



Impact of poly-victimization and resilience on anxiety: Delinquent and non-delinquent youth samples

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ABSTRACT

Victims of poly-victimization reveal a higher negative impact than victims of a single type of violence. Exposure to multiple types of violence is a stronger predictor of developing worse mental health outcomes. The main objectives of this study are to verify the relationship between poly-victimization, anxiety, and resilience, compare delinquent and non-delinquent adolescents, and identify the predictors of anxiety. The sample comprises 143 adolescents between 12 and 17 years old ($M = 14.93$, $SD = 1.63$), of which 97 (67.8 %) were identified as young delinquents and 46 (32.2 %) as non-delinquents. Participants completed a socio-demographic questionnaire, the Juvenile Victimization Questionnaire (JVQ), the Resilience Scale (RS), and the State-Trait Anxiety Inventory (STAIC C-2). Analysis showed a relationship between JVQ, the RS, and the STAIC C-2. Compared to non-delinquents, young delinquents reported more childhood victimization episodes, more anxiety, and less resilience. Additionally, gender, poly-victimization, and resilience are significant predictors of anxiety. The findings showed that poly-victimization and resilience affect anxiety.

1. Introduction

Violence against children includes at least one of the six types of interpersonal violence (e.g., maltreatment, bullying, physical assault, sexual violence, intimate partner violence, and emotional violence). It occurs in different stages of child development (Ferrara et al., 2019). Children and adolescents under 18 often report experiencing violence or abuse in multiple contexts, such as at home, school, and the community (Finkelhor, Turner, Hamby, & Ormrod, 2011). In 2020, 41,337 cases of youth violence were identified in Portugal, including negligence, domestic violence exposure, physical violence, psychological violence, sexual violence, abandonment, and child labor exploitation (Comissão de Proteção de Crianças e Jovens [Child and Youth Protection Commission], 2021). Due to violence's short and long-term impact of violence on children's development (Meinck et al., 2020), victimization is considered a public health concern regardless of the country, cultural context, and language.

Research on juvenile victimization typically assesses the most severe victimization experiences (e.g., child sexual abuse, physical abuse) without considering the cumulative impact of victimization. However, a

more comprehensive perspective has been considered, and poly-victimization has gained increasing attention (Finkelhor et al., 2005). Poly-victimization refers to the experience of multiple types of victimization (e.g., Ford et al., 2017; Musicaro et al., 2019), including childhood neglect, psychological, physical, and sexual abuse, and witnessing violence (Finkelhor et al., 2011). Poly-victimization is associated with more negative consequences than a single type of victimization and is considered a stronger predictor of developing worse mental health outcomes (Finkelhor et al., 2011).

Research shows no consensus regarding poly-victimization and gender differences. Finkelhor et al. (2007) demonstrated that poly-victimization is more common in boys than in girls. Other studies have suggested that girls suffer from poly-victimization more frequently than boys (Ellonen & Salmi, 2011; Pinto-Cortez et al., 2017). They show significantly higher levels of anxiety symptoms and symptoms of post-traumatic stress (PTSD) than boys (Guerra et al., 2016; Mossige & Huang, 2017; Nurius et al., 2020). However, some research has found no significant differences (e.g., Guerra et al., 2017; Obsuth et al., 2017).

Poly-victimization in childhood influences individuals physically and psychologically, and these consequences extend throughout the life

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course (Ford & Delker, 2018). Young poly-victims are more likely to develop psychological disorders, including post-traumatic stress disorder, depression, dissociation, anger externalizing behaviors, suicidal behaviors, poor school performance, alcohol/drug use problems, cognitive disorders (Charak et al., 2018; Ford & Delker, 2018; Jackson-Hollis et al., 2017; Kretschmar et al., 2017; Méndez-López & Pereda, 2019; Mossige & Huang, 2017; Suárez-Soto et al., 2019), and antisocial behaviors (Dong et al., 2013; Hamby et al., 2020). Victimization is a risk factor for increasing anxiety and decreasing resilience levels (Halliday et al., 2022).

Specifically, Ford et al. (2013) concluded that young delinquents who experienced poly-victimization showed symptoms of PTSD, depression/anxiety, emotional and behavioral problems, and psychosocial impairment. Subsequently, Ford et al. (2017) assessed individuals in juvenile detention facilities, concluding that young delinquents who were victims of poly-victimization were more likely to report anger, depression, anxiety, and somatic problems. Bontempo & Pereira, 2012 explained the high anxiety levels in poly-victims because children and adolescents of school age are more prone to suffering physical and psychological violence in their social relationships, increasing their anxiety levels.

The developmental psychopathology perspective argues that most forms of psychopathology result from multiple causal influences (Muris, 2006). The violence experienced in childhood may represent a significant risk for poor psychological and biological development, thereby increasing the likelihood of developing anxiety (Cicchetti, 2016). Identifying symptoms of psychopathology during a child's development allows for recognizing the primary causes and preventing problems at this developmental stage in the future (Shulman & Scharf, 2018). This perspective also emphasizes that psychopathology occurs in a developing organism, which is particularly relevant in childhood when development changes are most pronounced (Leebens & Williamson, 2017). Researchers who subscribe to this perspective argue that understanding the origins of psychopathology requires examining both successful and unsuccessful adaptation (Morsünbiil et al., 2019). Nevertheless, each child victim of violence can show differences, influenced by resilience, at psychological and neurobiological levels (Ioanidis et al., 2020).

Resilience describes achieving positive outcomes, adaptation, or developmental milestones despite adversity, risk, or stress (Shemesh & Heiman, 2021). Resilience is crucial in mediating the link between victimization and anxiety (Fang et al., 2022). The higher resilience levels and compensatory mechanisms can enable children to adapt to adversity (Cicchetti & Toth, 2005; Toth & Cicchetti, 2013). Children with high resilience and good problem-solving skills can identify external resources (e.g., friends and family) and recognize their strengths and capabilities. Resilience is a significant variable in abused children and can protect them from developing poor mental health and delinquent behaviors (Huang & Mossige, 2018). However, the number of violent events is directly and inversely associated with resilient functioning (Howell & Miller-Graff, 2014). Segura et al. (2017) support these findings, demonstrating that poly-victimization is linked to a weak presence of individual and environmental protective factors and lower levels of youth resilience. More recently, Suárez-Soto et al. (2019) also concluded that experiences of poly-victimization impair resilience, diminishing both social and personal resources.

Besides the symptoms of internalization described above, poly-victims tend to exhibit externalization behaviors. A recent systematic review of risk factors of poly-victimization and the impact on delinquency in youth showed that poly-victimization and delinquency often co-occur because these victims are more likely to engage in delinquent behaviors and show higher anxiety scores (Pires & Almeida, 2023). Furthermore, according to Martins et al. (2021), adolescents exposed to adverse childhood experiences and traumatic events tend to have a greater predisposition to engage in delinquent behaviors. Specifically, poly-victimization in children is associated with the clinical

severity of externalizing symptoms, delinquency, and overall impairment (e.g., Turner et al., 2016). Youth involved in the juvenile justice system can experience poly-victimization before or during adopting delinquent behaviors due to difficulties in emotional regulation, interpersonal relationships, development, and social integration caused by adverse experiences (Pereda et al., 2017). For this reason, in addition to poly-victimization, low levels of resilience are also risk factors for adopting delinquent behaviors (Mansouri et al., 2015; Newsome et al., 2016).

There is a clear investment in research about youth poly-victimization at the international level. Although, the development of research in Portugal on poly-victimizations is scarce limited (Almeida et al., 2020). To the best of our knowledge, no national empirical research with samples of young delinquents analyzes poly-victimization. Considering the high prevalence in Portugal of reported child victimization cases and the potential greater impact of poly-victimization on young delinquents, this study aims to: a) verify the relationship between poly-victimization, anxiety, and resilience; b) compare younger and older youth, boys and girls, poly-victims and non-poly-victims, and delinquent and non-delinquent adolescents concerning poly-victimization, anxiety, and resilience; c) identify the predictors of anxiety.

2. Method

2.1. Participants

The study's inclusion criteria required participants to be between 12 and 17 years of age, be Portuguese, and have skills to give answers to the instruments – being able to read and write in Portuguese. Thus, all other participants who did not meet this requirement were excluded from the study.

The original sample included 159 participants. Upon analyzing the sociodemographic questionnaire, we found that 16 participants reported being below 12, exceeding 17, or not having Portuguese nationality. Consequently, they were excluded from the study, and the final sample comprised 143 adolescents with a mean age of 14.93 ($SD = 1.63$).

To compare the variances between younger and older youth, we categorized participants into two age groups: a group of individuals aged 12 to 14 years and another aged 15 to 17 years. Furthermore, individuals were categorized as poly-victims if they reported experiencing at least four victimization types, using Finkelhor et al. (2011) definition.

2.2. Procedures

Data was collected at 2 scout groups, 4 study and tutoring centers, 3 juvenile detention facilities, and 3 residential care institutions from several regions in Portugal. We contacted each institution and requested authorization for data collection. The objectives and procedures of the study were explained, ensuring the confidentiality of the results and anonymity of participants before parents (mothers or fathers) signed the informed consent. Furthermore, the study required the verbal consent of all adolescent participants to partake in the study. The confidentiality of the results and the anonymity of subjects were ensured. The respective institution directors gave authorization for data collection.

The study was conducted following the ethical principles outlined in the Declaration of Helsinki (World Medical Association, 2013), and the Egas Moniz School of Health & Science Review Board and the Ethics Committee approved the protocol.

2.3. Measures

Socio-demographic data. We assessed the following socio-demographic data through a brief questionnaire: age, gender, nationality, if the adolescent has committed delinquent behavior throughout his life, and if the adolescent is in a juvenile detention facility.

Juvenile Victimization Questionnaire (JVQ; Finkelhor et al.,

2005; Almeida et al., 2020). This questionnaire was developed by Finkelhor et al. (2005) and aims to assess crime, child abuse, and other childhood victimization types. The Portuguese version was used in this study (Almeida et al., 2020). It is composed of 34 items grouped into five modules. Module A concerns conventional crimes (8 items), Module B examines child maltreatment (4 items), Module C investigates peer and sibling victimization (6 items), Module D regards sexual victimization (7 items), and Module E analyzes witnessing and indirect victimization (9 items). Each item was measured on a dichotomous scale, with 0 signifying a negative response and 1 representing an affirmative response. Higher scores in each module indicate a higher prevalence of victimization (Finkelhor et al., 2005). Almeida et al. (2020) showed that JVQ had good psychometric properties among Portuguese youth. Cronbach alphas for the total sample was 0.94. (Almeida et al., 2020). The instrument shows adequate psychometric properties in our study, with an alpha of 0.78 for the total sample.

State-Trait Anxiety Inventory for Children (STAIC C-2; Gonçalves & Dias, 1999; Spielberger et al., 1973). The STAIC was developed to assess anxiety in two distinct dimensions: state anxiety (STAIC C-1) and trait anxiety (STAIC C-2). The Portuguese version was used in this study (Gonçalves & Dias, 1999). In our study, only the STAIC C-2 scale was used, as the objective is to assess anxiety levels in children. This measure has 20 sentences, in which the individual answers indicate how, in general, they feel on a scale consisting of three levels: never, sometimes, and many times. This scale measured relatively stable individual differences in the tendency to experience anxiety and was developed for self-administration. According to Gonçalves and Dias (1999), the instrument's internal consistency has an alpha value of 0.78 and is valid for the Portuguese population. In our study, the instrument had an alpha value of 0.71.

Resilience Scale (RS; Felgueiras et al., 2010; Wagnild & Young, 1993). This instrument is a self-assessment scale with 25 items validated for the Portuguese population (Felgueiras et al., 2010). The organization of individuals in the face of an adverse event and their ability to overcome it is evaluated. This instrument encompasses 5 dimensions: Perseverance, Self-confidence, Serenity, Meaning, and Existential Loneliness (Wagnild & Young, 1993). Felgueiras et al. (2010) adapted this instrument for the Portuguese population, considering this tool reliable, valid, and sensitive, with an alpha value of 0.82. In this study, Cronbach's alpha for RS was 0.80.

2.4. Statistical analysis

Initially, a descriptive analysis was performed with the sociodemographic and subscales data to understand the sample's characteristics better. The next step was to perform Pearson correlations to verify the relation between total scores and subscales of the JVQ, the RS Scale, and the STAIC C-2. We also performed ANOVA to compare the means between sociodemographic variables and the total scores and subscales of the JVQ, the RS, and the STAIC C-2. Multiple linear regressions were also performed to analyze the predictors of anxiety. We used the statistical software IBM SPSS Statistics Version 27.0 to conduct this analysis.

3. Results

3.1. Sample characteristic

As mentioned, the total sample comprised 143 adolescents. Within the two age groups formed, 57 (39.9 %) were participants aged between 12 and 14 years old and 86 (60.1 %) between 15 and 17 years old. The sample comprised 66 girls (46.2 %) and 77 boys (53.8 %). Among the participants meeting these criteria, 52 (36.4 %) were initially identified as delinquents, and 91 (63.6 %) were identified as non-delinquents. The 52 delinquents were in juvenile detention facilities and residential care institutions with criminal records in Portuguese justice. However,

according to the socio-demographic questionnaire, we verified that in the general population not identified as young delinquents, 46 (32.2 %) reported delinquent behaviors (e.g., robbery, theft, consumption of substances). Consequently, we considered 97 young delinquents (67.8 %) and 46 adolescent non-delinquents (32.2 %). From the sample of young delinquents, 47 (48.5 %) are girls, and 50 (51.5 %) are boys with a medium age of 15.36 ($SD = 1.529$). Regarding non-delinquent youths, 19 (41.3 %) are girls, and 27 (58.7 %) are boys, with a medium age of 14.02 ($SD = 1.483$). Individuals were categorized as poly-victims if they reported experiencing at least four victimization types. Within the sample, 66 (46.2 %) are poly-victims. Additionally, 59 (60.8 %) individuals are delinquents among these poly-victims.

3.2. Descriptive analysis

Of the total participants, 36 (37.1 %) reported they had committed theft, 12 (12.4 %) reported they had committed a robbery, 46 (47.4 %) made threats against someone, 33 (34 %) had run away from home, 59 (60.8 %) have missed classes on purpose, 21 (21.6 %) have driven without a driving license and, 19 (19.6 %) already have done graffiti without authorization. Regarding the consumption and sale of substances, 28 (28.9 %) affirmed to have used drugs, 18 (18.6 %) have already sold drugs, 57 (58.8 %) have already consumed alcohol, and 43 (44.3 %) have smoked tobacco. Additionally, 63 young delinquents (64.9 %) affirmed that they had aggressive behavior (breaking something, hitting someone), 27 (27.8 %) have invaded private properties, and 27 (27.8 %) stated that they had and/or used a bladed weapon.

The descriptive analyses were performed for each scale and subscale. For the delinquent sample, the mean of JVQ is 6.13 ($SD = 4.853$). Specifically, this analysis shows that the youth delinquents reported more conventional crime victimization, followed by witnessing and indirect victimization, peer and sibling victimization, child maltreatment, and sexual victimization. Regarding anxiety (STAIC C-2), the delinquent sample's mean is 41.96 ($SD = 5.528$). For resilience (RS), young delinquents reported more self-confidence, followed by perseverance, meaning, serenity, and existential loneliness. In the non-delinquent sample, the mean of JVQ is 1.41 ($SD = 1.733$). They reported more witnessing and indirect victimization, followed by conventional crime victimization, child maltreatment, peer and sibling victimization, and sexual victimization. The mean of anxiety (STAIC C-2) is 38.78 ($SD = 5.403$). For resilience (RS), the non-delinquent sample reported more self-confidence, followed by perseverance, meaning, serenity, and existential loneliness, as in the delinquent sample.

3.3. Correlational analysis

The results of the Pearson correlations suggest the existence of significant correlations between victimization (JVQ), resilience (RS), and anxiety (STAIC C-2) in some subscales (Table 1). Negative and significant correlations between the subscales of JVQ and the subscales of the RS were verified. Specifically, conventional crime victimization is negatively correlated with perseverance, self-confidence, serenity, and the total score of the RS. Child maltreatment is negatively associated with perseverance, self-confidence, and the total score of the RS. Peer and sibling victimization correlate negatively with perseverance, self-confidence, and the total score of the RS. Finally, the total score of the JVQ is negatively correlated with perseverance, self-confidence, and the total score of the RS.

The JVQ and the STAIC C-2 show positive and significant correlations. The total score of the JVQ is associated with the total score of the STAIC C-2, and conventional crime victimization is associated with the total score of the STAIC C-2.

The total score of the STAIC C-2 is negatively correlated with perseverance, serenity, and meaning. There are also negative correlations between the total score of the STAIC C-2 and the total score of the RS. Furthermore, the total score of the STAIC C-2 shows negative

Table 1

Correlations between victimization (JVQ), resilience (RS), and anxiety (STAIC C2) (n = 143).

	2	3	4	5	6	7	8	9	10	11	12	13
JVQ												
1. Conventional Crimes	0.512**	0.650**	0.288**	0.542**	0.841**	−0.221**	−0.203*	−0.172*	−0.146	−0.108	−0.198*	0.203*
2. Child Maltreatment		0.511**	0.293**	0.501**	0.738**	−0.209*	−0.183*	−0.078	−0.103	−0.161	−0.169*	0.154
3. Peer and Sibling Victimization			0.213*	0.489**	0.775**	−0.265**	−0.179*	−0.098	−0.157	−0.128	−0.202*	0.159
4. Sexual Victimization				0.229**	0.527**	−0.002	−0.038	0.027	0.012	0.003	0.009	0.094
5. Witnessing and Indirect Victimization					0.777**	−0.132	−0.108	−0.034	0.002	−0.075	−0.074	0.107
6. JVQ Total						−0.225**	−0.194*	−0.102	−0.105	−0.124	−0.173*	0.196*
RS												
7. Perseverance							0.748**	0.581**	0.633**	0.584**	0.886**	−0.270**
8. Self-confidence								0.625**	0.612**	0.554**	0.892**	−0.141
9. Serenity									0.541**	0.527**	0.775**	−0.177*
10. Meaning										0.350**	0.795**	−0.404**
11. Existential Loneliness											0.684**	−0.076
12. RS Total												−0.272**
STAIC C2												
13. STAIC C2 Total												

Notes. JVQ = Juvenile Victimization Questionnaire; RS = Resilience Scale; STAIC C2 = State-Trait Anxiety Inventory for Children.

* $p < .05$; ** $p < .001$.

correlations with RS.

3.4. Group differences

All the assumptions were tested to perform the ANOVA one way. In our study, we used the age groups, gender, poly-victimization, and delinquency variables. Concerning age groups, the results reveal statistically significant differences showing that oldest adolescents present higher values for conventional crimes victimization ($M = 1.79$, $SD = 1.624$), [$F(1,141) = 18.388$, $p < .001$], child maltreatment ($M = 0.98$, $SD = 0.116$), [$F(1,141) = 20.009$, $p < .001$], peer and sibling victimization ($M = 1.12$, $SD = 1.212$), [$F(1,141) = 6.914$, $p = .010$], sexual victimization ($M = 0.76$, $SD = 1.345$), [$F(1,141) = 8.762$, $p = .004$], witnessing and indirect victimization ($M = 1.52$, $SD = 1.650$), [$F(1,141) = 19.088$, $p < .001$], and for the total score of the JVQ ($M = 6.16$, $SD = 5.078$), [$F(1,141) = 28.286$, $p < .001$].

Boys show higher levels in the resilience subscale, meaning ($M = 26.87$, $SD = 5.027$), [$F(1,141) = 9.008$, $p = .003$] and in RS total ($M = 135.75$, $SD = 21.206$), [$F(1,141) = 5.969$, $p = .016$], and girls show higher levels of anxiety compared to boys ($M = 43.06$, $SD = 5.907$), [$F(1,141) = 19.436$, $p < .001$].

For poly-victimization, we verify significant statistical differences in the total score of the STAIC C-2. Youth poly-victims show higher levels of anxiety than non-poly-victims ($M = 42.45$, $SD = 5.762$), [$F(1,141) = 9.298$, $p = .003$]. No differences were found between poly-victims and non-poly-victims regarding resilience.

Concerning the comparison between the delinquent and the non-delinquent samples, the results show that youth delinquents have higher values in conventional crimes victimization ($M = 1.84$, $SD = 1.625$), [$F(1,141) = 34.475$, $p < .001$], child maltreatment ($M = 0.93$, $SD = 1.063$), [$F(1,141) = 19.062$, $p < .001$], peer and sibling victimization ($M = 1.26$, $SD = 1.210$), [$F(1,141) = 33.130$, $p < .001$], sexual victimization ($M = 0.70$, $SD = 1.284$), [$F(1,141) = 6.909$, $p = .010$], witnessing and indirect victimization ($M = 1.41$, $SD = 1.619$), [$F(1,141) = 13.760$, $p < .001$], in the total score of the JVQ ($M = 6.13$, $SD = 4.853$), [$F(1,141) = 40.918$, $p < .001$], and in anxiety ($M = 41.96$, $SD = 65.528$), [$F(1,141) = 10.449$, $p = .002$]. Compared to the non-delinquent, the delinquent sample shows lower scores on the total RS scale ($M = 127.23$, $SD = 20.993$), [$F(1,141) = 13.734$, $p < .001$] and its subscales: preservation ($M = 30.03$, $SD = 5.860$), [$F(1,141) = 14.963$, $p < .001$], self-confidence ($M = 34.79$, $SD = 6.988$), [$F(1,141) = 11.323$, $p < .001$], serenity ($M = 22.20$, $SD = 4.312$), [$F(1,141) = 6.285$, $p = .013$], meaning ($M = 24.66$, $SD = 5.926$), [$F(1,141) = 8.965$, $p = .003$], and existential loneliness ($M = 10.08$, $SD = 2.503$), [$F(1,141) = 5.097$, $p = .026$].

and existential loneliness ($M = 10.08$, $SD = 2.503$), [$F(1,141) = 5.097$, $p = .026$].

3.5. Regression analysis

The explanatory model of anxiety for the total sample using a Multiple Linear Regression shows that the model is significant. Durbin-Watson was 1.88, and VIF was < 3 . Delinquency, existential, perseverance, serenity, and loneliness are not significant, so we performed a new model (Table 2) only with significant paths. The model is significant ($F(4,138) = 13.65$, $p < .001$) and explains 26 % of the variance of anxiety. Gender ($\beta = -0.27$, $p < .001$), poly-victimization ($\beta = 0.19$, $p = .009$), meaning ($\beta = -0.45$, $p < .001$), and self-confidence ($\beta = 0.21$, $p = .024$) are significant predictors of anxiety.

4. Discussion

This study aimed to verify the relationship between poly-victimization, anxiety, and resilience; compare younger and older youth, boys and girls, poly-victims and non-poly-victims, and delinquent and non-delinquent adolescents concerning poly-victimization, anxiety, and resilience; and identify the predictors of anxiety. Our findings showed that the total mean of victimization was higher than those found in another study with children and adolescents from the general population in the United States of America (Finkelhor et al., 2009), and the results obtained by a study with adolescents from the general population in Chile (Cortez & Sanhueza, 2015). These results could be because we used a young delinquent sample, unlike the studies that used a general

Table 2

Multiple Linear Regression with Anxiety for the Total Sample (n = 143).

Variable	β	t	p	Adj R ²	ΔR^2	F
				0.26	0.28	F (4,138) = 13.65, $p < .001$
Gender	−0.27	−3.67	<0.001			
Poly-victimization	0.19	2.64	0.009			
Resilience – Meaning	−0.45	−4.80	<0.001			
Resilience – Self-confidence	0.21	2.29	0.024			

population. According to the literature, young delinquents report more episodes of victimization (Pereda et al., 2017; Turner et al., 2016), so the mean is higher. The mean of this research is lower than the results from another study with a specific sample composed of youth involved in the juvenile justice system, namely one Spanish study (Pereda et al., 2015). The fact that Spain has higher levels of juvenile delinquency than Portugal may explain this result. According to the National Institute of Statistics of Spain (Instituto Nacional de Estadística [National Institute of Statistics], 2020), there were 14,112 convicted youth in 2019. In that same year, it was recorded only 1,568 convictions of juvenile delinquency in Portugal (República Portuguesa [Portuguese Republic], 2020). As youth delinquents report more episodes of victimization (Ford et al., 2013), the victimization means also tend to be higher, as verified in the study of Pereda et al. (2015). Future research should study the total score of victimization in young delinquents.

In this study, conventional crimes and witnessing and indirect victimization were the most frequent victimization that affected Portuguese children and youth. This result differs from the study by Finkelhor et al. (2009), in which peer and sibling victimization was the most frequent victimization reported by adolescents. However, our results align with a study in Spain, where the most frequent victimization reported was conventional crime victimization, followed by witnessing and indirect victimization (Pereda et al., 2014).

In our study, the relationship between resilience and victimization showed negative relationships between several types of victimization and resilience. Specifically, a negative correlation existed between resilience subscales and conventional crime victimization, child maltreatment, and peer and sibling victimization. Other researchers corroborated these results (Howell & Miller-Graff, 2014; Segura et al., 2017). Huang and Mossige (2018) concluded that resilience protects children from developing poor mental health and delinquent behaviors in situations of violence or abuse in children, especially among poly-victims. Research suggests that the number of violent events is directly and inversely associated with resilient functioning, concluding that poly-victimization negatively affects resilience, reducing social and personal resources, as verified in our data (Suárez-Soto et al., 2019; Toth & Cicchetti, 2013).

We concluded that higher levels of victimization are associated with higher anxiety levels. These results are like those obtained by other researchers (Dong et al., 2013; Finkelhor et al., 2007; Guerra et al., 2016; Haahr-Pedersen et al., 2020; Hamby et al., 2020; Wolfe, 2018) since their studies showed that being exposed to multiple types of violence is a powerful predictor for developing anxiety. Some authors explain this result from a developmental psychopathology perspective, which affirms that poly-victimization may represent a significant risk for poor psychological and biological development and increase the possibility of high anxiety levels (Cicchetti, 2016; Muris, 2006).

The analysis of the relationship between anxiety and resilience showed positive and significant relationships between perseverance, serenity, meaning, and anxiety. Ioannidis et al. (2020) corroborated these results and concluded that victims of violence show differences, influenced by resilience, at a psychological and neurobiological level (Toth & Cicchetti, 2013). Children with resilience and good problem-solving skills can identify external resources, recognize their strengths and capabilities, and, for this reason, show lower levels of anxiety (Huang & Mossige, 2018).

The oldest adolescents reported higher values in all victimization subscales and the total victimization than the youngest, corroborating prior studies' results (Cyr et al., 2014; Finkelhor et al., 2007). This difference may be because older adolescents are expected to be less supervised and exposed to more risk than younger ones. Cyr et al. (2014) concluded that poly-victimization is more common among older children because some kinds of victimization (e.g., sexual assault and witnessing an assault) increase with age. Also, according to routine activity theory, the oldest adolescents are expected to be more unprotected from risk and less supervised by adults (Martins et al., 2019). Research reports

older adolescents often go to unprotected areas (e.g., without supervision, in night periods) than younger adolescents or children. In this way, they are more likely to socialize with other individuals and become more exposed to criminal opportunities and episodes of violence (Ceccato, 2005).

This research corroborates the current findings that boys show higher levels of resilience than girls, and girls show higher anxiety levels than boys (Masood et al., 2016; Sambu & Mhongo, 2019). One possible explanation for these findings is that girls are generally more emotional than boys (Erdogan et al., 2015), so they could be affected more deeply after experiencing multiple episodes of violence (Qouta et al., 2003). Besides, girls are more vulnerable to adverse outcomes, showing more post-traumatic stress (PTSD) and stress, which reveals low resilience (Kimhi et al., 2010).

Regarding anxiety, according to some authors, girls seem to show significantly higher levels of anxiety symptoms and symptoms of PTSD than boys (e.g., Guerra et al., 2016; Mossige & Huang, 2017; Nurius et al., 2020). We can explain this result through the differences in brain chemistry and hormone fluctuations between boys and girls. Furthermore, changing hormone levels in a girl's life and reproductive events may be associated with increased levels of anxiety (e.g., Deardorff et al., 2007). Another explanation could be how girls react to life stressors. While men engage in more active, problem-focused coping, girls are more likely to ruminate about life stressors, increasing anxiety levels (Hayward & Sanborn, 2002). Also, boys and girls could not understand and answer questions similarly. When boys talk more freely about their experiences, more emotions are expressed. Similarly, girls show more resilience when they talk more freely about their experiences.

Poly-victims showed higher levels of anxiety. The results confirm the current literature (e.g., Finkelhor et al., 2007; Haahr-Pedersen et al., 2020; Hamby et al., 2020), showing that exposure to multiple types of violence is a powerful predictor of developing anxiety (Ford et al., 2017). Poly-victims are more likely to develop mental health disorders than other victims (Finkelhor et al., 2005; Turner et al., 2010). The violence experienced in childhood may represent a significant risk for poor psychological development and increased anxiety (Cicchetti, 2016). Bontempo & Pereira, 2012 explained the high levels of anxiety in poly-victims to the highest probability of children and adolescents of school age suffering physical and psychological violence in their social relationships, increasing their anxiety levels. Moreover, Turner et al. (2017) showed that low self-esteem and higher levels of humiliation, shame, sadness, and hopelessness experienced during and after the various victimization episodes increase anxiety levels in poly-victims.

This research showed no differences in resilience between poly-victims and non-poly-victims. However, some authors reported that violent events are directly and inversely associated with resilient functioning (Howell & Miller-Graff, 2014). Poly-victimization is associated with the weak presence of individual and environmental protective factors and lower levels of resilience in youth (Segura et al., 2017). This result may show that the poly-victims in this study used some adaptive strategies and had sufficient protective factors, like family cohesion (Carbonell et al., 2002), supportive relationships (Afifi & MacMillan, 2011), positive self-perception, and optimism (Pérez-González et al., 2017), to develop resilience similarly to non-poly-victims.

Our results showed that delinquents present higher anxiety and victimization than non-delinquent youth. According to several authors (Pereda et al., 2017; Turner et al., 2016), poly-victimization is related to clinical severity externalizing symptoms, delinquency (Martins et al., 2021), mental health problems, and general impairment (Ford & Delker, 2018). Youth delinquents have a higher probability of experiencing poly-victimization. Because of problems in emotional regulation, interpersonal relationships, development, and social integration caused by adverse experiences, delinquency tends to increase (Pereda et al., 2017). Ford et al. (2013) also identified delinquents' severe post-traumatic symptoms, depression/anxiety, emotional and behavioral problems, and psychosocial impairment.

Regarding resilience, young delinquents showed lower levels than non-delinquents. The different existing studies corroborate this result, although there are sample differences (Mansouri et al., 2015; Newsome et al., 2016; Segura et al., 2017; Suárez-Soto et al., 2019). Results from Allen et al. (2006) showed that resilience in children who experience poly-victimization is essential to reduce the risk of long-term delinquency and their risk of becoming young delinquents. Additionally, Mansouri et al. (2015) showed that more resilient adolescents are less susceptible to developing disorders and show negative behaviors, like delinquency, under adverse life experiences (e.g., poly-victimization).

The present findings showed that in the total sample, gender, poly-victimization, meaning, and self-confidence predicted anxiety. However, delinquency, existential, perseverance, serenity, and loneliness did not predict anxiety. According to previous research, girls suffer more negative psychological outcomes (e.g., depression and anxiety) than boys after multiple episodes of victimization (Espelage et al., 2016; Guerra et al., 2016; Mossige & Huang, 2017). Furthermore, as mentioned above, victimization and resilience impact anxiety levels (Finkelhor et al., 2007; Guerra et al., 2016; Haahr-Pedersen et al., 2020; Hamby et al., 2020; Suárez-Soto et al., 2019; Wolfe, 2018). Poly-victimization in childhood affects individuals physically and psychologically, which may increase anxiety levels (Ford & Delker, 2018). In addition, the higher resilience levels and compensatory mechanisms can enable adolescents to function adaptively regardless of adversity (Cicchetti & Toth, 2005; Toth & Cicchetti, 2013). In this way, adolescents with resilience could more easily cope with the effects of anxiety (Hjemdal et al., 2011; Rong, 2021; Secades et al., 2016). However, research shows that other variables can explain anxiety, namely the temperament of the child, situational anxiety of the mother (Kain et al., 1996), problematic family relationships (Crawford & Manassis, 2001), age, and social support (Ripley & Worthington, 2002). Future studies should include these variables and study how they can predict anxiety.

In our study, delinquency is not a predictive variable for anxiety. On the other hand, research suggests that anxiety could lead to delinquent behavior due to heightened threat responsiveness (Hodgins et al., 2010; Jolliffe et al., 2019). The symptoms of anxiety may predict future anti-social behavior (e.g., Beyers & Loeber, 2003; Fanti & Henrich, 2010), first-time offending (e.g., Zara & Farrington, 2009), and criminal recidivism (e.g., Sayed et al., 2016). Further research is needed to clarify the association between anxiety symptoms and delinquent behavior.

4.1. Limitations

Several limitations should be considered when interpreting the results of the study. First, although the sample is not representative of the Portuguese context, the research is based on a sample of adolescents from several geographic areas in Portugal. Second, the study focused only on age, gender, and poly-victimization differences. The study did not assess additional ethnic or racial characteristics through the socio-demographic questionnaire. These limitations compromise the generalization of the results to the Portuguese population.

We suggest that future research uses a more equitable sample concerning delinquency. Further research is needed with samples that include more sociodemographic variables. Third, most of the sample are young delinquents; therefore, the results that analyze the differences between delinquents and non-delinquents must be interpreted carefully. Juvenile victimization is very sensitive for children and adolescents. Therefore, responses may be subject to social desirability bias. Future research should explore this more and include a measure for social desirability bias.

5. Conclusions

Given the relatively limited availability of international research on poly-victimization within young delinquents (Cudmore et al., 2017; Ford et al., 2013; Kerig, 2018; Yoder et al., 2019), this study contributes

significantly to the literature. Despite the limitations, this study has the main strength of comparing the impact of poly-victimization between a sample of non-delinquents and young delinquents concerning anxiety and resilience in Portuguese children and adolescents. Our study confirms that poly-victimization negatively affects resilience, reducing social and personal resources. Furthermore, our analyses showed that poly-victimization in childhood represents a significant risk for poor psychological development and increases anxiety. Regarding the link between poly-victimization and delinquency, we conclude that young delinquents reported more childhood victimization episodes, more anxiety, and less resilience.

These results support and highlight the need for promoting mental health in poly-victims to help increase adolescents' well-being and the efficacy of delinquency prevention and intervention strategies. Findings also highlight the importance of treatment strategies that address anxiety problems in poly-victims. Finally, the Portuguese juvenile justice system should focus more on the needs of adolescents whose delinquent behaviors result from victimization or poly-victimization.

5.1. Practical implications

The results showed that poly-victimization substantially impacts delinquency (Charak et al., 2018; Finkelhor et al., 2007; Ford & Delker, 2018). Consequently, this study shows a fundamental understanding of poly-victimization research in Portugal, highlighting the detrimental impact of experiencing violence in different areas of life.

Another implication for the practice that emerges with the accomplishment of this work is the need to implement intervention and prevention strategies in the juvenile justice system. The relationship between victimization and delinquency demands the creation of intervention programs for children and adolescents who have experienced poly-victimization to avoid future delinquent behaviors. These programs must intervene in children's physical and mental health (e.g., assess anxiety problems and increase resilience) and ensure their well-being. In addition, this study may open other lines of investigation, still little explored, namely the study of the relationship between resilience, poly-victimization, and delinquency.

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CRediT authorship contribution statement

Ana Rita Pires: Methodology, Investigation, Formal analysis, Data curation, Writing – original draft, Writing – review & editing. **Telma Catarina Almeida:** Conceptualization, Validation, Data curation, Funding acquisition, Project administration, Formal analysis, Writing – original draft, Writing – review & editing, Supervision.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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References

- Affifi, T., & MacMillan, H. (2011). Resilience following child maltreatment: A review of protective factors. *The Canadian Journal of Psychiatry*, 56(5), 266–272. <https://doi.org/10.1177/070674371105600505>
- Allen, L., Cox, J., & Cooper, N. (2006). The impact of a summer day camp on the resiliency of disadvantaged youths. *Journal of Physical Education, Recreation & Dance*, 77(1), 17–23. <https://doi.org/10.1080/07303084.2006.10597808>
- Almeida, T., Ramos, C., Brito, J., & Cardoso, J. (2020). The juvenile victimization questionnaire: Psychometric properties and polyvictimization among Portuguese youth. *Children and Youth Services Review*, 113. <https://doi.org/10.1016/j.chidyouth.2020.105001>
- Beyers, J., & Loeber, R. (2003). Untangling developmental relations between depressed mood and delinquency in male adolescents. *Journal of Abnormal Child Psychology*, 31(3), 247–266. <https://doi.org/10.1023/A:1023225428957>
- Bontempo, K., & Pereira, A. (2012). Saúde mental de crianças e adolescentes vítimas de violência: Uma revisão crítica da literatura [Mental health of child and adolescent victims of violence: a critical review of the literature]. *Revista de Terapia Ocupacional da Universidade de São Paulo*, 23(2), 130–136. <https://doi.org/10.11606/issn.2238-6149.v23i2>
- Carbonell, D., Reinherz, H., Giaconia, R., Stashwick, C., Paradis, A., & Beardslee, W. (2002). Adolescent protective factors promoting resilience in young adults at risk for depression. *Child and Adolescent Social Work Journal*, 19(5), 393–412. <https://doi.org/10.1023/A:1020274531345>
- Ceccato, V. (2005). Homicide in São Paulo, Brazil: Assessing spatial-temporal and weather variations. *Journal of Environmental Psychology*, 25(3), 307–321. <https://doi.org/10.1016/j.jenvp.2005.07.002>
- Charak, R., Ford, J., Modrowski, C., & Kerig, P. (2018). Polyvictimization, emotion dysregulation, symptoms of posttraumatic stress disorder, and behavioral health problems among justice-involved youth: A latent class analysis. *Journal of Abnormal Child Psychology*, 47(2), 287–298. <https://doi.org/10.1007/s10802-018-0431-9>
- Cicchetti, D., & Toth, S. (2005). Child maltreatment. *Annual Review of Clinical Psychology*, 1, 409–438. <https://doi.org/10.1146/annurev.clinpsy.1.102803.144029>
- Cicchetti, D. (2016). Socioemotional, personality, and biological development: Illustrations from a multilevel developmental psychopathology perspective on child maltreatment. *Annual Review of Psychology*, 67, 187–211. <https://doi.org/10.1146/annurev-psych-122414-033259>
- Comissão de Proteção de Crianças e Jovens [Child and Youth Protection Commission] (2021). Avaliação da atividade das CPCJ: Relatório anual 2020 [Evaluation of the CPCJ activities: Annual Report 2021]. Retrieved from <https://www.cnpdpcj.gov.pt/relatorio-atividades>.
- Cortez, C., & Sanhueza, K. (2015). Experiencias de victimización y polivictimización en jóvenes chilenos [Experiences of victimization and polyvictimization in young Chileans]. *Señales*, 9, 5–25. Retrieved from <https://goo.gl/hQazBS>.
- Crawford, A., & Manassis, K. (2001). Familial predictors of treatment outcome in childhood anxiety disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(10), 1182–1189. <https://doi.org/10.1097/00004583-200110000-00012>
- Cudmore, R., Cuevas, C., & Sabina, C. (2017). The impact of polyvictimization on delinquency among Latino adolescents: A general strain theory perspective. *Journal of Interpersonal Violence*, 32(17), 2647–2667. <https://doi.org/10.1177/0886260515593544>
- Cyr, K., Clément, M., & Chamberland, C. (2014). Lifetime prevalence of multiple victimizations and its impact on children's mental health. *Journal of Interpersonal Violence*, 29(4), 616–634. <https://doi.org/10.1177/0886260513505220>
- Deardorff, J., Hayward, C., Wilson, K., Bryson, S., Hammer, L., & Atras, S. (2007). Puberty and gender interact to predict social anxiety symptoms in early adolescence. *Journal of Adolescent Health*, 41(1), 102–104. <https://doi.org/10.1016/j.jadohealth.2007.02.013>
- Dong, F., Cao, F., Cheng, P., Cui, N., & Li, Y. (2013). Prevalence and associated factors of poly-victimization in Chinese adolescents. *Scandinavian Journal of Psychology*, 54(5), 415–422. <https://doi.org/10.1111/sjop.12059>
- 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(1), 20–44. <https://doi.org/10.1080/14043858.2011.561621>
- Erdogan, E., Ozdogan, O., & Erdogan, M. (2015). University students' resilience level: The effect of gender and faculty. *Procedia-Social and Behavioral Sciences*, 186, 1262–1267. <https://doi.org/10.1016/j.sbspro.2015.04.047>
- Espelage, D., Hong, J., & Mebane, S. (2016). Recollections of childhood bullying and multiple forms of victimization: Correlates with psychological functioning among college students. *Social Psychology of Education*, 19(4), 715–728. <https://doi.org/10.1007/s11218-016-9352-z>
- Fang, D., Lu, J., Che, Y., Ran, H., Peng, J., Chen, L., ... Xiao, Y. (2022). School bullying victimization-associated anxiety in Chinese children and adolescents: The mediation of resilience. *Child Adolescent Psychiatry Mental Health*, 16(1), 52. <https://doi.org/10.1186/s13034-022-00490-x>
- Fanti, K., & Henrich, C. (2010). Trajectories of pure and co-occurring internalizing and externalizing problems from age 2 to age 12: Findings from the National Institute of Child Health and Human Development Study of Early Child Care. *Developmental Psychology*, 46(5), 1159–1175. doi: 10.1037/a0020659.
- Felgueiras, M., Festas, C., & Vieira, M. (2010). Adaptação e validação da Resilience Scale de Wagnild e Young para a cultura portuguesa [Adaptation and validation of the Wagnild and Young Resilience Scale for portuguese culture]. *Cadernos de Saúde*, 3(1), 73–80. <https://doi.org/10.34632/cadernosdesaude.2010.2803>
- Ferrara, P., Franceschini, G., Villani, A., & Corsello, G. (2019). Physical, psychological, and social impact of school violence on children. *Italian Journal of Pediatrics*, 45(1), 76. <https://doi.org/10.1186/s13052-019-0669-z>
- Finkelhor, D., Hamby, S., Ormrod, R., & Turner, H. (2005). The Juvenile Victimization Questionnaire: Reliability, validity, and national norms. *Child Abuse & Neglect*, 29, 383–412. <https://doi.org/10.1016/j.chiabu.2004.11.001>
- Finkelhor, D., Ormrod, R., & Turner, H. (2007). Poly-victimization: A neglected component in child victimization. *Child Abuse & Neglect*, 31(1), 7–26. <https://doi.org/10.1016/j.chiabu.2006.06.008>
- Finkelhor, D., Ormrod, R., & Turner, H. (2009). Lifetime assessment of poly-victimization in a national sample of children and youth. *Child Abuse & Neglect*, 33, 403–411. <https://doi.org/10.1016/j.chiabu.2008.09.012>
- Finkelhor, D., Turner, H., Hamby, S., & Ormrod, R. (2011). Polyvictimization: Children's exposure to multiple types of violence, crime, and abuse. *National Survey of Children's Exposure to Violence*, 1–11.
- Ford, J., & Delker, B. (2018). Polyvictimization in childhood and its adverse impacts across the lifespan: Introduction to the special issue. *Journal of Trauma & Dissociation*, 19(3), 275–288. <https://doi.org/10.1080/15299732.2018.1440479>
- Ford, J., Grasso, D., Hawke, J., & Chapman, J. (2013). Poly-victimization among juvenile justice-involved youths. *Child Abuse & Neglect*, 37(10), 788–800. <https://doi.org/10.1016/j.chiabu.2013.01.005>
- Ford, J., Cruise, K., & Grasso, D. (2017). A study of the impact of screening for poly-victimization in juvenile justice. *Journal of Interpersonal Violence*, 33(5), 810–831. <https://doi.org/10.1177/0886260517744844>
- Gonçalves, M., & Dias, P. (1999). Avaliação da ansiedade e da depressão em crianças e adolescentes (STAIC-C2, CMAS-R, FSSC-R e CDI): estudo normativo para a população portuguesa. In A. P. Soares, S. Araújo, & S. Cafres (Orgs.). *Avaliação psicológica: Formas e contextos* (pp. 553–564). Braga: APPORT.
- Guerra, C., Pereda, N., Guilera, G., & Abad, J. (2016). Internalizing symptoms and polyvictimization in a clinical sample of adolescents: The roles of social support and non-productive coping strategies. *Child Abuse & Neglect*, 54, 57–65. <https://doi.org/10.1016/j.chiabu.2016.03.004>
- Guerra, C., Pereda, N., & Guilera, G. (2017). Poly-victimization and coping profiles: Relationship with externalizing symptoms in adolescents. *Journal of Interpersonal Violence*, 00, 1–18. <https://doi.org/10.1177/0886260517744184>
- Haahr-Pedersen, I., Ershadi, A., Hyland, P., Hansen, M., Perera, C., Sheaf, G., ... Vallières, F. (2020). Polyvictimization and psychopathology among children and adolescents: A systematic review of studies using the Juvenile Victimization Questionnaire. *Child Abuse & Neglect*, 107, Article 104589. <https://doi.org/10.1016/j.chiabu.2020.104589>
- Halliday, S., Taylor, A., Turnbull, D., & Gregory, T. (2022). The relationship between traditional and cyber bullying victimization in early adolescence and emotional wellbeing: A cross-sectional, population-based study. *International Journal of Bullying Prevention*. <https://doi.org/10.1007/s42380-022-00144-8>
- Hamby, S., Taylor, E., Mitchell, K., Jones, L., & Newlin, C. (2020). Poly-victimization, trauma, and resilience: Exploring strengths that promote thriving after adversity. *Journal of Trauma & Dissociation*, 21(3), 376–395. <https://doi.org/10.1080/15299732.2020.1719261>
- Hayward, C., & Sanborn, K. (2002). Puberty and the emergence of gender differences in psychopathology. *Journal of Adolescent Health*, 30(4), 49–58. [https://doi.org/10.1016/s1054-139x\(02\)00336-1](https://doi.org/10.1016/s1054-139x(02)00336-1)
- Hjemdal, V., Solem, S., Hagen, K., & Stiles, T. (2011). The relationship between resilience and levels of anxiety, depression, and obsessive-compulsive symptom in adolescents. *Clinical Psychology & Psychotherapy*, 18(4), 314–321. <https://doi.org/10.1002/cpp.719>
- Hodgins, S., De Brito, S., Chhabra, P., & Côté, G. (2010). Anxiety disorders among offenders with antisocial personality disorders: A distinct subtype? *The Canadian Journal of Psychiatry*, 55, 785–791. <https://doi.org/10.1177/070674371005501206>
- Howell, K., & Miller-Graff, L. (2014). Protective factors associated with resilient functioning in young adulthood after childhood exposure to violence. *Child Abuse & Neglect*, 38(12), 1985–1994. <https://doi.org/10.1016/j.chiabu.2014.10.010>
- Huang, L., & Mossige, S. (2018). Resilience and poly-victimization among two cohorts of Norwegian youth. *International Journal of Environmental Research and Public Health*, 15(12), 2852. <https://doi.org/10.3390/ijerph15122852>
- Instituto Nacional de Estadística [National Institute of Statistics] (2020). Estadística de condenados: Adultos/Estadística de condenados: Menores [Conviction statistics: Adults/Conviction statistics: Juveniles]. Retrieved from: <https://www.ine.es/>.
- Ioannidis, K., Askelund, A., Kievit, R., & Van Harmelen, A. (2020). The complex neurobiology of resilient functioning after childhood maltreatment. *BMC Medicine*, 18(1), 1–16. <https://doi.org/10.1186/s12916-020-1490-7>
- Jackson-Hollis, V., Joseph, S., & Browne, K. (2017). The impact of extrafamilial victimization and poly-victimization on the psychological well-being of English young people. *Child Abuse & Neglect*, 67, 349–361. <https://doi.org/10.1016/j.chiabu.2017.03.004>
- Jolliffe, D., Farrington, D., Brunton-Smith, I., Loeber, R., Ahonen, L., & Palacios, A. (2019). Depression, anxiety and delinquency: Results from the Pittsburgh Youth Study. *Journal of criminal justice*, 62, 42–49. <https://doi.org/10.1016/j.jcrimjus.2018.08.004>
- Kain, Z., Mayes, L., O'Connor, T., & Cicchetti, D. (1996). Preoperative anxiety in children: Predictors and outcomes. *Archives of Pediatrics & Adolescent Medicine*, 150(12), 1238–1245. <https://doi.org/10.1001/archpedi.1996.02170370016002>
- Kerig, P. (2018). Polyvictimization and girls' involvement in the juvenile justice system: Investigating gender-differentiated patterns of risk, recidivism, and resilience. *Journal of Interpersonal Violence*, 33(5), 789–809. <https://doi.org/10.1177/0886260517744843>

- Kimhi, S., Eshel, Y., Zysberg, L., & Hantman, S. (2010). Postwar winners and losers in the long run: Determinants of war-related stress symptoms and posttraumatic growth. *Community Mental Health Journal*, 46(1), 10–19. <https://doi.org/10.1007/s10597-009-9183-x>
- Kretschmar, J., Tossone, K., Butcher, F., & Flannery, D. (2017). Patterns of poly-victimization in a sample of at-risk youth. *Journal of Child & Adolescent Trauma*, 10(4), 363–375. <https://doi.org/10.1007/s40653-016-0109-9>
- Leebens, P., & Williamson, E. (2017). Developmental psychopathology. *Child and Adolescent Psychiatric Clinics of North America*, 26(2), 143–156. <https://doi.org/10.1016/j.chc.2016.12.001>
- Mansouri, Z., Mousavi-Nasab, H., & Shamsodini, L. (2015). A study of the mediating role of resilience in personality characteristics and attitudes toward delinquency. *Journal of Fundamentals of Mental Health*, 17(2), 103–110. <https://doi.org/10.22038/JFMH.2015.4033>
- Martins, P., Mendes, S., Fernández-Pacheco, G., & Tendais, I. (2019). Juvenile victimization in Portugal through the Lens of ISRD-3: Lifetime prevalence, predictors, and implications. *European Journal on Criminal Policy and Research*, 25(3), 317–343. <https://doi.org/10.1007/s10610-018-9401-6>
- Martins, J., Dinis, M., Caridade, S., Sousa, H., & Moura, A. (2021). Adverse childhood experiences and delinquent behaviour: Predictors and mediating variables. *Archives of Clinical Psychiatry*, 48, 75–82. [10.15761/0101-608300000000284](https://doi.org/10.15761/0101-608300000000284)
- Masood, A., Masud, Y., & Mazahir, S. (2016). Gender differences in resilience and psychological distress of patients with burns. *Burns*, 42(2), 300–306. <https://doi.org/10.1016/j.burns.2015.10.006>
- Meinck, F., Murray, A. L., Dunne, M. P., Schmidt, P., & BECAN Consortium. (2020). Measuring violence against children: The adequacy of the International Society for the Prevention of Child Abuse and Neglect (ISPCAN) child abuse screening tool-Child version in 9 Balkan countries. *Child Abuse & Neglect*, 108, Article 104636. <https://doi.org/10.1016/j.chiabu.2020.104636>
- Morsünbil, Ü., Kaçira, E., & Özdemir, Ş. (2019). Developmental psychopathology: An interdisciplinary approach to mental health. *Psikiyatri Guncel Yaklasimlar*, 11(4), 451–465. [10.18863/pgy.487995](https://doi.org/10.18863/pgy.487995)
- Mossige, S., & Huang, L. (2017). Poly-victimization in a Norwegian adolescent population: Prevalence, social and psychological profile, and detrimental effects. *PloS one*, 12(12). <https://doi.org/10.1371/journal.pone.0189637>
- Muris, P. (2006). The pathogenesis of childhood anxiety disorders: Considerations from a developmental psychopathology perspective. *International Journal of Behavioral Development*, 30(1), 5–11. <https://doi.org/10.1177/0165025406059967>
- Muscaro, R. M., Spinazzola, J., Arvidson, J., Swaroop, S., Grace, L., Yarrow, A., ... Ford, J. (2019). The complexity of adaptation to childhood poly-victimization by youth and young adults: Recommendations for multidisciplinary responders. *Violence, Trauma & Abuse*, 20(1), 81–98. <https://doi.org/10.1177/1524838017692365>
- Méndez-López, C., & Pereda, N. (2019). Victimization and poly-victimization in a community sample of Mexican adolescents. *Child Abuse & Neglect*, 96, Article 104100. <https://doi.org/10.1016/j.chiabu.2019.104100>
- Newsome, J., Vaske, J., Gehring, K., & Boisvert, D. (2016). Sex differences in sources of resilience and vulnerability to risk for delinquency. *Journal of Youth and Adolescence*, 45(4), 730–745. <https://doi.org/10.1007/s10964-015-0381-2>
- Nurius, P., LaValley, K., & Kim, M. (2020). Victimization, poverty, and resilience resources: Stress process considerations for adolescent mental health. *School Mental Health*, 12(1), 124–135. <https://doi.org/10.1007/s12310-019-09335-z>
- Obsuth, I., Mueller Johnson, K., Murray, A., Ribeaud, D., & Eisner, M. (2017). Violent poly-victimization: The longitudinal patterns of physical and emotional victimization throughout adolescence (11–17 Years). *Journal of Research on Adolescence*, 28(4), 786–806. <https://doi.org/10.1111/jora.12365>
- 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. <https://doi.org/10.1016/j.chiabu.2014.01.019>
- Pereda, N., Abad, J., & Guilera, G. (2015). Victimization and polyvictimization among spanish adolescent outpatients. *Journal of Aggression, Maltreatment & Trauma*, 24(9), 1044–1066. <https://doi.org/10.1080/10926771.2015.1072121>
- Pereda, N., Abad, J., & Guilera, G. (2017). Victimization and polyvictimization of Spanish youth involved in juvenile justice. *Journal of Interpersonal Violence*, 32(21), 3272–3300. <https://doi.org/10.1177/0886260515597440>
- Pinto-Cortez, C., Pereda, N., & Álvarez-Lister, M. S. (2017). Child victimization and poly-victimization in a community sample of adolescents in Northern Chile. *Journal of Aggression, Maltreatment & Trauma*, 00(00), 1–20. <https://doi.org/10.1080/10926771.2017.1410748>
- Pires, A. R., & Almeida, T. C. (2023). Risk factors of poly-victimization and the impact on delinquency in youth: A systematic review. *Crime & Delinquency*. <https://doi.org/10.1177/00111287221148656>
- Pérez-González, A., Guilera, G., Pereda, N., & Jarne, A. (2017). Protective factors promoting resilience in the relation between child sexual victimization and internalizing and externalizing symptoms. *Child Abuse & Neglect*, 72, 393–403. <https://doi.org/10.1016/j.chiabu.2017.09.006>
- Qouta, S., Punamaki, R., & El Sarraj, E. (2003). Prevalence and determinants of PTSD among Palestinian children exposed to military violence. *European Child and Adolescent Psychiatry*, 12(6), 265–272. <https://doi.org/10.1007/s00787-003-0328-0>
- República Portuguesa [Portuguese Republic] (2020). Relatório anual de segurança interna 2019 [Annual homeland security report 2019]. Retrieved from: <https://www.portugal.gov.pt>
- Ripley, J., & Worthington, E. (2002). Hope-focused and forgiveness-based group interventions to promote marital enrichment. *Journal of Counseling & Development*, 80(4), 452–463. <https://doi.org/10.1002/j.1556-6678.2008.tb00531.x>
- Rong, M. (2021). *The relationship between depression, anxiety, and resilience in college student athletes* [Doctoral dissertation, University of Hawai'i at Manoa]. <http://hdl.handle.net/10125/75947>
- Sambu, L., & Mhongo, S. (2019). Age and gender in relation to resilience after the experience of trauma among internally displaced persons (IDPS) in Kiambaa Village, Eldoret East Sub-County. *Kenya. Journal of Psychology*, 7(1), 31–40. <https://doi.org/10.15640/jpbs.v7n1a4>
- Sayed, S., Piquero, A., Schubert, C. A., Mulvey, E., Pitzer, L., & Piquero, N. (2016). Assessing the mental health/offending relationship across race/ethnicity in a sample of serious adolescent offenders. *Criminal Justice Policy Review*, 27(3), 265–301. <https://doi.org/10.1177/08874034155575>
- Secades, X., Molinero, O., Salguero, A., Barquín, R., Vega, R., & Márquez, S. (2016). Relationship between resilience and coping strategies in competitive sport. *Perceptual and Motor Skills*, 122(1), 336–349. <https://doi.org/10.1177/00315125166631056>
- Segura, A., Pereda, N., Guilera, G., & Hamby, S. (2017). Resilience and psychopathology among victimized youth in residential care. *Child Abuse & Neglect*, 72, 301–311. <https://doi.org/10.1016/j.chiabu.2017.08.019>
- Shemesh, D., & Heiman, T. (2021). Resilience and self-concept as mediating factors in the relationship between bullying victimization and sense of well-being among adolescents. *International Journal of Adolescence and Youth*, 26(1), 158–171. <https://doi.org/10.1080/02673843.2021.1899946>
- Shulman, S., & Scharf, M. (2018). Adolescent psychopathology in times of change: The need for integrating a developmental psychopathology perspective. *Journal of Adolescence*, 65, 95–100. <https://doi.org/10.1016/j.adolescence.2018.03.005>
- Spielberger, C., Edwards, C., Lushene, R., Montuori, J., & Platzek, D. (1973). *State-trait anxiety inventory for children [Manual]*. Palo Alto, CA: Consulting Psychologists Press.
- Suárez-Soto, E., Pereda, N., & Guilera, G. (2019). Poly-victimization, resilience, and suicidality among adolescents in child and youth-serving systems. *Children and Youth Services Review*, 106, Article 104500. <https://doi.org/10.1016/j.chiayouth.2019.104500>
- Toth, S., & Cicchetti, D. (2013). A developmental psychopathology perspective on child maltreatment. *Child Maltreatment*, 18(3), 135–139. <https://doi.org/10.1177/1077559513500380>
- Turner, H., Finkelhor, D., & Ormrod, R. (2010). Poly-victimization in a national sample of children & youth. *American Journal of Preventive Medicine*, 38, 323–330. <https://doi.org/10.1016/j.amepre.2009.11.012>
- Turner, H., Shattuck, A., Finkelhor, D., & Hamby, S. (2016). Polyvictimization and youth violence exposure across contexts. *Journal of Adolescent Health*, 58(2), 208–214. <https://doi.org/10.1016/j.jadohealth.2015.09.021>
- Turner, H., Shattuck, A., Finkelhor, D., & Hamby, S. (2017). Effects of poly-victimization on adolescent social support, self-concept, and psychological distress. *Journal of Interpersonal Violence*, 32(5), 755–780. <https://doi.org/10.1177/0886260515586376>
- Wagnild, G., & Young, H. (1993). Development and psychometric evaluation of Resilience Scale. *Journal of Nursing Measurement*, 1(2), 165–178.
- Wolfe, D. (2018). Why polyvictimization matters. *Journal of Interpersonal Violence*, 33(5), 832–837. <https://doi.org/10.1177/0886260517752215>
- World Medical Association. (2013). World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects. *Jama*, 310, 2191–2194. <https://doi.org/10.1001/jama.2013.281>
- Yoder, J., Hodge, A., Ruch, D., & Dillard, R. (2019). Effects of childhood polyvictimization on victimization in juvenile correctional facilities: The mediating role of trauma symptomatology. *Youth Violence and Juvenile Justice*, 17(2), 129–153. <https://doi.org/10.1177/1541204018757038>
- Zara, G., & Farrington, D. P. (2009). Childhood and adolescent predictors of late onset criminal careers. *Journal of Youth and Adolescence*, 38, 287–300. doi: 10.1007/s10964-008-9350-3.