Euroqol, 2023). The scale is divided into two dimensions: descriptive, where it includes 5 domains specific to the person's health (mobility, self-care, usual activities, pain or discomfort, and anxiety or depression), and visual analogue, where the participating person self-reports his or her health status on a scale from 0 to 100. The performance of the EQ-5D-5L is as good as other quality-of-life instruments and is easy to use.

The Satisfaction With Life Scale (SWLS) was developed by Diener and collaborators in 1985 (Diener, Emmons, Larsen, & Griffin, 1985). On a seven-point Likert scale, it is a five-item measure of global cognitive judgments of life satisfaction. It shows good convergent validity with other scales and subjective well-being measures. SWLS is recommended as a supplement to scales that focus on psychopathology or emotional well-being. Scores range from 5 to 35 points. Higher scores indicate greater life satisfaction (Pavot, Diener, Colvin, & Sandvik, 1991).

Statistical analysis

Testing the regression assumptions can be done by examining the residuals plot, which tests the three crucial assumptions: linearity, normality, and homoscedasticity. If residual scatterplots show that regression assumptions are met, no further examination of variables and cases is (Tabachnick & Fidell, 2013, p. 127).

In the simple linear regression analysis, several assumptions were assessed to ensure the validity of the model. The following three points reflect a summary of the findings:

1. Homoscedasticity: The assumption that the variance of the residuals is constant was evaluated by examining scatterplots generated in the regressions. These plots did not show any violation of this assumption for all four regressions conducted in the study.

2. Normality of residuals: The assumption that residual values are normally distributed was assessed using P-P plots generated in the regressions. These plots did not indicate any violation of this assumption for the four regressions in the study.

3. Influential cases: Cook's distance was calculated to identify any influential cases that could bias the model. All calculated values were less than 1, indicating that no cases significantly influenced the model.

Overall, the results suggest that the assumptions of homoscedasticity, normality of residuals, and absence of influential cases were met in the simple linear regression analyses conducted for this study.

The bivariate Pearson correlation for the three variables' presence of meaning, life satisfaction, and perceived social support was performed to ensure that the variables were correlated. The bivariate Pearson correlation is $r = .64$, $n = 200$, $p < .001$ for the presence of meaning about life satisfaction, $r = .54$, $n = 200$, $p < .001$ for the presence of meaning about perceived social support, and $r = .51$, $n = 200$, $p < .001$ for perceived social support about life satisfaction. According to Cohen (Cohen, 1988, pp. 79–80), the relationship between two variables is strong when $r = \pm.5$, moderate when $r = \pm.3$, and weak when $r = \pm.1$. According to Hair (Hair, Page, & Brunsveld, 2019, p. 384), r has a moderate positive relationship between variables when r is between .41 and .70. In the observed case, correlation coefficients (r) ranging from 0.51 to 0.64 indicate either strong or moderate correlations.

General objectives

This study's specific objectives are to evaluate individuals' quality of life using the Quality of Life Questionnaire (QOL), which assesses mobility, self-care, activities of daily living, pain/discomfort, and anxiety/depression. Additionally, this study aims to investigate the association between perceived QOL (QOL questionnaire score) and various factors such as gender, age, income, education level, and marital status. Furthermore, this study aims to compare the perceived QOL of individuals living in residential care to those living at home.

The primary utility of this study is to examine the perceived Quality of Life of elderly individuals residing in Romania. Additionally, this study aims to identify the relationships between the meaning of life, quality of life, and satisfaction with life among individuals of similar ages living in private homes and institutions. Finally, this study aims to emphasize the importance of social support in the perception of quality of life and life satisfaction.

Results

Descriptive analysis

Table 1
Socio-Demographic and Family Characteristics of the Participants

Gender	N	%
Female	134	67
Male	66	33
Age groups (years)		
60-69	90	45
70-79	75	37.5
80+	35	17.5
Education		
primary school	52	26
high school	82	41
bachelor's degree	47	23.5
master's degree/PhD	19	9.5

Marital status		
Married	57	28.5
Couple	1	0.5
Divorced	42	21
Single	19	9.5
Widowed	81	40.5
Family composition		
Having children	47	23.5
No children	153	76.5

Note. $N = 200$

As shown in Table 2, most of the respondents reported either moderate problems (31%) or no problems at all (27.5%) in terms of mobility. According to the results for the self-care dimension, 63.5% of the participants reported no problems, whereas 12% of the 200 participants reported mild problems. In terms of regular activities, most of the participants (40.5%) reported no problems while 21% of the 200 participants reported mild problems. The pain/discomfort dimension of health showed that moderate problems (42%) and slight problems (29.5%) were reported. The results indicated moderate problems (30%) and slight problems (25.5%) for the anxiety-depression dimension

Table 2

EQ-5D-5L frequencies and proportions reported by dimension and level

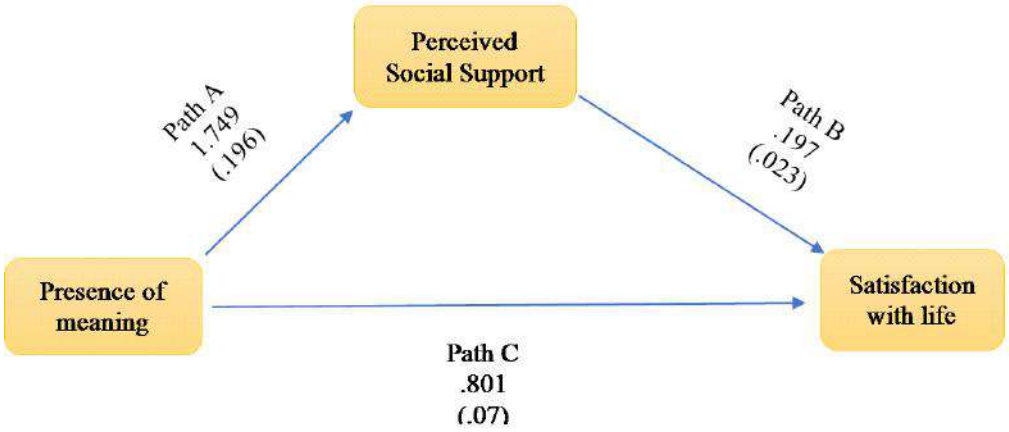
Level of problems	Mobility n (%)	Self-Care n (%)	Usual activities n (%)	Pain/ discomfort n (%)	Anxiety/ Depression n (%)
No problems	55 (27.5)	127 (63.5)	81 (40.5)	32 (16.0)	48 (24.0)
Slight problems	35 (17.5)	24 (12.0)	42 (21.0)	59 (29.5)	51 (25.5)
Moderate problems	62 (31.0)	23 (11.5)	40 (20.0)	84 (42.0)	60 (30.0)
Severe problems	43 (21.5)	18 (9.0)	28 (14.0)	20 (10.0)	29 (14.5)
Extreme problems	5 (2.5)	8 (4.0)	9 (4.5)	5 (2.5)	12 (6.0)

Note. $N = 200$

Inferential and regression analysis

The mediator model (Figure 1) was used to examine the hypothesis that perceptions of social support serve as a mediator in the correlation between the presence of meaning in life and life satisfaction.

Figure 1
The Mediator Model



The model is created by the author.

The hypothesized model suggests that the presence of meaning positively impacts life satisfaction, which is mediated by perceived social support.

In the mediator model, paths A, B, and C are tested by simple linear regression. Finally, multiple regression is applied with two independent variables and one dependent.

Results of the Mediation Analysis:

Table 3 (path C) reveals that the presence of meaning in life explained 40.7% of the variances, R^2 = .41, $F(1, 198) = 135.76$, $p < .001$. The presence of meaning in life significantly predicted satisfaction with life, β= .801 (95% CI: .67, .94), $t = 11.65$, $p < .001$.

Testing path A reveals that the presence of meaning in life explained 28.6% of the variances, R^2 = .29, $F(1, 198) = 79.23$, $p < .001$. The presence of meaning in life significantly predicted perceived social support, β= 1.749 (95% CI: 1.36, 2.14), $t = 8.90$, $p < .001$.

Testing path B: Linear regression, using the enter method, was carried out to test whether or not satisfaction with life could be predicted by perceived social support. The model was significant, $F(1, 198) = 70.26$, $p < .001$. It explained 26.2% (R^2 = .26) of the variance in the outcome variable, β= .197 (95%CI: .150, .243), $t = 8.38$, $p < .001$.

Table 3
Regression Analysis for Mediation of Perceived Social Support Between Presence of Meaning and Satisfaction with Life

Variable	B	SE B	t	β	95% CI	
					LL	UL
Step 1						
Constant	.520	1.911	.272		-3.248	4.288
Presence of Meaning	.801	.07	11.65***	.638	.666	.937

Step 2						
Constant						
Presence of meaning	5.713	5.457	1.047		-5.048	16.475
	1.749	.196	8.901***	.535	1.361	2.136
Step 3						
Constant	11.742	1.34	8.761		9.099	14.385
Perceived	.197	.023	8.382***		.150	.243
Social Support						
Step 4						
Constant	-.005	1.853	-.003		-3.660	3.650
Presence of Meaning	.641	.079	8.138***	.510	.486	.796
Perceived	.092	.024	3.817***	.239	.044	.139
Social Support						

Note. B = Unstandardized Coefficients; SE B = Standard Error of B; β = Standardized Coefficients; CI = confidence interval; LL = lower limit; UL = upper limit.
***$p < .001$

A. Testing the assumptions of multiple regression, a summary of findings:

1. Independence of Sampling/Observation: The assessment of observation independence was carried out using the Durbin-Watson test. The Durbin-Watson statistic is required to be between 1.5 and 2.5. The value obtained from this study was 1.75, which falls within the recommended range. This suggests that the independence assumption is fulfilled.

2. Multicollinearity: The tolerance and VIF (variance inflation factor) values from the coefficients table are used to test multicollinearity. If tolerance is greater than 1 and VIF is less than 10, it indicates that multicollinearity is not a concern. The assumption of multicollinearity is met based on the results.

3. The multivariate normality assumption can be evaluated using the Mahalanobis distance. The multivariate normality assumption can be considered met if the value of the test statistic falls below the critical value. In this case, the value of the test statistic did not exceed the given maximum threshold. As the value of 10.44 is below the critical value of 16.54, it can be concluded that the assumption is met. (Guy Zero, 2023).

4. To evaluate homoscedasticity, the residual plot (where zpred is plotted on the x-axis and zresid is plotted on the y-axis) is examined with a loess line. The homoscedasticity assumption is satisfied if the standardized residual values fall within the range of -3 to 3. Based on the outcomes of the investigation, the assumption holds.

5. Assessing Linearity: Scatter plots were utilized to evaluate the linearity assumption between the independent variables and the dependent variable. If the relationship is linear, it

confirms that the assumption of linearity has been met. The scatter plots demonstrated a linear relationship, evidencing that the assumption has been met.

Overall, based on the tests applied, it appears that the assumptions of independence, multicollinearity, multivariate normality, homoscedasticity, and linearity of the multiple regression model have been met in the study. This allows interpretation of the mediation model results.

The study aims to test if perceived social support mediates the relationship between the presence of meaning in life and satisfaction with life. Initial Pearson r correlation shows that all variables have a strong positive relationship with each other. Multiple regression was used to test the mediation model.

B. Applying multiple regression analysis to examine the relationship between the presence of meaning in life, perceived social support, and satisfaction with life (testing paths B and C).

1. Multiple regression analysis: The presence of meaning in life explained 45% of the variances in satisfaction with life (R^2 = .45). The F-test F (2, 197) = 79.82, p < .001) indicates that the overall model is statistically significant.

2. Sobel test: The Sobel test was conducted to assess the statistical significance of the indirect effect of the presence of meaning on satisfaction with life through the mediation of perceived social support (*Interactive Mediation Tests*, 2023). The Sobel test yielded a significant result (Z = 6.17, p < .001), indicating that the mediator (perceived social support) significantly explains the relationship between the predictor (presence of meaning) and the outcome (satisfaction with life).

3. Calculation of indirect effect: To calculate the indirect effect, the unstandardized coefficients from paths A and B were multiplied (1.749 * 0.197 = 0.345).

4. Partial mediation: According to Baron and Kenny (1986, as cited in Newsom, 2023), if the effect of the predictor variable on the outcome variable is statistically significant but smaller in the presence of a mediator, it indicates partial mediation. In this study, the multiple regression analysis showed that the effect of the presence of meaning on satisfaction with life was smaller when perceived social support was included as a mediator, suggesting partial mediation.

5. Comparison of models: The F coefficients and t-statistics coefficients for the model including both the presence of meaning and perceived social support were lower compared to the model with only the presence of meaning. This further supports the idea of partial mediation.

6. In conclusion, the results of the multiple regression analysis support the hypothesis that the presence of meaning in life predicts satisfaction with life, and this relationship is partially mediated by perceived social support. The findings suggest that the perception of social support plays a significant role in explaining the relationship between the presence of meaning and satisfaction with life.

The study aimed to explore the different meanings of life based on factors such as health, education level, number of children, and place of residence. The Kruskal-Wallis test was used to analyze the data.

1. Meaning of life across different education levels:

- There was a statistically significant difference in the presence of meaning of life across the four education groups (primary school, high school, bachelor's degree, and master's degree/Ph.D.) H (3, N = 200) = 9.14, p =.028.
- Group 1 (primary school) had the lowest mean rank Mr = 95.44 in comparison to Group 2 (high school) Mr = 92.54, Group 3 (bachelor's degree) Mr = 111.52, while Group 4 (master's degree/Ph.D.) had the highest mean rank Mr = 129.66 (table 4).

Table 4
Summary of differences of meaning in life between different education levels on the Kruskal-Wallis test

	Ranks		
	Education level	N	Mean rank
Presence of meaning	primary school	52	92.44
	high school	82	92.54
	bachelor's degree	47	111.52
	master's degree/Ph.D.	19	129.66

Note. p<.0.5

2. Meaning of life based on health, number of children, and place of residence:

There was a statistically significant difference in the presence of meaning between institutionalized individuals (group 1) and those living at home (group 2). Group 1 (institutionalized) had a lower mean rank (Mr = 69.52) compared to group 2 (living at home) with a higher mean rank (Mr = 131.48), H (1, N = 200) = 57.61, p < .001 (table 5).

Table 5
Differences in the meaning of life between individuals living in residential care and those living in private homes on the Kruskal-Wallis test

	Ranks		
	Type of residence	N	Mean rank
Presence of meaning	residential care	100	69.52
	private home	100	131.48

Note. p<.001

There was also a statistically significant difference in the presence of meaning between individuals with no children (group 1) and those with children (group 2). Group 1 (no children) had a lower mean rank (Mr = 78.19) compared to group 2 (with children) with a higher mean rank (Mr = 107.35), H (1, N = 200) = 9.18, p = .002 (table 6).

Table 6
Differences in the meaning of life between individuals with no children and those with children on the Kruskal-Wallis test

	Ranks		
	Group Type	N	Mean rank
Presence of meaning	with no children	47	78.19
	having children	153	107.35

Note. p=.002

3. The EQ-5D-5L VAS scale and its relationship with the presence of meaning:

The scores obtained from the MLQ questionnaire, which measured the presence of meaning, were divided into three levels: low presence of meaning (5-14), medium presence of meaning (15-24), and high presence of meaning (25-35). The dependent variable was the self-assessment of health on a visual analogue scale (VAS) from the EQ-5D-5L questionnaire, ranging from 0 to 100.

The Kruskal-Wallis test revealed a statistically significant difference in self-rated health on the VAS scale between the three conditions (H (2, N = 200) = 39.37, p < .001). Group 1 (low meaning) had a mean rank of 39.87, which was lower than Group 2 (medium meaning) with a mean rank of 68.44, and Group 3 (high meaning) with a mean rank of 115.62 (table 7).

4. The EQ-5D-5L "EQ Index" was used to assess participants' health preferences. The responses to the five-dimensional descriptive system were converted into a single summarizing index specific to Romania highlighted in previous research conducted and published by Elena Olariu and collaborators in 2022 (Olariu et al., 2023). This index, known as the EQ Index, reflects the health preferences of the population. The EQ Index was calculated using a specific syntax in SPSS, which converted the scores on the five health dimensions into a single total score.

There was a statistically significant difference in the EQ Index between the conditions (H (2, N = 200) = 21.90, p < .001). Group 1 (low meaning) had a mean rank of 57.90, which was lower than Group 2 (medium meaning) with a mean rank of 74.63, and Group 3 (high meaning) with a mean rank of 112.04 (table 7).

Table 7

Summary of differences of VAS / EQ Index between different levels of meaning on the Kruskal-Wallis test

	Ranks		
	Level of meaning	N	Mean rank
VAS	low level	15	39.87
	medium level	40	68.44
	high level	145	115.62
EQ Index	low level	15	57.90
	medium level	40	74.63
	high level	145	112.04

Note. p<.001

Discussions

The study's results are consistent with previous research, indicating a positive correlation between social support and life satisfaction. For example, Şahin, Özer, & Yanardağ (2019) and Alshraifeen et al. (2020) found that higher levels of social support were associated with greater life satisfaction among adults. The findings of this study suggest that social support is essential for enhancing individuals' satisfaction with life.

The study utilized multiple regression analysis to investigate the mediation model. The findings indicated that 45% of the variance in life satisfaction was accounted for by the existence of

meaning in life. The Sobel test for mediators validated the significant indirect impact of the presence of meaning on satisfaction with life, which was mediated by the perception of social support.

These findings support previous research that highlighted the mediating role of social support in the relationship between meaning in life and satisfaction with life. For example, Heo and Son (2009) found that social support mediated the connection between meaning in life and psychological well-being in young and middle-aged adults. This suggests that social support acts as a mechanism through which meaning in life influences satisfaction with life.

The study suggests that the presence of meaning in life is associated with better self-rated health and a more favourable state of health, as indicated by the EQ Index. The research provides insights into the relationship between meaning in life and health outcomes, highlighting the importance of considering factors such as education level, number of children, and place of residence in understanding the meaning of life. The study's findings are consistent with previous research on the sociodemographic factors that influence individuals' perceptions of the meaning of life. For instance, Schnell (2009) found that education level and marital status significantly contribute to a meaningful life among adults. Our study indicates that education may enhance the sense of meaning in life, which contradicts Schnell's (2009) findings of negative correlations between education level and meaning in life among adults. However, it is important to note that our study is limited to individuals aged 60 and above.

Nonetheless, there are some distinctions between the current study and similar studies. For example, Joshanloo and Jovanović (2018) discovered that age is not a significant predictor of life satisfaction. The present study focuses on elderly individuals.

A study conducted by Cornelia Rada (2020a) in Romania examined the factors associated with depression in the elderly. The study found that divorced, widowed, and unmarried individuals reported a lower quality of life. Furthermore, quality of life tends to decrease with age (Rada, 2020b). These findings suggest that the relationship between age and life satisfaction, as well as quality of life, may vary across age groups. An individual's marital status may affect their perception of their quality of life.

Moreover, this study only evaluated the impact of meaning in life on perceived quality of life, while previous research has also examined other factors, such as religiosity/spirituality (Borges et al., 2021). Therefore, it is important to consider various factors when analyzing individuals' perceptions of meaning in life.

In conclusion, the study's findings support a positive association between social support and satisfaction with life. Furthermore, the study found that social support mediates the relationship between meaning in life and satisfaction with life. These results are consistent with previous research. The study also contributes to the literature by examining the influence of education level, living situation, number of children, and perceived meaning in life on the perceived quality of life. However, there are differences in the age group studied and the factors considered. Future research could explore these factors and consider longitudinal designs to establish causal relationships between variables.

Conclusions

In the context of relationships, perceived social support plays a crucial role in determining one's overall well-being. When individuals feel supported by their loved ones, friends, or even professionals in their lives, they experience a sense of emotional, informational, instrumental, companionship, and validation support. This subjective assessment of the support received can

greatly impact their quality of life. Cohen and Wills (1985) highlighted those individuals who perceived higher levels of social support reported lower levels of psychological distress. This suggests that the subjective assessment of support received can have a significant influence on one's overall well-being.

Relationships are the most important source of meaning in life, according to Michael Steger (Steger, 2009, p. 683).

Social support from family and friends can also reduce the negative effects of aging and contribute to a higher quality of life (Rada, 2020b). Social support and friendship positively influence personal health and well-being (Rada, 2018, p. 141).

Having a strong network of supportive relationships can contribute to maintaining optimal physical and mental health. When individuals feel emotionally supported, they are better equipped to handle life's challenges and stressors. They have someone to turn to for advice, guidance, and encouragement, which can enhance their overall well-being. A meta-analysis conducted by Uchino (2009) found that individuals with stronger social support networks had better physical health outcomes, including lower rates of cardiovascular disease and mortality. This indicates that having emotional support can contribute to better overall health and well-being (Uchino, 2009).

Furthermore, the presence of companionship and validation support can provide individuals with a sense of belonging and acceptance. This can boost their self-esteem and confidence, allowing them to pursue their goals and aspirations with greater determination. When individuals feel supported and validated by their relationships, they are more likely to achieve their potential in any field of activity. A study by Reis et al. (2000) found that individuals who felt a sense of belonging and acceptance in their relationships reported higher levels of self-esteem. This suggests that having supportive relationships can positively impact one's self-perception and motivation to pursue personal goals (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000).

Perceived support is a measure of an individual's assessment of his/her situation (Eagle, Hybels, & Proeschold-Bell, 2019). The perceived source of social support refers to the subjective assessment of the emotional, informational, instrumental, companionship, and validation support provided by family members, friends, or informal support such as teachers, social workers, and health care personnel (Wawrzynski, Schaefer, Schvaneveldt, & Alderfer, 2021).

A lack of perceived social support can have detrimental effects on one's quality of life. Without a support system, individuals may feel isolated, lonely, and overwhelmed by life's challenges. This can lead to increased stress, anxiety, and even depression. Especially for older people, families contribute to their emotional well-being (Rada, 2021, p. 22). Without emotional, informational, and instrumental support, individuals may struggle to cope with difficulties and may find it challenging to achieve their full potential. Perceived social support is strongly associated with well-being (Wills & Shinar, 2000). Relationships and perceived social support are vital for finding meaning and fulfilment in life. The quality of relationships has a significant impact on well-being and overall quality of life. Quality of life refers to the maintenance of optimal physical and mental health required to reach one's potential in any area of activity. By fostering and developing supportive connections, individuals can improve their physical and mental health, realize their potential, and experience a more satisfying existence.

The findings of this study will contribute to the existing literature on the importance of purpose and meaning in life, particularly in the elderly population. The results will provide insights into the factors that influence the perception of quality of life the meaning of life in the third age, and the role of psychotherapy in promoting life transformation. The study's implications will be

relevant for healthcare professionals and individuals seeking to improve their quality of life and overall well-being.

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EFFECTIVE COMMUNICATION FORMS OF MANAGEMENT IN THE HEALTHCARE INDUSTRY IN BULGARIA

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Abstract

Objectives. The purpose of this scientific report is to research and present the results and analyses of a representative scientific study regarding effective communication forms of management in the health sector in Bulgaria. The research was conducted by the Gallup International Balkan team, at the request of Doncheva Yankov, PhD. An author survey was used for the purposes of the research.
Material and methods. The method of conduct is "face-to-face" with tablets. The research is representative, the sample is 807 adult Bulgarians. The measurement of the results is based on the "Gallup International Balkan" method. The detailed analysis is authored by the creator of the present scientific work.
Results. Among retirees and the unemployed, more effective health communication practices would be classic PR (public relations) approaches. Conventional PR methods would be more relevant for ethnic groups of Roma and Turks, while digital communication forms of management would work better for Bulgarians. General practitioners are the most preferred source of health information, followed by relatives, acquaintances, and neighbors, followed by an online search engine, then TV (television), social network groups and others. Brand awareness is found to be more important than the potential impact of a healthcare company's website and social media. Google ads arouse more trust among younger people, and Google reviews appear to be more important for people with a more favorable life horizon.
Conclusions. Considering the obtained results, we can conclude that effective communication in the health sector can be implemented through hybrid approaches in health PR.

Keywords: healthcare, public relations, management, communications, PR.

Introduction

The development of the technological world and the evolution of communication channels affect interpersonal communication, the way people think, and all spheres of business, existence, and lifestyle. Does this psychological attitude of a consumer society also manifest itself when it comes to products and services in the health sector? Through which channels is information about health and social care products and/or services most often consumed? Is Google at the center of the consumer urge, and to what extent does the Bulgarian rely on the new information technologies as far as the health sector is concerned? Which public communication methods and tools are of greatest interest to consumers in the health sector? Does age determine digital preferences, and what

channels do different groups of consumers use for obtaining health information? Answers to these and other questions emerge from the research presented in this article.

It is important to clarify that the concept of the present work is based on the scientific category "management in health PR", since the subject of the study is in the health sphere, in the field of public communications. The studied signs in the scientific work are the possibilities for optimizing the PR management methodology in the health sector, especially in Bulgaria.

Until now, the health PR in Bulgaria has been studied through analyses, opening a view of which health institutions, what PR is applied (or not applied), what units are distinguished, and what specific activity they perform. The PR structures in the Ministry of Health (MOH), the Central Office of the National Health Insurance Fund (NHIS), the Medicines Executive Agency (IMA), the Bulgarian Medical Association (BLA), and the Bulgarian Association for Drug Information (BALI) were reviewed. There is data about which factors influence the decision to set up a specialized PR department in healthcare organizations: the scale of the organization, its specific activities, and its management policy.

To date, the research presented in this article is the only one summarizing the experience of health PR practitioners as well as the opinions and feedback from patients and clients of health organizations in Bulgaria.

Material and methods

The research was conducted by the team of "Gallup International Balkan" by order of Doncheva Yankov, and for the purposes of the research, an author's survey was used. The research is representative, and the sample is 807 adult Bulgarians. The conducting method is "face-to-face" with tablets, the most up-to-date method for conducting sociological surveys. The investigated characteristics are gender, age, type of settlement, amount of personal monthly income, employment status, education, ethnicity, and party electorate.

To understand which health PR methods are effective, and which tools are most effective in a digital environment, a logical step is to conduct a survey among the audience of consumers of health products and/or services. To formulate the questions, bibliographic sources that researched and described the experience and methodology of the success of health public relations were examined.

By gender: men and women.

By age: 18–25 years, 26–35 years, 36–45 years, 46–55 years, 56–65 years, 66+ years.

By type of settlement: village, small town, regional center, capital.

By personal monthly income: up to BGN 150, BGN 151-250, BGN 251-450, BGN 451-700, BGN 701-1000, over BGN 1000, refusal to share monthly income.

By employment status: working (employed) in a private structure, working in a government structure, self-employed/own business, retired, unemployed, not working. Keep in mind that the unemployed are unemployed people who are looking for work. The not-working are those people who do not have a job and are not looking for one; for example, housewives, students, or students who are not looking for a job. The retirees category is all those who told the interviewers that they are retired (pensioners). The category is declarative and is aggregated for all pensioners — for TELK pensioners, by age, etc.

By education: higher, secondary, primary, and lower.

By ethnicity: Bulgarians, Turks, Roma.

Electorate of (political bias towards): GERB, BSP, DPS, VMRO, Vazrazhdane, ITN, Democratic Bulgaria, "Stand up, Bulgaria", "We continue the change", "Bulgarian rise", I would not vote (I do not elect anyone).

After such a refined fragmentation of signs, we will be able to get information not only about effective tactics in health PR but also what audience we would impress using specific methods. When a healthcare organization knows to which audience (target group) to direct its campaign activity, it will be of great benefit to know which method will reach the same audience the fastest. The research for the present scientific work derives this valuable information, and given the representativeness of the study, it can serve as a professional guide for PR practices in the health sector.

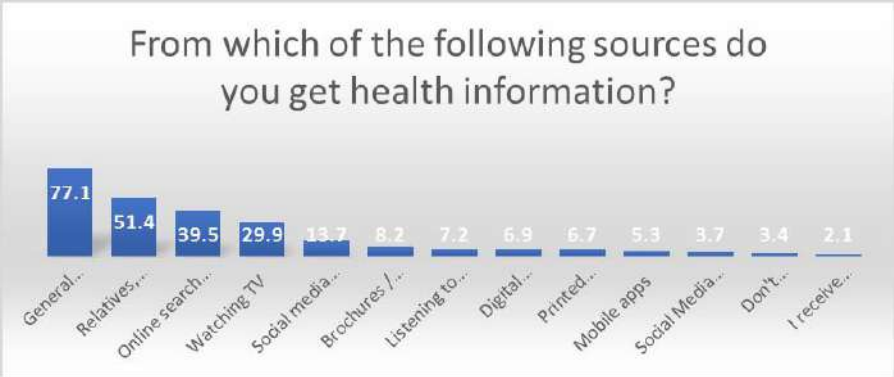
Results

The measurement of the results of the survey is based on the "Gallup International Balkan" method, and the detailed analysis of the same is the author's work of the creator of the present scientific work.

Regarding the sources of health information, GPs (general practitioners) are the most preferred source according to the declarative data, and it should be considered that some of the responses are probably also due to social desirability or automaticity.

Diagram 1

Health information source preferences of all respondents



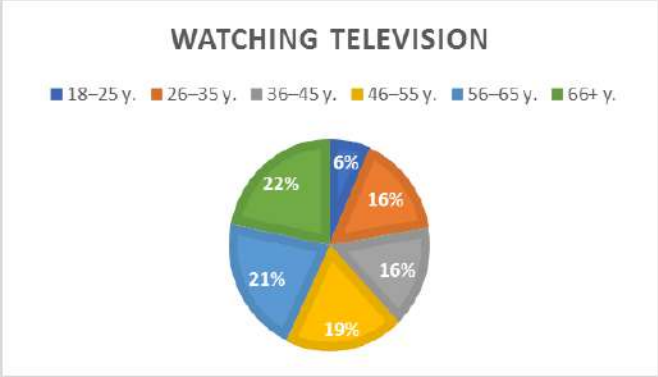
Based on 100% of the answers, the preferences for sources of health information after the personal doctor (77.1%) are relatives, acquaintances, and neighbors (51.4%); in third place comes an online search engine (39.5%), followed by television, social network groups, brochures, radio, digital forums, print publications, mobile applications. (See diagram #1). At the bottom of the ranking are sponsored content on social networks, lack of response, and other sources. If we take a closer look at the detailed fragmentation of age groups, it becomes clear that with increasing age and the associated circumstances of the life perspective (type of settlement, employment status, etc.), the influence of the Internet predictably decreases, while the influence remains evident, e.g., on television.

Diagram 2
Preference for an online search engine as a source of health information by different age groups

Quite expectedly, *online search engines* are the most popular method of searching for health information among younger groups of respondents, namely 26–35 years (25%), 36–45 years (20%), 18–25 years (19%). If we pay attention to the amount of personal monthly income, it is striking that online search engines are chosen most by people with the highest income.

Of the digital sources of information, the next most preferred is *television* (29.9%). It is not at all a surprise that the highest percentage (22%) of respondents are precisely from the group of adults over 66 years of age, followed by the 56–65-year-olds with 21%. Regularity is noticed: with increasing age, the interest and preference for television as a source of health information also increases. (See diagram #3).

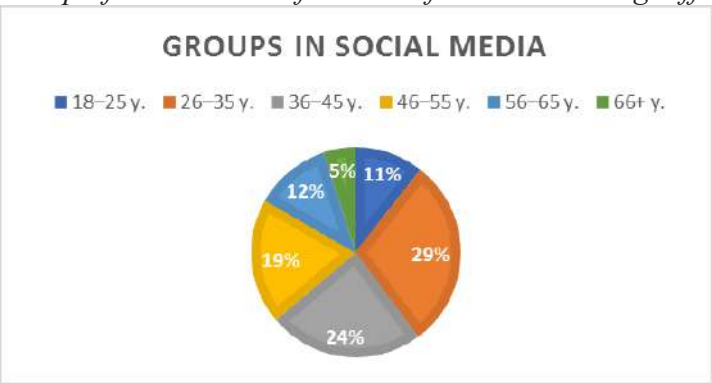
Diagram 3
Television as a preferred source of health information among different age groups



We should pay attention to *groups in social networks* as a source of health information; they are listed as preferable to radio for this purpose. Here, very similar to the result with online search engines, the reaction of the *26–45-year-olds is the most visible* (26–35-year-olds with 23.5% and 36–45-year-olds with 19.3%). Apparently, women are more interested (16.3%) than men (11%) when it comes to choosing specialized groups in social networks as a source of health information, and people living in regional centers are the most interested (15.2%), followed by residents of the capital (14.3%), people living in a small town (13.4%), and people living in the countryside (11.4%).

Diagram 4

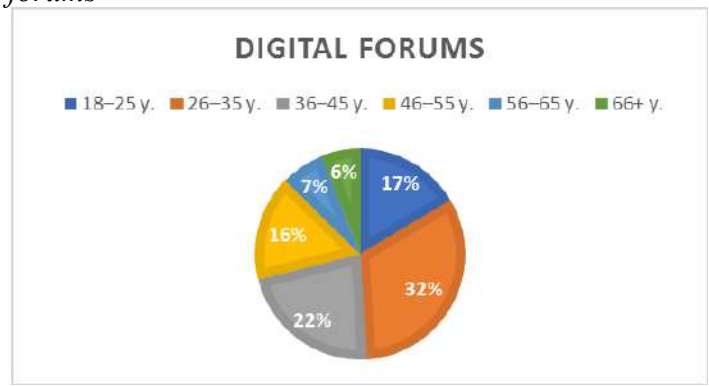
Social network groups as a preferred source of health information among different age groups



Radio is next in the ranking of preferred sources of health information, but it is not popular among young adults aged 18–25, as none of them named it as their preferred source. Our data also show that people aged 36–45 (14%) and 56–65 (17%) consider radio unimportant when it comes to seeking health information. Among all age groups, those over 66 years old listen to the radio the most for health information, with almost one-third (29%) of respondents in this age group choosing radio as their go-to source. An interesting result is that more men (8.8%) than women (5.7%) choose the radio. People over 66 years of age (11.6%), living in the countryside (10.2%), self-employed, and/or with their own businesses (16%) chose the radio the most. The correlation between educational status and interest in radio as a source of health information is clear; those with higher levels of education tend to exhibit greater interest. The situation with digital forums is very similar to the groups on social networks: with the increase in age, interest in the same decreases reciprocally.

Diagram 5

Preferences for digital forums



Almost twice as many women as men choose digital forums as a source of health information. The most popular choice is among 26-35-year-olds (13.6%), followed by respondents between 36 and 45 years old. The least chosen answer is from people over 66 years of age (2.5%). Regarding employment status, a completely logical result was obtained: the more educated a person is, the more he relies on digital technology. Bulgarians (7.5%), followed by Turks (3.2%), chose digital forums, while Roma did not indicate this choice at all.

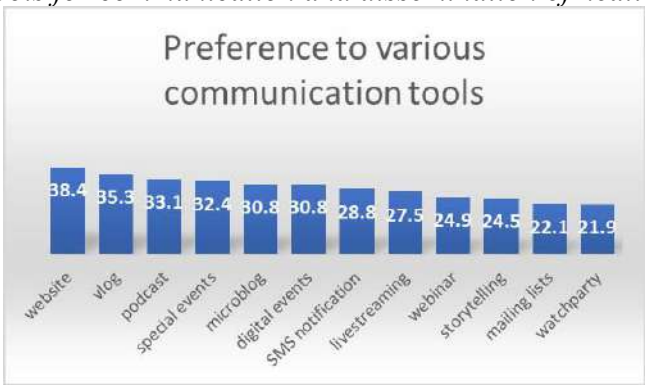
Although mobile applications are a hit trend in the field of healthcare worldwide, they are one of the least preferred sources of health-related information in Bulgaria.

Sponsored content on social networks is the least chosen source of health information, with more women than men relying on it (4.6% and 2.8%, respectively). There are dramatically more people between the ages of 26 and 35 (8.8%) compared to other age groups. Surprisingly, respondents with the highest and lowest monthly income made the same choice regarding sponsored content, and a uniform result, as with mobile applications, was also obtained here for groups with incomes between BGN 151-250 and BGN 251-450 per month, as not a single respondent selected them.

Before looking into the details of the results for the various indicators studied, we take a general look at the answers of all respondents, and it becomes clear that websites, vlogs, and podcasts are at the top of the digital ladder of honor when it comes to Bulgarians' preferences for communication tools and dissemination of health information. (See diagram #6).

Diagram 6

Preference for different tools for communication and dissemination of health information



At the bottom of this ranking is a watch party; this is not at all a surprise, considering the behavior of the management of social networks such as Facebook, which, as we mentioned in a previous chapter of the present work, decided to say goodbye to the function on April 16, 2021. Watch Party was discontinued. With bipolar thinking in the logic of choosing mailing lists, we share that they are second to last, presumably due to people's antipathy to being bombarded with unsolicited commercial messages. The surprise here is storytelling, which ranks in preference after webinars, live streaming, even after SMS notification, digital events, and microblogging. To understand the reason for this arrangement, we will pay attention to the life aspects of the respondents, for example, the type of settlement, personal monthly income, and education. Age is a significant factor in digitality, so we will take it into account when analyzing the results.

A website of a health or social organization is the most preferred of all tools for communication and dissemination of health information mentioned in the survey; men and women indicated almost equally this choice, although women slightly more (41.6% women and 35% men). Age tends to determine people's digital mood, and this is evident here: the website is of most interest to 26–35-year-olds, followed by the 36–45-year-old group, and least interesting to over-66s. The people of Sofia chose this method the most, and the population from small towns and villages the least. Almost as a joke, the most people with the highest income and those with the lowest income chose the website: 58.5% and 44%, respectively, and those with incomes between BGN 151 and 250 per month did not mention the website at all.

The *vlogs* were the next most chosen by survey respondents (35.3%), almost equally by men and women. The youngest are the most fans of this format for sharing health information, and quite expectedly, people over the age of 66 are the least. As with the website, people with the lowest

income and those with the highest have chosen the vlogs as an option they find interesting for obtaining health information, while the population with incomes between BGN 151 and 250 did not indicate this choice at all. The unemployed (those who do not have a job and are not looking for one, for example, housewives, students, or students who are not looking for a job) are the most (49.5%); this is logical since they have the most time for such activities.

Podcasts are a trendy option to reach a certain audience, including in the health sector. They are chosen almost equally by men and women, and younger groups of respondents are more interested in podcasts at the expense of the oldest, who are the least. Most answers about podcasts are from the people of Sofia (40.3%). Similar to vlogs, the most non-working people indicated that podcasts were of interest to them as a tool for communication and dissemination of health information (58.1%), while the least were pensioners (7.6%).

Special events, for example, charity events, premieres, openings of pharmacies, health facilities, etc., are an effective classic approach in public relations, and according to Bulgarians, they are in fourth place among the choices indicated in the survey. More women than men would respond to an invitation to a special event—36.2% of women and 28.3% of men. It is not atypical that young groups of respondents chose this option (18–45-year-olds are the most), and people over 66 are the least. The least number of people living in villages are interested in special events in the health sector, and the most interested are people from regional centers.

Microblogging is next in the ranking of the most preferred ways of communicating and disseminating health information in the health sector. Microblogs are most popular among people living in the capital and, quite predictably, least popular among people living in the countryside. The population with a monthly income of BGN 151-250 did not indicate the microblog at all, but as has been repeatedly obtained with other digital tools, people with the highest and lowest incomes are the most interested.

Digital events, for example, Facebook events, are a widely used tool in the management of public communications in the health sector, and according to the results of the current survey, they occupy the golden mean in the preferences of the respondents. Almost equally, men and women are interested in digital events; the trend for younger respondents' preferences is maintained here as well, led by the 26–35-year-old group, with the over-66s being the least.

SMS notification is a method that has been around longer than most of the other tools, and whether it is relevant and liked by the audience of consumers of healthcare services and products is clear from the results of the survey. There are no surprises in the age groups: most are young respondents; the least are people over 66 years of age. We find proportionality in the number of respondents from each type of settlement who chose SMS notification as a tool of interest to them. Most people with incomes between BGN 151-250 per month (46.6%) chose this type of communication. Pensioners (retirees) are the least.

Live streaming in the health sector is just as current an approach in PR as it is in other areas of business. The results show that it is less popular than SMS notification and all listed so far when it comes to people's health preferences. More men (30.7%) than women (24.4%) chose live streaming, although the difference was not drastic.

Webinars are a popular method of digital communication, which we paid special attention to in a previous chapter of this work. Men and women alike find webinars interesting, with 26–35-year-olds choosing this option the most, followed by 18–25-year-olds, and predictably, those over 66 are the least interested. Residents of the capital and those living in a regional center are equal, followed by people in a small town; the least are people living in a village. None of the respondents

with an income of BGN 151-250 per month described the webinars as interesting, and people with the highest and lowest incomes showed the most interest.

Oddly enough, *storytelling is ranked as one of the least interesting ways to communicate* and disseminate health information, as it is a common and fun way to communicate on the Internet. The smaller the population, the lower the interest. The educational regularity is in force here as well; in terms of ethnicity, the tendency of Bulgarians, Turks (7.9%), and Roma (6.9%), with Bulgarians (26.6%) being drastically more than the others, also applies.

For 22.1% of the respondents, *mailing lists* are of interest as far as communication in the health sector is concerned. Men and women who are interested in email communication are almost equal in number, and the younger the respondents, the more interested they are in this type of communication. The majority of people with the lowest and highest monthly income indicated periodic email notification as interesting to them, and those with an income between BGN 151 and 250 were not interested at all.

The watch party is an interesting tool for communicating and disseminating not only health information, but it is nevertheless the least preferred of the others in the survey. Respondents with the highest and lowest incomes, followed by those who do not share the amount of their monthly salary, are the most interested in watch parties, and people with a monthly salary between BGN 151 and 250 are not at all interested in this one method. The education attribute shows the same dependence as with the previous researched instruments in the survey, and by ethnicity, they are ranked as follows: Bulgarians, Roma, and Turks, with Bulgarians being significantly more interested.

The ~~topic~~ issue of trust in the health sector is both sensitive and crucial, as it is the main asset of health structures. Image and reputation are pillars of trust, and vice versa—trust can be the cause of an impeccable reputation. Building these values is a long-term process, and digital and conventional PR tools to achieve them can have varying levels of effectiveness. Consumers of health products and/or services have given their opinions on the matter, and here are the results:

The easy-to-use website inspires trust in over 60% of respondents to varying degrees: 3, 4, and 5, with 5 being the highest.

Diagram 7

How likely are respondents to trust a health/social care facility, doctor, or organization more if they have an easy-to-use website?

Men and women are almost equally likely to trust a health/social care facility, doctor, or organization more if they have an easy-to-use website; however, younger respondents, especially

those living in larger settlements and with the highest income, are more excited about an easy-to-use website. On the other hand, pensioners seem to be the least enthusiastic about this feature.

Having a well-known name is important not only in the health sector but also affects the work of PR teams as they strive to create a positive image of a particular health organization. When respondents are familiar with the name of a medical or social institution, pharmacy, or health organization, they tend to place more trust in it. The results demonstrate a classic progressive dependence - the higher the likelihood of trust, the greater the number of people who have made this choice. According to the survey, 55.6% of respondents stated that they are very likely or likely to trust a health or social care facility, doctor, or organization more if its name is familiar to them.

Diagram 8

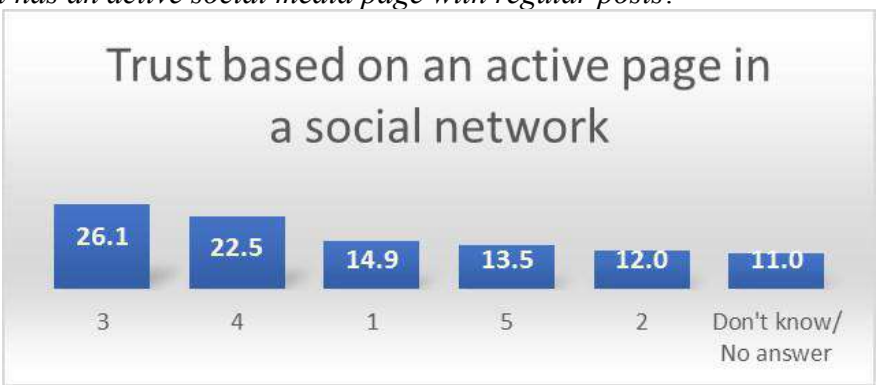
How likely are respondents to place higher trust in a given health or social facility, doctor, or organization simply because they are familiar with its name?

Bulgarians trust a well-known name of a health organization, but with small reservations, unlike the Roma, who can fully trust a pharmacy, for example, just because its name is familiar to them.

Social media activity can be indicative of an organization's overall activity as well as its desire to communicate with its direct and indirect audiences. The following survey question tells us how likely respondents are to trust a particular healthcare facility if it has an active social media page with regular posts. Of all respondents, 36% stated that an organization's social media presence is significant, while 26,1% were neutral.

Diagram 9

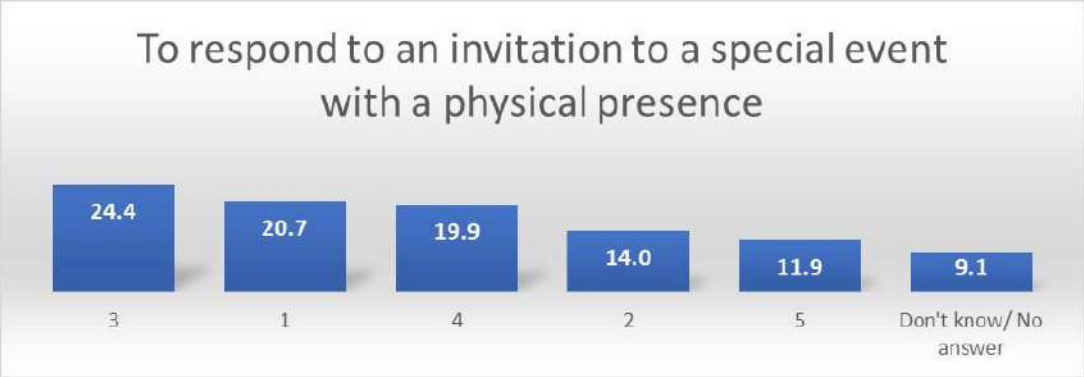
How likely are respondents to place higher trust in a given health/social facility, doctor, or organization if it has an active social media page with regular posts?



It is probable that 31.8% of the respondents will physically attend a special event in response to an invitation; when the neutral vote is included, the percentage rises to 56.2%. Our analysis will concentrate on people who get giddy about events involving physical presence.

Diagram 10

How likely are respondents to attend a special event in response to an invitation launched by a health/social facility, doctor, or health organization?



Responding to an invitation to a *digital special event with an online presence* is likely for 28.1% of people in Bulgaria, and if we add the neutral vote, the total is 49.2%. We consider those who are likely or very likely to respond to such an invitation.

Diagram 11

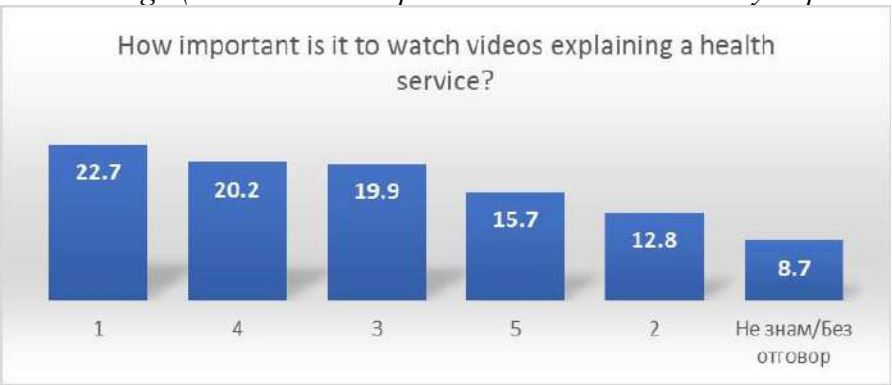
How likely are respondents to attend a digital special event (with an online presence) in response to an invitation launched by a health/social facility, doctor, or health organization?

These are rather women, 26-45 years old, almost regardless of the place of residence, the people with the highest incomes and those with an income between BGN 151 and 250 per month, mostly unemployed, well educated; the higher the education, the more likely they are to respond to an invitation to a digital event; the majority of ethnic Bulgarians, but none of the "Stand Up, BG" voters, are expected to attend.

We asked our respondents how important it is for them to watch videos explaining a health service that they or their loved ones will undergo. Here's what we found out:

Diagram 12

How important is it for Bulgarians to watch videos explaining a given health service that they or their loved ones will undergo (1 means "not important at all" and 5 is "very important")?

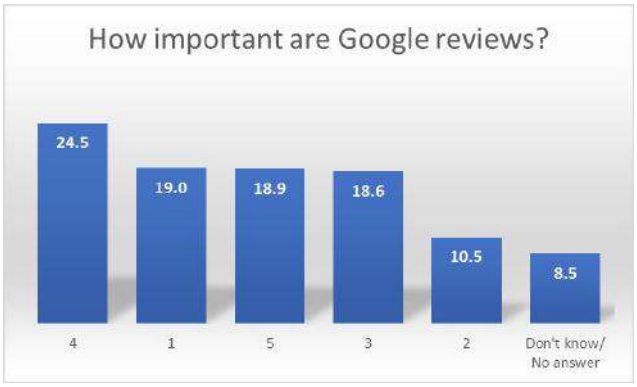


Almost an equal percentage of respondents, 22.7%, 20.2%, and 19.9% respectively, answered that it was not important at all, important, or neither important nor unimportant. However, 15.7% of the respondents considered it very important. Those for whom videos are very important are mostly young people aged 18-35; there are more women than men; the larger the type of settlement, the more the importance increases; and an interesting result is that the most people from the group of personal incomes between BGN 151 and 250 per month answered precisely, "It is very important to me.".

Seeking advice is a fundamental practice in real-life decision-making. Google reviews, or better known as Google opinions, shared by former patients and customers of a health or social care facility or health organization is the next health public relations tool we explore.

Diagram 13

How important is it for Bulgarians to read Google reviews? (1 means "not important at all" and 5 means "very important")

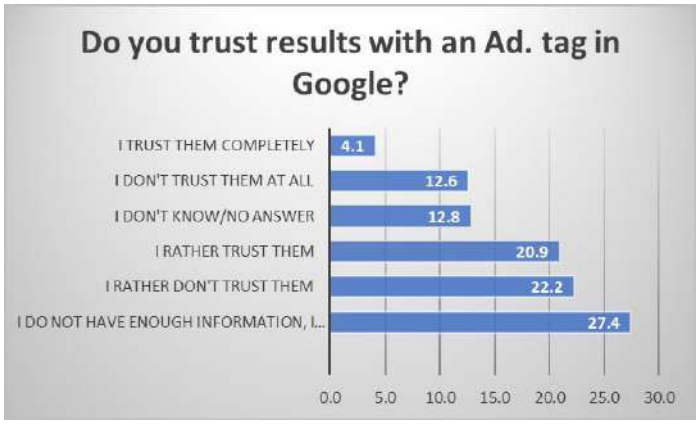


According to our data, nearly a quarter of the respondents consider it essential to seek advice from Google. The survey results showed that there was almost an equal number of votes for the two ends of the spectrum - very important and not important at all - with 18.9% and 19%, respectively. The study also found that people living in larger settlements tended to place more importance on Google's reviews. Furthermore, the results revealed that those who were unemployed, had graduated from universities, identified themselves as ethnic Bulgarians, and supported the "Bulgarian Rise" movement, considered Google's reviews the fourth most important factor.

Bianchi (2023) reports that Google's market share was over 84% as of December 2022. However, according to data from Statista (2023), this share was even higher in 2015 at 88%. This highlights the massive influence the search engine has on people's decisions and the resulting impact on their lives. The project's monetization makes it easy for users to be exposed to sponsored content presented in a sophisticated manner, with some users unaware that they are viewing paid advertising. The extent to which people in Bulgaria trust Google's results with the "ad" tag, which typically appears at the top, and whether they understand its meaning at all, can be understood from the results of the next question in the study. When searching for information on breast augmentation surgery, drugs, stroke treatment, or recovery from a car accident, for example, paid advertisements for hospitals, pharmaceutical companies, medical centers, and so on, are the quickest way to reach the searcher, and they base their treatment decisions on these results. This is the current situation in Bulgaria:

Diagram 14

How much do people trust results with an ad. tag on Google?



It is evident that there is insufficient information and that they did not pay attention to these details when nearly one-third of Bulgarians are unaware that sponsored content appears at the top of search engine results pages.

Similar results were obtained for the responses "I rather trust them" and "I rather don't trust them" (on a Google search with the tag "Ad"): 20.9% and 22.2%, respectively. We will specifically draw attention to the respondents because, in the context of public relations, an audience that is either completely or quickly trusted is more important. The likelihood that men and women will trust paid advertisements is nearly equal, with the highest levels of trust coming from those between the ages of 36 and 45, followed by those between the ages of 26 and 35 and 46 and 55. The type of settlement has almost no influence on the results; in fact, a fairly harmonic distribution emphasizes the fact that the majority of those with the highest incomes selected this choice.

Out of all the respondents, full credit of trust (as in Google advertising results) received the lowest vote (4.1%). The technical profile is not unusual: individuals in small towns between 18 and 25 years who are not very different from those in other types of settlements.

Discussion

The fundamental way that the health sector is different from all other business sectors is that it deals with people's lives and health, and it is distinguished by a unique audience sensitivity. Successful PR management is part of the strategy for the development of successful businesses, including in the health sector. The public relations management strategies used in the health sector that are currently known fall under the general principles of public relations, but they also have unique details. These include the following: writing and distributing press releases; planning open-door days; conducting information seminars; holding health exhibitions; purchasing technology; conducting research; expertly and meticulously planning PR campaigns; monitoring; managing crises; and handling other issues that may come up while a PR specialist is working in the field. Health PR management can also be accomplished by employing low-cost, subtle, and believable message delivery strategies like general marketing promotion, editorial endorsement, and third-party endorsement to spread the word. Questionnaires and surveys are part of the healthcare public relations management toolkit.

Among the key digital challenges for health PR specialists across various directions and platforms are the representative appearance of a health organization's website, comprehensible language, medically accurate texts; other challenges include periodic update of the information in the institution's website's "news" section; the creation of texts (articles and posts) for on-page and off-page SEO optimization; resourcefulness, responsiveness, sufficiency in communication with patients, clients, employees and the general public in various digital channels, as well as in the preparation of content for daily or periodic maintenance of the META profiles (and profiles in other social networks) of the institution they represent health PRs, creation of texts for menus and content mobile applications and periodic monitoring for updates and bugs in the system. When implementing digital special events in an online environment, hybridity and adaptability are qualities that are more than necessary for success.

The current empirical findings offer a fresh perspective and potential avenue for future study on the actions of health communication specialists (such as in their role as spokespersons), which can play a significant role in the development of homo sapiens, the success of the entire health organization, the local community's quality of life, and the global health of people. Similar research can be conducted on other territorial units containing diverse ethnic groups, and megacities ought to be included in the category of settlements.

Following the scientific and research analysis, recommendations can be made regarding the need for in-depth analyses of health PR in the meta universe (metaverse, multiverse, megaverse) - what is its specificity, how it works, which health PR methods remain universally valid in the 3D virtual space, which strategies result in effective PR for health in this context. Multiplied knowledge about the digital world and the way of life its conditions implied by the study of the health field in the parallel digital worlds, and particularly by the management of health public relations there. Additional suggestions for future research on the topic are made in relation to artificial intelligence; this technology is still relatively new when it comes to health PR, and tracking its advancement will yield fresh insights into the efficacy of these messages.

Conclusion

As the digital world continues to expand and grow, online communication will become increasingly prevalent. However, in Bulgaria, communications in the health sector are still a hybrid,

combining digital tools and traditional methods. Considering all that has been said thus far, the following conclusions will be drawn:

1. Classic PR approaches would be more effective in health communication with target groups such as pensioners, the elderly, and the unemployed, as they tend to be less tech-savvy than other groups of respondents. Conventional public relations methods would be more relevant for ethnic groups such as Roma and Turks, while digital communication forms of management would work better for Bulgarians. Sources of health information: General Practitioners (GPs) are the most favored source of health information, followed by family members, friends, and neighbors; an online search engine comes in second; then come television, social media pages, radio, brochures, internet forums, print media, and mobile applications. Sponsored content on social networks, unresponsiveness, and other sources rank lowest in the ranking.
2. Channels for health PR–Bulgarians show the most serious interest in websites. Perhaps due to the perceived ease of use, respondents prefer channels with video content more than those without. Except for websites, which are more established digital forms, older people do not yet find the new forms of communication to be as natural or as familiar. Trust (Image and Reputation) – Brand awareness predictably appears to be more important than the potential impact of a healthcare company's website and social media. However, the website (and, to a lesser extent, the social media pages) perform important outreach work for youth groups.
3. Younger people are more likely to trust Google sponsored content, Google reviews, and video content, but neutrality and reservation are commonplace. For those with a longer life horizon, viewing a video about a planned medical procedure, for instance, and particularly reading Google reviews, prove to be more significant. The respondents' level of education is positively correlated with their level of digital literacy and engagement. Although they use health organizations' websites, retirees are the least tech-savvy group.
4. The predominant mode of communication is hybrid: among the conventional channels, radio and television are most frequently utilized. Both the writing of texts for the website and the use of mailing lists for health communication are standard practices. Among the common practices are content creation for social media, mobile applications, and SEO optimization. The most popular digital communication channels in the health sector are social networks, e-mail, and websites. Although sponsored content is used in practice, respondents claim that it is not always effective.

Considering the obtained results, we can conclude that *the study fully supports the leading hypothesis,* which holds that the health sector can effectively implement communication through the use of hybrid approaches to public relations. Only in this way will health public relations specialists be able to fulfill one of their most basic functions – to be a bridge between health organizations and their audiences.

For PR professionals in the health sector, choosing which strategies to use is an intellectual journey along entwined paths of experience, skills, knowledge, professional intuition, and contacts. The efforts of health public relations specialists are valuable when the goal is better health and a healthier existence for the human species. Hybridity is a necessary horizon companion. Right now, more than ever!

Acknowledgements

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CHANGES IN TEACHING METHODS DURING THE COVID-19 PANDEMIC IN ROMANIA

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Abstract

Objectives. During the COVID-19 pandemic, numerous measures have been taken worldwide, and, in this context, teachers were put in a position to adapt teaching to the virtual space and learn the ways of online teaching on the go. The aim of this study was to answer the question: What were the main online teaching methods currently used by Romanian pre-university teachers during the COVID-19 pandemic?
Material and methods. The research methodology used was the focus group. Between September 9 and 11, 2021, four focus groups were held online with 18 teachers from pre-university education in Romania.
Results. Most of the teachers had mixed assessments of online teaching during the COVID-19 pandemic. Teachers identified several types of problems they faced during this pandemic. In terms of technical difficulties, they talked about the lack of appropriate technology or the existence of problems related to the Internet connection. From the perspective of social difficulties, they mentioned new types of relationships among teacher, child, and parent and the emergence of new social roles for the child and parent in the educational process.
Conclusions. This study shows that there were numerous challenges faced by Romanian teachers during the COVID-19 pandemic. Teachers had to adapt to the new challenges and develop a skill set required in online teaching: learning to creatively use digital tools; more efficient use of already existing online teaching platforms; attending training courses to refine the social and psychological skills needed in online interactions with students.

Keywords: COVID-19 pandemic, online teaching methods, digital tools, online teaching platforms, online skills and competencies.

Introduction

According to data published by EUROSTAT (EUROSTAT, 2020), school closures due to the COVID-19 pandemic affected a total of approximately 76.2 million pupils and students: 15.7

million children (up to 5 years) in early childhood education, 24.5 million pupils (5-7 years) enrolled in primary education, and 36 million students (10-16 years) in secondary education.

From the perspective of the internal difficulties of the educational process during the two years of the COVID-19 pandemic, in 2021, the Romanian Ministry of Education estimated that over 4400 teachers did not have digital devices and/or access to the internet (Ministerul Educației, 2021). The Ministry of Education also mentioned as other problems the lack of digital devices through which students and teachers can access online courses, the lack of privacy during online classes because students had to share the work space with their parents and/or siblings and teachers/teachers with their children or other family members; and the lack of a national e-learning platform (Ministerul Educației, 2021).

The research question of this article was: What were the main obstacles faced by Romanian pre-university teachers during the COVID-19 pandemic?

The theoretical framework

The assessment of the impact of online education from the COVID-19 pandemic on the main educational actors must be seen not only from the perspective of these urgent adaptations to the new reality but also from a broader point of view that concerns the consideration of digital as a major source and powerful driver of innovation and current economic growth. It redraws the value chains of entire production sectors. Finally, and above all, it is a central vector of knowledge and culture (Boissière & Bruillard, 2021; Grimault-Leprince, 2023). Regarding online education, the researchers found that it has traditionally been viewed as an alternative pathway, particularly suitable for adult learners seeking opportunities in higher education. However, the emergence of the COVID-19 pandemic required educators and students at all levels of education to quickly adapt to virtual courses (Lockee, 2021; Xianghan & Stern, 2022). Teachers' attitudes towards the use of digital tools in education were a rather sparsely researched topic in the pre-pandemic period. However, there were studies that revealed a wide range of opinions towards the use of ICT in the classroom in the Czech Republic, Germany, and Norway. The respondents were divided into five categories, starting with the group of enthusiasts and ending with teachers who reject ICT. The largest group was made up of enthusiastic teachers. These results regarding the perceptions of the use of digital tools in education were not confirmed by subsequent research during the pandemic and post-pandemic periods (Eickelmann & Vennemann, 2017; Gleisner Villasmil, Lindvall, Sund, & Sert, 2023; Lomos, Luyten, & Tieck, 2023). Thus, between June and September 2020, the European Commission launched a public consultation on the impact of COVID-19 on education and training, on the related shift to distance and online learning, and on their vision of the future of digital education in Europe. The public consultation revealed that around 60% of respondents had not used distance and online learning tools before the crisis. Although this survey was carried out based on the consultation of a wide range of citizens, not only with actors from the educational environment, it can still be taken into account because, in the context of the health crisis, the whole society mobilized with the aim of intervening and supporting the urgent transition process to online education (Planul de acțiune pentru educația digitală (2021-2027), 2020).

The COVID-19 pandemic has affected more than 1.5 billion pupils and students in 165 countries. Distance education was seen as the only alternative to ensure pedagogical continuity. This situation has led to many difficulties, in particular the lack of direct contact, technical problems, and connection difficulties. In addition, many teachers felt that they did not have sufficient skills in the field of digital technologies (Legros, 2021). Authors who have studied the rapid transition to the

digital sphere during periods of school closures have highlighted major differences in terms of access to digital technologies, depending on the income level of countries, but also in terms of the situation of different social groups within countries (Husamah, Suwono, Nur, & Dharmawan, 2022; Zancajo, Verger, & Bolea, 2022).

An extensive online education opinion survey was conducted in India, with both teachers and pupils/students participating. Most of the answers are in favor of traditional learning. The researchers hypothesized that this result was due to the unprecedented circumstances and the lack of preparation of teachers and students for the transition to online distance education (Selvaraj, Radhin, Nithin, Benson, & Mathew, 2021). Another research conducted in China assessed the attitudes of 892 teachers towards online learning using learning environment, need gratification, mental engagement, and behavior as predictors. Structural equation modeling was used to explore the relationship between these four dimensions during these teachers' participation in an online learning program. Results reveal significant correlations between learning environment, need gratification, mental engagement, and behavior (Mo, Minjuan, Yulu, & Hai, 2021).

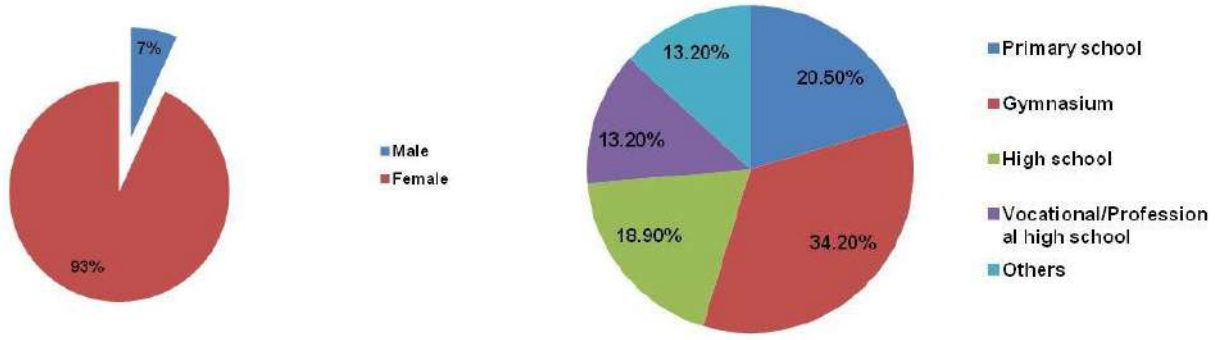
Material and Methods

To answer the previous research question, this study will present an analysis of data resulting from an ERASMUS+ project ("DigiTeaL" or "Digital Teaching Literacy") running in 2021-2022 over 18 months. The University of Bucharest is a partner in the project, along with the University of Wolverhampton (Great Britain) and the non-governmental organizations Demokritos (Cyprus), Emphasis (Greece), and Beno (Germany).

In the first stage of the project, an opinion survey was conducted with teachers from the pre-university education system in Romania and the Republic of Moldova. The sample of respondents had a volume of 164 people, and the data collection period was July 27–September 13, 2021.

From the point of view of the sample structure, the data indicate a majority percentage of female teachers (93.2%) among the respondents (see Figure 1). At the same time, more than half of the survey participants work in primary and secondary education.

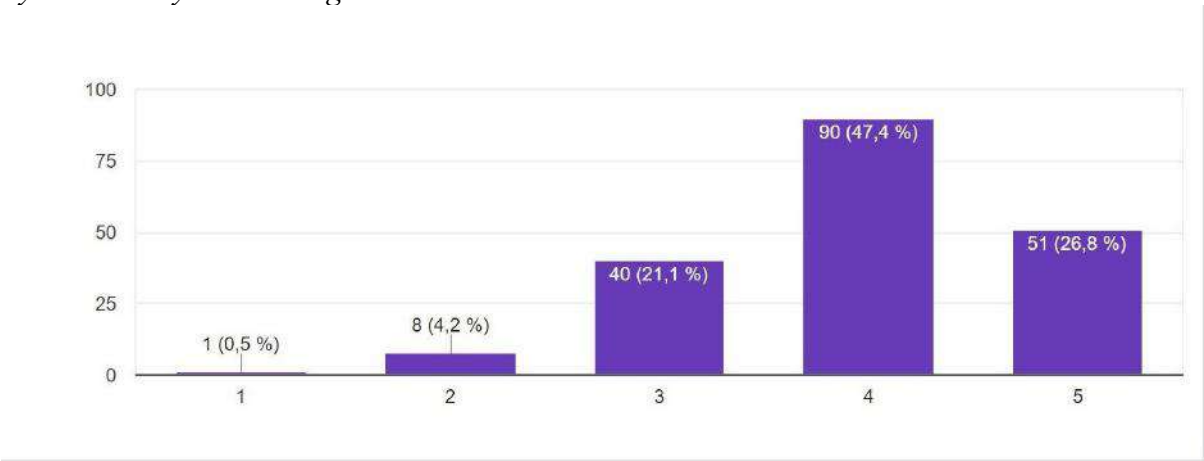
Figure 1.
Sample structure



Results

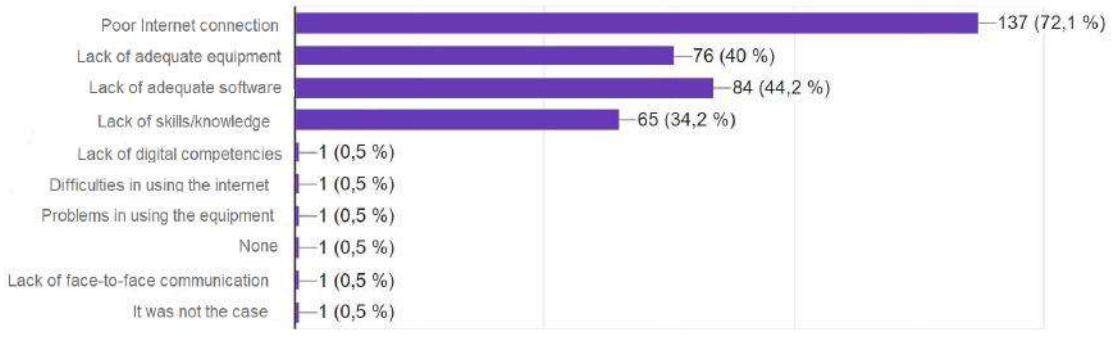
According to the data collected through the online survey regarding the confidence related to their own digital skills, most teachers declared themselves "confident" (47.4%) and "very confident" (26.8%) in relation to teaching online lessons (see Figure 2).

Figure 2.
Safety related to your own digital skills



"Poor internet connection" (72.1%), "lack of special software for online lessons" (44.2%), "lack of appropriate equipment" (40%), and "lack of skills/knowledge needed for online lessons" (34.2%) were the main problems facing pre-university teachers included in the sample (see Figure 3).

Figure 3.
Difficulties encountered while teaching online lessons



Regarding the online teaching platforms used by the schools where the respondents worked in relation to the teaching platforms they actually used during online classes, the results indicate that they largely overlapped due to access offered to teachers by the "Google Classroom" and "Microsoft Teams" suites (see Figures 4 and 5).

Figure 4.
The online teaching platform used by the institution where it operates

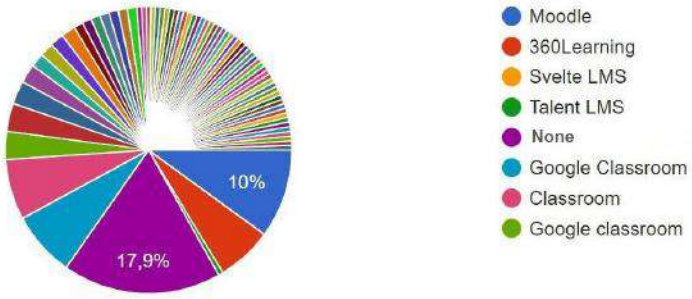
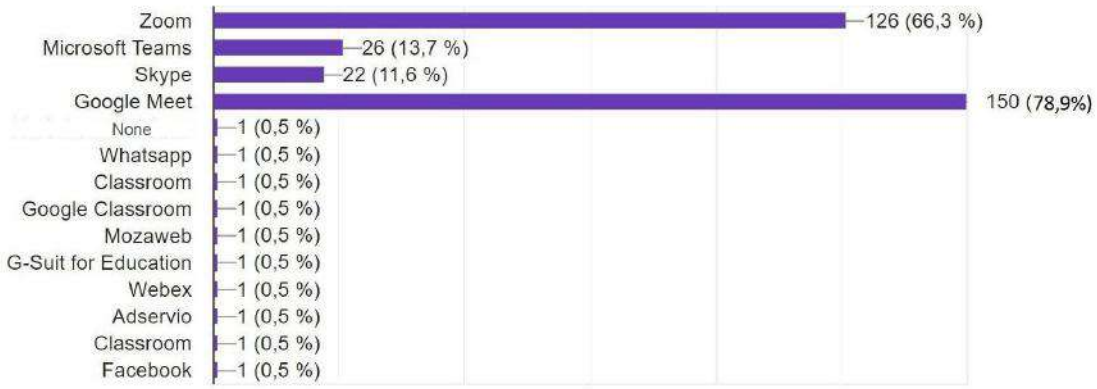


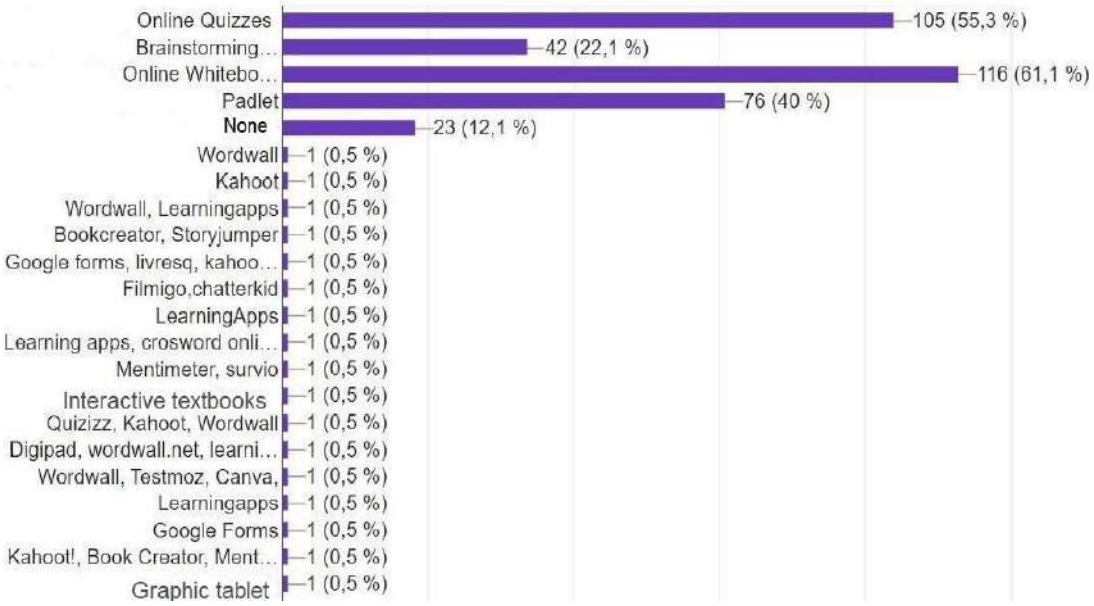
Figure 5.
Online teaching platform used for online lessons



An interesting aspect was the fact that 17.9% of the teachers declared that no teaching platform was used in the institution where they worked (see Figure 4), although, according to their statements, only 0.5% said that they did not use any online teaching platform during the pandemic (see Figure 5). A possible explanation for this difference lies in the fact that most of the questioned teachers acted independently in relation to the institutions, assuming the continuation of the didactic process by their own forces.

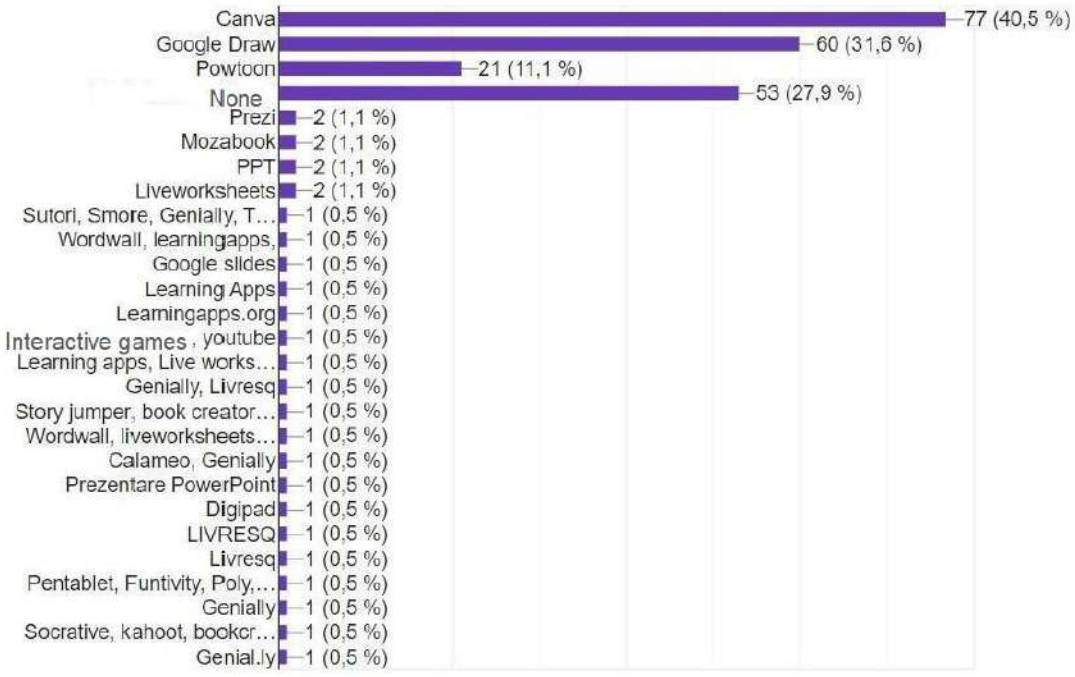
The period of the pandemic also represented an opportunity for IT companies to develop and refine a series of programs (software) and applications for teaching online lessons. Along with the previously mentioned platforms ("Google Classoroom" and "Microsoft Teams") for teaching online lessons, teachers used "Zoom" (66.3%) and "Skype" (11.6%) (see Figure 5). According to the data collected in this study, in order to increase the degree of interaction with students, teachers used platforms such as "Online Whiteboard" (which is actually part of the "Google Classroom" suite) (61.1%), "Quizz Online" (55.3%), "Mind Maps" (22.1%), and "Padlet" (12.1%) (see Figure 6).

Figure 6.
Online teaching platform used to increase the degree of interaction with students



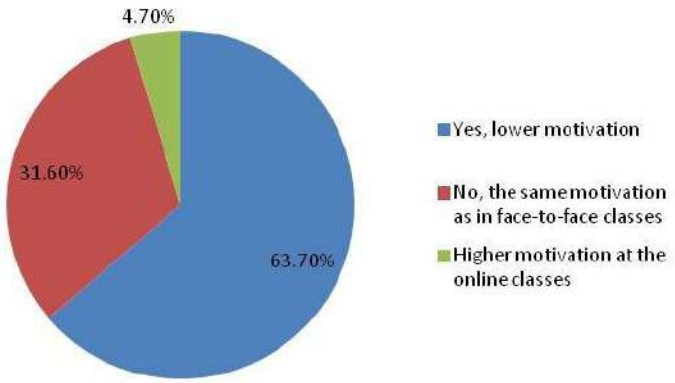
"Canva" (40.5%), "Google Draw" (also part of the "Google Classroom" suite) (31.6%), and "Powtoon" (11.1%) were the online platforms used to create attractive content for online classes (see Figure 7).

Figure 7.
Online teaching platform used to create engaging content for online classes



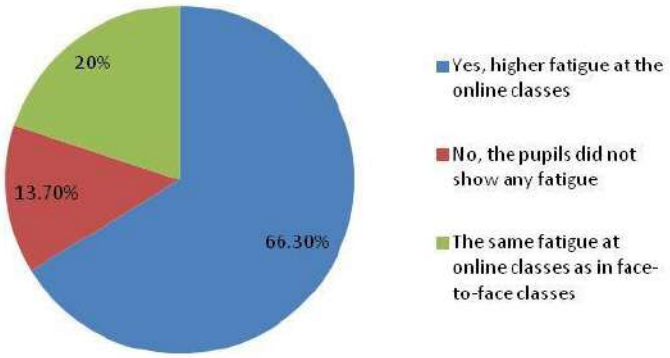
The period of the pandemic also represented a challenge that students had to face: the transition from classic education, based on face-to-face interaction, to online classes also brought a series of negative elements in terms of the behavior of the beneficiaries of the educational process (students). Thus, according to the data set analyzed, a percentage of 63.7% of teachers appreciated that there was a decrease in student motivation during online classes, and only 31.6% claimed that this motivation remained unchanged (see Figure 8).

Figure 8.
The existence of problems related to student motivation during online classes



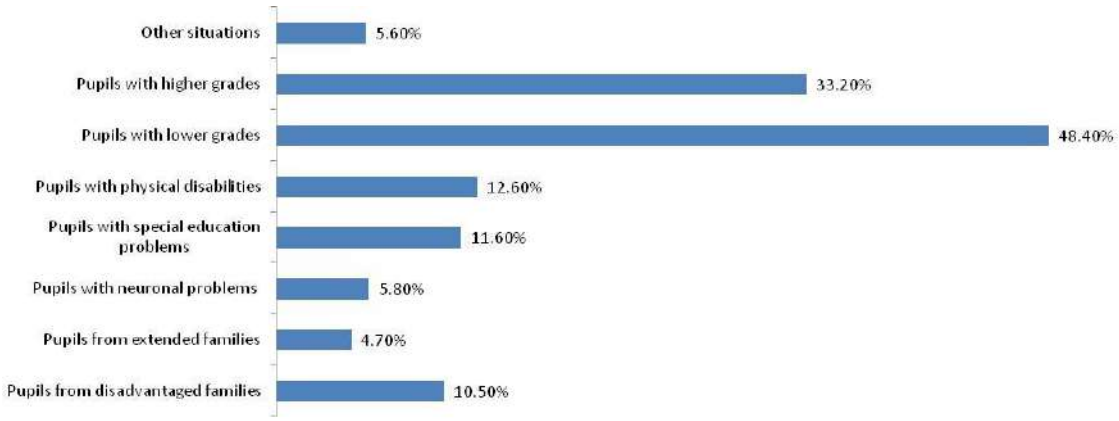
A significant percentage of teachers (66.3%) declared that digital fatigue also appeared during online classes, with the percentage of those who claimed that it did not manifest itself being significantly lower (13.7%) (see Figure 9).

Figure 9.
Issues related to student fatigue during online classes



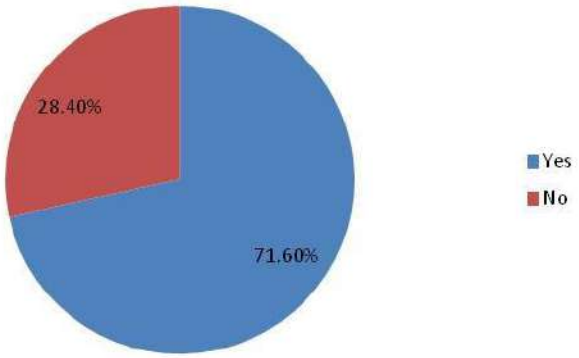
Regarding the comparison between online and face-to-face lessons, the teachers included in the analyzed sample declared that online education benefited students who previously had poor results (48.4%), students from disadvantaged families (10.5%), those with special educational needs (11.6%), and students with physical disabilities (12.6%) (see Figure 10).

Figure 10.
Comparison of online and face-to-face lessons for students



Most of the teachers surveyed online (71.6%) were aware of GDPR provisions (see Figure 11).

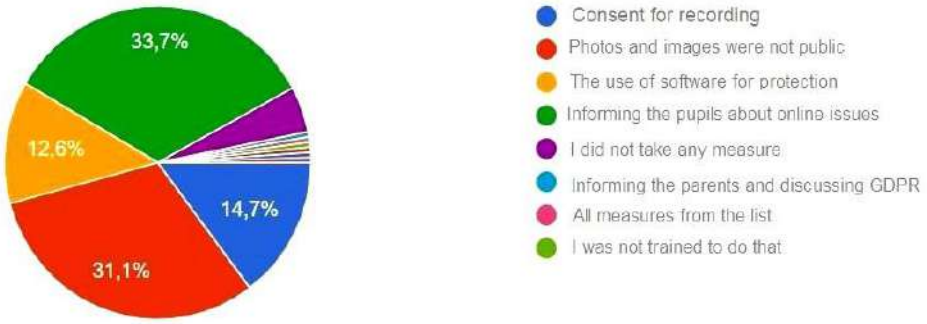
Figure 11.
Knowledge of GDPR provisions



In this context, the measures taken to protect students' private lives and intimacy during online classes were extremely diverse: requesting and obtaining consent to record classes, protecting

students' identities, and informing students about the risks associated with their online activity (see Figure 12).

Figure 12.
Measures taken to protect students' privacy/intimacy while teaching classes online



At the same time, teachers had to take a series of measures to avoid interrupting online classes by people from outside the class, including introducing a password for access to online classes, verifying the identity of the people participating before the start of the class, and maintaining the private nature of the access link at class time (see Figure 13).

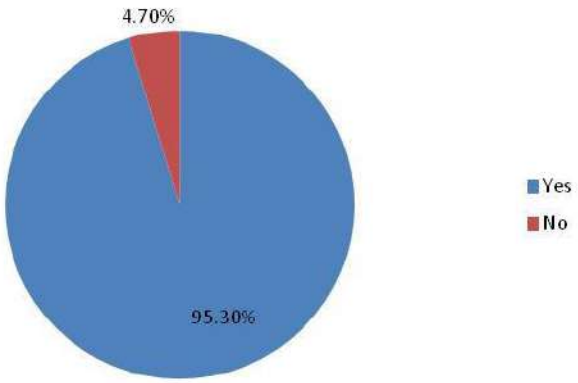
Figure 13.
Measures taken to avoid disruption of online classes by people outside the classroom

Changing security settings, using the cyberbullying reporting system, and informing students about online dangers and risks were also some of the measures taken by teachers to protect students from online dangers and risks (see Figure 14).

Figure 14.
Measures taken to protect students from online dangers and risks

The new type of education (the digital one) also marked the manifestation of a new type of relationship at the level of the profession, with an extremely high percentage of the subjects included in the sample (95.3%) declaring that they exchanged advice and best practices with other colleagues (see Figure 15).

Figure 15.
Peer-to-peer support: tips and best practices



Discussions and Conclusions

The results of the online survey conducted within the "DigiTeaL" project thus indicated that the majority of respondents were of the opinion that they too have "good" and "very good" digital skills (46.5%). The main difficulties faced by Romanian pre-university teachers online were poor internet connection (71.2%), lack of software and applications (45.3%), or lack of appropriate equipment (38.8%). About 35.5% of respondents considered the lack of digital literacy to be a problem.

Respondents faced decreased student motivation (66.3%), fatigue (66.3%), and evaluation errors, with 48.4% of respondents considering that online grades were higher compared to face-to-face classes in front of them. The majority of respondents (71.6%) were aware of the General Data

Protection Regulation (GDPR), and their responses demonstrated that most of them have taken steps to protect students' online safety. Only about 5% of them reported not taking any action to ensure the online safety of students and the teaching class.

The main problems during online teaching identified by the teachers participating in the online survey were: a decrease in students' motivation compared to the previous period (61.2%); the appearance and persistence of students' digital fatigue during online classes (67.7%); post-festum identification of student evaluation errors in the sense that 45.9% of respondents stated that the grades awarded were higher because the exam was conducted online.

At the same time, the period in which the teachers carried out the activity online during the COVID-19 pandemic indicated the existence of both positive aspects (for example, the ability of teachers and students to quickly adapt to the requirements of online education; the development of new digital skills) and some negative elements (decreasing student motivation during online lessons; the emergence of new psychological phenomena, such as digital fatigue; student evaluation errors).

As the existing literature shows (Mallillin, Mendoza, Mallillin, Felix, & Lipayon, 2020; Dos Santos, 2024), the main obstacles faced by Romanian pre-university teachers during the COVID-19 pandemic were thus professional, administrative, and psychological.

With the passing of this stage, this study concluded that new studies are needed to identify ways of supporting for the teaching staff on the horizon of the present and future economic-social crises.

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VALIDATION STUDY OF THE QUESTIONNAIRE ON THE PERCEPTION OF THE EFFECTS OF PRAYER

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Abstract

Objectives. The effectiveness of prayer in resolving the issues that individuals encounter is a subject of interest not only for the faithful but also for those seeking alternatives to the pragmatic solutions designed for the social context in which they find themselves. That is why the main objective of this study was to construct a questionnaire to measure the perception of the effects of prayer.
Material and methods. The construction of the questionnaire was achieved by developing a consistent number of items that were then applied to a representative sample and by subjecting the results to exploratory and confirmatory factorial analyses. The fidelity of items, subscales, and scales was also measured.
Results. The specific statistical analyses for the validation of the questionnaire were performed, and thus the adequacy index of each variable was calculated for the complete model of the questionnaire (KMO = .96), and following the sphericity test, a score $\chi^2_{(1035)}$ = 18257, p < .001, statistically significant, was obtained. Thus, the values of the indicators for the validation of the factorial structure are within the accepted limits ($RMSEA$ = .04, TLI = .94, χ^2/df = 1.94, p < .001).
Conclusions. Assessing the effectiveness of prayer in improving people's lives is still a controversial topic and difficult to prove, but the degree to which people perceive positive effects is measurable and is a topic of general interest. The validation of this questionnaire is a novelty among the scales in the Romanian language.

Keywords: faith in the effects of prayer, introspection, emotion regulation, compassion for others, self-control.

Introduction

One of the most well-known truths about humanity is the positive perceived benefits of prayer on the overall well-being of those who engage in it. There is an increasing amount of evidence supporting these effects based on numerous studies that have found relationships between important psychological characteristics and prayer, as viewed by Salazar (2008) as an act of communication with God that can be approached from the perspective of efficacy and authenticity. The efficacy of prayer refers to its power or ability to produce certain effects. Prayers need to be "authentic", meaning that there should be a correspondence between the act of prayer and the mental

state of believing that prayer can have a positive impact. Furthermore, the authenticity of prayer involves a sincere and profound sense of faith and spiritual connection during this act (Sharp, 2010).

Additionally, prayer allows a person to acquire a certain kind of self-knowledge and, therefore, to be drawn closer to God. Through introspection and meditation during prayer, an individual can explore his/her thoughts, feelings, and deep-seated beliefs. This self-awareness can lead to a better understanding of oneself and enhance the connection with divinity. Prayer can provide a sense of inner peace and spiritual fulfillment, thus enabling a deeper proximity to God (Cockayne, 2017). It can provide opportunities for self-reflection as practitioners become more aware of their own thoughts and emotions, as well as those of others (Leffel, 2011, as cited in Greenway, 2020). Lambert et al. (2009, as cited in Greenway, 2020) have found that the time spent in prayer positively correlates with an increase in gratitude. According to this theory, prayer promotes prosocial behavior, as individuals who pray frequently perceive themselves to be kinder. Prayer can amplify positive emotions, similar to meditative practices, and can also amplify other emotions. For example, it can evoke feelings of reverence, respect, awe, or humility as one approaches and communicates with a powerful supernatural being. These emotions can similarly energize the respective resources and spill over into other areas of life. Prayer can provide an opportunity for reasoning and reflective thinking to take place amidst the business of everyday activities (Greenway, 2020). People who pray, especially those who believe they are praying to a powerful and holy supernatural being, may experience increased humility, as these prayers amplify both the emotions felt during prayer and others as well. Additionally, when prayers refer to virtues and vices, they directly influence the usual behaviors or actions of the individual, more than when they modify their own emotions (Fredrickson et al., 2008, as cited in Greenway, 2020).

Prayer has started to be used in therapeutic techniques, not only in patristic psychotherapy but also in other approaches. For example, Christian prayer healing accompanied by emotion-focused therapy procedures significantly contributes to progress in overcoming emotional blockages by finding in God a Person who is friendly towards emotions (Wan, 2021). Prayer-based psychotherapy helps the recipient become a person of noble and religious character, with the qualities of recognizing the union with God, increased self-awareness, understanding one's own weaknesses, and striving to improve them, as well as enhancing motivation in life (Makarrim, 2022). Prayer provides individuals with resources they can use to develop individual strategies for emotion regulation. In particular, the relationship with God through prayer brings individuals closer to a person to whom they can express and unload their anger; positive reflections that help maintain self-esteem; reinterpretation of cognitions that make situations appear less threatening; a person with whom they can interact to "eliminate" negative stimuli that induce emotions; and a role model for emotion management. Subsequently, after emotional regulation based on these formed resources, there is a positive influence on social action (Sharp, 2010).

In an experimental study that involved exposing participants to video tasks of emotional suppression after they engaged in a Stroop task where they prayed for the desires and needs of others (Friese & Wänke, 2014), it was found that they performed better in emotional suppression compared to those who were allowed to pray freely. Researchers suggest that prayer may have this effect because it relies on social resources, and similar effects could be found if other social resources were used. Using the same research design but focusing on thought suppression (Friese & Wänke, 2014), those who engaged in thought suppression and prayer had better results in the Stroop task than those who engaged in free thinking and thought suppression. The authors suggest once again that these effects may be a result of utilizing social resources, and similar findings may arise from other interventions involving social interaction. Religion can influence multiple elements of

the emotion regulation process, including setting emotional goals, intrinsic or extrinsic emotional regulation, self-regulation abilities, beliefs about emotional malleability, the use of specific emotion regulation strategies, forming communities that provide social support in emotion regulation, and religious rituals. Religion shapes emotional experiences (reverence, gratitude, joy, guilt, and hatred) that individuals who pray seek to cultivate or inhibit based on religious values (Vishkin, Bigman, & Tamir, 2014). Another experimental study measuring emotion regulation through physiological reactivity, behavioral expressions, and self-reported stress levels before and after time spent in prayer, as well as cognitive mechanisms (cognitive reappraisal, positive reinterpretation, and religious coping), demonstrated that physiological reactions and behavioral conduct evolved after prayer while stress levels decreased. Cognitive reappraisal, positive reinterpretation, and relaxation were correlated with each other. An authentic prayer experience was also closely associated with cognitive reappraisal, positive reinterpretation, and a decrease in heart rate during prayer (Sokol, 2017). Research suggests that prayer expands people's psychological perspective through acceptance, which then improves the emotional management of personal issues, although it does not apply to cognitive mechanisms (McCulloch & Parks-Stamm, 2020). However, there are also studies that have not found significant effects of these activities on the regulation of human emotions, life satisfaction, or positive and negative emotional experiences. Despite this, participants in the prayer group reported feeling significantly less sad (Kossurok, 2012). Such an experimental study that highlighted certain specific limitations of studies that evaluate physiological changes induced by spiritual/religious experiences, especially those that utilize salivary markers, found there were no statistically significant discrepancies between the medians measured for the experimental group and control group, both before and after testing, for any of the seven variables: salivary alpha-amylase (sAA), secretory immunoglobulin-A (SigA), cortisol (sC), Salivary Testosterone, Salivary Oxytocin (sO), Interleukin 6 (sal IL-6), and Interleukin 8 (sal IL-8), and was also done in Romania. These findings align with the limited differentiation observed between the Control Group (CG) and Study Group (SG), both before and after testing, which also aligns with the outcomes of two additional related studies on the individual practice of prayer in the Christian-Orthodox tradition (PCOT). These studies pertain to psycho-emotional changes and EEG activity in the alpha, beta, and gamma frequency bands (results pending publication) (Mihalache, Zăgrean, Bălan, Stoleriu, & Zăgrean, 2023).

McCullough and Willoughby (2009) have argued that religion can promote self-control, influence how goals are set, pursued, and organized, facilitate self-discipline, foster the development of self-regulation capacity, and prescribe and encourage self-regulatory behaviors. The influences of religion on self-control and self-regulation have a positive effect on health, well-being, and social behaviour. Although there are also studies that have shown no significant difference in terms of self-control performance in groups with similar levels of negative disposition, those who first suppressed their emotions and then prayed exhibited a higher positive disposition compared to the control group (Yarollahi, Shairi, & Hasanzadeh Dastjerdi, 2019). Therefore, prayer can influence the well-being of individuals who practice it. Prayer can enhance well-being, particularly when it is linked to inner identity dialogues, and it can decrease well-being when linked to ruminative inner dialogues (Puchalska-Wasyl & Zarzycka, 2020).

A characteristic that religious individuals attribute to themselves is being universally prosocial. However, evaluations of behaviors suggest more limited prosociality, and some studies suggest a small causal relationship. Recent research has identified new moderators, with religiosity being more strongly linked to prosociality through self-image and altruism. A significant moderator remains the identity of the recipient: religious prosociality often favors religious groups over

external groups (Tsang, Al-Kire, & Ratchford, 2021). It is also important to know that personal religious convictions, when embraced and displayed within work environments, have the potential to instill significance and purpose into work. This, in turn, may foster positive work-related mindsets (such as work engagement) and ultimately result in increased reported levels of a particular aspect of contextual performance (David & Iliescu, 2020).

There are two distinct sources of religious prosociality: the religious perspective associated with the protection of the religious group and the supernatural perspective associated with belief in God. These two principles apply to different prosocial objectives and thus have different effects on prosocial behavior depending on the target and context (Preston, Ritter, & Ivan Hernandez, 2010). Helping others is associated with high levels of mental health, beyond the benefits of altruism and other known psychospiritual and demographic factors (Schwartz, Meisenhelder, Ma, & Reed, 2003). Helping others entails certain aspects: understanding their needs and praying for them; listening to them when they are in need and assisting them in finding solutions; supporting them in understanding the reasons behind their needs; guiding people to help themselves; and aiding them in finding an organization to assist them (Cornelius, 2013).

In conclusion, from Wood's perspective, religious rituals can be seen as psychological exercises that strengthen people's self-control capacity, enhance individuals' social bonding, and lead to social behaviors of willpower and group commitment (Koole, Meijer, & Remmers, 2017).

Material and methods

General objectives

The main objective of this research was to develop a questionnaire to measure people's perceptions of the psychic effects of prayer, validated on the Orthodox Christian population, an instrument that supports the completion with empirically obtained data of the entire theoretical support covered in this thesis, not having enough instruments to measure certain psychically perceived benefits of prayer.

Another goal is to identify differences in the perception of prayer effects according to demographics (gender, age).

Research questions

Without wishing to contradict the views previously expressed, this article aims to empirically evaluate the perceived benefits that prayer has for a person. Not having the audacity to believe that it can evaluate the effects of prayer in a person's life, it nevertheless wanted to find out what people's perception or belief is about these effects. In this regard, it also sought to find out how an Orthodox believer feels the effects of prayer in his life, both mentally and socially.

Participants and procedure

The study involved 441 people, aged between 18 and 76 (M_{age} = 37.06, *SD* = 12.16), of whom 100 are male (22.7%) and 341 are female (77.3%). The entire sample belongs to the Orthodox Christian confession, which is the main condition for participation in the study.

The construction of this scale began with the elaboration of items referring to changing moods, empathy, altruism, providence, introspection, self-evaluation, self-reflection, self-

knowledge, change of perception, change of behavior, change of way of thinking, strengthening willpower, resilience, etc. Initially, 74 items were elaborated, to which participants were asked to answer by choosing from 5 answer options (never, rarely, sometimes, often, always) rated from 1 to 5 on the Likert scale, according to the suggestions of the specialized literature. Following data collection, a number of statistical procedures were applied to establish the factorial structure.

In order to validate a questionnaire, the international standards required to perform statistical analyses to measure certain indices whose values are recommended to be found between certain thresholds unanimously accepted by psychometricians have been met. In developing this scale, most standardized tests for such proposals were conducted. Statistical analyses were carried out with the help of the Jamovi program.

Results

Exploratory Factorial Analysis for the Faith Questionnaire on the Effects of Prayer (FQEP)

In tables 1 and 2, it can be seen that there is an accepted suitability for the measured variables, the index *KMO* = .96, located between the proposed pages, following the spherical test, obtaining a score of $\chi^2_{(1035)} = 18257$, $p < .001$, statistically significant. The values of the indicators for validating the factorial structure are within the accepted limits, as follows: *RMSEA* = .04, *TLI* = .94, $\chi^2/df = 1.94$, $p < .001$ (Taasoobshirazi & Wang, 2016).

Table 1
Test of Sphericity

Bartlett's Test of Sphericity		
χ^2	df	p
18257	1035	< .001

Table 2
Indices of exploratory analysis tests

Model Fit Measures							
RMSEA 90% CI					Model Tes		
RMSEA	Lower	Upper	TLI	BIC	χ^2	df	P
.04	.04	.05	.94	-2108	1004	515	< .001

The exploratory factorial analysis of the 74 items of the questionnaire revealed 13 factors (table 3). After extracting the 13 factors of the questionnaire, it was found that some of the items had a level of communalities lower than .30, which determined their extraction from the questionnaire, so that out of a number of 74 items, 46 were kept.

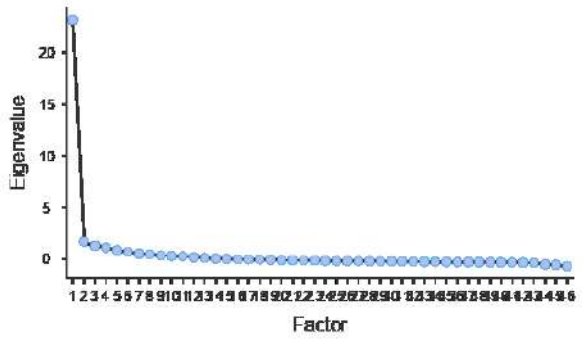
Table 3
Exploratory Factorial Analysis of the Perception Questionnaire on the Effects of Prayer

	Items (anexa 1)	Factor Loadings	Item-scale correlation	Uniqueness
	Emotion Regulation (α=.87)			
i7	Prayer is the act through which I rid myself of negative emotions.	.787	.833**	.227
i6	Prayer relieves me of a spiritual burden.	.733	.869**	.237
i5	Prayer helps me have a better emotional disposition.	.685	.885**	.362
i8	to unload myself from worries, troubles, inner tensions.	.640	.827**	.306
	Sensory Deprivation (α=.83)			
i3	to use social media less.	.939	.834**	.132
i4	to distance myself from sources that visually/aurally demand from me.	.769	.905**	.362
i2	to communicate less in social contexts.	.706	.865**	.504
	Self-control (α=.91)			
i55	to maintain patience in the face of problems being resolved.	.801	.865**	.107
i56	to cope more easily with everyday stressful situations.	.611	.910**	.244
i54	to acquire better management of disturbing emotions (anxiety, anger, rage, indignation).	.604	.895**	.231
i53	to handle conflict situations more effectively.	.411	.896**	.319
	Introspection (α=.92)			
i27	to analyze my own conscience more.	.689	.875**	.173
i24	to reflect on my real needs.	.596	.859**	.263
i25	to be more attentive to the connotation of the thoughts that come to my mind.	.594	.892**	.226
i26	to delve deeper into myself.	.549	.853**	.271
i23	to analyze my inner states more profoundly.	.407	.888**	.234
	Increase Will-power (α=.88)			
i60	to feel stronger in accomplishing my activities.	.831	.834**	.106
i61	to be more efficient in tasks that require effort from me.	.607	.867**	.257
i59	to be perseverant in achieving goals.	.495	.912**	.304
i57	to reach my personal objectives.	.483	.852**	.409
	Interpersonal Intuition (α=.86)			
i14	to intuit events, people, and things in my life more easily.	.980	.946**	.110
i15	to recognize the emotional state and feelings of others more easily.	.760	.935**	.226
	Faith in Divine Providence (α=.88)			
i21	to strengthen my faith and hope in divine providence.	.729	.908**	.144
i22	to feel genuine support as a result of communion with God.	.643	.906**	.197
i20	to better understand the will of God and what He asks of me.	.615	.883**	.226
	Compassion for Others (α=.88)			
i13	to be interested in the needs of the sick or those facing problems of any kind.	.754	.887**	.131
i11	to be more attentive to the needs of those around me.	.546	.829**	.203
i12	to be more empathetic/compassionate towards people.	.499	.895**	.305
i16	to support more those who need me.	.440	.821**	.321

	Altruism (α=.82)			
i18	to adopt an ethical/moral behavior towards the rules of the community in which I live.	.699	.878**	.216
i17	to become more available to engage in social-philanthropic projects.	.615	.897**	.325
i19	to consider the common good as well.	.584	.812**	.310
	Changing Perspective (α=.90)			
i68	to perceive a much deeper aspect of reality.	.642	.846**	.212
i66	to see the world with 'different eyes.'	.599	.881**	.261
i67	to find a deeper meaning in the events that happen to me.	.565	.900**	.211
i51	to direct my thoughts in a positive manner.	.363	.906**	.305
	Self-knowledge (α=.82)			
i32	to become aware of my own limits in communication.	.662	.847**	.197
i33	to better understand my role in relation to the community's objectives.	.553	.893**	.237
i31	to self-disclose.	.484	.860**	.534
	Prosociality (α=.88)			
i46	to become more respectful towards the elderly.	.662	.886**	.151
i47	to become more responsible and trustworthy.	.605	.913**	.139
i45	to become loyal to friends and my reference group.	.371	.909**	.243
	Changing of Behavior (α=.90)			
i39	to give up certain undesirable behaviors for myself and others.	.590	.884**	.184
i38	to improve my way of interacting with others.	.548	.919**	.224
i42	to replace harmful habits with more constructive ones.	.400	.861**	.259
i43	to humble myself (reduce selfishness).	.371	.853**	.332

Note. 'Minimum residual' extraction method was used in combination with a 'oblimin' rotation
**. Correlation is significant at the 0.01 level (2-tailed).

Figure 1
Principal components analysis (PCA)



The remaining 13 factors are: emotion regulation (4 items), sensory deprivation (3 items), self-control (4 items), introspection (5 items), increased willpower (4 items), interpersonal intuition (2 items), faith in Divine Providence (3 items), compassion for others (4 items), altruism (3 items), changing perspective (4 items), self-knowledge (3 items), prosociality (3 items), and changing of behavior (4 items).

Table 4
Variance of questionnaire factors

Factor	SS Loadings	% of Variance	Cumulative %
1	3.21	6.99	6.99
2	2.16	4.68	11.67
3	3.32	7.21	18.88
4	3.19	6.94	25.82
5	3.09	6.71	32.53
6	2.23	4.84	37.38
7	2.76	6.01	43.38
8	2.73	5.94	49.33
9	2.62	5.69	55.01
10	2.60	5.65	60.66
11	2.15	4.68	65.35
12	2.29	4.98	70.33
13	2.17	4.72	75.05

Internal Consistency of the Faith Questionnaire on the Effects of Prayer (FQEP)

As can be seen in Table 5, following the application of the fidelity test for the Faith to the Effects of Prayer questionnaire, the Chronbach alpha score is .97 for the entire questionnaire. The average scores obtained by the research participants ranged from 2.91 (*SD* = .93) for sensory deprivation to 4.35 (*SD* = .64) for emotion regulation. Other high average scores are at the subscales faith in Divine Providence (*M* = 4.27, *SD* = .68), self control (*M* = 4.20, *SD* = .67), introspection (*M* = 4.20, *SD* = .66), compassion for others (*M* = 4.18, *SD* = .65), changing perspective (*M* = 4.15, *SD* = .70), changing of behavior (*M* = 4.11, *SD* = .70), prosociality (*M* = 4.08, *SD* = .78), and increased willpower (*M* = 4.08, *SD* = .69). Other scores, also high, were obtained at the subscales altruism (*M* = 3.95, *SD* = .70), self knowledge (*M* = 3.77, *SD* = .79) and interpersonal intuition (*M* = 3.72, *SD* = .91).

Table 5
The central tendency of the scores of the variables masured (N = 441)

	Mean	SD	Skewness		Kurtosis	
				SE		SE
Emotion regulation	4.35	.64	-1.42	.11	3.95	.23
Sensory deprivation	2.91	.93	-.20	.11	-.54	.23
Self-control	4.20	.67	-.85	.11	1.82	.23
Introspection	4.20	.66	-.98	.11	3.52	.23
Increased willpower	4.08	.69	-.60	.11	.98	.23
Interpersonal intuition	3.72	.91	-.43	.11	-.10	.23
Faith in Divine Providence	4.27	.68	-1.14	.11	2.80	.23
Compassion for others	4.18	.65	-.70	.11	1.25	.23

	Mean	SD	Skewness		Kurtosis	
				SE		SE
Altruism	3.95	.70	-.43	.11	.66	.23
Changing perspective	4.15	.70	-.96	.11	2.16	.23
Self-knowledge	3.77	.79	-.43	.11	.67	.23
Prosociality	4.08	.78	-.92	.11	1.48	.23
Changing of behavior	4.11	.70	-.88	.11	1.86	.23

Inferential analysis

One of the goals of the study was to investigate the differences in these variables depending on demographic characteristics such as gender and age. The gender analysis identified statistically significant differences only for sensory deprivation ($t_{(439)} = 7.69$, $p = .006$), where men ($M = 3.04$, $SD = .80$) scored higher than women ($M = 2.88$, $SD = .96$).

Table 6
Analysis of gender differences of measured variables

		Mean	SD.	S.E. M	Levene's Test for Equality of Variances		t-test for Equality of Means						
					F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	95% C.I. of the Diff.	
												Low	Up
Sensory	male	3.04	.80	.08 eva[1]	7.69	.006	1.54	439	.122	.16	.10	-.04	.37
Deprivation	female	2.88	.96	.05 evna[2]			1.71	190.80	.089	.16	.09	-.02	.35

[1]Equal variances assumed
[2]Equal variances not assumed

Upon analyzing the data, statistically significant differences were found in four out of the thirteen variables across different age categories. Specifically, for emotional regulation, the study found very small differences between the six age categories. The category with the lowest score was young people up to 24 years old (M = 4.14, SD = .81), while the highest score was recorded by the 35-44 age group (M = 4.45, SD = .60), followed closely by the category of 55-64 years (M = 4.44, SD = .47). For interpersonal intuition ($F_{(5,435)} = 2.41$, p = .036), participants over the age of 65 scored the highest (M = 4.09, SD = .66), while those in the 25-34 age category scored the lowest (M = 3.54, SD = .95). A similar hierarchy was observed for altruism ($F_{(5,435)} = 4.10$, p = .001). Looking carefully over the results, in terms of changing behavior ($F_{(5,435)} = 2.60$, p = .025), we notice that the change is less for younger participants (18–24 years, M = 3.93, SD = .76; 25–34 years, M = 4.01, SD = .70) than for more mature ones.

Table 7
Analysis of age differences of measured variables

		N	Mean	SD	SE	95% CI for Mean		Sum of Squares	df	Mean Square	F	Sig.
						Lower Bound	Upper Bound					
Emotion regulation	18-24	76	4.14	.81	.09	3.96	4.33	5.13	5	1.02	2.52	.029
	25-34	125	4.32	.62	.05	4.21	4.43	177.22	435	.40		
	35-44	119	4.45	.60	.05	4.34	4.56	182.35	440			
	45-54	78	4.41	.56	.06	4.28	4.53					
	55-64	32	4.44	.47	.08	4.27	4.61					
	65+	11	4.38	.50	.15	4.04	4.72					
	Total	441	4.35	.64	.03	4.29	4.41					
Interpersonal intuition	18-24	76	3.76	.81	.09	3.58	3.95	9.83	5	1.96	2.41	.036
	25-34	125	3.54	.95	.08	3.37	3.70	355.03	435	.81		
	35-44	119	3.85	.95	.08	3.67	4.02	364.86	440			
	45-54	78	3.66	.94	.10	3.44	3.87					
	55-64	32	3.95	.60	.10	3.73	4.16					
	65+	11	4.09	.66	.20	3.64	4.53					
	Total	441	3.72	.91	.04	3.64	3.81					
Altruism	18-24	76	3.88	.67	.07	3.72	4.03	9.93	5	1.98	4.10	.001
	25-34	125	3.74	.71	.06	3.61	3.86	210.52	435	.48		
	35-44	119	4.07	.71	.06	3.94	4.19	220.45	440			
	45-54	78	4.09	.74	.08	3.93	4.26					
	55-64	32	4.07	.48	.08	3.89	4.24					
	65+	11	4.09	.55	.16	3.71	4.46					
	Total	441	3.95	.70	.03	3.88	4.01					
Changing of Behaviour	18-24	76	3.93	.76	.08	3.75	4.10	6.27	5	1.25	2.60	.025
	25-34	125	4.01	.70	.06	3.89	4.14	209.43	435	.48		
	35-44	119	4.20	.58	.05	4.10	4.31	215.70	440			
	45-54	78	4.22	.73	.08	4.06	4.39					
	55-64	32	4.23	.76	.13	3.95	4.50					
	65+	11	4.22	.55	.16	3.85	4.59					
	Total	441	4.11	.70	.03	4.04	4.17					

Discussions

According to Curelaru (2018), 42% of Romanians pray daily, and 27% pray even multiple times a day. Adding up the main positive responses, it results that 90% of us pray at least several times a year, with the remaining 10% either praying less frequently, not at all, or not knowing or refusing to answer. Additionally, 83% of respondents stated that prayer has helped them to a very large extent or to a great extent in life (IRES, 2015). There have been limited research efforts in the field of religious psychology among the Romanian population, despite the quality of the available studies. This might be attributed, at least in part, to the absence of specific instruments to validate and substantiate ”the effects of the interiorization and the transformation of the human spiritual powers produced by it in the very depths of the human being” (Holbea, 2022).

Given the variations in religious faith and behavior, there are instances in which creating scales tailored to the specific religion under study becomes essential. Utilizing scales designed for other religious denominations might not encompass the particular nuances required to provide meaningful insights for the research. Many studies are focused on samples from the U.S. population, often including individuals affiliated with neo-Protestant religions. However, the results from these studies may not be directly applicable to other religious contexts. Therefore, research investigating the psychological implications of religiosity should involve an analysis of the distinct dimensions of the particular religion being studied. Achieving this could be facilitated by fostering collaboration between psychology researchers and experts in the specific religious field. An interdisciplinary approach would enhance the conceptualization and comprehension of religiosity (Rusu & Turliuc, 2011).

The Faith in the Effects of Prayer questionnaire was developed to measure the degree to which people believe their prayers have an effect on their psychic lives. For this questionnaire, based on specialized literature, some of the psychological aspects that could be changed as a result of practicing prayer have been identified. This theoretical model is related to concepts such as emotion regulation, sensory deprivation, self-control, introspection, increased willpower, interpersonal intuition, faith in divine providence, compassion for others, altruism, changing perspective, self-knowledge, prosociality, and changing of behaviour.

Older international studies assert that the significance of spiritual aspects, which increase with age, varies when it comes to the gender of adolescents. As such, girls with high levels of spirituality show an interest in future perspectives, whereas boys correlate spirituality more strongly with family life and school situation (Büssing, Föller-Mancini, Gidley, & Heusser, 2010). A study from Romania reveals that education within a theological context instructs students in various aspects related to the pedagogy of prayer. An education that emphasizes the significance of both individual and communal prayer within the church context significantly reduces gender-based differences concerning prayer (motivations, underlying mental states, and long-term effects). Furthermore, the data underscores that girls tend to pray more frequently than boys, displaying a higher propensity to express gratitude to God for received assistance and experiencing a greater sense of inner peace through personal prayer (Opriş & Opriş, 2022). In the present research, although statistically significant differences were found based on age and gender in variables such as sensory deprivation, emotion regulation, interpersonal intuition, altruism, and changing of behavior, it is considered relevant that the change of behavior is less pronounced for younger participants compared to those who are more mature.

Conclusions

The questionnaire that was designed to highlight the effects of prayer on human development consists of 46 items, divided into 13 subscales, measuring various aspects of spiritual dynamics within an individual's psychological structure. After applying statistical procedures in accordance with internationally accepted theories, the index scores have shown good performance in relation to the research objectives.

The differences in these perceived benefits of prayer have been analyzed based on independent variables such as gender and age. The results have been compared with those obtained from other similar studies to establish relationships and draw meaningful conclusions. By examining how prayer impacts different demographic groups, we can better understand its effects and identify any potential variations.

The subjective benefits of prayer seem to be very internally consistent and organized in a coherent and logical structure of belief. Nevertheless, we caution readers not to confuse this construct with the actual manifested effects of prayer, which is a subject still open for debate.

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Anexa 1

Chestionarul de percepție asupra efectelor rugăciunii

	Itemi
	Reglarea emoțiilor
i7	Rugăciunea este actul prin care scap de emoțiile negative.
i6	Rugăciunea mă scapă de o împovărare sufletească.
i5	Rugăciunea mă ajută să am o dispoziție emoțională mai bună.
i8	să mă descarc de supărări, necazuri, tensiuni interioare.
	Deprivare senzorială
i3	să folosesc mai puțin mijloacele social-media.
i4	să mă îndepărtez de sursele care mă solicită vizual/auditiv.
i2	să comunic mai puțin în contexte sociale.
	Autocontrol
i55	să îmi păstrez răbdarea față de probleme în curs de rezolvare.
i56	să fac față mai ușor situațiilor cotidiene stresante.
i54	să dobândesc un mai bun management al emoțiilor perturbatoare (anxietate, furie, mânie, revoltă).
i53	să gestionez mai bine situațiile conflictuale.
	Introspecție
i27	să îmi analizez mai mult propria conștiință.
i24	să reflectez asupra nevoilor mele reale.
i25	să fiu mai atent/ă la conotația gândurilor care îmi vin în minte.
i26	să aprofundez lăuntrul meu.
i23	să îmi analizez mai profund stările lăuntrice.
	Creșterea voinței
i60	să mă simt mai puternic în realizarea activităților mele.
i61	să fiu mai eficient în realizarea activităților care necesită un efort din partea mea.
i59	să fiu perseverent în realizarea scopurilor.
i57	să îmi ating țelurile personale.
	Intuiție personală
i14	să intuiesc mai ușor evenimentele, oamenii, lucrurile din viața mea.
i15	să recunosc mai ușor dispoziția sufletească și sentimentele altora.
	Încredere în providența divină
i21	să îmi întăresc credința și nădejdea în providența divină.
i22	să simt un sprijin real ca urmare a comuniunii cu Dumnezeu.
i20	să înțeleg mai bine voia lui Dumnezeu și ceea ce îmi cere El.

	Compasiune
i13	să fiu interesat de nevoile bolnavilor sau persoanelor cu probleme de orice natură.
i11	să fiu mai atent/ă la nevoile celor din jur.
i12	să fiu mai empatic/mai compasional față de oameni.
i16	să îi sprijin mai mult pe oamenii care au nevoie de mine.
	Altruism
i18	să adopt un comportament etic/moral față de regulile comunității în care trăiesc.
i17	să devin mai disponibil în a mă implica în proiecte social-filantropice.
i19	să mă gândesc şi la binele comun.
	Schimbarea perspectivei
i68	să percep o latură mult mai profundă a realității.
i66	să văd lumea cu „alți ochi”.
i67	să găsesc un sens mai profund în evenimentele care mi se întâmplă.
i51	să îmi direcționez gândurile într-o manieră pozitivă.
	Autocunoaștere
i32	să îmi conştientizez propriile limite în comunicare.
i33	să îmi conştientizez mai bine rolul în raport cu obiectivele comunității.
i31	să mă autodezvălui.
	Prosocialitate
i46	să devin mai respectuos față de vârstnici.
i47	să devin mai responsabil și mai de încredere.
i45	să devin loial față de prieteni și grupul meu de referință.
	Schimbarea comportamentului
i39	să renunț la anumite comportamente indezirabile pentru mine şi pentru alții.
i38	să îmi îmbunătățesc modul de a interacționa cu ceilalți.
i42	să schimb obișnuințele nocive cu altele mai constructive.
i43	să mă smeresc (să îmi reduc egoismul).

LONELINESS IN THE ELDERLY– LITERATURE REVIEW

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Abstract

Objectives. This study aims to conduct an in-depth analysis of the intricate facets of loneliness to acquire a deeper comprehension of this emotional state. It also aims to identify psychological and therapeutic interventions that can significantly improve the overall well-being of elderly individuals. Given that loneliness has a significant detrimental effect on the physical and mental health, as well as the lifespan of seniors, it is a significant public health concern.
Material and methods. This paper aims to comprehensively analyze loneliness by examining it from psychosocial and phenomenological perspectives. Through this exploration, we hope to gain a deeper understanding of this complex experience and its impact on individuals. Our findings may reveal new insights into addressing the challenges of loneliness and harnessing its potential for growth and transformation.
Results. The experience of loneliness is multifaceted and intricate, lacking a universally accepted language to articulate it. Understanding the roots of loneliness is crucial to effectively preventing and intervening. Because people of different ages tend to experience loneliness in various ways, this study set out to identify the unique characteristics of each age group that put people at risk of or provide protection from experiencing loneliness.
Conclusions. Loneliness is a growing concern among professionals, political authorities, and society due to its negative impact on individual and social health, the population's well-being, and its support networks. The issue of loneliness among older adults is complex and requires further investigation. We can better understand this issue and develop effective global interventions by exploring it. Given the widespread prevalence of loneliness among seniors, additional research is urgently needed to better comprehend how older adults interpret and experience this phenomenon.

Keywords: loneliness, isolation, age, ageing, health, senior citizens.

Introduction

In today's world, loneliness is a complex and multifaceted concept involving various social and psychological processes and conditions. It determines how an individual relates to society and the world, making it a social phenomenon requiring deep socio-philosophical reflection. Unfortunately, in the 21st century, people increasingly feel alone and isolated in a global political system that seems alien to them. Regrettably, the individual and their inner lives are becoming less important than the state, the organization, or the collective. This century is often called the age of loneliness, with global surveys showing that loneliness is becoming more prevalent, affecting almost a third of people and severely affecting one in twelve (Cacioppo & Cacioppo, 2018).

Loneliness has gone beyond its traditional form and has become a purely personal phenomenon (Yanguas, Pinazo-Henandis & Tarazona-Santabalbina, 2018). Individuals now perceive society's influence differently, placing greater emphasis on how they establish their position in society based on their inner world (Manstead, 2018). A shift in focus that reinforces the psychological aspect of loneliness is linked to the individual's increased self-awareness and societal changes (Luhmann, Buecker, & Rüsberg , 2023).

Since it impacts individuals of all ages and has significant consequences for older people, loneliness is a growing problem in industrialized nations (Rada, 2020a). This concern has led to increased interest in the study of loneliness. The COVID-19 pandemic, demographic changes that lead to an ageing society, and technological advances have brought loneliness into the spotlight, raising awareness and interest (Rokach, 2023). Loneliness is of concern to professionals in many fields and even to political authorities. This is because of its impact on individual and societal health, the well-being of the population, and its link to social support networks (Mushtaq, Shoaib, Shah, & Mushtaq, 2014). Experiencing loneliness has long-term consequences that affect the whole personality structure, the ability to relate to others, and the overall quality of life (Ernst, Niederer, Werner, Czaja, Mikton, Ong, Rosen, Brähler, & Beutel, 2022). To understand the concept of loneliness, how it has changed in modern society, and to anticipate its impact on the world of the future, a comprehensive interdisciplinary approach is essential.

This study examines existing theoretical approaches to understanding loneliness in older people. Recognizing present developments and implementing necessary life-guiding principles is crucial for the scientific and theoretical relevance of addressing loneliness in modern society. Traditionally, people have viewed the multidimensional psychological construct of loneliness as an unpleasant experience resulting from the discrepancy between one's expectations and actual social relationships (Seemann, 2022).

Philosophers have considered the problem of loneliness since ancient times. Loneliness, understood as a painful negative emotionality due to a perceived lack of social connectedness, first appeared in the literature in the 1800s (Alberti, 2018). Over the years, many researchers have attempted to define the term.

Loneliness is often defined as a negative, distressing, or unpleasant experience regarding the quality or quantity of a person's social relationships (Cacioppo, Hawkley, & Thisted, 2010). The consensus psychological definition of loneliness explicitly focuses on the social aspects of the concept, describing it as a feeling that results from a perceived discrepancy between desired and achieved levels of social relationships. Perlman and Peplau (1981) often refer to this gap between expected and actual social relationships as the underlying mechanism of loneliness, also known as perceived social isolation.

The relationship between living alone, loneliness, and social isolation and their association with health remains controversial. Despite their overlapping characteristics, researchers and theorists have long hypothesized that loneliness, social isolation, and living alone are separate constructs (Victor, Scambler, Bond, & Bowling, 2000).

Various conceptualizations of loneliness exist: as a discrepancy between the quality and quantity of social relationships individuals desire and perceive (Walton, Shultz, Beck, & Walls, 1991), as a perceived lack of social contact (Townsend, 1980), as perceived social isolation (Hawkley & Cacioppo, 2010), or as a lack of people to share emotional and social experiences (Rook, 1984). Conversely, scholars have conceptualized social isolation as a gauge of an individual's integration and meaningful communication with their community, family, and friends (Victor et al., 2000), the objective experience of solitude (Hawkley & Cacioppo, 2010), the absence

of meaningful social connections (Lubben & Gironda, 2003), or the lack of integration with social networks (Rook, 1984).

While these definitions suggest conceptual overlap, research indicates that there is only a moderate association between loneliness and social isolation (Golden et al., 2009). Although sometimes considered synonymous, loneliness and social isolation are distinct concepts. Social isolation has been defined as the objective state of having minimal social contact with others. In contrast, loneliness reflects a subjective state of perceived lack of desired affection and closeness with a significant other (Ong, Uchino, & Wethington, 2016). Thus, a person may feel lonely without being socially isolated or, conversely, be socially isolated without experiencing loneliness. Therefore, Smith and Victor (2019) have distinguished between loneliness and feeling isolated, emphasizing the conditions of living alone and extreme social isolation.

Social isolation and loneliness can also be distinguished from living alone based on a simple enumeration of household size (Victor et al., 2000). Inconclusive research findings have been found regarding the relationship between loneliness and social isolation among individuals who live alone. While some studies have found no connection between the two, others have found that living alone significantly increases the likelihood of experiencing loneliness (Sundström, Fransson, Malmberg, & Davey, 2009). Despite possible theoretical differences, living alone has been included in measures of social isolation (Victor et al., 2000) rather than assessed as a potentially separate category. Reviews of intervention studies draw attention to the inadequate separation of related concepts, underpinning the continuing difficulties in establishing what works, for whom, and in what circumstances to tackle loneliness or social isolation (Victor et al., 2018).

Existing theory and evidence suggest that a more nuanced examination of the relationships between these three concepts may be helpful, particularly in developing our understanding of the links between these issues and health and well-being outcomes. Previous qualitative research provides rich and meaningful data on lived experiences of loneliness, social isolation, and living alone. They suggest that loneliness and social isolation are complex individual experiences with different causes and perceived consequences (Dahlberg, 2007). However, quantitative work has typically defined loneliness and social isolation in predetermined, binary, and strict ways (Shankar, McMunn, Banks, & Steptoe, 2011), which may not accurately capture the complexity of these experiences.

Heinrich and Gullone (2006) reviewed the literature and concluded that several definitions of loneliness differ in their focus. Loneliness is the subjective emotional distress that occurs when a person feels alone, abandoned, or rejected by others or lacks adequate social connections that provide a sense of belonging and integration. Changes in life circumstances closely correlate with the universal phenomenon of loneliness (Rokach, 1988).

A limitation of research in this area is that it has focused primarily on developing a quantifiable definition of the term to measure antecedents and consequences for physical and mental health. The multidimensional nature of loneliness has been characterized as a highly subjective and idiographic experience. Weiss (1989) describes loneliness as an elusive phenomenon that is easier to explain than to understand. However, quantitative methods like the UCLA Loneliness Scale (Russell, 1996) and Jong Gierveld's Loneliness Scale (Gierveld & Van Tilburg, 2010) assume that loneliness is a shared construct with a universally understood meaning. However, the polymorphic nature of loneliness is complex to capture, and its essence is difficult to comprehend using quantitative measures alone.

Regarding the factors that contribute to the development and maintenance of loneliness, Heinrich and Gullone (2006) identified several theoretical perspectives. These include the social

needs approach (early life experiences influence it), the cognitive discrepancy approach (loneliness is a result of faulty cognitive processes, desires, and perceptions), the interactionist approach (character traits interact with situational and cultural factors), deficits in social relationships (the need to belong), and finally a consequence of the universal human need to belong (Motta, 2021). When trying to understand these different definitions more holistically, it can be said that loneliness can be understood in terms of social relationships and that when a person's need for social relationships is not met, loneliness occurs.

Loneliness is a counterpoint to the community necessary for a satisfying existence. Many researchers agree that loneliness is associated with a person's experience of isolation from the human community, family, historical reality, and a harmonious natural universe (Lee & Ko, 2018).

Loneliness constitutes an intrinsic facet of human existence. Moustakas (1961) posited that humans, at their core, experience fundamental and enduring solitude. I contend that every individual should confront their inherent sense of isolation and come to terms with the profound and complete aloneness that characterizes human existence. Any endeavor to evade or mitigate this existential loneliness will likely lead to self-alienation (Moustakas, 1961). Consequently, this loneliness can significantly influence the human experience and psyche.

A comprehensive analysis of empirical literature on loneliness underscores a considerable volume of studies, predominantly investigating the intricate nexus between loneliness and various existential quandaries alongside emotional states. Much of the research is quantitative and focuses on the negative aspects of loneliness. For instance, Cacioppo and Hawkley (2009) conducted a longitudinal study that found a significant association between loneliness and increased levels of anxiety and fear regarding the future. Similarly, research by Qualter et al. (2013) demonstrated that individuals experiencing loneliness often struggle with feelings of isolation and a lack of connection and belongingness, corroborating the notion that loneliness is closely linked with these existential concerns.

Furthermore, empirical studies like those by Hawkley et al. (2008) and Qualter et al. (2013) have shown that loneliness has a profound effect on the mind, showing a link between it and higher levels of depressive symptoms and unhealthy ways of coping. Moreover, research by Cacioppo, Capitanio, and Cacioppo (2014) elucidates the neurobiological underpinnings of loneliness, revealing alterations in brain activity and hormonal regulation, which contribute to its detrimental effects on mental health. Moreover, studies such as those by Jaremka et al. (2013) elucidated the cyclical nature of loneliness, indicating that individuals experiencing loneliness may become trapped in a cycle wherein their feelings of isolation and despair reinforce one another over time. Therapeutic interventions aim to understand and address these multifaceted aspects to enhance emotional well-being and the overall quality of life for affected individuals.

Many studies have explored the experience of loneliness and its meaning to individuals who describe it, typically focusing on specific populations. Old age and aging are often equated with loneliness. The recent synthesis of qualitative studies by Mansfield that examined loneliness up to 2018 found that more than half of these studies focused on aging (Mansfield et al., 2021).

Loneliness is a prevalent sentiment that people of every age group experience. According to Cacioppo et al. (2006), this phenomenon becomes more significant as people age and more pertinent to their lives. In contemporary times, global societies face a substantial challenge stemming from population aging, a phenomenon characterized by rising life expectancy and declining fertility rates (Lloyd-Sherlock, 2002).

Loneliness profoundly impacts the physical and psychological well-being of elderly individuals, prompting extensive investigation within psychological research. Efforts are directed

towards unraveling its intricate dynamics and devising interventions to augment the overall quality of life (Mushtaq et al., 2014). In the elderly population, experiences of loneliness and isolation often manifest diversely, influenced not only by subjective feelings of social detachment but also by individual biases, satisfaction levels, and cognitive evaluations of social interactions.

Numerous comparative studies have reported a significant prevalence of loneliness in the older population. Approximately 50% of people over 60 are at risk of social isolation, and one-third will experience some degree of loneliness later in life (Landeiro, Barrows, Musson, Gray, & Leal, 2017).

Aging is a process that begins with life and continues throughout it. It represents the period of closure when individuals look back on life, live on past achievements, and begin to complete their life course (Steverink, Westerhof, Bode, & Dittmann-Kohli, 2001). It is an age when several profound changes in human life occur, people need to adapt, and the needs of older people are different (Rada, 2018b). Adapting to the changes that come with age requires individuals to be flexible and develop new coping skills to adapt to the changes common at this stage of life. The effects of loneliness are felt in all aspects of life: relationships with oneself and others, work, finances, and, most importantly, mental and physical health (Rada, 2020a).

The literature describes a multifaceted relationship between aging and loneliness, mediated by physical, social, and psychological changes during aging (Cohen-Mansfiel, Hazan, Lerman, & Shalom, 2016). Loneliness is a subjective, negative feeling related to one's experience of poor social relationships. Psychological changes in older people result from age-related changes, which are caused by internal factors such as heredity and hormonal changes and external factors such as retirement, reduced biological potential, associated pathology, reduced family members, and the deaths of relatives or friends of a similar age (Rada, 2020b). As people age, the likelihood of suffering age-related losses increases. Such losses can prevent the maintenance or acquisition of desired relationships, resulting in a higher incidence of loneliness.

Normal functioning for an older person involves physical, mental, and social balance. Older people are particularly vulnerable to loneliness because of the expected changes and losses associated with aging. Variables significantly associated with loneliness in older adults are female gender, unmarried status, older age, lower income, lower educational level, living alone, low quality of social relationships, poor self-reported health, and poor functional status.

Scientific research has extensively investigated the psychological characteristics associated with loneliness, given its significant impact on mental health and individual well-being. Among these attributes are poor mental health, low self-efficacy beliefs, adverse life events, and cognitive deficits. Feelings of loneliness often accompany symptoms of depression, anxiety, and stress in poor mental health.

These associations have primarily been examined in cross-sectional studies, exploring various facets of loneliness and its impact on mental health and psychological well-being. For instance, Faludi (2015) analyzed living arrangements, health status, and levels of loneliness among the elderly in multiple countries, elucidating the complex interactions between social factors and the living environment on the experience of loneliness among older individuals. Concurrently, Vasile et al. (2024) investigated the association between social isolation and mental well-being in later life, highlighting the significant role of loneliness in this relationship. These research endeavors have contributed to a better understanding of the complexity and impact of loneliness on the individual, laying the groundwork for developing interventions and programs to enhance the psychological well-being of those affected.

Loneliness is a multidimensional construct associated with various objective (such as physical health and sociodemographic variables) and subjective (such as mental health, particularly depression and anxiety, perception of health, and quality of life) factors, as concluded from a literature review. Therefore, it is essential to assess all these factors (including objective factors such as physical health and sociodemographic variables as well as subjective factors such as mental health, particularly depression and anxiety, perception of health, and quality of life) to investigate their association with loneliness among older adults, as suggested by Somes (2021). Furthermore, different researchers have reported that loneliness is an indirect predictor of mortality among older adults. Multiple studies have reported the negative health ramifications of loneliness in old age, as indicated by Heinrich and Gullone (2006).

Considering the potential outcomes, the wide prevalence of loneliness poses a significant challenge to society. However, it emphasizes the need for improved outreach and personal connections (Hutten et al., 2022). To fully comprehend loneliness throughout life, contextual factors such as culture, functional limitations, and changes in social networks must be considered, as they have a powerful influence on the expression and fulfillment of universal and age-specific relationship expectations in older individuals (Mansfield et al., 2021). The cessation of active professional activity, narrowing the social circle, and approaching physical frailty result in a complex of psychological, value-based, and motivational changes that lead to a new rhythm of life (Rada, 2018b; Lubben & Gironda, 2003). Active building of the life of an older person helps them overcome the feeling of emptiness.

As individuals age, their reliance on external assistance and support tends to increase to effectively manage their daily needs (Freedman & Spillman, 2014). Loneliness is intricately linked to an individual's cognitive appraisal of the quality and fulfillment derived from social connections (Hawkley et al., 2008). The experience of living alone exacerbates the challenges associated with addressing various life difficulties, a task already complicated by declining mental and physical capacities as well as limited financial resources.

Empirical investigations, such as those conducted by Cornwell and Waite (2009), suggest a nuanced duality in the social behaviors of older individuals. Self-imposed isolation may serve dual functions: safeguarding one's mental well-being and seeking solace amidst adversity. Social isolation, characterized by a diminished interest in oneself and others, can cause loneliness among older adults (Smith & Victor, 2019). This isolation may stem from unrealistic expectations regarding the depth and regularity of connections within familial and social networks.

Research findings by Hawkley and Cacioppo (2010) suggest that individuals harboring unrealistic expectations regarding the quality and frequency of social interactions are more susceptible to experiencing loneliness. Thus, the combination of unrealistic expectations and disinterest in social connections significantly contributes to the experience of loneliness among older individuals.

It is essential to emphasize the difference in meanings of loneliness, particularly in old age. Loneliness can be interpreted as objective isolation, as an experience of a severe personality disorder, as disharmony's dominance, or as a crisis of the self. Loneliness can also be a form of voluntary solitude required for contemplation and existential experiences. Those inclined toward solitude are not destined to experience negativity resulting from loneliness. The progressive increase in loneliness trends among older people now and in the future exacerbates this problem. Thus, it is essential to study it in detail, not only by doctors but also by sociologists, demographers, economists, and psychologists.

The scholarly discourse on loneliness among older people extensively identifies its risk factors. A meta-analytical review by Pinquart and Sörensen (2003) elucidates the association between loneliness and an array of factors encompassing socio-demographic elements, psychosocial aspects, and health-related concerns, notably the decline in physical health and insufficient socioeconomic resources. Furthering this discourse, Cacioppo et al. (2014) establish loneliness as a significant predictor of various morbidity outcomes in adults, including the prevalence of depressive symptoms, deterioration in physical health, and functional constraints. Importantly, these relationships persist even after adjustments for objective measures of social isolation, highlighting the profound impact of loneliness on later-life health outcomes.

Moreover, the literature underscores the adverse effects of loneliness on both physical and mental health dimensions, correlating it with an increased rate of mortality and the onset of dementia. Research by Mushtaq et al. (2014) indicates a notable rise in mortality rates among lonely older adults. However, there is a divergence in findings regarding the role of loneliness as an independent predictor of mortality after accounting for initial health status, health behaviors, depression, and social isolation. Beyond its association with depressive symptoms, loneliness is implicated in adversely affecting cognitive functions across the lifespan, demonstrating its extensive negative implications (Ong et al., 2016; Rada, 2020a).

People experience feelings of loneliness when circumstances hinder their ability to develop desired relationships. This may be due to the loss of relationships.

Individuals experience loneliness and isolation differently. This explains why similar factors or situations can affect individuals differently. Individual, community, or social circumstances, social factors, major life transitions, and loss and grief events can cause loneliness and isolation. We control for various variables known to influence the well-being of older adults, such as age, gender, race, marital status, education level, frequency of social contacts, number of medical problems, number of social issues, functional disabilities, and cognitive status, to examine these relationships.

An array of theoretical constructs from psychology, sociology, and gerontology inform the academic discourse on loneliness among older adults, collectively elucidating the phenomenon's etiology, implications, and potential interventions. This body of work identifies the intrinsic human need for social connections as a fundamental aspect of well-being, noting the adverse effects of unmet social needs due to life transitions prevalent in older age (Hawkley & Cacioppo, 2010). More research has been done on how emotionally meaningful relationships become more important with age (Townsend, 1980), how secure attachments help us control our emotions (Lee & Ko, 2018), and how social reciprocity works and the problems it can cause in later life (Golden et al., 2009).

Moreover, cognitive processes are highlighted for their role in shaping perceptions of loneliness, emphasizing the impact of negative self-evaluations and expectations of rejection (Bandura, 1977). Environmental factors, including living arrangements and community integration, are significant determinants of loneliness among older people (Hawkley et al., 2008). An evolutionary perspective suggests loneliness is a signal encouraging social connection, a mechanism of particular relevance as individuals face changes in social roles and physical abilities as they age (Shankar et al., 2011).

Despite the comprehensive exploration of these theoretical perspectives, the literature reveals a gap in synthesizing a unified framework tailored explicitly to understanding and addressing loneliness in older adults. This study aims to consolidate the current knowledge by examining the adoption of these theories within gerontological research, identifying emerging issues, and assessing the potential of these conceptual models to inform interventions. By critically

evaluating the application and limitations of existing theories, this research endeavors to contribute to a nuanced understanding of loneliness among older adults, fostering the development of targeted strategies to mitigate its prevalence and impact. This approach underscores the multifaceted nature of loneliness and highlights the necessity for interdisciplinary research to advance theoretical and practical insights into this significant issue.

Purpose and objectives of the study

This study aims to thoroughly analyze the existing academic literature on loneliness among the elderly population. It seeks to deeply explore the multifaceted dimensions of loneliness experienced by older adults, including its origins, various manifestations, and its significant impact on their physical and psychological well-being and overall quality of life. Against the backdrop of an alarming increase in loneliness rates among older people worldwide, the critical importance of this research endeavor is undeniable. The goal is to uncover key insights that could inform the development of effective strategies to mitigate loneliness among older people.

In light of the growing global concern over the adverse effects of loneliness on the elderly population, this study commits to dissecting and understanding this complex phenomenon in depth. Anchored by a series of fundamental research questions, the study aims to address the following:

1. What are the theoretical frameworks and prevailing models that elucidate the phenomenon of loneliness among older adults?
2. How does loneliness impact older people's psychological and physiological health, and what are the underlying mechanisms?
3. Which interventions have proven effective in alleviating loneliness within this population segment, and what factors contribute to their success?

The study focuses on the following primary research objectives:

Objective 1: To perform a comprehensive review and synthesis of existing research on loneliness among older people, highlighting the identification of its determinants, manifestations, and consequences.

Objective 2: To thoroughly examine the complex interaction between loneliness and various health outcomes in older adults, paying particular attention to health's psychological and physiological dimensions.

Objective 3: To critically evaluate the efficacy of various interventions to mitigate loneliness among older people, discern best practices, and provide recommendations for future initiatives.

This study aspires to significantly contribute to the academic discourse on aging and loneliness by offering a detailed analysis and synthesis of current research. By presenting a comprehensive overview, the study intends to establish a robust foundation for future research efforts, policy formulation, and the development of targeted interventions to address loneliness among older people.

Methodology

The selection of a methodological framework for examining the incidence of loneliness within the senior population is a fundamental cornerstone of the present investigation, ensuring the scrutiny's comprehensive, profound, and extensive nature. Establishing a schematic for a meticulous, stringent, and thorough examination of pertinent scholarly works markedly enhances the credibility

and dependability of the outcomes derived from this research. This segment provides an in-depth discussion of the methodological strategies and procedures implemented, thus emphasizing our dedication to maintaining precision and scholarly diligence.

We meticulously developed our methodology for conducting literature searches to incorporate a broad spectrum of databases distinguished by their extensive research collections within social science and health. This selection included, but was not limited to, the Web of Science, APA PsycNet, PubMed, PsycINFO, ScienceDirect, Google Scholar, SAGE Journals, BioMed Central, the US National Library of Medicine, and SpringerLink. The choice of these repositories was intentional, aimed at harnessing their capability to offer a comprehensive overview of interdisciplinary research directly relevant to our study's thematic focus. This approach highlights our dedication to thoroughness and relevance in accessing and evaluating the most significant compilations of scholarly work in the domains above.

To navigate these databases with precision, we adopted a strategic approach in formulating our search criteria, combining keywords related to the concept of loneliness—such as "loneliness" and "social isolation"—with demographic identifiers including "elderly," "older adults," and "senior citizens." We interconnected these terms using the logical operator "AND" to refine our search scope. The careful selection of both broad and specific search terms was crucial in ensuring the exhaustiveness of our search effort, enabling us to identify studies of potential relevance from a diverse range of perspectives.

The criteria for including studies were meticulously delineated to ascertain the incorporation of research that thoroughly investigates the issue of loneliness within the elderly demographic. These inclusion parameters mandate that the studies to be considered must:

- be published in the English language, a prerequisite for facilitating detailed scrutiny and analysis;
- originate from the period spanning 1977 to 2024, thereby encompassing a broad spectrum of insights from both past and present contexts;
- explicitly concentrate on the themes of loneliness or social isolation in individuals aged 65 years and older;
- rely on empirical evidence or engage in theoretical discourse to delve into the nuances of loneliness.

Exclusion criteria were also scrupulously defined to preserve the thematic focus and uphold the scholarly integrity of the literature review. The following conditions precluded studies from consideration:

- failed to center on the aged populace as restricted by the stipulated age benchmarks;
- were not disseminated through peer-reviewed academic journals, a measure critical for assuring the integrity and scholarly merit of the research findings;
- deviated from the core subject of loneliness, for example, those that addressed broader societal challenges without yielding specific insights into the loneliness experienced by older people.

Utilizing this methodological framework, we curated a collection of 3,150 articles spanning publications from 1977 to 2024. The variability in filtering functionalities across different databases necessitated the formulation of precise inclusion and exclusion criteria. These guidelines were pivotal in meticulously navigating the extensive body of literature, thus emphasizing studies directly relevant to exploring loneliness within the elderly cohort.

The literature examination was guided by an explicitly formulated array of indicators, constituting the foundation for analyzing the research outcomes presented in the selected articles.

These indicators covered a spectrum of variables, such as the incidence of loneliness among the elderly and demographic, psychosocial, and health determinants contributing to loneliness. Furthermore, this evaluation considered loneliness's psychological and physiological consequences, providing a comprehensive perspective on its effects.

We carried out the methodology for this systematic literature review through several precisely defined phases:

1. Preliminary screening: The initial phase involved screening articles based on the relevance of their titles and abstracts to the thematic focus on loneliness among older people. Identifying and applying keywords pertinent to loneliness and the elderly demographic guided this screening, efficiently narrowing the body of literature to 529 relevant entries.

2. Eliminating duplicates: The subsequent phase employed the citation management software Zotero to remove duplicate studies, ensuring the uniqueness of each selected article. This procedure refined the selection to 369 articles, subjecting them to more detailed scrutiny of their abstracts for relevance and alignment with the research objectives. Articles lacking precise demographic data or inadequately addressing the phenomenon of loneliness or its direct implications for older people were excluded at this stage.

3. Comprehensive textual analysis: In the final phase, we subjected articles that passed the preliminary screening to an in-depth full-text analysis to ascertain their conformity with the established inclusion criteria, emphasizing methodological integrity and direct relevance to the research question. This rigorous evaluation culminated in identifying 74 articles (Table 1) that met the criteria for inclusion. These chosen articles help build a base for the systematic review by showing how common loneliness is among older people, what causes it, and how it affects them, and outlining possible ways to make it less of a problem.

This structured approach facilitated a systematic and organized exploration of the literature, laying a robust foundation for understanding the multifaceted nature of loneliness among older people.

Results

The comprehensive exploration into the multifaceted dimensions of loneliness among older people underscores its profound impact on mental and physical well-being, emphasizing the critical need for targeted interventions. This academic synthesis endeavors to distill the essence of current research findings, eliminate redundancies, and present a cohesive narrative on the determinants, consequences, and mitigation strategies for loneliness in older adults. Loneliness among older people is a pressing issue, adversely affecting their mental, physical, and social health. The vulnerability of older adults to loneliness, a complex and multidimensional phenomenon, necessitates a unified methodological framework to enhance the comparability and interpretation of research data across diverse age groups.

Research reveals a broad spectrum in defining target age groups for loneliness studies, ranging from 45 to over 75 years old. This variability highlights the complexity of loneliness and the imperative for methodological unification to facilitate better research outcomes. Notable studies include Theocharopoulou, Cocks, Pring, and Dipper (2015), Cohen-Mansfield & Perach (2015), Chen and Schulz (2016) and Franck, Molyneux, and Parkinson (2016), each contributing to our understanding of loneliness across different age segments.

The relationship between aging and loneliness is intricate. Studies like Pinquart & Sörensen (2003) indicate a general trend of increasing loneliness with age, while others, such as Savage et al.

(2021), suggest that ageing may reduce the risk of loneliness. Comparative studies, such as Dykstra (2009) and Choi, Kong, and Jung (2012), further elaborate on the dynamics of loneliness across various age groups.

The determinants of loneliness among the elderly are multifaceted, encompassing a broad range of demographic variables, social determinants, health conditions, and environmental factors. Demographic variables play a significant role in the experience of loneliness among older people. Gender, socioeconomic status, marital status, and ethnic background are pivotal in the likelihood of feeling lonely (Cohen-Mansfield et al., 2016; Kobayashi & Steptoe, 2018; Hawkley & Cacioppo, 2010). Studies have consistently shown that older women, unmarried individuals, those belonging to ethnic minority groups, or those residing alone are more susceptible to loneliness (Victor, Scambler, Bowling, & Bond, 2005; Masi, Chen, Hawkley, & Cacioppo, 2011; Steptoe, Shankar, Demakakos, & Wardle, 2013).

The living environment significantly influences loneliness, distinguishing between community and institutionalized environments (McHugh, Dowling, Butler & Lawlor, 2016). Older adults in nursing homes or those living alone may face heightened risks of loneliness (Freedman & Spillman, 2014; Franck et al., 2016). This distinction underlines how social experiences and the quality of social networks impact feelings of loneliness and isolation (Hawkley & Cacioppo, 2010; Masi et al., 2011).

The physical and social environment, including high crime rates, housing inaccessibility, and a scarcity of community resources, also plays a critical role in the experience of loneliness. These environmental factors can exacerbate feelings of isolation, indicating the need for community-level interventions to improve older people's living conditions and social infrastructure (Cohen-Mansfield et al., 2016).

Socio-economic status and educational attainment emerge as pivotal in influencing the experience of loneliness (Hutten et al., 2022). Lower economic security and limited education are associated with higher rates of loneliness, suggesting that these factors exacerbate feelings of isolation by limiting social opportunities and access to community resources (Kobayashi & Steptoe, 2018). Furthermore, the quality of social relationships often diminishes with declining socioeconomic status, contributing to heightened loneliness (Cohen-Mansfield et al., 2016). In addition to the studies above, further research by Hawkley and Cacioppo (2010) investigates the psychological mechanisms through which socio-economic status influences loneliness, suggesting that perceived social isolation and the lack of a supportive social network play mediating roles. This study underscores the psychological impact of socioeconomic factors on loneliness, providing a deeper understanding of how economic and educational disparities contribute to feelings of isolation (Pinquart & Sorensen, 2003). Victor et al. (2005) examine the demographic and socio-economic determinants of loneliness among older adults, identifying low income and limited education as significant predictors of loneliness.

The nuanced landscape of gerontological research vividly illustrates the profound effect of a life partner's loss on older people's susceptibility to loneliness. This event removes a crucial pillar of emotional and social support and limits avenues for social engagement, as highlighted by Freak-Poli, Kung, Ryan, and Shields (2022) categorized the demise of a spouse among life's utmost stress-inducing experiences; this loss profoundly affects an individual's well-being, setting a precedent for understanding the intricate relationship between significant life events and loneliness (Rada, 2018a). The dynamics of shrinking social networks, prompted by the passing of close relations or geographical distance from family and friends, further exacerbate feelings of isolation among older people. This phenomenon aligns with Carstensen's Socioemotional Selectivity Theory,

which suggests a shift in preference towards more meaningful social interactions as one ages (Carstensen, 2021). While this shift could foster a more profound, smaller network, it also risks intensifying loneliness if these networks diminish excessively or fail to replenish effectively.

Expanding on these insights, Victor et al. (2000) and Dykstra (2009) delve into the implications of these social network changes for loneliness, stressing the critical role of the quality and depth of relationships in mitigating feelings of isolation. Golden et al. (2009) further emphasize that the effectiveness of smaller social networks in buffering against loneliness hinges on the active participation and availability of close connections. To enrich this discussion, additional scholarly contributions provide a broader context. For instance, in their meta-analysis, Pinquart and Sörensen (2003) delineate how social network characteristics influence loneliness, underscoring the differential impacts of various forms of social support and interaction frequency. Furthermore, Motta (2021) explores loneliness's psychological and physiological dimensions, providing evidence of its broader health implications and the importance of integrative social strategies in addressing loneliness among older people. Additionally, Choi et al. (2012) contribute to the discourse by examining the role of technology in maintaining social connections in later life, suggesting that digital platforms can offer alternative means of sustaining meaningful relationships and potentially reducing feelings of loneliness.

Recent academic research emphasizes the significant consequences of loneliness, surpassing emotional discomfort to affect both psychological and physical health negatively. Particularly among older people, loneliness has profound repercussions on individual well-being. Contemporary studies highlight a bi-directional relationship between loneliness and health, illustrating a complex interaction where loneliness can exacerbate health issues, and pre-existing health conditions can further amplify feelings of loneliness. Loneliness, especially among the elderly, has been identified as a public health issue with serious consequences for psychological and physical health. This dynamic interaction profoundly impacts individuals' well-being and mortality risk (Fleisch Marcus, Illescas, Hohl, & Llanos, 2017; Steptoe et al., 2013).

The contributions of Manfred Spitzer to this domain, especially his studies on the neurobiological repercussions of loneliness, lay the critical groundwork for understanding the effects of social isolation on mental and physical well-being. In his research, Spitzer (2023) reveals how loneliness serves as a potent stressor, instigating neurobiological alterations that may result in a variety of health complications, such as diminished cognitive abilities, depression, and changes in immune response. His analysis of the psychological and physiological consequences of loneliness highlights the critical role of social interactions in maintaining human health. Furthermore, the link between loneliness and a heightened risk of mental health problems, including depression, anxiety, and cognitive deterioration, is well established. The work of Walton et al. (1991) indicates that loneliness not only increases stress, depression, and anxiety levels but also suggests a self-perpetuating cycle in which loneliness intensifies mental health disorder symptoms. This, in turn, may lead to increased isolation.

Research indicates that loneliness can expedite cognitive decline and elevate dementia risk, with studies such as Heinrich and Gullone (2006) associating loneliness with a higher risk of Alzheimer's disease, thus linking it to cognitive deterioration. Recent studies have broadened our comprehension of loneliness, illustrating its role in increasing social disconnection, depression risk, and mental disorder prevalence while also diminishing life quality, lowering self-rated health, and exacerbating metabolic and inflammatory conditions (Domènech-Abella, Mundó, Haro, & Rubio-Valera, 2019; Perissinotto, Cenzer, & Covinsky, 2012). Furthermore, findings suggest that loneliness's impact on decision-making is indirectly related to its effect on overall cognitive

function, highlighting a multifaceted network of issues, including poor health perception, mental disorders, and depression, underscoring the intricate and interconnected nature of loneliness's effects (Stewart et al., 2020).

Academic discourse has extensively substantiated the linkage between loneliness and an increased incidence of chronic and cardiovascular diseases, such as hypertension, heart disease, and stroke. Hawkley, Thisted, Masi, and Cacioppo, (2010) demonstrate that loneliness contributes to heightened blood pressure and cardiovascular risks, emphasizing the role of stress-related mechanisms in exacerbating the negative health impacts associated with loneliness. Further analysis by Kobayashi and Steptoe (2018) connects these health outcomes to the social limitations imposed by chronic diseases, which curtail opportunities for social interaction and the sustenance of relationships, consequently intensifying feelings of loneliness.

Cardiovascular issues are not the only adverse health outcomes of social isolation and loneliness. Research by Faludi (2015) reveals a strong link between social isolation and an increased risk of death from all causes, with a particular emphasis on cancer mortality. Furthermore, studies from Rokach (2023) and Perissinotto et al. (2012) also support the relationship between loneliness, functional decline, and a notable increase in mortality risk. These findings underscore the significant public health implications of loneliness and social isolation.

Moreover, chronic loneliness has a significant detrimental effect on immune functionality. Research by Jaremka et al. (2013) revealed that loneliness could modify gene expression within immune cells, diminishing resistance to viral infections. These studies underscore the complex and comprehensive impact of loneliness and social isolation on health, signaling a pressing need for public health strategies to address and mitigate these risks.

Prolonged loneliness often precipitates a retreat from social contexts, intensifying the sense of isolation experienced by individuals. This phenomenon fosters a self-sustaining cycle of loneliness, whereby individuals find themselves progressively more isolated due to their hesitancy to partake in social engagements. The reluctance to engage in social activities not only diminishes opportunities for interaction but also reinforces isolation, creating a loop that is difficult to break. This cycle underscores the critical need for interventions encouraging social participation and connection. Loneliness is closely linked to diminished engagement in physical activities. Hawkley, Thisted, and Cacioppo (2009) highlight that feelings of loneliness can contribute to a sedentary lifestyle, thereby exacerbating the decline in physical health and overall well-being. The reduction in physical activity associated with loneliness not only affects physical health directly but also has implications for mental health, as regular physical activity is known to impact mood and cognitive function positively. The findings by Lubben and Gironda (2003) emphasize the importance of addressing loneliness as part of a holistic approach to health, recognizing the interconnectedness of social, physical, and mental health dimensions.

Prolonged loneliness significantly impacts individuals by promoting social withdrawal and reducing engagement in physical activities, creating a cycle of increased isolation and declining health. This self-sustaining cycle of loneliness, characterized by avoiding social interactions, exacerbates feelings of isolation, highlighting the necessity for interventions to foster social participation and connections. Meanwhile, loneliness is associated with decreased physical activity, leading to a sedentary lifestyle that negatively affects physical and mental health. The work of Lee and Ko (2018) underscores this relationship, advocating for a holistic approach to health that addresses the multifaceted impacts of loneliness. These findings collectively stress the importance of comprehensive strategies, considering the interplay between social engagement, physical activity, and overall well-being.

In the field of research for mitigating loneliness among older people, specialized literature emphasises the effectiveness of a multifaceted approach supported by various academic studies. These strategies, designed to address loneliness through the lenses of social, psychological, physical, and technological dimensions, aim to improve seniors' quality of life and well-being. Social relationships, highlighted by Holt-Lunstad, Smith, and Layton (2010), are fundamental in reducing the risk of mortality, requiring interventions to promote and maintain social connections, a perspective also supported by Cornwell and Waite (2009). Golden et al. (2009) and Dykstra (2009) validate the effectiveness of social and community programs in mitigating loneliness. At the same time, Masi et al. (2011) recognize the potential of technology in maintaining social connections, emphasizing the importance of access to online resources and training in the use of technology.

Dickens, Richards, Greaves, and Campbell (2011) attest to the effectiveness of counseling and cognitive-behavioral therapy in developing social skills and coping strategies. Moreover, social and family support, highlighted by Dickens et al. (2011) and Lloyd-Sherlock (2002), is essential in promoting emotional health. Warburton, Nicol, and Bredin (2006) underline the benefits of volunteering and physical activity. Oswald, Wahl, Schilling, and Iwarsson (2007) explore the impact of environmental adaptations and the importance of education in improving digital literacy.

This literary synthesis reflects the necessity of a holistic and personalized approach to combating loneliness. It emphasizes that effective interventions must be comprehensive, from improving social connectivity to integrating technology and promoting physical and mental health. It highlights the ongoing importance of research and practice to ensure a sustainable improvement in seniors' lives.

Discussions

Loneliness represents a significant challenge for older people, emerging as a substantial public health concern in our society that is facing an aging population. A deep understanding of loneliness's depth and complexity necessitates a holistic approach that incorporates multidisciplinary perspectives and respects the diversity of individual and cultural experiences. Loneliness theory highlights the complex interaction between psychological and social factors in shaping the feeling of loneliness, emphasizing the importance of subjective interpretations of social connections (Hawkley & Cacioppo, 2010). This perspective reveals that loneliness does not solely stem from objective social isolation but is significantly influenced by the perceived quality of social interactions. Therefore, addressing loneliness among older people requires an intervention framework that recognizes and leverages the diversity of individual experiences and interpretations (Cohen-Mansfield & Perach, 2015).

The research underscores the need for personalized and culturally sensitive interventions that cater to older people's specific needs and preferences (Cattan, White, Bond, & Learmonth, 2005). This involves developing flexible and adaptable strategies to navigate the diversity of social and cultural contexts (Quan, Lohman, Resciniti, & Friedman, 2020).

A crucial aspect of combating loneliness is the integration of technology, with a focus on accessibility and adaptation to the needs of elderly users. Communication technologies, such as video calls, offer valuable opportunities for connection. However, their success depends on overcoming the digital divide and ensuring the necessary support for effectively using these tools (Noone et al., 2020). In the COVID-19 pandemic, the need for effective interventions to reduce loneliness has become even more pressing, highlighting the importance of assessing and adapting digital services and telemedicine to minimize isolation risks (Noone et al., 2020).

In conclusion, addressing loneliness among older people requires an integrated and adaptable perspective that acknowledges the phenomenon's complexity and capitalizes on the potential of personalized interventions and technology. Future research must continue to explore innovative approaches and validate their effectiveness, ensuring that solutions are accessible, inclusive, and capable of meeting the diverse needs of the aging population.

Conclusions

Exploring the various causes and consequences of loneliness in older people highlights the pivotal role of group-based social support in alleviating loneliness, isolation, and social distress. This comprehensive review identifies vital factors influencing loneliness and mental health, arguing that bespoke mental health promotion strategies are imperative. It posits that mental health promotion should be seamlessly incorporated into all public health initiatives, reflecting its paramount importance in the European Union. The advancement of mental health demands a concerted effort across all societal levels and sectors, aiming to establish a compassionate environment that treats mental health enhancement as a foundational principle of collective and individual pursuits. Ensuring that individuals with mental health challenges receive the care and treatment they deserve aligns with human rights and supports the principle of Lavikainen, Lahtinen, and Lehtinen (2000) that mental health is a critical component of public health.

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Table 1.
Presentation of the studies included in the systematic review

Author/ Year	The study	Participants	Hypotheses/ Research Questions	Variables	Measuring tools/ Intervention program	Main results/ Evaluation of the intervention
Bandura, A. (1977)	Self-efficacy: Toward a unifying theory of behavioural change			Self-efficacy boosts starting, striving, and persisting through challenges, enhancing resilience and performance.		Self-efficacy drives effort, initiation, and persistence in overcoming challenges.
Cacioppo, J. T., & Cacioppo, S. (2018)	The growing problem of loneliness		The research explores the rise of loneliness in modern societies and its adverse effects on health.	Loneliness, intensified by social and technological shifts, deteriorates physical and mental health.		Recognizes loneliness as a public health problem.
Cacioppo, J. T., Hawkley, L. C., & Thisted, R. A. (2010)	Perceived social isolation makes me sad: 5-year cross-lagged analyses of loneliness and depressive	Men and women aged between 50-58 years.	The study analyzes how perceived social isolation and depressive symptoms influence each	Independent variables: perception of social isolation (loneliness). Dependent variables: depressive symptoms.	Cross-lagged analyses are based on questionnaires and periodic psychological assessments to measure loneliness	The perception of social isolation (loneliness) is both a predictor and a consequence of depressive

	symptomatology in the Chicago Health, Ageing, and Social Relations Study.		other over five years.		and depressive symptoms.	symptomatology during the five years of the study.
Cacioppo, J.T., & Hawkley, L.C. (2009)	Perceived social isolation and cognition		Perceived social isolation negatively affects cognitive functions.	Independent variable: perceived social isolation. Dependent variables: gene expression, brain function (social and emotional processing), cognition.	Questionnaires for perceived social isolation, cognitive tests for performance.	Perceived social isolation is linked to lower cognitive performance, suggesting isolation may lead to cognitive impairment.
Cacioppo, S., Capitanio, J. P., & Cacioppo, J. T. (2014)	Toward a neurology of loneliness		Investigating the neurological underpinnings of loneliness.	Independent variables: loneliness. Dependent variables: neurological changes and health effects.		We are identifying the neurological links between loneliness and health.
Carstensen, L. L. (2021)	Socioemotional Selectivity Theory: The Role of Perceived Endings in Human Motivation		The perception of imminent ends alters motivation and socio-emotional behavior.	Independent variables: perception of end-of-life or deadlines. Dependent variables: motivation, social, and emotional preferences change.	Socioemotional selectivity theory (SST) as a theoretical framework.	Endings shift focus to meaningful goals, influencing motivation and behavior.
Cattan, M., White, M., Bond, J., & Learmonth, A. (2005)	Preventing social isolation and loneliness among older people: A systematic review of health promotion interventions	Patients' ages ranged from 38 to 93 years, as stated, and most were over 65.	Effectiveness of health promotion interventions in preventing social isolation and loneliness.	Independent variables: types of health promotion interventions. Dependent variables: levels of social isolation and loneliness.	A systematic review of the intervention literature.	Educational and social group interventions can reduce loneliness in older people, but the impact of home visits and befriending is uncertain.
Choi, M., Kong, S., & Jung, D. (2012)	Computer and internet interventions for loneliness and depression in older adults: A meta-analysis.	Older adults	Effectiveness of computer and Internet interventions in reducing loneliness and depression.	Independent variables: computer and internet interventions. Dependent variables: levels of loneliness and depression.	Meta-analysis of existing studies.	Computer and Internet-based interventions can reduce loneliness and depression among older adults.
Cohen-Mansfield, J., & Perach, R. (2015)	Interventions for alleviating loneliness among older persons: A critical review	Older adults	Which interventions are effective in alleviating loneliness in older people?	Independent variables: various types of interventions. Dependent variables: the level of loneliness.	Critical review of existing literature.	Educational interventions aimed at improving social networks can potentially reduce loneliness.
Cohen-Mansfield, J., Hazan, H., Lerman, Y., & Shalom, V. (2016)	Correlates and predictors of loneliness in older adults: a review of quantitative results informed by qualitative insights	Older adults	The factors associated with and predictors of loneliness in older adults.	Independent variables: socio-demographic, health, and lifestyle factors (e.g., gender, age, income, education, living situation, relationship quality, health status). Dependent variables: loneliness level.	Quantitative and qualitative literature review.	Identifying the factors associated with loneliness; recommendations for future research and interventions.

Cornwell, E. Y., & Waite, L. J. (2009)	Social disconnectedness, perceived isolation, and health among older adults.	Older adults	The relationship between social disconnection, perceived isolation, and health in older people.	Independent variables: social disconnection and perceived isolation. Dependent variables: health status.	Analysis of data from an existing study/survey.	Results show the importance of social disconnectedness and perceived isolation in health research.
Dahlberg, K. (2007)	The enigmatic phenomenon of loneliness.	The study focuses on conceptual and theoretical analysis.	Exploring the nature and dimensions of the phenomenon of loneliness.	The concept of loneliness.	Theoretical and conceptual analysis.	Deep understanding of loneliness as a complex and enigmatic phenomenon.
Dickens, A. P., Richards, S. H., Greaves, C. J., & Campbell, J. L. (2011)	Interventions targeting social isolation in older people: A systematic review.	Elderly individuals.	Interventions targeting social isolation in older adults show varying effectiveness.	Independent variables: types of interventions. Dependent variables: level of social isolation.	A systematic review of existing studies.	Variability in the effectiveness of interventions; some have the potential to reduce social isolation.
Domènech-Abella, J., Mundó, J., Haro, J. M., & Rubio-Valera, M. (2019)	Anxiety, depression, loneliness and social network in the elderly: Longitudinal associations from The Irish Longitudinal Study on Ageing	Adults aged ≥ 50 years.	Social networks, loneliness, generalized anxiety disorder (GAD), and major depressive disorder (MDD) are interrelated.	Independent variables: age, health, socioeconomic context, social support. Dependent variables: physical and mental health, well-being, social isolation.	The UCLA Loneliness Scale assesses loneliness. The Berkman-Syme Social Network Index measures social integration. The Composite International Diagnostic Interview (CIDI) assesses MDD and GAD.	Objective and perceived social isolation increase MDD or GAD risk, underscoring the importance of addressing both types of isolation.
Dykstra, P. A. (2009)	Differences in loneliness among older people: A comparative analysis	Elderly individuals.	Differences in loneliness among elderly subgroups.	Independent variables: age, gender, marital status, and social network. Dependent variables: levels of loneliness.	Comparative analysis based on surveys or interviews.	Identifying factors influencing loneliness in older people.
Faludi, C. (2015)	Living arrangements, health status, and loneliness among older people in Bulgaria, Romania, and Russia	Elderly individuals aged 65 and above	The study hypothesized that elderly people living alone or in care face more loneliness and worse health than those with family.	Independent variables: living arrangements Dependent variables: health status and loneliness. Controlled variables: age, gender, and socio-economic status.	Data collection included surveys on demographics, living conditions, social interactions, health, and objective health assessments without reference to any intervention program.	Living alone or in care increases loneliness and worsens health in older people, highlighting the value of social support and family.
Fleisch Marcus, A., Illescas, A. H., Hohl, B. C., & Llanos, A. A. (2017)	Relationships between social isolation, neighbourhood poverty, and cancer mortality in a population-based study of US adults	US adults	The study investigates the relationships between social isolation, neighborhood poverty, and cancer mortality.	Independent variables: social isolation, neighborhood poverty. Dependent variables: cancer mortality.	Analysis of population-based data.	The study connects social isolation, neighborhood poverty, and cancer mortality, highlighting their impact on outcomes.

Franck, L., Molyneux, N., & Parkinson, L. (2016)	A systematic review of interventions addressing social isolation and depression in aged care clients	Older adults aged 77 to 86 years.	Assessing the effectiveness of interventions to reduce social isolation and depression in older adults in aged care services.	Independent variables: various interventions (social, psychological, technological). Dependent variables: levels of social isolation and depression.	A systematic review of existing studies.	Highlights effective, tailored interventions for reducing social isolation and depression in aged care clients.
Freak-Poli, R., Kung, C. S. J., Ryan, J., & Shields, M. A. (2022)	Social isolation, social support, and loneliness profiles before and after spousal death and the buffering role of financial resources	Individuals before and after the death of a spouse.	Studies change in social isolation, support, and loneliness post-spousal death, exploring financial resources' protective function.	Independent variables: spousal death, financial resources. Dependent variables: social isolation, social support, loneliness.	Analysis of longitudinal data.	Indicates changes in social isolation, support, and loneliness after spousal death, suggesting a mitigating role for financial resources.
Freedman, V.A., & Spillman, B.C. (2014)	The residential continuum from home to nursing home: Size, characteristics and unmet needs of older adults	Older adults across various residential settings.	Investigates the characteristics, size, and unmet needs of older adults along the residential continuum from home to nursing home.	Independent variables: type of residential setting. Dependent variables: unmet needs, characteristics of older adults.	Data was likely collected via surveys, interviews, and administrative records, capturing participants' living situations, care access, health status, and perceived unmet needs.	Identifies unmet needs and varied characteristics of older adults in different residences, exposing gaps in care and services.
Gierveld, J. D. J., & Van Tilburg, T. (2010)	The De Jong Gierveld short scales for emotional and social loneliness were tested on data from 7 countries in the UN generations and gender surveys.	Non-institutionalized population aged 18 to 79 years.	Evaluation of the De Jong Gierveld short scales for measuring emotional and social loneliness across diverse populations.	Independent variables: demographic and social factors. Dependent variables: scores on emotional and social loneliness scales.	The De Jong Gierveld short scales for loneliness.	The scales effectively measure emotional and social loneliness across different countries, demonstrating reliability and validity in diverse cultural contexts.
Golden, J., Conroy, R. M., Bruce, I., Denihan, A., Greene, E., Kirby, M., & Lawlor, B. A. (2009)	Loneliness, social support networks, mood and wellbeing in community-dwelling elderly.	People aged 65 and over.	Examines the relationship between loneliness, social support networks, mood, and well-being among older people.	Independent variables: social support network size and quality, loneliness. Dependent variables: mood (e.g., depression, anxiety), well-being (physical and emotional health). Controlled variables: age, gender, socioeconomic status, pre-existing health conditions.	The study likely combined quantitative (e.g., UCLA Loneliness Scale, Beck Depression Inventory) and qualitative (e.g., social network analysis, interviews) measures to evaluate social support, loneliness, mood, and well-being.	This paper highlights the impact of loneliness and social support networks on the mood and well-being of elderly individuals, indicating significant associations between these factors.
Hawkley, L.	Loneliness	The review	Explores the	The independent	The review	Loneliness

C., & Cacioppo, J. T. (2010)	matters A theoretical and empirical review of consequences and mechanisms.	spans diverse demographics, exploring age, culture, and social circumstances to grasp loneliness's impact on various population segments.	consequences of loneliness and the mechanisms through which it affects health and wellbeing.	variables are loneliness and social isolation. The dependent variables are health outcomes (mental and physical health) and well-being indicators. The moderating variables are social support, socioeconomic status, age, and demographics.	discusses various measures in the literature to assess loneliness and its consequences, covering self-report scales, health outcomes, psychological stress, and physiological indicators.	significantly affects physical and psychological health, detailing its pathways and impacts on wellbeing.
Hawkley, L. C., Thisted, R. A., & Cacioppo, J. T. (2009)	Loneliness predicts reduced physical activity: Cross-sectional & longitudinal analyses.	Two hundred twenty-nine white, black, and Hispanic men and women, ages 50 to 68.	It investigates whether loneliness predicts levels of physical activity.	Independent variables: loneliness. Dependent variables: physical activity levels.	Surveys and physical activity tracking.	Loneliness is a predictor of reduced physical activity both in cross-sectional and longitudinal perspectives.
Hawkley, L. C., Thisted, R. A., Masi, C. M., & Cacioppo, J. T. (2010)	Loneliness predicts increased blood pressure: 5-year cross-lagged analyses in middle-aged and older adults.	50 to 68-year-old White, Black, and Hispanic men and women.	Examines whether loneliness predicts increased blood pressure over five years.	Independent variables: loneliness. Dependent variables: blood pressure.	Longitudinal survey data and blood pressure measurements UCLA loneliness scale.	Loneliness was found to predict increased blood pressure over five years among the study participants.
Hawkley, L.C., Hughes, M.E., Waite, L.J., Masi, C.M., Thisted, R.A., & Cacioppo, J.T. (2008)	From social structural factors to perceptions of relationship quality and loneliness: The Chicago Health, Aging, and Social Relations Study	225 White, Black, and Hispanic men and women aged 50 through 6	Explores how social structural factors influence perceptions of relationship quality and loneliness.	Independent variables: social structural factors (e.g., socio-economic status). Dependent variables: perceptions of relationship quality, loneliness.	Surveys used the UCLA loneliness scale and demographic, socioeconomic, health, social roles, and stress data to evaluate relationship quality, loneliness, and social factors.	Marriage significantly mitigated the link between income and loneliness, offering the most protection against loneliness.
Heinrich, L. M., & Gullone, E. (2006)	The clinical significance of loneliness: A literature review.	The adolescent developmental period.	Explores the clinical importance of loneliness through existing literature.	It is not applicable in the traditional sense, but it focuses on loneliness as a main subject.	Review of published studies on loneliness and its effects.	Loneliness is a critical factor in various psychological and physical health issues.
Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010)	Social relationships and mortality risk: A meta-analytic review.	The review analyzes varied studies to explore loneliness's effects across different demographic segments.	Examines the association between social relationships and mortality risk.	Independent variables: social relationship quality and quantity. Dependent variable: mortality risk. Controlled variables like age, health status, and socio-economic status could independently affect mortality risk.	Meta-analysis of existing studies.	Strong evidence links social relationships to lower mortality risk.
Hutten, E., Jongen, E. M. M., Hajema,	Risk factors of loneliness across the lifespan		Identifies and analyses risk factors of	Independent variables: various demographic, psychological, and	Analysis of literature/research studies on	Identifying key risk factors for loneliness at

K., Ruiter, R. A. C., Hamers, F., & Bos, A. E. R. (2022)			loneliness throughout the life span.	social factors. Dependent variables: loneliness.	loneliness.	different life stages, emphasizing the importance of targeted interventions.
Jaremka, L. M., Fagundes, C. P., Peng, J., Bennett, J. M., Glaser, R., Malarkey, W. B., & Kiecolt-Glaser, J. K. (2013)	Loneliness promotes inflammation during acute stress.		Examining how loneliness affects inflammation during acute stress.	Independent variables: loneliness. Dependent variables: level of inflammation.	UCLA, The Pittsburgh Sleep Quality Index, Community Healthy Activities Model Program for Seniors questionnaire, Immune Assays.	Loneliness is associated with increased inflammation during acute stress.
Kobayashi, L. C., & Steptoe, A. (2018)	Social isolation, loneliness, and health behaviours at older ages: Longitudinal cohort study.	Men and women aged ≥52.	Investigating the correlation between social isolation, loneliness, and health behaviors among older adults.	Independent variables: social isolation and loneliness. Dependent variables: health behaviors (physical activity, diet, smoking, alcohol use). Control variables: age, gender, socioeconomic status, and health conditions.	Social isolation and loneliness are gauged via surveys like the UCLA Loneliness Scale. At the same time, health behaviours, such as physical activity and dietary habits, are assessed through self-reports or medical records.	Social isolation and loneliness are associated with poorer health behaviors among older adults.
Landeiro, F., Barrows, P., Nuttall Musson, E., Gray, A., & Leal, J. (2017)	Reducing social isolation and loneliness in older people: A systematic review protocol	This review analyzes the literature on interventions for reducing social isolation and loneliness in older individuals.	Examining interventions aimed at alleviating social isolation and loneliness among older individuals.	Independent variable: interventions (e.g., community programs, technology-based). Dependent variables: social isolation and loneliness levels. Moderating variables: older population characteristics (e.g., age, living situation)	The review evaluates measurement tools like the UCLA Loneliness Scale and interventions such as social activities and digital communication to address social isolation and loneliness.	The systematic review aims to identify effective strategies for reducing social isolation and loneliness among older individuals.
Lee, Y., & Ko, Y. (2018)	Feeling lonely when not socially isolated: Social isolation moderates the association between loneliness and daily social interaction.	Explored the correlations between social isolation, loneliness, and daily interactions among individuals at different life stages.	Investigating how social isolation moderates the relationship between loneliness and daily social interaction.	Independent variable: social isolation - limited social contacts Dependent variable: loneliness - the feeling of isolation. Moderating variable: daily social interaction - frequency and quality of engagement.	Various tools like scales, questionnaires, and diaries measure social isolation, loneliness, and daily social interaction.	Social isolation influences the link between loneliness and daily social interaction, indicating that loneliness can arise without isolation.
Lloyd-Sherlock, P. (2002)	Social policy and population ageing: Challenges for		Examining the challenges of population ageing for social	Social policies, population ageing.	Analysis of social and demographic policies.	Identifying global ageing population challenges and needs to guide

	north and south		policy in developed and developing regions.			targeted social policy development.
Lubben, J., & Gironda, M. (2003)	The centrality of social ties to the health and well-being of older adults.	Older adults.	Investigating the importance of social ties for the health and well-being of older adults.	Social ties, health, well-being.	Surveys/questionnaires will likely assess social ties, health status, and well-being.	Social ties are crucial for the well-being of older adults, emphasizing their importance for quality of life.
Luhmann, M., Buecker, S., & Rüsberg, M. (2023)	Loneliness across time and space	The study likely includes a diverse demographic sample to explore loneliness across various population segments deeply.	Investigating the variation of loneliness over time and across different geographical locations.	Independent variables: time (life stages), space (living environments). The dependent variable is loneliness levels. Control variables: demographics (age, gender, socioeconomic status), social network size and quality.	Loneliness is assessed with tools like the UCLA Loneliness Scale, and contextual factors are analysed using GIS and longitudinal studies to observe changes over time.	The study aimed to examine how loneliness changes over time and in different geographical contexts, providing insights into the dynamics and patterns of loneliness.
Mansfield, L., Victor, C., Meads, C., Daykin, N., Tomlinson, A., Lane, J., … Golding, A. (2021)	A conceptual review of loneliness in adults: Qualitative evidence synthesis	In qualitative evidence synthesis, "participants" refer to people from primary studies exploring loneliness across different contexts and populations.	To review and synthesize qualitative evidence on the concept of loneliness in adults.	Conceptual variables: definitions and dimensions of loneliness, perceived causes, and impacts of loneliness on well-being. Contextual variables: social, environmental, and individual factors influencing experiences of loneliness.	The review does not use measuring tools or interventions. Instead, it analyses methodologies from included studies, such as interviews, focus groups, or ethnographic observations, to gather data on loneliness.	The study provided a conceptual review of loneliness in adults based on qualitative evidence, offering insights into the nature and experiences of loneliness among adult populations.
Manstead, A. S. R. (2018)	The psychology of social class: How socioeconomic status impacts thought, feelings, and behaviour?	Explored the influence of social class on psychology by involving participants from diverse socioeconomic backgrounds.	Investigating how socioeconomic status influences cognition, emotions, and behavior.	Independent variable: socioeconomic status (SES) via education, income, and occupation. Dependent variables: socioeconomic status (SES) via education, income, and occupation.	SES is measured via surveys on education, income, occupation, and social status, and psychological assessments use tests for cognitive and emotional states, like personality and well-being.	The study aimed to explore the psychological effects of social class, highlighting how socioeconomic status impacts thoughts, feelings, and behaviours.
Masi, C. M., Chen, H. Y., Hawkley, L. C., & Cacioppo, J. T. (2011)	A meta-analysis of interventions to reduce loneliness.	Individuals experiencing loneliness.	Analyzing the effectiveness of interventions in reducing loneliness.	Loneliness levels before and after interventions.	Meta-analysis of existing interventions targeting loneliness.	The study's meta-analysis evaluated interventions to reduce loneliness, offering insights into the effectiveness of different strategies.

McHugh, J. E., Dowling, M., Butler, A., & Lawlor, B. A. (2016)	Psychological distress and frailty transitions over time in community-dwelling older adults.	Six hundred twenty-four participants aged over 60 years.	Exploring the relationship between psychological distress and frailty transitions over time among community-dwelling older adults.	Psychological distress, frailty transitions.	They likely utilised questionnaires to measure psychological distress and assess frailty transitions.	The study explored the link between psychological distress and frailty transitions in older adults over time, offering insights into the evolution of these factors.
Morris, M. E., et al. (2015)	Loneliness in older adults: A review	Older adults.	Reviewing the prevalence, causes, and effects of loneliness in older adults.	Loneliness.	Review of existing literature and studies on loneliness in older adults.	The study offered a thorough overview of loneliness in older adults, detailing its prevalence, causes, and effects on well-being.
Motta, V. (2021)	Key concept: Loneliness.		Analysing the critical concept of loneliness.	Loneliness.	A literature review or conceptual analysis of loneliness.	Synthesizing the concept of loneliness provides a deeper understanding of this aspect.
Mushtaq, R., Shoaib, S., Shah, T., & Mushtaq, S. (2014)	Relationship between loneliness, psychiatric disorders and physical health? A review of the psychological aspects of loneliness	Individuals affected by loneliness, psychiatric disorders, and physical health issues.	Investigating the links between loneliness, psychiatric disorders, and physical health.	Loneliness, psychiatric disorders, physical health.	A review of existing literature on psychological aspects of loneliness.	The evidence synthesis reveals how loneliness correlates with psychiatric disorders and physical health, highlighting its psychological impacts.
Ong, A. D., Uchino, B. N., & Wethington, E. (2016)	Loneliness and health in older adults: A mini-review and synthesis	Older adults.	Examining the relationship between loneliness and health in older adults.	Loneliness, health.	Review of existing literature on loneliness and health in older adults.	The synthesis outlines the link between loneliness and health outcomes in older adults, offering a concise overview.
Oswald, F., Wahl, H. W., Schilling, O., & Iwarsson, S. (2007)	Housing-related control beliefs and independence in activities of daily living in very old age	Significantly older adults aged 75-89 years.	Investigating the relationship between housing-related control beliefs and independence in activities of daily living among very old individuals.	Housing-related control beliefs, independence in activities of daily living.	Various questionnaires and scales, including the Housing Enabler and Geriatric Depression Scale, were used in the study.	Perceived control over living environments significantly influences daily independence among very old adults, indicating its impact on functioning in old age.
Pinquart, M., & Sörensen, S. (2003)	Risk factors for loneliness in adulthood and old age—a meta-analysis.	Individuals ages 10–97 years.	Identifying factors linked to loneliness in adulthood and later life.	Risk factors for loneliness.	Meta-analysis of existing studies on risk factors for loneliness, UCLA.	Identifying common risk factors for loneliness in adulthood and

						old age provides deeper insights into this issue.
Qualter, P., Brown, S. L., Rotenberg, K. J., Vanhalst, J., Harris, R. A., Goossens, L., Bangee, M., & Munn, P. (2013)	Trajectories of loneliness during childhood and adolescence: Predictors and health outcomes.	7-17 years	Examining the trajectories of loneliness during childhood and adolescence, their predictors and health outcomes.	Loneliness trajectories, predictors, health outcomes.	Likely utilized surveys or questionnaires to assess loneliness, predictors, and health outcomes over time.	Identified trajectories of loneliness during childhood and adolescence, along with factors predicting these trajectories and their impact on health outcomes.
Quan, N. G., Lohman, M. C., Resciniti, N. V., & Friedman, D. B. (2020)	A systematic review of interventions for loneliness among older adults living in long-term care facilities.	Older adults (aged >65) living in long-term care facilities	Reviewing the effectiveness of interventions aimed at reducing loneliness in this population.	Loneliness, intervention effectiveness.	A systematic review of existing interventions for loneliness in long-term care facilities.	Summarized evidence on interventions' effectiveness in reducing loneliness in older adults in long-term care facilities.
Rada, C. (2018a)	Ageing and intergenerational care	55-93 years	Investigating the relationship between ageing and intergenerational care.	Independent variables: types of intergenerational care (informal family care giving, formal programs). Dependent variables: elderly well-being, caregiver benefits, care effectiveness. Moderating variables: elderly age and health, caregiver-recipient relationship, cultural and socio-economic factors.	Personality, depression, memory, quality of life, family questionnaires and a 36-item omnibus questionnaire that collects socio-demographic data, data on health-damaging behaviors, opinions and attitudes relevant to the health of older people.	Examined the dynamics and impact of intergenerational care on aging individuals, providing insights into the evolving care landscape across generations.
Rada, C. (2018b)	Spending leisure time when approaching retirement and during retirement	55–93 years of age.	Examining leisure activities engagement before and during retirement.	Leisure time activities, retirement status.	Questionnaires to assess leisure time activities and retirement status.	Explored leisure time usage before and during retirement, offering insights into activity patterns and adjustments in this life phase.
Rada, C. (2020a)	Factors associated with depression in middle-aged and elderly people in Romania.	35–74 years old.	Identifying factors associated with depression in this demographic.	Depression, demographic factors.	The Geriatric Depression Scale.	Identified depression-linked factors in middle-aged and elderly Romanians, suggesting areas for intervention or support.
Rada, C. (2020b)	The quality of life when approaching retirement and during retirement in Romania. How	55–93 years old.	Investigating the quality of life before and during retirement in	Quality of life, age, marital status, family communication, and family satisfaction.	Life Quality Questionnaire-short form (WHOQOL-BREEF), the	Identified the influence of age, marital status, communication, and family

	important are age, marital status, communication, and satisfaction within the family?		Romania, focusing on the importance of age, marital status, communication, and family satisfaction.		Family Communication Scale, and the Family Satisfaction Scale developed by Olson et al.	satisfaction on the quality of life before and during retirement in Romania.
Rokach, A. (1988)	The experience of loneliness: A tri-level model.	Aged 16–84 years	Developing a tri-level model to understand the experience of loneliness.	Personal variables: psychological traits, emotions, cognition. Situational variables: environments, circumstances, interactions. Societal variables: cultural norms, social structures, community ties.	A theoretical framework or conceptual model.	The study proposed a tri-level model to explain the experience of loneliness, providing insights into its multifaceted nature.
Rokach, A. (2023)	The effects of loneliness on the aged: A review		Developing a tri-level model to understand the experience of loneliness.	Loneliness affects aging	A literature review or systematic review methodology.	Summarizing evidence on how loneliness affects older adults' health and well-being, offering insights into ageing and loneliness.
Rook, K. S. (1984)	The negative side of social interaction: Impact on psychological well-being.	Women between the ages of 60 and 8.	Investigating the negative impact of social interaction on psychological well-being.	Independent variable: negative social interactions. Dependent variable: psychological well-being. Control variables: demographics, baseline psychological well-being, quantity of social interactions.	Social interaction is measured through self-reports, diaries, or observations. Psychological well-being is assessed with standardized scales like the Beck Depression Inventory or the General Anxiety Disorder Scale.	Explored how negative social interactions affect psychological well-being, revealing social relationships and mental health complexities.
Russell, D. W. (1996)	UCLA loneliness scale (version 3): Reliability, validity, and factor structure.		Evaluating the reliability, validity, and factor arrangement of the UCLA Loneliness Scale (version 3).	Loneliness scale reliability, validity, factor structure.	UCLA Loneliness Scale (version 3).	Examined the UCLA Loneliness Scale (version 3) for reliability, validity, and factor structure, offering insights into its effectiveness in measuring loneliness.
Savage, P. E., et al. (2021)	Loneliness among older adults in the community during COVID-19: a cross-sectional survey in Canada	Older adults.	Identifying factors associated with loneliness during the covid pandemic.	Sociodemographic factors, health status, social support, and responses to COVID-19 measures, including their impact on daily routines and	Surveys, interviews, or qualitative methods will likely be used to assess loneliness and its effects on ageing	A survey of 4,879 older adults revealed that during the COVID-19 pandemic, 34.8% felt lonely

				social interactions.	individuals.	sometimes, and 8.3% felt lonely often, with women experiencing higher rates of loneliness than men.
Seemann, A. (2022)	The psychological structure of loneliness.	The study involved participants of various ages and diverse backgrounds to explore loneliness universally.	Investigating the psychological structure of loneliness.	Independent variables contribute to loneliness (e.g., social network size, interaction frequency, and relationship quality). Psychological loneliness experiences are dependent variables. Demographics and potentially psychological well-being are control variables.	Loneliness scales like the UCLA Loneliness Scale quantify loneliness levels. Psychological assessments measure related constructs like depression or anxiety. Qualitative interviews offer in-depth insights into personal experiences of loneliness.	Identifying and describing the psychological components of loneliness provides a better understanding of this experience.
Shankar, A., McMunn, A., Banks, J., & Steptoe, A. (2011)	Loneliness, social Isolation, and Behavioural and biological health indicators in older adults	Older adults	Investigating the links between loneliness, social isolation, and behavioral and biological health markers in elderly individuals.	Loneliness, social isolation, health indicators (behavioral and biological).	Likely utilized surveys, biomarker assessments, and behavioral observations.	Discovered links between loneliness, social isolation, and adverse health markers in older adults, shedding light on the influence of social connections on health.
Smith, K., & Victor, C. (2019)	Typologies of loneliness, living alone, and social isolation and their associations with physical and mental health		Analyzing various loneliness types, living alone, and social isolation, and their links to physical and mental well-being.	Typologies of loneliness, living arrangements, social isolation, physical and mental health.	ADL, IADL, Short Portable Mental State Questionnaire (SPMSQ), UCLA.	Discovered different types of loneliness, revealing its multifaceted nature.
Somes, J. (2021)	The loneliness of aging.	Ageing individuals, likely older adults.	The study examines how loneliness affects aging.	Loneliness, aging.	Surveys, interviews, or qualitative methods will likely be used to assess loneliness and its effects on ageing individuals.	It explored loneliness in ageing individuals, uncovering its prevalence, contributing factors, and impact on older adults' well-being.
Spitzer, M. (2023)	Loneliness: The unrecognised disease.	The study explored loneliness across	Loneliness significantly contributes to poor health	Independent variable: loneliness Dependent variables: health outcomes	The study used loneliness scales, such as the UCLA Loneliness Scale,	The study may be an essay or paper arguing that loneliness should

		diverse age groups, socioeconomic statuses, and living conditions.	outcomes, acting as a disease that affects mental and physical health.	Control variables: age, gender, socio-economic status, pre-existing health conditions.	and health assessments to measure mental and physical health indicators.	be recognized as a health issue.
Steptoe, A., Shankar, A., Demakakos, P., & Wardle, J. (2013)	Social isolation, loneliness, and all-cause mortality in older men and women	Men and women aged 52 and	The study examines the connections between social isolation, loneliness, and all-cause mortality in older adults.	Social isolation, loneliness, all-cause mortality.	Likely utilized surveys or questionnaires to assess social isolation, loneliness, and mortality rates.	Discovered links between social isolation, loneliness, and higher mortality risk in older adults, highlighting the importance of social connections for longevity.
Steverink, N., Westerhof, G. J., Bode, C., & Dittmann-Kohli, F. (2001)	The personal experience of aging, individual resources, and subjective well-being.	Aged 40 to 85	The study explores how personal experiences of aging and individual resources relate to subjective well-being.	Personal experience of ageing, individual resources, subjective well-being.	It likely involved surveys or questionnaires assessing the personal experience of ageing, individual resources, and subjective well-being.	Ageing encompasses physical decline, growth, and social loss, all influencing emotions and life satisfaction.
Stewart, C. C., Yu, L., Glover, C. M., Mottola, G., Bennett, D. A., Wilson, R. S., & Boyle, P. A. (2020).	Loneliness interacts with cognition about healthcare and financial decision-making among community-dwelling older adults.	Community-dwelling older adults.	The authors are investigating the interaction between loneliness and cognition regarding healthcare and financial decision-making in older adults.	Loneliness, cognition about healthcare, cognition about financial decision-making.	De Jong Gierveld Loneliness Scale, 19-test neuropsychological battery.	Loneliness interacts with cognitive abilities in healthcare and financial decision-making among older adults, potentially influencing decision-making processes.
Sundström, G., Fransson, E., Malmberg, B., & Davey, A. (2009)	Loneliness among older Europeans.	65 years or older	Exploring the occurrence and correlates of loneliness among elderly individuals in Europe.	Loneliness, demographic factors, social support, health status.		Found loneliness rates among older Europeans and studied associated factors like demographics, social support, and health.
Townsend, P. (1980)	Isolation, desolation, and loneliness.		Investigating the concepts of isolation, desolation, and loneliness.	Isolation, desolation, loneliness.		Analyses isolation, desolation, and loneliness, shedding light on individual experiences in diverse social contexts.
Vasile, M., Aartsen, M., Precupetu, I., et al. (2024)	Association between social isolation and mental well-being	People aged 65 or older.	Studying the connection between social isolation,	Social isolation, loneliness, mental well-being.	The World Health Organization Well-Being Index (WHO-5 scale).	Investigated how social isolation influences mental well-being in

	in later life: What is the role of loneliness		loneliness, and mental well-being in older age.			older adults, focusing on the mediating effect of loneliness.
Victor, C., Mansfield, L., Kay, T., Daykin, N., Lane, J., Duffy, L. G., … Meads, C. (2018)	An overview of reviews: The effectiveness of interventions to address loneliness at all stages of the life course.		Assessing the effectiveness of interventions targeting loneliness at various life stages.	Loneliness, intervention effectiveness	Involved systematic reviews of existing literature on loneliness interventions.	Reviewed interventions targeting loneliness across different life stages, offering insights into effective strategies.
Victor, C., Scambler, S., Bond, J., & Bowling, A. (2000)	Being alone in later life: Loneliness, social isolation, and living alone.	Older adults.	Exploring loneliness, social isolation, and living alone in later life.	Loneliness, social isolation, living alone.		Explored loneliness, social isolation, and living alone in older adults, shedding light on later life solitude.
Victor, C., Scambler, S., Bowling, A., & Bond, J. (2005)	The prevalence of, and risk factors for, loneliness in later life: a survey of older people in Great Britain.	People aged 65 or more years living in their own homes.	Exploring the prevalence of and risk factors for loneliness in later life.	Loneliness, risk factors.	the De Jong Gierveld scale, ULA.	She identified the prevalence rate of loneliness and associated risk factors among older people in Great Britain.
Walton, C. G., Shultz, C. M., Beck, C. M., & Walls, R. C. (1991)	Psychological correlates of loneliness in the older adult.	Adults aged 61–91 yrs.	Studying psychological factors linked to loneliness in older adults.	Loneliness, psychological correlates.	Four Likert scale tests, a true-false questionnaire, and a demographic inquiry were administered to determine study objectives.	Identified psychological factors linked to loneliness in older adults, offering insights into its causes in this group.
Weiss, R. S. (1989)	Reflections on the present state of loneliness research.		Reflecting on current loneliness research.		Assessment of research designs, measurement tools, and data analysis techniques used in loneliness research.	Provides insights or perspectives on the current state and trends in loneliness research.
Yanguas, J., Pinazo-Henandis, S., & Tarazona-Santabalbina, F. J. (2018)	The complexity of loneliness	Adults from different demographics, including age groups, socio-economic status and lifestyles.	Loneliness, explored for its complexity, detrimentally affects mental and physical health akin to chronic conditions.	Independent variable: degree of loneliness. Dependent variables: mental health outcomes (e.g., depression, anxiety) and physical health outcomes (e.g., cardiovascular disease risk).	UCLA Loneliness Scale, depression and anxiety assessments, and physical health screenings.	Tailored interventions effectively reduced loneliness, emphasizing personalized approaches.

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DRAMA/THEATER-BASED RESEARCH AS A MEANS TO EXPLORE THE KEY ASPECTS FOR INSTRUCTORS APPLYING DRAMA AND THEATER WITH AT-RISK YOUTH

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Abstract

Objectives. The study sought to identify the most important psychological and professional training competencies of theater instructors in working with marginalized populations and to identify methodological difficulties and practical obstacles encountered during interactions with at-risk groups.
Material and methods. The study involved nine theater instructors, aged 24-35, who delivered an intervention for at-risk youth. After the activities, interview and focus group methods were employed to facilitate discussions concerning the professional competencies and psychological traits of theater instructors in the context of challenges encountered when working with at-risk groups. The outcomes were subsequently analyzed using categorical analysis grids.
Results. Participants highlighted challenges related to experiencing secondary traumatic stress and adopting a 'rescuer' role when working with young people at risk. They noted that there wasn't a significant difference in their approach when working with the at-risk group compared to their standard practices, indicating the value of pre-existing training in mitigating potential stressful situations.
Conclusions. This qualitative investigation has revealed that drama instructors encounter various challenges when working with at-risk groups, but these can be effectively addressed through the cultivation of specific psychological attributes and professional competencies.

Keywords: applied drama/theater trainer, at-risk youth, teaching difficulties, secondary traumatic stress, trainer's competences

Introduction

Background

In Romania, addressing the well-being of children and young people remains an ongoing concern. Young people within the special protection system are among the groups adversely impacted by the delayed implementation of public policies aimed at enhancing their well-being (Alexandrescu, 2019). According to the National Authority for the Protection of Children's Rights

and Adoption (2022), at the end of 2022, 11.629 minors were in public or private residential services and 30.400 in family-type services (overview section of the special protection system). The recipients of these services were minors who could not continue residing within their biological families. State intervention in their cases was carried out through three specific pathways, namely: 1. the child's passage through a family until a disruptive event occurred (death of parents or close relatives, parents' departure for work, parental rights termination, etc.); 2. placing the child in healthcare facilities; and 3. abandoning or finding the child on the street (Stănculescu, Grigoraș, Teșliuc, & Pop, 2016).

Studies on the deprivation of children and young people from their family environment are numerous and identify serious deficiencies in their psycho-emotional development. Deprived of social interaction, stimulation, and empathic care, institutionally raised youth may exhibit a diverse range of emotional and social disorders in adulthood, in addition to alterations in brain development and cognitive delays (Nelson, Fox, & Zeanah, 2014). Lacking warmth and predictability, institutionalized youth are exposed to various forms of abuse and neglect (Ciocan, 2023), which predisposes them to display a lack of empathy, cognitive inflexibility, adjustment and personality disorders, and aggressive behaviors in adulthood (Johnson, Cohen, Brown, Smailes, & Bernstein, 1999). In light of these limitations, it is essential to consider promoting the placement of minors in family-like care services or offering interventions aimed at preventing the child's separation from their parents. This approach helps mitigate the long-term psychological and social consequences associated with the deprivation of a familial environment.

When foster care is not a viable option and efforts to prevent abandonment are unsuccessful, various intervention programs have been established by non-governmental organizations (UNICEF, Save the Children, SOS Children's Villages, and Concordia in Romania), associations (The Social Incubator), as well as social and artistic professionals. These programs aim to narrow the cognitive, emotional, and social development disparities between minors in residential care and their peers in the general young population (O'Brien & Donelan, 2008).

The conclusion of the communist regime exposed a grim image to the world, revealing overcrowded orphanages in Romania where children endured emotional deprivation and inadequate living conditions (Alexandrescu, 2019). These institutions have become case studies for professionals abroad (Cyrulnik, 2009), some of whom have commenced research into the impact of play-based activities and direct interactions on institutionalized young people (Brown, 2014a, 2014b; Jennings, 2011).

In recent years, within the Romanian context, a focus on working with underprivileged youth, including those in institutional care, using theatrical and art-therapeutic exercises has emerged. These approaches have been implemented through dedicated programs by certain organizations (Ajungem Mari, Lindenfeld Association, and POT, Tangent Association) and practitioners (Apostol, 2018a, 2018b). These programs facilitate the expression of emotions and the conversion of personal experiences into empowering narratives, which are vital aspects of the process of reintegrating these young individuals into society.

> *If we wish to transform horror, we must create places where emotions can be expressed; resocializing children 'as though nothing had happened' emphasizes their wounds, but they can easily be transformed if we can draw them, put them on stage, or turn them into a story* (Cyrulnik, 2009, p. 88).

Although these initiatives have yielded positive outcomes, their occurrence remains infrequent when contrasted with the significant number of individuals who could benefit from them. Historically, the scarcity of such initiatives can be attributed to the undervaluation of professionals

from the theater and film sectors who engage in social work with vulnerable populations. There has been a prevailing notion that individuals graduating from arts programs achieve success solely through involvement in cultural institution projects (Razar, 2009, as cited in Zikry & Ceobanu, 2020).

In Romania, there has been a progressive and sustained lobby for the social integration of vulnerable populations through theater in the last few years. Starting with 2015, "I.L. Caragiale" National University of Theater and Film in Bucharest (UNATC) has ensured, through conferences, workshops, and demonstration performances, the awareness of the general public and decision-makers on this topic. A decisive development occurred in 2023 when the significance of education through theater within the social sphere gained more recognition with the introduction of master's degree programs that actively promote the development of expertise in working with marginalized populations—Master's *Degree in Theater Pedagogy* and *Master's Degree in Community and Therapeutic Theater—at* the UNATC, as well as by the implementation of specialized projects within the same university—"Sunshine. Education through Theater", a project co-financed by the National Cultural Fund Administration.

Role of the instructor

Conducting a workshop with institutionalized young people requires a specific skill set, which, while sharing similarities with that of a theater instructor, also presents unique methodological challenges. The starting point for the activity leader is to understand that his or her role is that of facilitator. Grasping the original meaning of this term, "to make easy" (Prendergast & Saxton, 2009), helps the coordinator position himself/herself correctly in relation to those he/she works with as a person who skillfully guides communication and planned activities to facilitate the acquisition of specific knowledge, skills, or awareness related to various aspects of the socio-emotional domain. The coordinator must avoid taking on the role of a teacher, as this might create a perceived power imbalance and resistance among the participants, particularly in the case of a high-risk group.

Paolo Freire (2017) advocated for the shift from unidirectional educational settings to bi-directional frameworks where both the teacher and the learner are regarded as equal participants in the dialogue. By adopting the role of a subject in the process, as opposed to being an object, the learner empowers themselves through the encouragement they receive from the knowledge facilitator. In drama/theater-based activities, this type of relationship is reflected in the principle set out by Viola Spolin (1999): "We learn through experience and experiencing, and no one teaches anyone anything". In essence, it is imperative for the facilitator to exercise patience and instill trust in those they are working with. They should apply their techniques adeptly to bring forth individuals' personal resources. This approach implies a sense of generosity, as it demands the capacity to 'de-center,' meaning to acknowledge that the work centers on the beneficiaries—it originates from them and pertains to them rather than the facilitator (Prendergast & Saxton, 2013).

An intervention targeting beneficiaries of protection services entails meticulous planning of the conducted activities with the aim of attaining predefined developmental objectives aligned with the socio-emotional priorities identified by the stakeholders. This rigor is complemented by the trainer's flexibility, as they consider the needs expressed both directly and indirectly by the participants. Active listening, continuous curiosity demonstrated through questioning, and honesty enable the coordinator to adapt and refine the work process to best suit the group's requirements (Prendergast & Saxton, 2013). The principle of transparency should be promoted in the professional

training courses (theater education and art therapy) of future instructors, as it is a quality in working not only with at-risk groups but in any educational context due to the balance it brings to the instructor-participant relationship.

> *If facilitators are transparent about their intentions and about the 'baggage' they bring with them into the work, there is a chance that any contradictions that may emerge between the aspirations of the participants and those of the facilitator can be used as part of a developing analysis, which may itself be a prelude to a discernible, sustained impact.* (Etherton & Prentki, 2006, p. 150)

Participants place their trust in trainers based not only on their honesty and willingness to listen but also on their ability to maintain a non-judgmental stance. One potential challenge for a workshop coordinator is entering the workspace and, by extension, the relationships with participants, with preconceived notions and biases. This type of interaction will make it difficult to establish a relationship of trust and will be detrimental to the smooth running of the activity. The key to harmonious interactions aligns with Berne's theory (2018), emphasizing the importance of eliminating any preconceptions or prejudices when engaging with each individual. By adhering to this principle, a transparent relationship is fostered, beginning anew and involving both parties actively. Maintaining a non-judgmental mindset allows the trainer, when necessary, to step aside, allowing participants the freedom to explore and discover their own answers. By adopting this approach, the facilitator can effectively discern the requirements and preferences of the participants, subsequently incorporating them into the design of the planned intervention (Brown & Taylor, 2008). Called "negative capability" by Fisher (as cited in Brown & Taylor, 2008, p. 178), this ability does not imply passivity or relaxation on the part of the coordinator, but implementing the skill of actively being with a situation without jumping to conclusions and acting in anticipation.

Among the damaging preconceptions is that of viewing welfare recipients as victims in need of rescue through drama- or theater-based intervention programs. From this perspective, one of the challenges faced by the drama facilitator is to avoid assuming any of the roles within the dramatic triangle, notably that of the rescuer, in their interactions with the participants (Karpman, 2016). Although at risk, these young people are survivors of unsettling events, as a result of which they have developed various coping mechanisms to deal with adversity. Intervention is timely because it aims to redress disruptive behaviors (adopted as a coping measure by some young people) and provides an opportunity to heal trauma. Interventions utilizing theater for disadvantaged young people do not endeavor to 'rescue' them but rather to provide a platform for them to articulate their emotions, explore solutions to their circumstances, and engage in resocialization processes. The risk of individuals conducting social interventions developing a savior complex is significant, particularly when they perceive themselves as privileged and believe they possess superior knowledge compared to the individuals they are assisting (Flaherty, 2016). To establish appropriate boundaries, it is beneficial for the facilitator to maintain the understanding that their role is that of a guide, assisting participants in discovering their own solutions rather than providing predefined answers (Stewart & Joines, 2004).

Working with at-risk youth can also lead to secondary traumatic stress for the facilitator (Ormiston, Nygaard, & Apgar, 2022; Tumwesigye, 2021; Weiss-Dagan, Ben-Porat, & Itzhaky, 2022). When the coordinator successfully establishes a secure environment where each participant feels respected and acknowledged, it can encourage catharsis. In such cases, some young individuals may be willing to confide in the facilitator about past or ongoing abusive experiences. Hence, the drama/theater coordinator working in applied settings faces a significant risk of emotional exhaustion unless they have acquired the skill of establishing clear boundaries between their

professional and personal lives or engage in counseling and reflective discussions with peers who share similar professional challenges (Zikry & Ceobanu, 2020; Stevenson, 2022; Gordon, Kirtchuk, McAlister, & Reiss, 2018).

Material and methods

Two primary objectives were pursued by the study. Firstly, it aimed to identify the critical psychological and training competences exhibited by theater instructors engaged with disadvantaged children and young individuals, classifying them as 'training attributes' within the educational (training) context. Secondly, it sought to evaluate methodological challenges, including those encountered in practical situations involving at-risk groups.

A qualitative research design rooted in the empirical theory method was employed. As demonstrated by Popa (2018), this approach entails the inductive development of a theory derived from data gathered during the research. Consequently, a comprehensive analysis of the professional experiences of theater instructors actively engaged in social interventions with at-risk youth was conducted. This analysis aimed to extract the distinctive aspects of the required training and the challenges faced during the process.

Nine theater instructors, aged 24 to 35, participated in the study. Two of the participants were male, while the others were female. All of them held Master's degrees in Theater Pedagogy from the "I.L. Caragiale" National University of Theater and Film in Bucharest, representing four different graduation years, with the oldest being from the class of 2017. In 2022, four of these instructors were pursuing their PhD studies at the same university, while the remaining participants had completed their Master's degrees in 2022. Each instructor possessed a minimum of two years of experience working with children and young individuals from various backgrounds, excluding those classified as at-risk. The group's average age was 27.8 years, with an average of 5.88 years of experience in theater pedagogy. To maintain confidentiality in the presentation of results, each instructor was assigned a code from P1 to P9.

A social intervention was conducted by the team of instructors using applied theater and drama techniques with at-risk young people who were under state protection and placed in residential services (both public and family-based). These interventions were carried out in various geographical locations across Romania, including Bucharest, Craiova, Suceava, and Gura Humorului. The intervention encompassed an interactive performance addressing three distinct abuse scenarios, accompanied by a series of five workshops utilizing art-therapeutic and theatrical exercises to foster the development of socio-emotional skills. In each location, three separate working groups were formed: two comprised of children and (pre)adolescents, and one composed of institutional staff.

Drawing from documented accounts of abuse among disadvantaged youth, the performance had a duration of 45 minutes and was followed by a 30-minute discussion session centered on the presented themes. Six instructors took part in the performance, with one of them facilitating audience interaction, following a model similar to the 'Joker' role in Augusto Boal's Theater of the Oppressed method (Boal, 2022). The remaining three instructors were responsible for guiding the post-performance discussion session.

The drama workshops spanned five consecutive days, with each session running for three hours. The module concluded on the sixth day, culminating in the presentation of the outcomes to the center's community through brief demonstration workshops. The trainers were organized into three working teams, each containing at least one PhD student. The composition of these teams

varied from one institution to another, with the sole consistency being that the two male instructors remained with the pre-adolescent groups, offering young people a male role model.

Before the intervention, an informational session regarding the psychological characteristics of the target group was organized, conducted by a psychologist, and attended by all instructors. Additionally, there were three subsequent meetings with the same psychologist throughout the intervention, serving as opportunities for the trainers to reflect on both their achievements and the challenges they encountered during the program. Final feedback was provided by both the psychologist participating in the activities and an independent psychologist. The psychologist had an overview of the activities carried out and assessed the compliance with the qualitative research methodology in terms of the constitution and functioning of the focus groups. Thus, the results of the research were assessed as consistent and generalizable for the professional group of trainers.

The study took place following the intervention and employed semi-structured interviews with preset open-ended questions (Jamshed, 2014) and focus group discussions as data collection techniques. Nine individual interviews were conducted alongside a group discussion that involved all the instructors. These sessions were overseen by the author of the study and carried out through online meetings using the Zoom video conferencing platform. To ensure transparency and with participants' consent, the discussions were audio-recorded and subsequently transcribed using an online tool.

The interviews were conducted approximately three weeks after the conclusion of the activity. These interviews were based on a standardized set of six open-ended questions (see Annex 1), posed to all trainers in a consistent order. Each interview had a duration of approximately 20–30 minutes.

The focus group was carried out six months following the conclusion of the activity to assess any shifts in the instructors' perspectives that may have occurred since the initial interviews. During the focus group session, participants engaged with a series of open-ended questions designed to encourage reflection on the skills and challenges they had encountered (see Annex 2). This session spanned a duration of 2 hours and 20 minutes.

To analyze the data gathered from the nine interviews and the focus group, a categorical grid was employed. This grid was developed based on the two primary objectives of the study.

Results

The analysis of data from the interviews (I) and focus group (FG) followed a categorical grid derived from the outlined objectives, namely: psychological competences and professional competences of the theater instructor; methodological difficulties and practical difficulties of working with young people at risk (Table 1).

Below, the issues are presented based on the established categories, along with the responses provided by the study participants.

Among the **psychological competences of the theater instructor**, a number of positive elements that make up the personality have been identified, with emphasis on the emotional and creative dimensions. Thus, the responses reflected that emotional and personal intelligence are necessary skills in working with people in general, especially in the case of at-risk youth, where their emotional responses may manifest themselves in impulsive and aggressive behaviors:

"*It helped that I'm empathetic*" (P8, 30 years old, I);

"*Empathy proves invaluable when working with any group*" (P2, 24, I);

"*I found understanding and empathy from colleagues. Empathy was the key to working effectively with this risk group*." (P1, 24, I);

"*I have learned to manage my own emotions when working with a vulnerable group*" (P5, 28, I);

"*I took more care in dealing with them through expression and tried to keep my composure for situations where they might become aggressive or vulnerable*" (P4, 26, FG);

"*Managing one's own emotions and emphasizing emotional resilience, which involves self-regulation skills, is essential because you serve as a role model for the workshop participants*" (P9, 35, FG).

Another aspect that the instructors found useful was patience with workshop participants.

"O*ne of the skills that helped me a lot was patience*." (P3, 25 years old, I);

"*In this specific context, I think that among the most useful skills is patience*." (P9, 35, I);

"*Patience has helped a lot, both with myself and those I have worked with*" (P2, 24, I).

It was emphasized that a certain level of firmness is necessary to effectively manage groups of at-risk young people.

"*A second skill was firmness*" (P3, 25 years old, I);

"*Sometimes it also required firmness because some participants refused to follow the rules of the game, so they ended up disrupting the activity for others*" (P4, 26, FG).

Despite the serious and responsible nature of coordination work, successful instructors were characterized by their ability to maintain a sense of playfulness.

"*Joviality and constant playfulness*" (P7, 30 years old, I);

"*'Enjoy yourself; what you're doing is fun'. It was an encouragement for me as well, not just for the participants. Sometimes, I tend to take things too seriously and forget to simply have fun*" (P2, 24, I);

"*I have a positive, playful attitude that prevails during the workshop*" (P8, 30, I).

It was stressed that it's beneficial to refrain from forming any expectations regarding how the activities or interactions with the target group will unfold. Additionally, it's important to avoid preconceived notions or prejudices towards young people at risk, as these attitudes can lead to underestimating them.

"*It helped that I had no expectations about what was going to happen during the workshops*" (P5, 28 years old, I);

"*From now on, I will choose to let go of the preconceptions I tend to have before any activity involving a group*" (P1, 24, I);

"*Young people at risk need friendly people around them who are open to dialogue and who don't judge them or tell them what's good or bad*" (P8, 30, I);

"*I learned how hard it is to accept people as they are*" (P9, 35, I);

"*We noticed an inclination towards familiarity with emotional language in all groups. It was surprising because I expected them to know nothing. [...] From now on, I will choose to approach each participant with an open mind, starting from scratch*" (P3, 25, FG);

"*After all, we are all humans. I understand that it's important to let go of prejudices and any other parasitic thoughts before meeting them*" (P4, 26, FG).

Another point indicated by the instructors was the importance of demonstrating generosity, not only towards the participants but also towards their colleagues.

"*I found support in my colleagues whenever I looked for it, and they found it in me*" (P1, 24 years old, I);

"*Any opportunity to share my knowledge with others made me feel fulfilled"* (P4, 26, I);

"*I wanted to be able to give others some of the things I acquired during my studies*" (P2, 24, I);

"*I believed in the power of the intervention to bring a little ray of sunshine into the lives of institutionalized children*" (P7, 30, I);

"*I have identified a greater desire to help them or to observe changes at the end of the intervention compared to the workshops I usually conduct in Bucharest*" (P9, 35, FG).

Certain psychological characteristics identified in this study can be regarded as skills essential to the training of theater professionals and may also be viewed as professional competences. For instance, the capacity for observation, not only of the individuals one collaborates with but also of oneself, provides an opportunity for self-regulation in interpersonal interactions.

"*I think a useful skill in this context was the ability to observe oneself while interacting with workshop participants*" (P9, 35 years old, I);

"*It helped that I'm a good observer*" (P8, 30, I).

Another skill highlighted by the study participants is maintaining focus of attention, aiding them in staying engaged with the groups they worked with, and ensuring the effective management of the educational environment.

"*Distributive attention and the ability to focus over a longer period of time and in noisy spaces*" (P7, 30 years old, I);

"*I developed my ability to connect with the present moment; I was 100% here and now while coordinating the workshops, because otherwise I would lose the attention of the participants*" (P8, 30, I);

"*I realized that in interacting with them, we were really more careful, more cautious, like a mother with her newborn. We were looking in all directions, although we ourselves didn't make significant modifications as trainers. Basically, we used the same approaches that we use every time during workshops to win over participants, to raise their energy, and to get them involved*" (P6, 29, FG).

Instructors also underlined the importance of spontaneity and creativity, along with qualities related to the latter such as flexibility and adaptability, as essential skills in coordinating their work.

"*We as trainers always have to adapt to the times and the people we work with*" (P6, 29 years old, FG);

"*Creativity played a vital role in finding innovative solutions to challenges without being like an executioner or policeman that nullifies freedom of expression*" (P9, 35, FG);

"*Flexibility and spontaneity to be able to adapt to any space, any group, any environment, with the idea of not being afraid of anything and to keep in mind that every problem has a solution*" (P8, 30, FG).

Under the category of **professional competences required by the theater instructor,** aspects related to the ability to effectively manage educational activities, acquired through study or work experience, were identified. Consequently, all participants accentuated the importance of customizing the approach to suit the specific needs of the target group.

"*I have noticed that when I let myself be guided by the needs of the group, I can deliver the essential information and knowledge needed*" (P1, 24 years old, I);

"*I paid attention to details and to the needs of the group; I identified them quickly and found solutions*" (P8, 30, I);

"*I think the best strategy is to think that there is no universally valid approach. That's how you always stay open: you're really there to observe the people you work with and adapt to them*" (P9, 35, FG).

Similarly, it is necessary to ensure the conscious and active acquisition of knowledge.

"*It is important to respect the pace and boundaries of those we work with*" (P8, 30 years old, I)

The trainers also highlighted the importance of positioning themselves as equals with the workshop participants. This approach boosted the participants' confidence in their own abilities and fostered an environment conducive to meaningful dialogue.

"*I was open to learning from the participants*" (P8, 30 years old, I);

"*Even if they have certain difficulties, I have learned not to treat them with superiority, because this will push me away from them instead of helping me to establish a relationship with them*" (P4, 26, FG);

"*They looked at us at first as an authority that was harder to reach. We were Mrs. and Mr. Then, they realized that we related to them sincerely and that we saw them as equal dialogue partners*" (P3, 25, FG).

Establishing a proper rapport also entails recognizing the constraints inherent in the role of an instructor when working with at-risk youth:

"*Setting clear boundaries with those I work with*" (P6, 29 years old, I);

"*I have learned to detach myself from the children's problems without being indifferent*" (P7, 30, I);

"*It helped me a lot that we had delineated our role there and that we knew our practice was not therapeutic. This gave me the freedom to realize that I was only there to coordinate theater games, not to heal anyone*" (P1, 24, FG).

Effective communication skills proved valuable in fostering interaction between the workshop facilitators and participants, as well as in promoting collaboration among the instructors.

"*I felt compatibility with all my colleagues and communicated very well, both during and outside the workshops*" (P5, 28 years old, I);

"*Every situation has a solution if communication is effective*" (P1, 24, I);

"*I perceived every day as a new and unique opportunity to learn something new about facilitation and communication*" (P9, 35, I);

"*Some participants said it was the first time they felt genuinely heard when outsiders came to engage in activities with them, asking honest questions about their feelings*" (P3, 25, FG);

"*We created a safe space where we showed them that we were really listening*" (P4, 26, FG).

The facilitators valued their group work skills as essential for the effective collaboration they experienced among themselves.

"*Each center had a specificity to which we were able to adapt quickly because our working group was cohesive.*" (P3, 25 years old, I);

"*The relational dynamics between trainers can be a model of communication for the group. The better their relationship, the more trust and confidence there is that anything can be solved. (...) No matter which team member I was paired with, we worked together, despite the challenges*" (P8, 30, I).

Another point raised by the facilitators was the importance of being transparent and honest with the workshop participants regarding the objectives of the intervention and the challenges encountered during the process.

"*Honesty: I acknowledged my awkwardness if it came up (I wasn't afraid to normalize it)*" (P8, 30 years old, I);

"*We didn't claim that we knew everything; instead, we suggested that we explore together through exercises to learn new things. We were transparent with them*" (P9, 35, FG).

One of the skills developed during the intervention was the ability to facilitate, which means guiding participants to discover their own answers and solutions to the challenges they encounter.

"*I learned that asking questions can be very productive: what was that experience like for you, how do you feel now, and what did you do to overcome that moment?*" (P8, 30 years old, I);

"*We insisted, on the feedback, that they honestly share what they feel and what they think about certain situations. In one of the groups, half of the workshop was just feedback; that's how long it took to open up*" (P3, 25, FG).

Setting and adhering to a specific training objective, as well as the capability to design a workshop plan, were cited as factors that assisted instructors in conducting the educational activities.

"*I know the importance of organizing a work plan according to the proposed educational objectives*" (P8, 30 years old, I);

"*I had a stable lesson plan that gave me some security. Any challenge from outside could not destabilize me; I knew what I had to do*" (P5, 28, I);

"*It helped that the workshops were very carefully thought out in advance. I mean how the workshops were structured—the specific daily themes, the games*" (P9, 35, FG).

Knowledge of educational psychology gained during the study and pre-intervention information about the target group were identified as factors that supported the successful implementation of the intervention.

"*All the books I read in my master's in pedagogy about child psychology*" (P7, 30 years old, I);

"*I had enough knowledge of theater pedagogy at hand*" (P5, 28, I);

"*Theoretical knowledge about the target group mattered; we had not all worked with at-risk groups before, but we had read articles and books, talked to the psychologist before starting the activities, and shared our previous experiences*" (P9, 35, FG).

Efficient time management skills were also recognized as valuable for organizing activities effectively, especially when considering the unique characteristics of the target group.

"*Organizational skills to use time effectively*" (P1, 24 years old, I);

"*In all groups, in all cities, there was a question of timing, and we were focusing on the most important games. There were days when we managed to do all the exercises*" (P6, 29, FG).

Within the **methodological difficulties** category, various challenges related to the structure of the activities were identified. One of the challenges highlighted by the instructors was the mixed workshop on the fourth day, where the institution's staff participating in the workshops were divided between the two groups of children and (pre)adolescents:

"*All three of us instructors put up a united front to get the teenagers to come, because we thought that if they heard adults were participating in the workshop, only about three*

of them would come. Two or three boys said they didn't want to come when they heard it was a mixed workshop" (P8, 30 years old, FG);

"*When we were going to have the mixed workshop day, I was afraid they would make all kinds of excuses to miss it. We told them that we knew we were just getting used to each other and that it seemed inappropriate for adults to join in. We went ahead as planned and set some rules so they would feel more comfortable*" (P3, 25, FG).

An unexpected challenge arose during exercises involving balloons when some participants became frightened by the noise of them being popped. Consequently, the activity had to be adapted to accommodate their needs.

"*It never occurred to me that children might be scared of balloons. They were so scared that they would blow up in their faces.*" (P9, 35 years old, FG);

"*There were two people who were really afraid of balloons. When the others saw that the two were attracting attention, it perpetuated the desire to be noticed, and half of the group ended up being scared of balloons.*" (P3, 25, FG);

"*I asked who was afraid to pop balloons, and no one answered. I made them close their eyes and ask again. Two or three raised their hands, so we just played with the balloons instead*" (P8, 30, FG).

Modifications were made to other exercises in order to maintain the educational objective, necessitating adaptations, replacements, or eliminations of activities due to time constraints:

"*It was the 'emotion collage' exercise, and they were encouraged to speak with each other. The group's need was not to talk at all but to listen to music, and then they abandoned the activity*" (P3, 25 years old, FG);

"*In the first group, it was really an adaptability exercise for us because there were very young participants and we had to reduce the difficulty of the exercises*" (P6, 29, FG);

"*We didn't manage to do everything as planned because we didn't have enough time, and we chose the exercises that seemed most relevant to them at the time*" (P7, 30, FG).

The facilitators noted the challenge of prioritizing the needs of the target group, even if this meant foregoing certain educational objectives:

"*The target was not reached in a straight line; the trajectory had its ups and downs, but the important thing is that it was reached*" (P2, 24 years old, I);

"*I gave up on the idea of getting what I had set out to achieve at the end of the workshop. Due to a strong desire to impart knowledge, I found myself inadvertently steering them in what I believed was the best direction*" (P8, 30, I).

The intervention's format played a pivotal role in facilitating the activities, with the trainers believing that the absence of specific components (the psychologist's presence for information and counseling, the time spent together on travel and the introductory performance) would have hampered the overall productivity of the process.

"*The fact that we also had the psychologist with whom we met a couple of times after the start of the intervention was a huge plus. (...) I honestly don't know if the process would have worked as effectively if there had not been a psychologist to provide validation from time to time*" (P9, 35 years old, FG);

"*It was useful that we could talk to each other, especially because we all lived together on travel. It helped a lot. Even on the way from the workshop to the accommodation, when I was finding out what the others had been up to, we learned from each other's experience, and it took away the pressure of having to find solutions on our own in a very short time. It created a connection between us and helped us balance our work*

more. I think back to the first workshops, which we found much more difficult because we didn't have that time to talk to each other; we would come to the workshop and we would go our own way at the end" (P8, 30, FG);

"*I initially underestimated the show at the beginning of the intervention that featured the three abuse situations. (...) The funny thing is, every time it seemed to me that they weren't paying attention, that's when it had the biggest impact on them. Afterwards, they would come and tell us separately that they resonated with a certain character or situation*" (P3, 25, FG).

The **practical difficulties** identified encompassed both concerns from the viewpoint of the facilitators engaged in the intervention and the young individuals they were working with. In this context, certain instructors encountered secondary traumatic stress as a consequence of their empathetic responses to emotional disclosures made by the young participants during the workshops. During the workshop, there may be sensitive disclosures made by the participants, such as expressing the desire to die, as was the case in the present research. In response to this type of situation, the theater instructor team should prioritize the immediate safety and well-being of the individual, involving mental health professionals and emergency services if necessary, by creating a safe and supportive space during the workshop and adapting the content to explore themes related to mental health, resilience, and coping strategies.

"*Those of us with less experience working with vulnerable children have been quite affected by the problems they face*" (P7, 30 years old, I);

"*Although I had undergone some psychological training beforehand, their stories stirred something in me. It was like an internal struggle not to react in a very shocked way and not have the desire to save them. It was different and more difficult than working with typical children and young people. For example, at a workshop, a 12-year-old girl came to me, looked me in the eye, and told me with all her heart that she wanted to die. It helped me to hear again from the psychologist that I need to establish a clear boundary between me and the participants to prevent emotional exhaustion*" (P3, 25, FG);

"*I learned to let go of the rescuer syndrome because it was hard for me to manage the interaction with the participant who confessed to me during the workshop break that she was a victim of sexual abuse. I still felt it was my responsibility to make her happy during the workshop*" (P6, 29, FG).

The absence of proper professional boundaries between certain instructors and the recipients of the intervention led to a situation where some young people engaged in persistent online interactions, seeking continued contact with the instructors after the intervention had concluded.

"*The biggest challenge was the participant I got attached to and gave my Instagram account to, and then I didn't know how to handle the situation because she was texting me a lot*" (P7, 30 years old, FG);

"*I was very careful not to give out my personal details, because I knew there was a risk that vulnerable teenagers could get attached very quickly and not understand that we were only with them for a very short period of time. Maybe I wouldn't be so careful about that detail with a group of kids who aren't at risk, meaning I wouldn't be afraid to give them my Instagram. To avoid this kind of dependency, I think it helps to set the framework from the beginning: who we are, how long we stay, what we do, so that they don't create other expectations*" (P8, 30, FG).

Revealing the vulnerability of the trainers facilitated a connection with the workshop participants, encouraging them to embrace their own vulnerabilities. However, this approach posed a challenge for some coordinators:

"*Even for me, it is difficult to let go of the 'mask' and be really vulnerable and honest in front of a group of people, regardless of their ages*" (P2, 24 years old, I);

"*Being honest and open about one's own imperfections and insecurities in an appropriate learning environment is not a weakness but a good example for those struggling with low self-esteem*" (P9, 35, I).

Facilitators also noted instances of intrusion during the workshops by specific institution employees associated with the young people involved. In response to this behavior, the solution was to lock the doors of the rooms in which the activities were held in order to physically safeguard the participants and to offer them the intimacy needed to work during the workshops. Feedback regarding the behavior of the youngsters was delivered at the end of the workshop to the caregivers (social workers, maternal assistants, and educators) in order to provide them with assurance that the activities undertaken were going well.

"*The ladies had anxieties about young people's behavior—they might run away; they might behave inappropriately... Even though we told them everything was fine, they still didn't trust us and were constantly checking on us*" (P3, 25 years old, FG);

"*They came in a lot, not just at the beginning; they kept opening the door. We couldn't even create an atmosphere where young people felt safe enough to open up. You can't really relax when there's always someone at the door*" (P8, 30, FG).

The physical space either facilitated or hindered the progress of activities, depending on its appropriateness for the specific tasks at hand.

"*The space was not the most suitable because it was outdoors and sunny; we had no privacy*" (P3, 25 years old, FG);

"*When the space was right, it was very easy to carry out the work. When the space was not suitable, it was terrible*" (P8, 30, FG);

"*I remember the workshop in the bedroom, which belonged to one of the girls in the group. She didn't attend any more workshops afterwards. I felt I had invaded her privacy*" (P7, 30, FG).

Facilitators also encountered challenges related to the behavior exhibited by the young people they were working with, pointing out the importance of instructors having adequate psycho-pedagogical training and thorough pre-intervention briefings.

"*That girl, who was initially very shy and came accompanied by her mother, then ended up using licentious language, didn't really get involved in the activity; it was more like sitting on the sidelines. I didn't know how to approach her*" (P9, 35 years old, FG);

"*Some of them were not very cooperative at first. Then, once they saw what the exercises were like, they accepted us. It wasn't easy; we had to pass a few trials*" (P4, 26, FG);

"*At first, they seemed to hide behind a wall; they were not very open and showed avoidant behaviors. By the end of the show, it was obvious that they paid attention because they would come up to us and tell us which characters they empathized with*" (P3, 25, FG);

"*I noticed in them a kind of verbal and physical violence, which was a bit different, in the sense that it seemed to be the way they showed affection to each other*" (P8, 30, FG);

"*I noticed resistance, insecurities, and skepticism on their part, which made us more vulnerable because we were looked at with suspicion*" (P5, 28, FG).

Finally, the facilitators noted that the activities were most successful when there were minimal variables involved, as any changes tended to affect the dynamics of the entire group.

> "*I think we need as few variables as possible. You need to have many certainties and clearly established activities in advance, because the risk group brings a lot of unexpected elements anyway. If you don't have a clear structure behind it, like we had—we were aware of the exercise schedule, we were familiar with our team, we knew what language to use, we established our own rules—all sorts of uncertainties and challenges can arise*" (P3, 25 years old, FG);
>
> "*I think the first group we all felt was the hardest because everything was new to us. There were many unknowns: colleagues I had never worked with before, a new working situation, the risk group, and the fact that new participants kept coming every day*" (P8, 30, FG).

Table 1
Competences and difficulties encountered in working with at-risk youth

Established Categories	Identified Aspects
Psychological Competences	*emotional intelligence* *personal intelligence* *patience* *firmness* *joviality* *non-judgmental mindset* *generosity* *observational acumen* *focus* *spontaneity* *creativity* *flexibility* *adaptability*
Professional Competences	*individualized and accessible approach to implementation* *facilitating the deliberate and active acquisition of knowledge* *establishing an equitable relationship with participants* *recognizing the constraints inherent to the role of an applied drama/theater facilitator* *effective communication capabilities* *proficiency in group dynamics (compromise and collaboration)* *sincerity in interactions with participants* *facilitation skills* *formulating and pursuing training objectives* *ability to design a workshop plan*

	knowledge of psycho-pedagogy *efficient time management competences*
Methodological Difficulties	*hybrid workshop: combining young people at risk and adults responsible for them* *resource-related challenges (balloons)* *modifying, substituting, or omitting specific exercises based on the needs of the target group* *flexibility in terms of educational goals based on the target group's unique characteristics* *features of the intervention format*
Practical Difficulties	*secondary traumatic stress* *inappropriate online interactions initiated by members of the at-risk group determined by the context of the intervention* *manifestation of instructor vulnerability* *intrusion by institution staff members responsible for the at-risk group* *inadequate workspace determined by the context of the intervention* *problematic behaviors displayed by specific participants* *presence of numerous variables*

Discussions

The current study has highlighted that applied drama- and theater-based interventions for at-risk youth encompass several challenges that can be effectively addressed by facilitators who possess specific psychological and professional skills and are under the supervision of experts (psychologists, socio-dramatists etc.), ultimately fostering resilience in the process. These findings align with the perspectives of other authors who have undertaken similar initiatives (Hartley, 2012; Prendergast & Saxton, 2009, 2013). The focus of drama and theater activities lies in the human being and its constituent elements, which encompass thoughts, emotions, and actions. The specialized professional skills inherent to a theater educator's role, encompassing communication, facilitation, group dynamics, and personalized guidance, must be supplemented by specific psychological attributes. These qualities enable effective management of both intra- and interpersonal aspects when engaging with workshop participants. Notably, these attributes encompass observation, focused awareness, patience, and a jovial demeanor. The responsibilities and expertise of the applied drama/theater practitioner are delineated by the boundary where drama intersects with psychotherapy, transitioning into dramatherapy, which necessitates additional professional qualifications (Bailey, as cited in Kramer & Freedman, 2017). At the same time, it is advisable that the vulnerable group be approached in an integrated way, within a multidisciplinary team of specialists (theater instructor, psychologist, drama therapist, social worker), because the expertise of each member of the team increases the effectiveness of interventions.

The ethics of working with and researching vulnerable people are also important. In addition to limitations in obtaining informed consent (from participants who are minors or have a reduced capacity to consent), there are also issues relating to the effective psychological protection

of participants. This will be ensured both through compliance with already established ethical frameworks (through international and national guidelines) and through the design of an intervention/research protocol and an environment that ensures reliable protection, in which maximum benefit and non-maleficence are the ends of the activities carried out.

Based on the feedback from the survey participants, it appears that the pedagogical approach to working with young people at risk closely resembles that used in activities with young people from the general population. The enjoyable and engaging atmosphere in the workshops was attributed not only to the playful exercises but also to the instructors' jovial demeanor. When an individual is willing to play, it becomes easier to facilitate change and transformation. The instructor's playfulness influences the participants, creating a positive atmosphere and encouraging a shift in perspective, a concept also found in the theory put forth by Prentki (in Freebody, Balfour, Finneran, & Anderson, 2018, p. 169). While the intervention in this study was meticulously planned, there were situations where the plan had to be adapted. This adaptation was prompted by the identification and prioritization of other needs within the working group. In such instances, the trainers' abilities in listening, observation, attentiveness, and flexibility played a crucial role. These skills allowed them to seize learning opportunities as they emerged, ensuring that the process effectively addressed the needs and interests of the targeted young people, which is similar to recommendations put forward by other studies (Prendergast & Saxton, 2009; Hartley, 2012). Some of the study participants also noted that they refined their ability to facilitate during this experience. Facilitation involves asking open-ended questions to encourage those they work with to reflect and find their own solutions to problems. This approach has not only prevented instructors from imposing their own ideas during exercises but has also allowed them to effectively manage group dynamics, ensuring that discussions are not dominated by specific individuals, a perspective consistent with observations made by other authors in similar contexts (Prendergast & Saxton, 2009, 2013).

The variation in approach stemmed from the unique characteristics of the working group, particularly the disclosures made by the young people to the trainers, which were enabled by the creation of a safe and supportive environment. Dung and Zsolnai (2022) and Ormiston et al. (2022) described teaching as a "helping profession" because educators provide care and support to those they work with, and this role carries a significant level of stress. The exposure, sometimes unintentional, to the life experiences of at-risk youth led to the emergence of secondary traumatic stress in trainers. This phenomenon has also been noted by other researchers who have explored the effects of working with vulnerable individuals (Ruiz-Fernández et al., 2021; Oberg, Carroll, & Macmahon, 2023). The practitioner in applied drama or theater must establish clear boundaries regarding their scope of action and enhance their socio-emotional competencies. This ensures that their emotional engagement respects healthy boundaries, a point also highlighted by Sextou and Karypidou (2018). These skills concern both the ability to cope with working with vulnerable groups without interfering in their personal lives and the ability to withstand stress and/or recover from difficult, emotionally charged interventions. By this way, it ensures a safe frame for drama activities.

In conclusion, it is advisable for a social intervention team working with at-risk groups to comprise individuals with diverse areas of expertise, such as psychology and pedagogy. It's important for trainers to share a common vocabulary and complement each other. Besides the mutual support that instructors provide each other in reflective sessions, they should also receive proper information and emotional management support, an observation consistent with previous research (Hartley, 2012; Ferguson, 2017; Tumwesigye, 2021).

Furthermore, instances of resistance, inconsistency, and disruptive behaviors from some young people, as well as practical challenges like inadequate space, necessitated adjustments to the working dynamics. These circumstances demanded adaptability, flexibility, creativity, and spontaneity from the instructors in order to find effective solutions, which is similar to the theories of other authors who have explored the resilience of the applied drama/theater practitioner (Prendergast & Saxton, 2009). Nevertheless, the capacity to adapt does not exclude the need for a well-planned context of investigation, as illustrated by the findings of other researches (Novak et al., 2021).

This research has highlighted essential psychological and professional competencies for trainers working with at-risk groups. These competencies are instrumental in helping them navigate and address the challenges encountered in this context.

It is important to note that this study does have some limitations, including a small participant pool, a relatively brief intervention period, and the involvement of instructors who had limited prior experience working with vulnerable or at-risk groups despite their longer overall experience in theater pedagogy.

Conclusions

This research has catalogued potential difficulties encountered in applied drama and theater activities with at-risk young people and linked them to various psychological and professional competences that can assist facilitators in addressing these challenges. Among the identified psychological competences are emotional and personal intelligence, which help in managing one's own emotions during human interactions, as well as fostering empathy and emotional support. Additionally, non-judgmental thinking, adaptability, observation, and maintaining focused attention are highlighted as crucial for providing effective guidance to the group.

Among the professional competences, communication skills, the ability to work within a group, individualized approaches, and sincerity in creating a safe space for participants are emphasized, as well as understanding the boundaries inherent in the role of an instructor.

Based on the findings of this study, it is recommended that further research be conducted with a larger and more experienced pool of participants, particularly those with longer histories in pedagogy and interacting with at-risk individuals. This expanded research could identify additional psychological nuances and professional skills necessary for working effectively with this group while considering the professional limitations associated with applied drama and theater.

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Annex 1 – Interview Questions

- Why did you choose to participate in this intervention?
- What was your experience like during the workshops? Did you observe any changes in yourself, your colleagues, or the group you were collaborating with?
- What skills did you possess prior to this intervention that you believe were the most valuable in facilitating the activities?
- What have you gained from this experience? Please provide specific examples of the knowledge and skills you've acquired and how you plan to apply them in the future.
- What aspects or practices have you decided to let go of as a result of this intervention?
- If you had to encapsulate your experience of this intervention in a single word, what would that word be?

Annex 2 – Focus Group Questions

- How does your interaction with the at-risk young people compare to your previous experiences with different groups?
- What difficulties have you encountered in your work?
- What factors contributed to the smooth execution of your tasks?
- What methodological insights have you gained from this work experience?
- How has your experience with this intervention influenced your approach to your work?
- What are the necessary requirements for drama instructors to effectively work with at-risk individuals?
- What steps can be taken in the future to address the training needs of drama instructors working with at-risk youth?

THE FAMILY ENVIRONMENT OF CHILDREN WITH DIVORCED PARENTS AND THEIR EMOTIONAL DISTURBANCES

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Abstract

Objectives. This study presents the child's emotional disturbances as consequences of the parents' divorce. The child's reactions to the parents' divorce differ depending on a number of factors such as the child's age stage, his personal characteristics, the existence of parental conflict, and the support network.
Material and methods. The study was conducted by analyzing the literature published between 1985 and 2023. The search was conducted in Romanian and English in 18 international publications using the following key phrases and terms, separately or in combination: divorce, children's mental disorders, parental conflict, anxiety, depression, stress, emotionality, and preadolescents. These were used to investigate the link between parental conflict in divorce and emotional consequences for the child.
Results. In research on the psychological impact of divorce on a child, a series of disorders associated with a poorly managed family separation have been highlighted. Anxiety disorders are very common following divorce and are usually associated with depressive disorders, the symptoms of which vary in severity. The risk of post-traumatic or acute stress disorder is increased in children who have been exposed to a conflict situation between their parents or who have been involved in such a situation themselves, and it can manifest itself more severely if the feeling of guilt arises, a feeling often found in children whose parents have divorced, which intensifies the stress disorder. In cases where the child is forced to manage the distress resulting from parental conflict, the child may develop a range of problems, such as attachment disorder, adjustment disorder, or behavioral disorders.
Conclusions. The negative effects of misunderstandings between divorcing parents have a major impact on a child's emotional development.

Keywords: emotional disturbances, divorce, children's mental disorders, parental conflict, family life.

Introduction

The phenomenon of parental separation often leads to tensions, conflicts, frustrations, and dissatisfactions whose effects extend beyond those of the parties involved, represented by the

parents, with the children certainly becoming collateral victims. Since emotional divorce begins long before the legal divorce takes place, the child is subjected to successive emotional tensions, conflicts, physical aggression between parents, episodic abandonment, and revenge between the partners, leading the child to become deeply conflicted before and after the divorce while also hiding psycho-affective changes of varying intensity.

The association between family stresses caused by transitions in parental separation and the effects of the child's adjustment to the changes of separation has been established in numerous studies showing higher levels of emotional and behavioral problems, both externalizing (antisocial behavior, noncompliant, aggression) and internalizing (inhibited, withdrawn behavior, anxiety, depression), with lower levels of social responsibility, self-esteem, and social and cognitive competence in children and adolescents living in contentious homes or in divorced families in comparison with those in harmonious and non-divorced families. Conflict between parents can lead directly to emotional changes and functional impairment and is a significant risk factor for psychological and physical health in children.

Material and methods

Children's emotional reactions to the event of separation, starting from the moment when they realize that tensions between parents are unmanageable, consistent, and permanent, depend on the parents' approach, on how they manage personal conflict and their relationship dynamics. The present analysis constitutes the scientific basis for the study of the psychological factors involved in the development of emotional disorders in children whose parents are divorced.

The present research is based upon the information accessed in 2023 regarding psychological factors such as parental conflict and parental behaviors in divorce in relation to a child's emotional disturbances.

The research directions of the carried-out analysis aimed at: identifying relationships between children's anxiety, depression, stress, aggressivity, and emotionality with the family environment of the children with divorced parents; exploring the influence of psychological factors associated with post-divorce parenting behaviors; and identifying the need for further research on the influence of parental conflict on children's risk of disorders. The literature review was conducted from two directions simultaneously.

The first line of the literature review looks at the psychological factors involved in the post-divorce family environment, focusing on co-parenting relationships between parents. The second direction of analysis focuses on identifying the psycho-emotional disorders of children with divorced parents, looking at the impact that divorce may have on them. A larger volume of publications on this topic was studied, but only material from verified sources that provided consistent information on this topic was selected for inclusion in the analysis. The study was conducted through a systematic analysis of the scientific literature, published between 1985–2023. The process consisted of stages of search, selection, and systematic analysis of scientific articles in relation to the set of indicators and criteria detailed below.

The search for study publications was carried out in English and Romanian; the search process was carried out using the following databases: *Family Therapy Journal*, *American Journal of Family Law*, *Journal of Abnormal Child Psychology*, *ScienceDirect*, *ResearchGate*, *PubMed*, and *Medscape Medical*, according to the following key phrases and terms, taken separately or in combination: anxiety, depression, stress, emotionality, aggression, conduct problems, divorce,

parental conflict, impact of divorce, post-divorce parental behaviors, and emotional disorders. The searches were carried out between November 2020 and October 2023.

Following an online search, 218 titles and abstracts were reviewed; those that concurrently satisfied the following criteria were kept for the articles' complete publication analysis: being published between 1980 and 2023, containing quantitative or qualitative research results relevant to our research purpose (such as the impact of divorced parents on a child's emotional well-being), and being published in reputable journals or other scientifically verified publications. Figure 1 illustrates the way the concepts in the study and their respective relationships have been analyzed.

The following plan was based on several research questions: How are emotional disorders such as anxiety, depression, stress, aggression, and risky behaviors in children defined? What are the relationships between anxiety, depression, stress, aggression, and emotionality explored in children and parenting behaviors? What are the influences of the psychological factors of divorced parents on their children?

The indicators that were the basis of the analysis of the research results presented in the selected articles were the following: a) The presence of emotional disorders measured in children who go through a situation of parental separation; b) The existence of psychological factors characteristic of the family environment, such as parental behaviors and the conflict of divorced parents; c) The existence of significant correlations between the forms of children's emotional disorders and the post-divorce family environment.

The main purpose of the present review was to explore the existing body of information on the influence of post-divorce parenting behaviors on the occurrence and development of emotional disorders in children from divorced families. The identification of the impact of divorce on children was carried out in order to create, as future directions, psychological intervention programs with the potential to ameliorate the issues highlighted in the study.

Inclusion and exclusion criteria used in the sorting process of items

Inclusion criteria	Exclusion criteria
The title, summary, or labels of the article contained at least one of the terms divorce, child, or parental conflicts;	The title, summary, or labels of the article did not contain any of the terms divorce, child, or parental conflicts;
Age of participants between 9–13 years;	Participants in developmental periods other than preadolescence (e.g., small children, adolescents);
Studies based on field data processing, systematic review, or meta-analysis;	Clinical peculiarities of the sample (e.g., parents with disorders);
Results are oriented towards the relationship between parental separation and child`s development.	

Current study: The relationship between the family environment of children with divorced parents and their emotional disorders

These were used to investigate the link between parental conflict in divorce and the emotional consequences for the child. The literature highlights the association between family tensions caused by parental separation transitions and the effects of the child's adjustment to the changes of separation. The analysis shows that children's emotional reactions to parental divorce are consistent and depend on how parents manage personal conflict and post-divorce relationship

dynamics. In this context, it is important to identify the main causes of children's emotional disturbances and to consider them critically.

The stressors that determine the consequences on the relational dynamics of the family are the many changes that occur after divorce, such as: custody, alimony, change of residence, changes in the child's schooling, single-parent family structure, and lower financial resources.

Children's emotional reactions to the event of separation, starting from the moment they are told about the decision or even earlier, when children realize that tensions between parents are unmanageable, consistent, and permanent, depend on the parents' approach, how they manage personal conflict and their relationship dynamics. Children's adjustment process to parental separation is long-lasting and different in its manifestations, and some children are striving to please their parents and seem particularly calm, while others feel free to express their own feelings, exhibit frustration and anger or oppositional behavior, and are likely to process the experience of parental separation more quickly.

Parents strive for and develop their identity and role as "parents" and the latter becomes an important part of their life and self-identity. Parenting is a highly valued role, even in a traditional marriage where the stay-at-home mother handles most of the day-to-day child-rearing responsibilities and the less involved father, when asked, still says that being a parent is the most important part of his life. But when parents separate, much stress is placed on these parental identities. If the mother has been the primary caregiver or primary parent, she is likely to feel very threatened if the father demands equal parenting time. Similarly, the father may feel that there is an attempt to marginalize him if the mother feels that he should only have a "once every two weekends" (Fridays after school to Sundays dinner time) program of personal contact with her child. He may be used to seeing and spending time with the child every evening and on weekends. So, parents need to renegotiate how their time and responsibilities for raising and educating their child will be shared so that they can manage their insecurities and adjust to the new family environment (Austin, 2011).

Routt and Anderson (2014) point out that divorce usually involves the loss of daily contact with one parent, most often the father, which can affect the child's bond with the parent with whom he or she has little contact. Research published in 2014, finds that a significant proportion of children feel less close to their fathers after divorce (Routt & Anderson, 2014).

Fauber, Forehand, Thomas, and Wierson (1990) conducted a study on dysfunctional parenting that aimed to develop and test a structural equation model in which the relationship between interparental conflict and young adolescents' adjustment problems is mediated through its impact on three aspects of parenting behavior: lax control, psychological control, and parental rejection or withdrawal. The model was tested separately on a sample of 46 young adolescents from families in which parents are together and a group of 51 adolescents from recently divorced families. The hypothesis that most of the relationship between marital conflict and adolescent adjustment problems could be explained by disturbances in the parent-child relationship was significant, with a direct effect of parental conflict on adolescent externalizing problems. Results also suggested that the mediation patterns were somewhat different for the 2 samples and that the pattern explained a greater proportion of the variation in adjustment problems of adolescents from families in which parents are together than those from recently divorced families (Fauber et al., 1990).

Guided by the hypothesis of children's emotional security in contexts of parental conflict, Davies and Cummings (1998) conducted research that highlighted the link between parental relationships and children's adjustment, mediated by children's emotional security as evidenced by their emotional reactivity (e.g., vigilance, stress), by regulating exposure to parental emotional state

(avoidance, tension, involvement) and internal representations in the context of interparental relationships. The study analysis supported the hypothesis that marital dysfunction was related to children's adjustment problems as mediated by response processes indicating emotional insecurity in relation to parental conflict. Children's emotional reactivity and internal representations were closely related to marital relationships and children's adjustment, particularly in terms of internalizing symptoms (Davies & Cummings, 1998).

Although associations between marital conflict and children's adjustment problems are established, less is known about the individual differences in children that may impact these relationships. The authors examined longitudinal relationships between marital conflict and children's adjustment using a community sample of elementary school-aged children and young adolescents and assessed the role of children's vagal regulation in moderating the link between conflict and children's problems. High marital conflict led to negative child outcomes, while greater vagal suppression of a simulated argument was protective against internalizing problems associated with marital conflict. Findings support the value of a biopsychosocial perspective and illustrate that child vagal regulation may contribute to the aggregation or melioration of maladaptive risk in the context of marital conflict exposure (El-Sheikh & Whitson, 2006).

Results

Emotional disorders of children with divorced parents

Several factors have a crucial impact on a child's adjustment after parental divorce, one well-established factor being the level of parental conflict during and after divorce.

In high-conflict divorces, there are many emotional consequences for a child that are difficult or impossible to address from a psychological perspective unless there is a restructuring of the dynamics of the relationship between the two parents following the divorce (Barden, 2013).

Some see family instability as a major public health problem for children; others see divorce or separation as relatively harmless, even a positive change, especially for women in unhappy marriages or for children exposed to high conflict. Research has documented that parental divorce or separation is associated with an increased risk of adjustment problems for children and adolescents, including academic difficulties (e.g., lower grades and dropping out of school), disruptive behaviors (e.g., behavioral and substance use problems), as well as numerous emotional disorders (D'Onofrio & Emery, 2019).

Although divorce impacts all family members, for children its effects can be observed in adulthood as well, through weaker interpersonal relationships in which the person is less engaged and increased divorce rates. When considering the childhood poor school performance as well as emotional and behavioral problems, they can be observed compared to the case of children from intact families (Dumitriu, Butac, & Popa, 2022).

Comprehensive studies have investigated the prevalence of disorders in children aged 11 in a family context and have found a consistent presence of problems, with a sex ratio (boys to girls) of 1.7:1. The most prevalent disorders were attention deficit disorder, oppositional defiant disorder, and separation anxiety, and the least prevalent were depression and social phobia. Conduct disorder, generalized anxiety disorder, and simple phobia had intermediate prevalences. Pervasive disorders, reported by several sources, had a higher overall prevalence. Examination of background behavioral data revealed that children identified at age 11 as having multiple disorders had a history of adverse

life events with manifestations from earlier in life, as reported by parents and teachers (Anderson et al., 1987).

Scientific research has found a significant incidence of anxiety disorders and depressive disorders in children of divorced parents, particularly if they have fewer potential sources of resilience and social support (Wyman, Cowen, Hightower, & Pedro-Carroll, 1985).

Anxiety as a state of fear and tension is present in children, usually associated with motor manifestations (motor tics reactive to a situation of conflict and inner tension), vegetative manifestations (sweating, dry mouth, abdominal pain, diarrhea), or somatic expressions (sleep disturbances, eating disorders, hypochondriacal complaints). The anxious child lives with a vague feeling of permanent fear, with an expectation that something terrible is about to happen, and with an anticipatory character (Marcelli, Pătrașcu, Petcu, & Popa, 2003). Concrete manifestations of anxiety are common in clinical experience in the context of children with divorced parents. These range from irritability, anger, refusals, and tantrums to the need to have an adult around to be reassured, fears about past actions, and guilt. Such states show developmental changes both in their nature and in their responsiveness. Some no longer exist, while others intensify as they develop. Separation anxiety is common in young children and others and has been noted in many studies, which find that the fear of separation from the main attachment figure is a normal behavior, found in children during their first 3–4 years of life but is reactivated in the context of parental separation, regardless of age. In children whose parents have divorced, the symptoms of separation anxiety are often clinically significant, the fear of not being without the perceived protective person, of being separated or even abandoned by them, is a very present behavior. Emotional states can be of varying intensity and can manifest differently: worry, anxiety, exaggerated and persistent fear, crying protests, screaming, apathy, refusal to sleep alone, restless sleep with night terrors, and nightmares involving the theme of separation. To these can be added some somatic complaints such as headaches, stomach aches, diarrheal stools, vomiting, and fever, as well as specific neurovegetative symptoms such as sweating, paleness, and facial erythema (Dobrescu, 2005).

Olărescu and Veleanovici (2014) explain that generalized anxiety is also common in children affected by parental conflict and is more common among pre-teens and adolescents. Children are overwhelmed by worries and concerns that they cannot manage, along with symptoms such as restlessness, fatigue, muscle tension, difficulty focusing, sleep disturbances, and irritability. Some of them become obsessed with their academic or sporting performance, becoming insecure perfectionists and constantly seeking their parents' approval.

Panic disorder can occur in the context of a child's anxiety or cognitive disorder as a consequence of stressful experiences, an anxious attachment, or a high-stress family environment. Manifestations may take the form of intense fear, palpitations, sweating, choking, chest discomfort, abdominal pain, even accompanied by vomiting, nausea, fainting, loss of balance and control, depersonalization, impending doom, numbness, paleness, or flushing of the cheeks or face (Dobrescu, 2005).

As for mood disorders associated with anxiety disorders, they are frequently encountered in children with divorced parents, children who have more or less severe depressive symptoms present in depressive episodes that may be triggered by factors related to the dynamics of separation, the most common being the situation perceived by the child as a loss, the separation of parents being a fact that implies no longer having the person of attachment. Moreover, conflict situations between parents in which the child is present or is a party represent emotional abuse that can lead to mood disorders (Strohschein, 2005).

From a clinical perspective, the signs and symptoms that appear are diverse, depending on the age of the child, and may not always meet DSM criteria. In this regard, Dobrescu presents many clinical features of depressive disorder in children and adolescents. In pre-school children, it is manifested by apathy, refusal to eat, refusal to play, easy crying, irritability, sometimes enuresis, encopresis, abdominal pain, diarrhea, or vomiting. Schoolchildren often present vegetative disorders (decreased attention, tendency to isolate, decreased school performance, irritability, sometimes violent outbursts) and psychosomatic symptoms (headache, abdominal pain). The child is listless, exhibits motor and verbal sluggishness, is apathetic, and has a distorted self-perception with an often diminished self-image. The adolescent presents symptoms similar to those of an adult who declares a loss of interest and pleasure, lack of energy, frequent appetite and sleep disturbances, feelings of worthlessness, failure, unhappiness, or even suicidal ideation and suicide attempts (Dobrescu, 2005).

Dysthymic disorder can be diagnosed if the child or adolescent has been depressed or irritable for at least one year, has eating and sleeping disorders, low self-esteem, difficulty concentrating or making decisions, low energy or chronic fatigue, and feelings of hopelessness. Rogers and Spalding (2009) point out that the disorder is frequently found in children who are neglected by their parents, who are more concerned with mutual confrontation, or in children from families with difficulties in emotional expression and communication in an intensely conflictual family environment (Mikaeili & Zamanloo, 2012).

The existence of depressive symptoms in children can cause difficulties in schoolwork, affecting academic results. Scientific research examines the relationship between depression and learning problems in children, focusing on the mediating role of executive function disorders and inattention. A sample of 115 children, aged 7 to 12, who had difficulties with school activities, were tested over the past three years with different measures assessed by different raters. Regression analyses were used in the data analysis. The psychometric tests used were the Child Depression Inventory (CDI) and the Conners 3rd Edition. Children with high levels of depressive symptoms also have very high levels of learning problems, executive function deficits, and inattention. Executive function deficits and inattention add significant explanatory variance for learning problems in school-aged children, in addition to depression. Executive function deficiencies and inattention have a partial mediating effect on the relationship between depression and learning problems. Assessment of executive function and attention is an important part of evaluating children with depression; intervention and treatment programs for depression should include components focused on executive function and attention (Ciuhan & Iliescu, 2021).

Stress disorders are most common in situations where the child has been abused, has been exposed to a traumatic event, and especially in high-conflict divorce (Kilpatrick & Williams, 1998; Hall et al., 2006). The child experiences intense fear, helplessness, and horror, sometimes accompanied by disorganized or agitated behavior, painful memories, flashbacks that bring the stressful situation to the fore, terrifying dreams, and strong discomfort when remembering the trauma, even accompanied by neurovegetative disorders. Physical or verbal aggression occurs in both real behavior and in play, and clinical experience shows that play becomes repetitive and may be about a traumatic event. Most of the time, avoidance of stimuli associated with the trauma is encountered by: avoiding places or people associated with the traumatic event, thoughts, feelings, conversations, and activities that may be tangential to the painful situation, or even by refusing to acknowledge the existence of the event that occurred. Stress disorder also has neurophysiological consequences in the form of sleep disturbances, insomnia, fear of the dark, difficulty sleeping alone, nightmares directly related to the abuse, or terrifying dreams. A state of excitability, hypervigilance, irritability, and an exaggerated startle reaction are often encountered. Developmental delay is noted

in younger children and those whose parents have been in long-term conflict. Stress disorder also manifests itself in a state of pessimism about the future and a lack of desire to plan ahead.

The risk of stress disorder is increased in children who have been exposed to a conflict situation between their parents or have been involved in such a situation themselves, as the perpetrator of the abuse is someone known and trusted by the child. The disorder can be more severe if guilt, a common feeling in children whose parents have divorced, intensifies the symptoms, and the disorder can also show signs of depression.

Davidson, O'Hara, and Beck (2014) investigated the biological mechanisms that may be affected by childhood trauma in general and high parental conflict in particular; specifically, their research highlights the relationship between exposure to high parental conflict or trauma and the biological stress response system (hypothalamic-pituitary-adrenocortical axis and sympathetic nervous system), sleep, and psychological maladjustment of the child who has experienced a divorce with high parental conflict (Davidson et al., 2014).

Somatoform disorders are those disorders that have somatic symptoms suggestive of a medical condition but which cannot be fully explained by that medical condition, often being a consequence of potentially traumatic or abusive situations. Internalizing symptoms are common among children and may predict persistent psychological distress.

Davies, Sturge-Apple, Cicchetti, and Cummings (2008) examined the interrelationships between cortisol reactivity in children and their psychological reactivity to interparental conflict in a sample of 208 first-grade children (mean age = 6.6 years). Relative to other forms of conflict reactivity, children's anxiety responses to interparental conflict were consistent and unique predictors of their increased cortisol reactivity to interparental conflict. Analyses revealed that associations between stress and elevated cortisol levels in response to interparental conflict were particularly pronounced when children exhibited high levels of conflict involvement (Davies et al., 2008).

Also, El-Sheikh, Harger, and Whitson (2001), studied the physiological regulation of the child in the relationship between exposure to parental verbal and physical marital conflict and the child's adjustment and physical health by measuring vagal tone in relation to heart rate and respiratory rate, with increased tone meaning that the body has the ability to relax more quickly after a stressful situation. Increased vagal tone is equivalent to the ability to regulate blood sugar levels and therefore reduces the risk of developing diabetes, cardiovascular disease, high blood pressure, anxiety, migraines, or digestive disorders. Research has hypothesized that a higher vagal tone has a protective (i.e., buffering) function for children exposed to higher levels of marital conflict. Results indicated that higher vagal tone protected children against increased externalizing, internalizing, and health problems related to exposure to more frequent marital conflict, particularly verbal conflict (El-Sheikh et al., 2001).

Separation or divorce of parents, high-level conflicts, and violence, often against the mother figure, can disturb the stability and balance of a child. Such adverse life experiences cause disruption of consciousness, memory, identity, or perception of the environment, as dissociative disorders (Quiñones, 2022). Dissociation is usually manifested as a defense mechanism in trauma situations, which has the ability to help the child detach from the distress caused by the trauma. Dobrescu (2005) describes the dissociative symptoms that occur after extreme trauma: states of perplexity and confusion, periods of amnesia, the feeling of "living in another world", major emotional and behavioral fluctuations, a state of confusion between reality and fantasy, and the existence of "imaginary friends" with whom the child has discussions (Dobrescu, 2005).

The clinical implications and effects of parental divorce are also highlighted in the child's attachment system in terms of key features of attachment theory such as an inadequate behavioral control system, dysfunctional social relationships, the way in which one relationship can impact another, and association with later adult functioning, which are characteristic features of attachment disorders. Clinical manifestations may show on the one hand a disinhibited behavior in which the child may exhibit a pattern of unclear attachment, with indiscriminate sociability and a diminished or absent ability to select attachment figures, and on the other hand an inhibited behavior in which the child is unable to initiate and respond appropriately to interactions with others, exhibiting an exaggerated pattern of inhibited, hypervigilant, and overly ambiguous responses, a mixture of closeness and avoidance (Rutter, 1995).

Anastopoulos, Shelton, DuPaul, and Guevremont (1993) conducted a study that correlated and examined changes in parental functioning resulting from parents' participation in a parent behavioral training (PT) program designed specifically for school-aged children with certain disorders, particularly attention deficit hyperactivity disorder (ADHD). Compared to control subjects, parents who completed the nine-session PT program showed significant post-treatment gains in both child and parent functioning that were maintained after treatment. In particular, there were improvements in parental stress and increases in parental self-esteem, which accompanied parent-reported improvements in the overall severity of both their children's ADHD symptoms and other disorders (Anastopoulos et al., 1993).

High parental stress is associated with child psychopathology in general, affecting both genders and, in particular, with externalizing symptoms, which was also proven by Breen and Barkley's (1988) study. The study examined the extent to which girls with attention deficit hyperactivity disorder (ADHD) differ from boys with ADHD, and normal girls in terms of parental assessment of child psychopathology and parental stress. Girls with ADHD were rated as more depressed and hyperactive than boys with ADHD. Both girls with ADHD and those who were not diagnosed showed greater stress for their mothers, and their mothers reported greater family and personal distress than the mothers of normal girls. Parental stress ratings were associated with both maternal depression and the severity of child psychopathology, particularly aggression, behavioral problems, and hyperactivity. These findings suggest that girls and boys with ADHD are quite similar in the nature of their psychopathology and do not differ from each other in the degree of parental stress associated with their caregiving (Breen & Barkley, 1988).

A longitudinal study of adolescent girls aimed to determine how temperament, attitudes towards shape and weight, life events, and family factors might contribute to the increased clinically significant importance of shape and weight as assessed by the Eating Disorder Examination (EDE) instrument. Data from the ascertainment phase were taken from 699 female twins (age M = 11.26 years) and 595 parents, and approximately 1.15 years later, twins completed the EDE assessment instrument again (age M = 13.10 years). Data collected and analyzed revealed that at the ascertainment stage, the importance of shape and weight was a significant predictor of disordered eating behaviors across a lifespan. Some support was identified for established risk factors for disordered eating risk, while multivariate analyses highlight the importance of adolescent development in a secure family environment (Wilksch & Wade, 2010).

One of the most common psychological disorders diagnosed in childhood is conduct disorder, which causes disturbances in the child's functioning and is more common in boys than in girls. Symptoms include aggression, oppositionality, and breaking rules and boundaries. It can start in early childhood, manifesting in aggressive behavior towards peers, stealing, and lying, or in pre-adolescence and adolescence, in antisocial behaviour and discipline problems. This disorder is social

in nature and is most often seen in the presence of peer groups. The literature considers as risk factors for the development of conduct disorder the development of children in violent environments and family tensions against a background of low protective factors. Research has shown that the development of conduct disorder correlates with poor parenting practices, family dysfunction, or parental psychiatric disorders. In this regard, some studies show the relationship between poor parenting behaviors and the prevalence of conduct disorder (Amirkhanloo, Doosti, & Donyavi, 2022).

Associated with conduct disorder is defiant oppositionality, when the child exhibits deviant behaviors such as: often losing his temper; frequently arguing with adults; defies and refuses defying and refusing rules and boundaries; being often angry and hostile; and being defiant. The disorder often occurs in the context of family dysfunction, being oriented towards the authoritarian and limit-setting figure (Dodge, 2013).

The adjustment of children with behavioral problems is conditioned by high levels of parental support that can mitigate the effects of family adversity on subsequent behavioral problems. Data on parenting and family adversity were found in assessments of the following parenting components: the mother's warmth toward the child, parental discipline, and positive parental involvement. The presence of child disturbance was correlated with the use of harsh physical discipline, indicators of family adversity, and family stress (Pettit, Bates, & Dodge, 1997).

The potential effect of parental separation during early adolescence on externalizing and internalizing problems, from the perspective of satisfying the need for autonomy and the need for belongingness as personality components of relating, has led to highlighting the correlation between the context of parental separation and increased externalizing problems (Natsuaki, Cicchetti & Rogosch, 2009). Particularly in boys, prospective relationships provided by longitudinal analyses have reinforced the idea that conflictual and inaccessible parental behavior during separation can have serious consequences for children's personality development (impulsiveness, aggression, and excessive energy) (Brown et al., 1998).

Identifying the developmental trajectories of psychopathological configurations by considering the child's personality and its underlying developmental dynamics allows for more specific diagnostic predictions and promotes more timely interventions. Various considerations can be made regarding childhood personality and its continuity throughout development. It is noteworthy that, according to the literature, some personalities show homotypic continuity from childhood through adolescence and into adulthood, usually those characterized by psychological health (Bandelow et al., 2005).

Divorce may be responsible for a decline in physical and psychological health in children, with maladjustment triggered by a number of risk factors associated with divorce, such as interparental conflict, parental psychopathology, declining socioeconomic status, inconsistent parenting styles, a parallel and conflictual co-parenting relationship between parents, and low levels of social support. Such risk factors trigger adjustment disorders, marked by psychopathological symptoms, poor school performance, risky behaviors, exacerbated psychophysiological responses to stress, and weakened immune systems, representing a significant deterioration in children's social and academic functioning.

Discussions

This revision of the literature has highlighted many emotional disturbances in children with divorced parents as a consequence of the inadequate environment that the separation situation

causes (interparental conflict, legal proceedings, change of residence, etc.). Analyzing the results of the literature, anxiety and depression are frequently encountered and manifested through a variety of behaviors: worry, fear, apathy, refusal to sleep alone, nightmares involving the theme of separation, unhappiness, low energy, or chronic fatigue.

Stress disorders are most common in situations where the child is exposed to a traumatic event, especially in high-conflict divorce. A state of excitability, hypervigilance, irritability, and an exaggerated startle reaction are often encountered.

Somatoform disorders are those disorders that are common among children and may predict persistent psychological distress, such as headaches, stomachaches, diarrheal stools, vomiting, fever, and specific neurovegetative symptoms.

According to the most current research, emotional support is the parenting skill that is most relevant to the quality of relationships and the child's lack of exposure to interparental conflict. Research shows that in emotionally difficult contexts such as divorce, emotional support is more relevant and useful than any other parenting skill. The quality of parental relationships and experiences of family interaction prior to divorce and poor adjustment to divorce are particularly associated with dysfunctional aspects of co-parental relationships, such as undermining the other parent and exposing the child to interparental conflict (Dumitriu, Prodan, & Toma, 2023).

The clinical implications and effects of parental divorce are also highlighted in the child's attachment system in terms of key features of attachment theory, considering an inadequate behavioral control system, dysfunctional social relationships, the way in which one relationship can impact another, and association with later adult functioning, which are characteristic features of attachment disorders.

Conclusions

The literature contains numerous studies on the effects of parental divorce on psychological maladjustment and psycho-emotional health problems in children of divorced parents, thus contributing to the integration of existing scientific knowledge. Significant results have been found linking the experience of parental divorce to the experience of psychological maladjustment problems in children. Divorce is a major stressor that should be considered by health professionals as potentially responsible for psychologically maladaptive responses and health decline in children.

The way parents act towards their children, either harmoniously or disharmoniously, and the personal parenting styles characteristic of each of the two parents, which present a large number of variations and a multitude of external and internal determining factors, create the parental approach towards the child. The family atmosphere is considered to be a picture of the many relationships that are established between family members and is a direct result of the behavioral patterns that family members adopt, which lead to serious consequences for the child.

The need to pay greater attention to the early detection and identification of personality traits and patterns in childhood can prevent children from being exposed to marked long-term consequences, with an increased risk of developing severe clinical conditions in adolescence or adulthood.

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