

**Table 3**

*Presentation of studies included in the systematic analysis, focusing on the risk behaviors to which adolescents with low levels of self-control are exposed*

Authors and year	<i>N</i>	Gender	Place of study	Study design	Characteristics of the sample
Jennings, Higgins, Tewksbury, Gover, and Piquero (2010)	170	41.7% male	Philadelphia, Portland, Phoenix, Omaha, Lincoln, Las Cruces	Longitudinal, data collection since 1995	<i>Gang Resistance Education and Training (G.R.E.A.T.)</i>
Risky behaviors: following a delinquent trajectory; following a victim trajectory.					
Neaverson, Murray, Ribeaud, and Eisner (2020)	11 years n=1144 13 years n=1366 15 years n=1447	51/52% male	Zürich	Longitudinal 2004-2018	<i>Zurich Project on the Social Development from Childhood to Adulthood (zproso)</i>
Risky behaviors: aggressive behavior.					
Cho (2019)	2272	49% male	South Korea	Longitudinal 2010-2015	<i>Korean Child Youth Panel Survey (KCYPs)</i>
Risky behaviors: engaging in delinquency.					
Yun et al. (2016)	3059	50% male	South Korea	Longitudinal 2003-2008	<i>The Korea Youth Panel Survey (KYPS)</i>
Risky behaviors: delinquent activities.					
Pahl et al. (2014)	838	(T4) 41% male	East Harlem, New York	Longitudinal, started in 1990	- African Americans - Puerto Ricans - pupils, urban
Risky behaviors: high level of marijuana use.					
Chapple and Hope (2003)	1139	49.8% male	Collegetown	Cross-sectional, with data collected in 1997	- students in grades 9-11, white - 82% of families that did not benefit from social aid
Risky behaviors: dating violence and gang violence (as aggressors).					
Samek et al. (2017)	2769	48% male	Minnesota	Longitudinal	<i>The Minnesota Twin Family Study (MTFS)</i> - 1382 pairs of monozygotic twins (5 pairs of triplets)
Risky behaviors: low aggressiveness control is a predisposing factor of alcohol consumption disorder.					

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Kumar, Kumar, and Benegal (2018)	68	76.47% male	Bangalore	Cross-sectional	- two groups of 34 participants (high and low risk for alcoholism, depending on family history)
Risky behaviors: high levels of impulsivity in the group with a predisposition to alcoholism were associated with executive dysfunctions.					
Burt, Boddy, and Bridgett (2015)	160	48.12% male	Midwestern	Cross-sectional	- psychology students
Risky behaviors: more symptoms of eating disorders.					
Huang et al. (2017)	5879	42.3% male	Northern Taiwan	Cross-sectional	- students in the first class of high school
Risky behaviors: lack of self-control correlated with suicide attempt (in boys); there was a stronger association between impulsivity and deliberate self-harm, respectively suicide attempt for males.					
Kahn, Holmes, Farley, and Kim-Spoon (2015)	219	55% male	Southwest Virginia	Longitudinal 2007	- 91.6% caucasieni -Appalachian population - two groups (low vs. high self-control)
Risky behaviors: risky sexual behavior.					
Eiden et al. (2016)	227	48.89% male	Erie County, New York	Longitudinal	- two groups (non-alcoholic parents vs. alcoholic father)
Risky behaviors: externalizing behavior problems, alcohol consumption under the legal age, companionship with delinquent peers.					
Brook, Zhang, and Brook (2011)	806	50.9% male	New York	Longitudinal T1 - 1975 T7 - 2005/2006	- 94.6% white
Risky behaviors: chronic marijuana use.					
Wojciechowski (2019)	1354	86.41% male	Maricopa and Philadelphia	Longitudinal 2000-2010	- juvenile offenders convicted of serious crimes - offence committed between 14-17 years
Risky behaviors: increased risk for opioid use among participants with low acceleration and high acceleration of the use of these substances.					
Kim-Spoon, Falrey, Holmes, and Longo (2014)	220	55% male	Southwestern Virginia	Cross-sectional	<i>Youth Healthy Development (YFID)</i>
Risky behaviors: cigarette use, alcohol use, marijuana use.					

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Asselmann, Wittchen, Lieb, Höfler, and Beesdo-Baum (2016)	3017	50.71% male	Munich	Longitudinal 1995-2003	<i>Early Developmental Stages of Psychopathology Study (EDSP)</i>
Risky behaviors: substance use disorder, alcohol abuse/addiction, nicotine addiction, illicit drug abuse/addiction.					
Piquero et al. (2002)	241	35% male	SUA	Cross-sectional	- university students
Risky behaviors: binge drinking, alcohol-related problems.					
Lopez-Vergara et al. (2019)	104	63.5% male	-	Cross-sectional	- frequent cannabis consumers - an average of consumption twice a day
Risky behaviors: more cannabis use, issues related to cannabis use.					
Clark et al. (2015)	674	50% male	Sacramento and Woodland, California	Longitudinal	<i>California Families Project</i> - participants of Mexican origin
Risky behaviors: substance use.					
Mason et al. (2011)	1945	49% male	Washington and Victoria (Australia)	Longitudinal, data collection starting in 2001-2002	- pupils - 961 participants from the USA
Risky behaviors: peer deviance, alcohol use, alcohol problems.					
Esposito et al. (2017)	768	46.61% male	Naples	Longitudinal	- Italian teenagers living in a high-risk context
Risky behaviors: aggressive behavior.					
Tackett et al. (2015)	105	45% male	Southern Ontario	Longitudinal	- urban area
Risky behaviors: more externalizing behaviors.					
Conner et al. (2009)	317	100% male	SUA	Longitudinal 1991-1995	- offenders, data from five cities - 54.5% African American, 31.8% Caucasian, 8.9% Hispanic/Latino
Risky behaviors: risk seeking was a predictor for violent crimes and crimes against property, volatile temperament was predictor of violent crime and drug use.					
Crandall et al. (2017)	450	48% male	SUA	Longitudinal 2007-2013	<i>Flourishing Families Project</i> - 70.28 % European American
Risky behaviors: risky sexual behavior.					

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Winstok (2009)	660	50.6% male	Northern Israel	Cross-sectional	- pupils in urban schools, grades 7-12 - 90.6% Jewish, 4.8% Christian, 0.3% Moslem
Risky behaviors: reactive violence (in particular), proactive aggression.					
MacKellar et al. (2000)	879	46% male	New York, Ft. Lauderdale, Houston, and San Francisco	Cross-sectional	- fleeing from home in history and homeless people - 40% white, 37% black, 12% Hispanic
Risky behaviors: non-use of condoms (in boys).					
Ellis et al. (2015)	3350	34.15% male	Malaysia and SUA	Cross-sectional	- Students - 2059 participants from Kuala Lumpur (31.7% male) and 1291 from SUA (36.6% male)
Risky behaviors: committing crimes – against property, crimes without victims, total crimes (supported stronger by USA data and weaker than those from Malaysia).					
Wertz et al. (2018)	2232 1037	49% male 52% male	England and Wales, Dunedin	Longitudinal 1999 – 2013 1975 - 2010	<i>Environmental Risk (E-Risk) cohort</i> + <i>Dunedin cohort</i> - 56% pairs of monozygotic twins and 44% diszygotes
Risky behaviors: committing offences.					
Liu et al. (2020)	225	46.7% male	-	Longitudinal	- low socio-economic status - rural sample, without university education - electrocardiogram during a social stress task
Risky behaviors: alcohol use problems.					
Tangney, Baumeister, and Boone (2004)	Study 1 351 Study 2 255	28% male 19% male	East Coast (SUA)	Cross-sectional	- university students - 58% white, 13% Asian, 11% African American
Risky behaviors: binge eating, alcohol abuse.					
Beckmann et al. (2019)	5673	49.7% male	Lower Saxony	Cross-sectional 2012/2013 – 2014/2015	- secondary school students from 702 schools
Risky behaviors: aggression targeting teachers.					

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Duell et al. (2016)	5227	49.3% male	Guang-Zhou and Shanghai, Medellin, Nicosia, Delhi, Naples and Rome, Amman and Zarqa, Kisumu, Myearsla, west of Sweden, Chang Mai, Durham and WinstonSalem	Cross-sectional	- only participants from the USA identified themselves as belonging to an ethnic minority group
Risky behaviors: taking risk (for Western countries, not for Asian ones).					
Brook, Brook, and Zhang (2014)	607	32.7% male	New York	Longitudinal 1975 – 2005/2006	
Risky behaviors: chronic cigarette smoking.					
de Winter, Visser, Verhulst, Vollebergh, and Reijneveld (2016)	2230	T2: 781–799 male T3: 759–775 male	North of the Netherlands	Longitudinal 2001 - 2008	<i>Tracking Adolescents' Individual Lives Survey (TRAILS)</i>
Risky behaviors: health risk behaviors (e.g. irregular meals, physical inactivity, smoking).					
Cheung (2014)	4734	50.7% male	Hong Kong	Cross-sectional 2007 – 2010	<i>To Bet or Not to Bet: Structural Disadvantage, Social Capital, Individual Mentality and Adolescent Gambling in Hong Kong</i> - public and private schools
Risky behaviors: at-risk/probable pathological gambling, frequent gambling, strong permissiveness towards gambling, intense consumption of tobacco and alcohol, involvement in delinquency.					
Bergen, Newby-Clark, and Brown (2012)	<i>Study 1</i> 2208 <i>Study 2</i> 296	27% male 42% male	Canada	Cross-sectional	- university students
Risky behaviors: high risk for gambling.					
Moilanen and Manuel (2018)	274	39.8% male	SUA	Cross-sectional 2013-2014	- Internet survey - never married
Risky behaviors: substance use, low level of condom use.					

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Hooker, Gyurak, Verosky, Miyakawa, and Ayduk (2010)	27	13 male	-	Longitudinal	- 11 couples and 5 participants whose partners have not been fMRI scanned
Risky behaviors: substance use the next day after the onset of an interpersonal conflict.					
Nivette et al. (2021)	737	51% male	Zurich	Longitudinal 2004 – 2020	<i>z-proso</i> - people assessed at 20 years were invited to this study at 22 years
Risky behaviors: non-compliance with public health measures aimed at reducing the spread of COVID-19.					
Rising and Bol (2017)	179	17.3% male	SUA	Cross-sectional	- university students
Risky behaviors: selection of high-calorie foods.					
Cheetham et al. (2017)	107	58 male	Melbourne	Longitudinal	<i>The ORYGEN Adolescent Development Study</i> - pupils - at T3, 24 of the participants received a diagnosis of substance use disorder
Risky behaviors: substance use disorder.					
Davis et al. (2018)	1354	86.4% male	Philadelphia and Phoenix	Longitudinal 7 years	<i>The Pathways to Desistance Study</i> - juvenile offenders - three classes of victimization: poly-victimized, indirectly victimized, and lowly victimized
Risky behaviors: binge drinking (only for the class of indirect victims, made up of those who were observers of violence).					
Chang et al. (2018)	469	138 male	Southeast USA	Cross-sectional	- college students - 84.9% white
Risky behaviors: suicidal behaviors.					
Jiang and Shi (2016)	601	282 male	Yantai	Cross-sectional 2015 – 2016	- college students
Risky behaviors: compulsive buying, problematic Internet use, problematic mobile phone use.					
Innamorati and Maniglio (2015)	6363	48% male	Italy	Cross-sectional	<i>Self-Report Delinquency study (ISRD-2)</i> - students from 15 Italian cities and towns
Risky behaviors: alcohol use and abuse (recently).					

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Tillyer and Tillyer (2016)	11070	49% male	USA	Longitudinal 1994 – 1996	<i>The National Longitudinal Study of Adolescent to Adult Health</i> - seventh to ninth grade students from 80 high schools and 52 secondary schools
Risky behaviors: history of violence as a victim.					
Hernandez and Diclemente (1992)	176	100% male	USA	Cross-sectional	- university students
Risky behaviors: sexual intercourse without a condom, consumption of alcoholic beverages, more sexual partners.					
Baker, Klipfel, and van Dulmen (2018)	113 couples	50% male	USA	Longitudinal	- Heterosexual - 88% Caucasian - 52% had been dating for over a year
Risky behaviors: committing emotional and verbal aggression.					
Lindgren et al. (2014)	300	136 male	-	Cross-sectional	- undergraduates - 57% white
Risky behaviors: higher alcohol consumption, more alcohol-related problems.					
Otten, Barker, Maughan, Arseneault, and Engels (2010)	428	About 50% male	Netherlands	Longitudinal, five waves	<i>The Family and Health Study</i>
Risky behaviors: following a pathway of high cannabis use.					
Fine et al. (2016)	930	100% male	Philadelphia, Jefferson Parish, Orange County	Longitudinal	<i>The Crossroads Study</i> - juvenile offenders - ethnic diversity
Risky behaviors: short-term offences, long-term offences, a greater variety of long-term offences.					
Quinn and Fromme (2010)	1136	34% male	Texas	Longitudinal	- members of the University of Texas at Austin
Risky behaviors: heavy episodic drinking, alcohol problems, unprotected sex.					
Finkel et al. (2009)	Study 2 936 Study 4 66	Study 4 50% male	Study 2 North Carolina	Study 2 Longitudinal Study 4 Experimental	Study 4 -33 romantic heterosexual couples, undergraduates
Risky behaviors: committing more acts of violence between intimate partners (Study 2), participants whose self-regulating resources have been exhausted in an experimental context have responded more violently to the partner's challenge (Study 4).					

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Moilanen (2015)	287	38% male	USA	Cross-sectional	- unmarried heterosexual participants - 87% European American - 81% psychology students
Risky behaviors: early initiation into oral sex and coitus, more lifetime coital partners, low probability of using contraception in the last sexual intercourse (low level of long-term self-control).					
Meldrum et al. (2015)	825	50% male	USA	Longitudinal 1991-2007	<i>National Institute of Child Health and Human Development's Study of Early Child Care and Youth Development (SECCYD)</i> - 59% of families with two parents
Risky behaviors: involvement in delinquency.					
Sussman et al. (2016)	3356	45.29% male	Southern California	Cross-sectional	- 9 <sup>th</sup> grade students - 45% Hispanic
Risky behaviors: tobacco use, use of other drugs (social self-control).					
Kogan et al. (2013)	315	100% male	Georgia	Longitudinal	- African American - pupils in public schools - rural areas
Risky behaviors: unconventional trajectories of sexual partners (more partners).					
Gover et al. (2011)	2987	39.5% male	South Korea and USA	Cross-sectional	- undergraduates - 1399 participants from Korea (34% male) and 1588 participants from USA (45% male) - response rate: 96.5% Korea, 99% USA
Risky behaviors: psychological relationship violence, physical relationship violence (aggressor + victim).					
Novak and Clayton (2001)	25186	About 50% male	Kentucky	Cross-sectional	- secondary and high school students from 38 public schools
Risky behaviors: initiation of experimental smoking, transition to advanced stages of cigarette smoking.					
Boutwell et al. (2013)	3502 - 2728 individual twins	-	USA	Longitudinal, data collection since 1994	<i>National Longitudinal Study of Adolescent Health (Add Health)</i> - 289 pairs of monozygotic twins - 450 pairs of diszygotic twins
Risky behaviors: history of victim of crime.					



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Hankonen, Kinnunen, Absetz, and Jallinoja (2014)	854 at T1 679 at T2	100% male	Finland	Longitudinal	- military recruits
Risky behaviors: higher consumption of fast food.					