

Prevalence and Factors Associated with Poly-victimization in Colombian High-school Attending Adolescents

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Author note

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Abstract

Poly-victimisation studies among adolescents are unknown in Colombia; however, there are many adolescent victims of the Colombian socio-political armed conflict. The study aimed to establish the prevalence and factors associated with poly-victimisation among high-school students from a Colombian Caribbean city. The present is a cross-sectional study involving adolescent students from official and private educational institutions at Santa Marta, Colombia. The students completed the seven items of the Youth Victimization Questionnaire (poly-victimisation), Well-Being Index (Depression risk), SPAN Scale (Post-traumatic stress disorders risk, PTSD), Self-report Suicidal Ideation Scale (Suicide risk), four items of Youth Risk Behavior Surveillance (alcohol, smoking, cannabis and cocaine use), and APGAR questionnaire (Family functioning). 1,462 students participated in the study; students were aged between 13 and 17 years ($M = 15.98$, $SD = 0.83$), 60.33% were females, and 21.54% reported poly-victimization (three or more events of violence). The poly-victimization was associated with the PTSD (OR = 3.26, 95%CI 2.45–4.34), depression risk (OR = 1.80, 95%CI 1.17–2.76), cigarette smoking (OR = 2.55, 95%CI 1.93–3.36), alcohol drinking (OR = 2.06, 95%CI 1.45–2.94), and cannabis smoking (OR = 2.36, 95% 1.66–3.36). In conclusion, poly-victimisation is related to post-traumatic stress, depression, cigarette smoking, alcohol, cannabis, and cocaine. It is recommended for future longitudinal design research.

Keywords: Poly-victimization; Prevalence; Risk factors; Adolescents; Cross-sectional studies.

Prevalence and Factors Associated with Poly-victimization among Colombian High-school Attending Students

Poly-victimization is the simultaneous or successive exposure to different forms of violence, verbiage, common crime, sexual abuse, physical abuse, bullying, and family violence

(Finkelhor et al., 2011). Adolescents are at high risk of poly-victimisation over time and persistent negative emotional consequences in adulthood (Álvarez-Lister et al., 2014; Finkelhor et al., 2005; Finkelhor et al., 2013; Ford et al., 2010).

The prevalence of poly-victimisation has been widely documented in adolescents using the Youth Victimization Questionnaire (JVQ) (Finkelhor et al., 2005). Among adolescents, the prevalence of poly-victimisation varies according to the method used to measure it last year or throughout life. The poly-victimisation estimated from the levels above the average of the group of participants in the previous year (Finkelhor et al., 2005), in European countries such as Sweden, Finland and Spain, ranges from 8% to 10.3% (Aho et al., 2014; Ellonen & Salmi, 2011; Pereda et al., 2014). In North America, in countries such as Canada and the US, it ranges from 12% to 22% (Cyr et al., 2013, Finkelhor et al., 2005%), and in Latin America, as in Chile and Mexico, between 12% at 25.9% (Pinto-Cortez, 20018a; Méndez-López & Pereda, 2019). The lifetime prevalence of poly-victimisation, scored from the 10th percentile or by grouping, seven to more than eleven victimising events in Europe in countries like Sweden and Spain, ranges from 8% to 10.3% (Aho et al., 2016; Pereda et al., 2014). In Latin America, in Chile, between 10% and 68.1% of young people report more than seven acts of victimisation throughout their lives (Pinto-Cortez & Vanegas, 2015; Pinto-Cortez et al., 2018). In Mexico, a prevalence of 13.6% of more than eleven victimising events for life was documented (Méndez-López & Pereda, 2019).

The critical differences in poly-victimisation prevalence may be related to the evaluation method or criteria and contextual, social, and cultural aspects (Pereda-Beltrán et al., 2012).

Variables associated with poly-victimisation in adolescents

Poly-victimization and demographical variables

In a study with 706 students from Chile, the authors found that women reported a high frequency of poly-victimisation than men (Pinto-Cortez & Vanegas, 2015). In another investigation with 5,960 adolescents from Sweden, researchers found that women indicated more Poly-

victimisation (care, sexual and digital abuse) than men, without significant differences by age group (Pereda et al., 2014).

Poly-victimization and mental health

The emotional consequences of poly-victimisation may vary depending on the victimising events (McLaughlin et al., 2010). In adolescents, poly-victimisation can harm self-esteem, social skills, and, eventually, dissocial behaviours (Finkelhor et al., 2011). Furthermore, poly-victimisation is a higher risk factor for meeting criteria for a formal mental disorder such as depressive disorder, substance use disorder, or post-traumatic stress disorder (PTSD) (Mendoza et al., 2018). For example, Lane and Simmons (2011) found in 480 Native American adolescents four times the risk of alcohol consumption associated with more than three traumatic events in life. Ford et al. (2010), in 4,023 adolescents in the United States who reported poly-victimisation three times of risk for alcohol drinking and four times for other drug use. Davis et al. (2019) found, in 20,092 American adolescents, an association between poly-victimisation and alcohol drinking, cannabis smoking, and the use of multiple substances. Bender et al. (2015) documented among 601 adolescents in the US who have experienced poly-victimisation (street victimisation and numerous cases of sexual abuse), twice the risk for a depressive disorder. Ford et al. (2010), in 4,023 adolescents, found that poly-victimisation was associated with an almost two-fold risk of major depression. Chan (2013), in 18,341 adolescents from different cities in China, found an association of poly-victimisation with the risk of depression.

Kirchner et al. (2014), in 823 poly-victimised Spanish adolescents during the last year, observed nine times greater risk for PTSD than students not poly-victimised. Similarly, Pinto-Cortez et al. (2018b), in a sample of 706 Chilean adolescents, showed that poly-victimisation significantly predicted PTSD symptoms. Finally, consistent with the previous results, Bender et al. (2015), in a sample of 601 adolescents from different US nationalities, found that poly-victimisation (street victimisation and multiple cases of sexual abuse) presents twice the risk of PTSD.

In Colombia, studies of the role of violence in mental health have been dealt with more extensively in isolation in the field of victimisation. Nevertheless, there are some findings of poly-victimisation in victims of the Colombian conflict. For example, Campo-Arias et al. (2014) observed in a sample of 943 victims of the armed conflict a prevalence of poly-victimisation of 11.7%. Furthermore, it was associated with depressive symptoms, perceived stigmatisation, and anxiety stress.

In the Colombian Caribbean region in the north of Colombia, poly-victimisation studies in adolescents are unknown; although, various forms of violence present high frequencies in Santa Marta (Institute of Legal Medicine and Forensic Sciences, 2019). Nevertheless, the high prevalence indicates a persistent need to study the variety and simultaneity of the different forms of violence and the possible effects on psychosocial health and well-being, especially in adolescence, the stage of highest psychosocial risk (Finkelhor et al., 2011). Furthermore, it should consider that the naturalisation of violence, stigma, and discrimination suffered by the victim translates into underreporting of the traumatic experience of diverse and simultaneous violent events in adolescents (Campo-Arias et al., 2014).

The Caribbean Region is inhabited by 10 million people, approximately 20% of the Colombian population. The continental Caribbean Region made up of seven departments (Atlántico, Bolívar, Cesar, Cordoba, Guajira, Magdalena and Sucre) and the insular territory by San Andrés and Providencia. The Colombian Caribbean is culturally different; it is usual to find patterns of sexual violence, intrafamily and community violence established in a context that brings together a series of risk factors that promote poly-victimisation (Carosio, 2012). Among the factors, social inequity, violence, displacement derived from socio-political conflict, family overcrowding, vulnerable communities such as children and young people in a situation of indigence, or extreme poverty are highlighted (Contreras et al., 2016; Quintero-Aguado et al., 2013; Ramos et al., 2008). For example, regarding victimisation by conventional crime, in the Caribbean region, in 2018, according to the

Colombian Institute of Family Welfare, in the criminal responsibility system, there were 876 cases of common crimes in adolescents aged 14 to 17 years, 823 committed by men and 53 by women. 38.7% are related to theft, 17% to the manufacture, trafficking or possession of firearms and 10.5% to the manufacture or possession of drugs, 4.6% to homicides. The departments with the highest number of adolescent cases in the criminal responsibility system are Atlántico, Bolívar and Sucre (Instituto Colombiano de Bienestar Familiar, 2018).

Regarding violence against children and adolescents, in the departments of the Colombian Caribbean Region, the highest proportion of minors are abused by their fathers in 30.6% and mothers 29.5%, followed by stepfathers 8.7% (Grupo Centro de Referencia Nacional Sobre Violencia, 2014). This socio-political context makes the present study relevant in the Colombian Caribbean Region.

This study would make it possible to understand the risk variables associated with poly-victimisation that could contribute to the design of prevention programs to cushion the effects of the simultaneity of violence on adolescents' mental health (Sabri et al., 2013). Likewise, new knowledge will provide information about mental health variables, such as family functioning, and contribute to the design of psychosocial interventions in educational institutions aimed at the families of adolescents in Santa Marta, the capital of the Department of Magdalena.

The study's objective was to establish the prevalence of poly-victimisation and its association with mental health factors among high-school students in a city in the Caribbean region, Colombia.

Method

Design and ethical issues

It was carried out an observational, analytical, cross-sectional study with the approval in ordinary session on July 12, 2018, of the research ethics committee from a public higher education institution in Santa Marta, Colombia.

Participants

The population study was 10,810 high-school students, tenth and eleventh grade, from public and private educational institutions in a city located on the Caribbean coast of Colombia. The sampling was probabilistic. Authors expected prevalences between 3% (+/- 1) and 50% (+/- 5) and a level of confidence of 95%. Moreover, 25% of losses were added due to non-authorisation from the educational institution or no consent. The above criteria gave a sample of 1,948 students.

Instruments

Poly-victimization

Poly-victimization was explored with the Juvenile Victimization Questionnaire (JVQ). The JVQ is a checklist to identify the simultaneous experience of different types of violence: The present study only used seven items from the conventional crime subscale, caregiver victimisation, and siblings at lifetime. The JVQ two options of answer: yes, or no (Finkelhor et al., 2005). In addition, the items had an adaptation to the colloquial language of the Colombian Caribbean. In previous studies, this scale has obtained a Cronbach's alpha between 0.82 and 0.84 (Finkelhor et al., 2005; Forns et al., 2013). However, this is unimportant given that only some items were appropriate for the sociocultural context of the Colombian Caribbean; that is, the scale was used as a simple questionnaire, and therefore no internal consistency was calculated for the present sample of participants. Poly-victimization was defined as the affirmative response to three or more items based on the criterion of mean score + 1 or the highest whole number if it was a decimal value (Pereda-Beltrán et al., 2012).

Depression risk

The Well-Being Index (WBI-WHO-5) quantified the risk of a depressive episode. The WBI-WHO-5 explores depressive symptoms during the most recent two weeks (World Health Organization, 1998). This version was adapted for Colombia by Campo-Arias et al. (2008). The WBI-WHO-5 comprises five items and offers four response alternatives from "never" to "always" rated zero to three points. The total possible scores are between

zero and fifteen; the lower scores suggest a high risk of depression; in the present study, scores lower than nine rated depression risk. This instrument has shown acceptable performance in previous studies in adolescents in the Colombian Caribbean, Cronbach alpha of 0.70 (Campo-Arias et al., 2015). However, the scale in the present study showed a Cronbach alpha of 0.82.

Post-Traumatic Stress Disorder Risk

The SPAN Scale measured the risk of post-traumatic stress disorder; it is a tool resulting from the Davidson Trauma Scale's refinement (Davidson et al., 1997). The SPAN is an acronym for *Startle*, *Physiological arousal*, *Anger*, and *Numbness*. The SPAN Scale has four items that explore common symptoms of post-traumatic stress disorder (PTSD): hypertension, physiological arousal, anger, and mental dullness. Each item provides four possible response options rated from one to five. Therefore, possible scores are between 4 and 16 (Meltzer-Brody et al., 1999). In this study, scores higher than 12 were considered high risk of PE. The DTS has performed well in other adolescent populations, with high Cronbach alpha (Pineda et al., 2002). In the present study, the SPAN showed a Cronbach alpha of 0.66.

Suicide risk

The Center for Epidemiological Studies (CES-D-SI) quantified suicidal ideation. The CES-D-SI explores the frequency of suicidal ideation in the past 15 days. Each item offers four response options that score from zero to three. Scores higher than eight indicate a high risk of suicide (Radloff, 1977). This scale has shown acceptable psychometric performance in previous studies with Colombian adolescents, Cronbach's alpha of 0.86 (Pineda-Roa et al., 2018). However, the scale showed Cronbach's alpha of 0.75 in the present study.

Substance use

This questionnaire evaluates the consumption of legal substances (cigarettes and alcohol) and illegal substances (cannabis and cocaine). Four items of the Youth Risk Behavior Surveillance, YOUTH, for lifetime substance use were selected to measure this variable (Kann, 2016). The

YOUTH has high stability on repeated measurements in previous studies (Brener et al., 2013).

Analysis of data

The descriptive analysis showed frequencies, percentages, mean, and standard deviations. The variables related to mental health were the dependent variables, poly-victimisation as independent or explanatory variables, and demographic variables as the confounding variables in the bivariate analysis. Odds ratios (OR), with 95% confidence intervals (95%CI), measured the associations. The multivariate analysis using logistic regression. The authors took variables that showed less than 25% probability values in the bivariate analysis. The

authors considered Greenland's recommendations (1989) when carrying out the different models. Besides, the goodness of fit of Hosmer-Lemeshow was estimated (Hosmer et al., 1991). This data analysis process used the IBM-SPSS program, version 27.

Results

A total of 1,462 students participated in the study, 70.93% were between 13 and 17 years ($M = 15.98$, $SD = 0.83$). 60.33% were female, 55.34% studied in tenth grade, 49.59% resided in the low-income areas, and 21.55% reported poly-victimization, that it three or more lifetime events ($Mean = 1.49$, $SD = 1.97$). Table 1 presents the descriptive analysis of the mental health variables.

Table 1

Characteristics of the sample.

| Variable | Category | n | % |
|------------------------------|-----------|-------|-------|
| Age (years) | 13 – 15 | 425 | 29.07 |
| | 16 – 17 | 1,037 | 70.93 |
| Gender | Female | 882 | 60.33 |
| | Male | 580 | 39.67 |
| Grade | Tenth | 809 | 55.34 |
| | Eleventh | 653 | 44.66 |
| Socioeconomic status | Low | 725 | 49.59 |
| | Medium | 508 | 34.75 |
| | High | 39 | 2.67 |
| | No answer | 190 | 12.99 |
| Lifetime alcohol consumption | Yes | 330 | 22.57 |
| | No | 1,132 | 77.43 |
| Lifetime cigarette smoking | Yes | 328 | 22.44 |
| | No | 1,134 | 77.56 |
| Lifetime cannabis use | Yes | 170 | 11.63 |
| | No | 1,292 | 88.37 |
| Lifetime cocaine use | Yes | 40 | 2.74 |
| | No | 1,442 | 97.26 |
| PTSD risk | Yes | 283 | 19.36 |
| | No | 1,179 | 80.64 |
| Depression risk | Yes | 103 | 7.05 |
| | No | 1,359 | 92.95 |
| Poly-victimization | Yes | 315 | 21.55 |
| | No | 1,147 | 78.45 |

Table 2 presents the bivariate association between poly-victimisation and mental health factors.

Table 2

Crude and adjusted by grade and family functioning outcomes with poly-victimization.

| Variable | cOR (CI95%) | aOR (CI95%) |
|------------------------------|--------------------|---------------------------------|
| Lifetime alcohol consumption | 2.18 (1.53 – 3.10) | 2.06 (1.45 – 2.94) ¹ |
| Lifetime cigarette smoking | 2.67 (2.03 – 3.51) | 2.55 (1.93 – 3.36) ² |
| Lifetime cannabis use | 2.50 (1.78 – 3.60) | 2.36 (1.66 – 3.36) ³ |
| Lifetime cocaine use | 1.58 (0.80 – 3.15) | 1.70 (0.84 – 3.43) ⁴ |
| PTSD risk | 3.42 (2.58 – 4.53) | 3.26 (2.45 – 4.34) ⁵ |
| Depression risk | 2.08 (1.36 – 3.18) | 1.80 (1.17 – 2.76) ⁶ |

c, crude.

a, adjusted.

¹ Hosmer-Lemeshow's test = 1.42, df = 4, p = 0.84.² Hosmer-Lemeshow's test = 0.33, df = 4, p = 0.99.³ Hosmer-Lemeshow's test = 0.55, df = 4, p = 0.97.⁴ Hosmer-Lemeshow's test = 1.69, df = 4, p = 0.79.⁵ Hosmer-Lemeshow's test = 1.52, df = 4, p = 0.82.⁶ Hosmer-Lemeshow's test = 4.76, df = 5, p = 0.45.

Poly-victimisation increases at least twice the risk of PTSD, current depression risk, lifetime cigarette smoking, alcohol drinking, and cannabis smoking, as indicated by Hosmer-Lemeshow's goodness-of-fit test (See Table 2).

Discussion

In the present study, a prevalence of 21% of poly-victimisation is associated with the risk of post-traumatic stress disorder, depression, cigarette smoking, alcohol drinking, and cannabis smoking.

A 21% of this sample of high-school attending adolescents reported three or more simultaneous victimisations throughout life. This prevalence contrasted with studies that estimated poly-victimisation using JVQ; it is higher than 8%, found among 1,107 youth in Spain; the authors reported that they had experienced eleven forms of victimisation (Pereda et al., 2014). Moreover, a

study documented that 10.3% had experienced more than eleven victimising events in 5,960 adolescents in Sweden (Aho et al., 2016). Similarly, the frequency found is higher than that reported in 706 Chilean adolescents, 10% evidenced more than eleven victimising acts (Pinto-Cortez et al., 2018b); and 13% of 1,068 Mexican adolescents, who evidenced more than eleven victimising events throughout their lives (Méndez-López & Pereda, 2019). However, the finding is lower than the documented prevalence in 706 Mexican adolescents, 68% of young people experienced up to six different types of violence, and 30.3% reported up to seven or more times in their life (Pinto-Cortez & Vanegas, 2015).

The prevalence of poly-victimisation can range from 1% to 90%. The disparity of the findings can explain the different criteria for establishing cut-off points for the victimisation situations included in the evaluation. Moreover, cultural or contextual particularities from each country can affect the

prevalence (Pereda-Beltrán et al., 2012). However, the previous results showed the form and situations' repetitiveness of victimisation, regardless of the socio-cultural context (Finkelhor et al., 2011).

The present study shows a moderate association between poly-victimisation and risk of post-traumatic stress disorder, lifetime cigarette smoking, alcohol drinking, and cannabis smoking. The association between poly-victimisation and PTSD suggests that poly-victimised students show twice the risk of PTSD. This finding is consistent with previous research. For example, in the USA, Bender et al. (2015), in a sample of 601 adolescents, found a moderate association between poly-victimisation and PTSD (OR = 2.08, 95%CI 1.52 – 1.20). In another study in Spain, Kirchner et al. (2014) found in 823 adolescents a significant association between poly-victimisation and PTSD (OR = 8.98, 95%CI 2.59 – 31.05). Thus, Poly-victimization is a complex phenomenon of violence. Poly-victimisation increases the risk of suffering severe trauma, emotional dysregulation, dysfunctional information processing, and maladaptive schemas linked to PTSD (Ford et al., 2010).

The present study reports an association between poly-victimisation and depression risk. Similar studies consistently indicate a moderate association between multiple experiences at the risk of depression. In the United States, in 4,023 adolescents, an association was found between polyvictimization as various forms of community violence and friends at risk of major depression (Ford et al., 2014) and in China in 18,341 adolescents (Chan, 2013). Polyvictimization can generate severe stress and acute trauma, making the adolescent vulnerable to developing a risk of major depression. It is important to note that depression is a symptom to meet the criteria for PTSD (Ozer et al., 2006) and others of risk behaviour such as substance use (Agnew, 2000).

The present study reports a moderate association between poly-victimisation and cigarette smoking, alcohol consumption and cannabis smoking. Poly-victimization and substance use are limited in adolescents; however, in a study carried out in the USA, Ford et al. (2010) found in 4,023 adolescents an association between poly

victimisation and alcohol consumption. Furthermore, Davis et al. (2019) in 20,092 American adolescents reported an association between poly-victimisation and the use of cannabis and multiple substances. The association between poly-victimisation, cigarette smoking, alcohol drinking, and cannabis smoking can explain from the perspective of self-medication theory; substance use is a strategy to suppress emotional suffering (Hawton et al., 2013). On the other hand, cigarette and alcohol consumption is the gateway for heavy drug use with an increased risk of problem use or meeting criteria for substance use disorder (Posada-Villa et al., 2009). Furthermore, the general strain theory (GST) indicates that poly-victimised individuals could adopt deviant behaviours to reduce the feelings of negative affect due to the tension due to victimisation and predispose risky behaviours such as substance use (Agnew, 2000).

The configuration of recurring, simultaneous, and repetitive violent events establish a recurring circle, which fosters the experimentation of stressors in the daily life of adolescent interactions in the social, family and educational contexts. Early victimisation predisposes a higher probability to develop maladaptive behaviour in adolescence and chronic mental disorders in adulthood (Finkelhor et al., 2013). Moreover, Poly-victimization significantly predicted the severity of symptoms and co-occurrence of PTSD disorder, depression, and other health risk behaviours such as substance use (Bender et al., 2015; Ford et al., 2010).

From this perspective, the role of poly-victimisation in mental health is unquestionable; consequently, the risk and protective factors precisely suggest prevention and promotion strategies aimed at adolescents, parents, and directors of educational institutions.

This study reports the prevalence in the Colombian context, which evidences adolescents' experience in the face of the simultaneity of different violence events, an underestimated phenomenon in the study of poly-victimisation among adolescents (Pereda-Beltrán et al., 2012). On the other hand, it is a first approach to understanding the implications of poly-victimisation on mental health and adolescents'

psychosocial development from the public policy on mental health (Pereda et al., 2014). However, this study has limitations because cross-sectional analyses do not clear enough evidence on the quantified associations' direction (Monleón & Canela, 2017). Moreover, the findings should be interpreted with caution because only seven items of the Juvenile Victimization Questionnaire were quantified; therefore, the number of victimisations is lower than that observed in other studies. Furthermore, it did not include poly-victimisation last year, making it complex to contrast the findings with other studies (Pinto-Cortez et al., 2018).

In conclusion, the risk of PTSD, the lifetime consumption of cigarettes and alcohol are risk factors for poly-victimisation in high school students from a city in the Caribbean region, Colombia. Future research recommends considering mediating variables, longitudinal design, and extending the ages of the age groups in clinical and non-clinical contexts.

Declarations

Ethics approval: The Research Ethics Board of the Universidad del Magdalena, Colombia, approved the project (Act of July 12th, 2018).

Consent to participate: The parents of participants signed informed consent.

Data availability statement: The data that support the findings of this study are available from the corresponding author upon reasonable request.

Authors' contributions: Carmen Cecilia Caballero-Domínguez contributed to the study conception, design and data interpretation, statistical analysis and drafted the article and revised and approved the final version. Adalberto Campo-Arias and Mabel Rodríguez contributed to the study conception and design, statistical analysis, data interpretation, revised the intellectual content and approved the final version.

References

- [1] Aho, N., Gren-Landell, M., & Svedin, C. G. (2016). The prevalence of potentially victimising events, poly-victimisation, and its association to sociodemographic factors: A Swedish youth survey. *Journal of interpersonal violence*, 31(4), 620-651. [10.1177/0886260514556105](https://doi.org/10.1177/0886260514556105)
- [2] Agnew, R. (2000). Strain theory and school crime. In S. Simpson. *Of crime and criminality: The use of theory in everyday life* (pp. 105-120). Pine Forge Press
- [3] Alvarez-Lister, M. S., Pereda, N., Abad, J., & Guilera, G. (2014). Poly-victimization and its relationship to symptoms of psychopathology in a southern European sample of adolescent outpatients. *Child Abuse & Neglect*, 38(4), 747-756. <https://doi.org/10.1016/j.chiabu.2013.09.005>
- [4] Bender, K., Brown, S., Thompson, S., Ferguson, K., & Langenderfer, L. (2015). Multiple victimisations before and after leaving home associated with PTSD, depression, and substance use disorder among homeless youth. *Child Maltreatment*, 20(2), 115-124. <https://doi.org/10.1177/1077559514562859>
- [5] Brener, N., Kann, L., Shanklin S., Kinchen, S., Eaton, D. K., Hawkins, J., & Flint, K. (2013). Methodology of the Youth Risk Behavior Surveillance System. *Morbidity and Mortality Weekly Report: Recommendations and Reports*, 62(1), 1-20.
- [6] Campo-Arias, A., Miranda-Tapia, G., Cogollo, Z., & Herazo, E. (2015). Reproducibilidad del Índice de Bienestar General (WHO-5 WBI) en estudiantes adolescentes. [Reproducibility of the Well-Being Index (WHO-5 WBI) among adolescent students]. *Salud Uninorte*, 31(1), 18-24. <https://doi.org/10.14482/sun.30.1.4309>
- [7] Campo-Arias, A., Oviedo, H. C., & Herazo, E. (2014). Prevalencia de síntomas, posibles casos y trastornos mentales en víctimas del conflicto armado interno en situación de desplazamiento en Colombia: una revisión sistemática. [Prevalence of mental symptoms, possible cases and disorders in victims displaced by the internal armed conflict in Colombia: A systematic review].

- Revista Colombiana de Psiquiatría*, 43(4), 177-185. <https://doi.org/10.1016/j.rcp.2014.07.003>
- [8] Carosio, A. (2012). *Feminismo y cambio social en América Latina y el Caribe [Feminism and social change in Latin America and the Caribbean]*. Consejo Latinoamericano de Ciencias Sociales (CLACSO).
- [9] Chan, K. L. (2013). Victimization and poly-victimization among school-aged Chinese adolescents: Prevalence and associations with health. *Preventive Medicine*, 56(3-4), 207-210. [10.1016/j.ypmed.2012.12.018](https://doi.org/10.1016/j.ypmed.2012.12.018)
- [10] Contreras, J. M., Both, S., Guedes, A., & Dartnall, E. (2016). [Violencia sexual en Latinoamérica y el Caribe: análisis de datos secundarios. Iniciativa de Investigación sobre la Violencia Sexual]. <http://clacaidigital.info/handle/123456789/980>
- [11] Cyr, K., Chamberland, C., Clément, M. È., Lessard, G., Wemmers, J. A., Collin-Vézina, D., & Damant, D. (2013). Poly-victimization and victimisation of children and youth: Results from a populational survey. *Child Abuse & Neglect*, 37(10), 814-820. <https://doi.org/10.1016/j.chiabu.2013.03.009>
- [12] Davis, J. P., Dworkin, E. R., Helton, J., Prindle, J., Patel, S., Dumas, T. M., & Miller, S. (2019). Extending poly-victimisation theory: Differential effects of adolescents' experiences of victimisation on substance use disorder diagnoses upon treatment entry. *Child Abuse & Neglect*, 89, 165-177. [10.1016/j.chiabu.2019.01.009](https://doi.org/10.1016/j.chiabu.2019.01.009)
- [13] Davidson, J. R., Book, S. W., Colket, J. T., Tupler, L. A., Roth, S., David, D., Mellman, T., Beckham, J. C., Smith, R. D., Davison, R. M., Katz, R., & Feldman, M. E. (1997). Assessment of a new self-rating scale for post-traumatic stress disorder. *Psychological Medicine*, 27(1), 153-160. [10.1017/s0033291796004229](https://doi.org/10.1017/s0033291796004229)
- [14] Ellonen, N., & Salmi, V. (2011). Poly-victimization as a life condition: Correlates of poly-victimization among Finnish children. *Journal of Scandinavian Studies in Criminology and Crime Prevention*, 12(01), 20-44. [10.1080/14043858.2011.561621](https://doi.org/10.1080/14043858.2011.561621)
- [15] Finkelhor, D., Hamby, S. L., Ormrod, R., & Turner, H. (2005). The Juvenile Victimization Questionnaire: reliability, validity, and national norms. *Child Abuse & Neglect*, 29(4), 383-412. <https://doi.org/10.5944/ap.13.2.17810>
- [16] Finkelhor, D., Turner, H. A., Shattuck, A., & Hamby, S. L. (2013). Violence, crime, and abuse exposure in a national sample of children and youth: an update. *JAMA Pediatrics*, 167(7), 614-621.
- [17] Finkelhor, D., Turner, H., Hamby, S., & Ormrod, R. (2011). *Poly-victimisation: exposure of children to multiple types of violence, crime and abuse*. OJJDP Juvenile Justice Bulletin. Recovered the] <https://www.ncjrs.gov/pdffiles1/ojjdp/235504.pdf>
- [18] Ford, J. D., Elhai, J. D., Connor, D. F., & Frueh, B. C. (2010). Poly-victimization and risk of post-traumatic, depressive, and substance use disorders and involvement. *Journal of Adolescent Health*, 46(6), 545-552. <https://doi.org/10.1016/j.jadohealth.2009.11.212>
- [19] Forn, M., Kirchner, T., Soler, L., & Paretilla, C. (2013). Spanish/Catalan version of the Juvenile Victimization Questionnaire (JVQ): Psychometric properties. *Anuario de Psicología*, 43(2), 171-188. <https://doi.org/10.1016/j.jadohealth.2009.11.212>
- [20] Grupo Centro de Referencia Nacional sobre Violencia. (2014). *Violencia Intrafamiliar [Intrafamily violence]*. <https://www.medicinalegal.gov.co/documentos/20143/49222/Violencia+Intrafamiliar.pdf>
- [21] Greenland, S. (1989). Modelling and variable selection in epidemiologic analysis. *American Journal of Public Health*, 79(3), 340-349. [10.2105/AJPH.79.3.340](https://doi.org/10.2105/AJPH.79.3.340)
- [22] Hawton, K., Casañas I Comabella, C., Haw, C., & Saunders, K. (2013). Risk factors for suicide in individuals with depression: a systematic review. *Journal of Affective Disorders*, 147(1-3), 17-28. [10.1016/j.jad.2013.01.004](https://doi.org/10.1016/j.jad.2013.01.004)
- [23] Hosmer, D. W., Taber, S., & Lemeshow, S. (1991). The importance of assessing the fit of logistic regression models: a case study.

- American Journal of Public Health*, 81(12), 1630-1635. 10.2105/AJPH.81.12.1630
- [24] Institute of Legal Medicine and Forensic Sciences (2019). Comportamiento de la violencia doméstica. Colombia. Comportamiento de la violencia doméstica. Colombia, 2015. [Behavior of Domestic Violence. Colombia, 2015].
- [25] Instituto Colombiano de Bienestar Familiar. (2018). *Tablero SRPA - Sistema de Responsabilidad Penal para Adolescentes* [Board SRPA - System of Criminal Responsibility for Adolescents]. <https://www.icbf.gov.co/bienestar/observatorio-bienestar-ninez/tablero-srpa>
- [26] Kann, L. (2016). Youth risk behavior surveillance-United States (2015). *Surveillance Summaries*, 65(6), 1-174.
- [27] Kirchner T., Forns M., Soler L., & Planellas I. (2014). Post-traumatic stress problems among polyvictimized Spanish youth: time effect of past vs recent interpersonal victimisations. *Child Abuse & Neglect*, 38(8), 1303-1312. 10.1016/j.chiabu.2014.02.014
- [28] Lane, D. C., & Simmons, J. (2011) American Indian youth substance abuse: Community-driven interventions. *Mount Sinai Journal of Medicine*, 78(3), 362-372. 10.1002/msj.20262
- [29] McLaughlin, K., Conron, K., Koenen, K., & Gilman, S. (2010). Childhood adversity, adult stressful life events, and risk of past-year psychiatric disorder: a test of the stress sensitisation hypothesis in a population-based sample of adults. *Psychological Medicine*, 40(10), 1647-1658. 10.1017/S003329170999212
- [30] Meltzer-Brody, S., Churchill, E., & Davidson, J. R. (1999). Derivation of the SPAN, a brief diagnostic screening test for post-traumatic stress disorder. *Psychiatry Research*, 88(1), 63-70. 10.1016/S0165-1781(99)00070-0
- [31] Méndez-López, C., & Pereda, N. (2019). Victimization and poly-victimization in a community sample of Mexican adolescents. *Child Abuse & Neglect*, 96, 104100. 10.1016/j.chiabu.2019.104100
- [32] Mendoza Mojica, S., Moreno López, M., & Ramos Lira, L. (2018). Eventos potencialmente traumáticos y sintomatología postraumática asociada con el consumo de alcohol en hombres y mujeres estudiantes de bachillerato. [Potential traumatic events and post-traumatic symptoms associated with alcohol consumption in male and female high school students]. *Revista Internacional De Investigación en Adicciones*, 4(1), 12-24. 10.28931/riiad.2018.1.3
- [33] Monleón, T., & Canela, J. (2017). Causality in medicine and its relationship with the role of statistics. *Biomedical Statistics and Informatics*, 2(2), 61-68. 10.11648/j.bsi.20170202.14
- [34] Ozer, E. J., & McDonald, K. L. (2006). Exposure to violence and mental health among Chinese American urban adolescents. *Journal of Adolescent Health*, 39(1), 73-79. 10.1016/j.jadohealth.2005.09.015
- [35] Pereda, N., Guilera, G., & Abad, J. (2014). Victimization and poly-victimization of Spanish children and youth: Results from a community sample. *Child Abuse & Neglect*, 38(4), 640-649. 10.1016/j.chiabu.2014.01.019.
- [36] Pereda-Beltrán, N., Abad-Gil, J., & Guilera-Ferré, G. (2012). Victimología del desenvolviment: Incidència i repercussions de la victimització i la polivictimització en joves catalans. [Victimología del desarrollo. Incidencia y repercusión de la victimización y poli-victimización en jóvenes catalanes]. Barcelona: Centro de Estudios Jurídicos y Formación Especializada.
- [37] Pereda, N., Guilera, G., & Abad, J. (2014). Victimization and polyvictimization of Spanish children and youth: Results from a community sample. *Child Abuse & Neglect*, 38(4), 640-649. 10.1016/j.chiabu.2014.01.019
- [38] Pineda, D. A., Guerrero, O. L., Pinilla, M. L., & Estupiñán, M. (2002). Utilidad de un cuestionario para rastreo del estrés postraumático en una población colombiana. [Usefulness of a questionnaire to track post-traumatic stress in a Colombian population]. *Acta Neurológica Colombiana*, 18(3), 132-138.

- [39] Pineda-Roa, C. A., Martínez-Chía, Á. P., Corredor-González, D. Y., Herazo, E., & Campo-Arias, A. (2018). Hallazgos psicométricos de la escala para ideación suicida del centro de estudios epidemiológicos en adolescentes escolarizados de Samacá, Boyacá, Colombia. [Psychometric findings of the suicidal ideation scale of the center of epidemiological studies in school enrolled adolescents in Samacá], *Boyacá, Colombia. Biosalud*, 17(2), 47-55. 10.17151/biosa.2018.17.2.4.
- [40] Pinto-Cortez, C., & Venegas, K. (2015). Experiencias de victimización y polivictimización en jóvenes chilenos [Experiences of victimization and poly-victimization in Chilean youth]. *Señales*, 9(14), 5-25.
- [41] Pinto-Cortez, C., Moraga, C., & Henríquez, D. (2018b). Experiencias de polivictimización como predictoras de síntomas postraumáticos en una muestra de adolescentes chilenos. [Poly-victimization experiences as predictors of posttraumatic stress symptoms in a sample of Chilean adolescents]. *Revista de Ciencia y Tecnología de las Américas*, 43(5), 329-335.
- [42] Pinto-Cortez, C., Pereda, N., & Álvarez-Lister, M. S. (2018a). Child victimisation and poly-victimisation in a community sample of adolescents in northern Chile. *Journal of Aggression, Maltreatment & Trauma*, 27(9), 983-1002. 10.1080/10926771.2017.1410748
- [43] Pinto-Cortez, C., Pereda, N., & Álvarez-Lister, M. S. (2018). Child victimisation and poly-victimisation in a community sample of adolescents in northern Chile. *Journal of Aggression, Maltreatment & Trauma*, 27(9), 983-1002. 10.1080/10926771.2017.1410748
- [44] Posada-Villa, J., Herazo, E., & Campo-Arias, A. (2009). Puerta de Entrada al Consumo de Sustancias Ilegales en Colombia: Infracciones a la Norma de Inicio. [The gateway to illegal substance use in Colombia: violations of the gateway rule]. *Revista de Salud Pública*, 11(3), 406-413.
- [45] Quintero-Aguado, A., Bonilla-Escobar, F. J., Otero-Ospina, A., Campo-Cabal, G., & Valencia-Upegui, H. (2013). Abuso sexual infantil: ¿territorio omitido o inadvertido en Colombia? [Child sex abuse: An area omitted or unnoticed in Colombia?]. *Revista Colombiana de Psiquiatría*, 42(2), 234-235. [https://doi.org/10.1016/S0034-7450\(13\)70012-X](https://doi.org/10.1016/S0034-7450(13)70012-X)
- [46] Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1(3), 385-401. 10.1177/014662167700100306
- [47] Ramos, J., Moreno, J., Parada, J., & García, A. (2008). La mendicidad en el Caribe colombiano el caso de los distritos de Barranquilla, Santa Marta y Cartagena. [Begging in the Colombian Caribbean]. *Revista Economía del Caribe*, 2, 66-105
- [48] Sabri, B., Hong, J. S., Campbell, J. C., & Cho, H. (2013). Understanding children and adolescents' victimisations at multiple levels: An ecological review of the literature. *Journal of Social Service Research*, 39(3), 322-334. 10.1080/01488376.2013.769835
- [49] World Health Organization: Regional Office for Europe. (1998). *Well-Being measures in primary health care: The DepCare Project*. Consensus meeting, Stockholm.