

■ Prevalence and quantifying the effects of bullying victimization in school-aged children in internalizing and externalizing mental health problems and academic failure

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Abstract

Addressing bullying has been declared as a main target by the World Health Organization to achieve the Sustainable Development Goals (SDG) motivated for the high prevalence and adverse effects for victims. A non-probabilistic convenience sampling survey was designed in order to estimate the prevalence of bullying victimization in aged-school adolescents as well as the effects (and quantification) of the victimization in Mental Health Problems (MHPs) and academic achievement. 561 Spanish adolescents, 55.3% females and 44.7% males, aged between 14 and 16 years old ($M = 14.97$, $DT = 0.75$), responded to a diagnostic measure of bullying victimization and an inventory of internalising and externalising Mental Health Problems (MHPs) measure. In addition, information on academic failure was collected. The results showed a significant prevalence of the diagnosis of bullying victimization, 29.4%, 95% CI [.256, .332] with adverse effects on internalising and externalising PSMs, and on academic failure. As for the internalizing MHPs, results exhibited severe and the most adverse effects in posttraumatic stress, extended to severe adverse effects to depression and anxiety (generalized), moderate adverse effect in somatic complaints and obsessive-compulsive and mild in social anxiety. With respect to externalizing MHPs, the results revealed moderate adverse effects in attention problems, hyperactivity-impulsivity, anger control; mild adverse effects in aggression, defiant behavior, and antisocial behavior. The bullying victimization increased two times ($OR = 2.04$) the probability of academic failure. The implications for prevention programs and intervention with bullying victims are discussed.

Keywords: adverse effects, psychological damages, intervention with victims, prevention programs, chronic damage.

Resumen

Prevalencia y cuantificación de los efectos de la victimización por acoso en niños en edad escolar en problemas de salud mental internalizantes y externalizantes y fracaso académico. Abordar el acoso escolar ha sido declarado como un objetivo por la Organización Mundial de la Salud para alcanzar los Objetivos de Desarrollo Sostenible (ODS) motivado por la alta prevalencia y los efectos adversos para las víctimas. Se diseñó una encuesta no probabilística por muestreo de conveniencia para estimar la prevalencia de la victimización por bullying en adolescentes de edad escolar, así como los efectos (y cuantificación) de la victimización en los Problemas de Salud Mental (PSMs) y el rendimiento académico. 561 adolescentes españoles, 55.3% chicas y 44.7% chicos, con edades comprendidas entre los 14 y los 16 años ($M = 14.97$, $DT = 0.75$), respondieron a una medida diagnóstica de victimización por acoso escolar y a una medida de inventario de Problemas de Salud Mental (PSMs) internalizantes y externalizantes. Además, se recogió información sobre el fracaso escolar. Los resultados mostraron una prevalencia significativa del diagnóstico de victimización por bullying, 29.4%, 95% CI [.256, .332] con efectos adversos en los PSMs internalizantes y externalizantes, y en el fracaso escolar. En cuanto a los PSMs internalizantes, los resultados evidenciaron efectos adversos severos y los más adversos en trastorno de estrés postraumático, extendido a efectos adversos severos en depresión y ansiedad (generalizada), efecto adverso moderado en quejas somáticas y obsesivo-compulsivo, y leve en ansiedad social. En relación con los PSMs externalizantes, los resultados revelaron efectos adversos moderados en problemas de atención, hiperactividad-impulsividad y control de la ira; y efectos adversos leves en agresividad, conducta desafiante y conducta antisocial. La victimización por bullying aumentó dos veces ($OR = 2.04$) la probabilidad de fracaso escolar. Se discuten las implicaciones para los programas de prevención e intervención con víctimas de acoso escolar.

Palabras clave: efectos adversos, daños psicológicos, intervención con las víctimas, programas de prevención, daños crónicos.

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School violence and bullying are issues that have received increasing attention in recent decades, identified as one of the greatest risks in childhood and adolescence (Centers for Disease Control and Prevention [CDC], 2014; Organization for Economic Co-operation and Development [OECD], 2019; United Nations Educational, Scientific and Cultural Organization [UNESCO], 2019). Recently, Chudal et al. (2022) in their macro study carried out between 2011 and 2017 in eight Asian countries (China, Japan, Indonesia, Singapore, Vietnam, Iran, India and Israel) and five European countries (Finland, Greece, Lithuania, Norway and Russia) with 21,688 adolescents from 13 to 15 years old shows a prevalence rate of bullying of 17.7%.

The theoretical and seminal definition of bullying provided by Olweus (1994, p. 1173) asserted: "a student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other students". As the prevalence was observed in academic setting (the exposition to negative actions required a face-to-face interaction that was almost exclusively in school), Olweus circumscribed bullying to school bullying. This definition and subsequent operationalization of bullying proved insufficient for the differential diagnosis of other contingencies happening in the academic context that also entail adverse effects for the victim such as fighting, violent games, aggression or certain types of teasing. Therefore, the following criteria were further defined, and additional criteria was added (Arce et al., 2014; Besag, 1989; Gini, 2004; Olweus, 1993, 2010; Smith & Brain, 2000; Solberg & Olweus, 2003; Stein et al., 2007). Consequently, the criteria for bullying diagnosis were: exposition to negative actions, repeated exposition to negative actions, exposition extended in time; and the actions were performed by other students (peers). Thus, for negative actions, it was specified that it should cause physical or psychological harm (without harm there is no victim) and that it should be carried out intentionally, i.e., the bully carried out these actions with the intention of causing harm (victimization) to the victim, the criterion of 'intentional harm'. The repeated exposition to negative actions were operationalized as once a week or more frequently, 'frequency criterion'. The exposition extended in time, 'chronicity criterion', has been defined as the negative actions were extended in time more than 3 months (chronic post-traumatic stress disorder; American Psychiatric Association, 1994). As for peers, it was specified as requirement an imbalance of power between bully and victim. Finally, Arce et al. (2014) extended the bullying from school setting to scholar-aged children and adolescents as new ways of bullying were perpetrated out of the school (e.g., cyber-bullying, sexting).

This phenomenon has been extensively addressed from different fields (e.g., academic, social, legal, clinical), due to the increase in cases of victimization (Biswas et al., 2020; Crebbin et al., 2015; Marcos et al., 2022; Mujis, 2017; Solberg & Olweus, 2003; UNESCO, 2019) and their adverse effects in physical and mental health (Baier et al., 2019; López-Barranco et al., 2022; Moore et al., 2017), in short, medium and long term (Schoeler et al., 2018).

Although the adverse effects of bullying victimization on all types of internalising Mental Health Problems have been studied (MHPs) (Kochel et al., 2012; Moore et al., 2017; Shaw et al., 2019), meta-analytical reviews (Christina et al., 2021; Molero et al., 2022; Moore et al., 2017) have shown that the literature has focused on examining significant adverse effects on depression and anxiety. Likewise, bullying victimization has been associated with externalizing Mental Health Problems (MHPs), such as hyperactivity or antisocial behaviors (Garaigordobil & Machimbarrena, 2019; Hoffman et al., 2017; Yilmaz et al., 2021).

Other relevant question of the study of bullying victimization were the adverse effects on the school context, specifically on academic failure (Espinoza et al., 2019; Evans et al., 2019; Davis et al., 2018; Ma et al., 2019). In this regard, Yu and Zhao (2021) in a macro-study examined data from 210,523 students from 51 Programme for International Student Assessment (PISA) countries in order to estimate the causal effect of bullying victimization on academic adjustment. The findings revealed: a) middle school students, repeaters, and truancy report significantly higher bullying victimization; b) bullying victimization is associated with poor academic achievement and social integration problems such as bad classmate relations, lack of school belonging, and sense of loneliness; (3) study time, academic engagement, and online socialization are identified as the mediators between bully victimization and academic literacy and social integration.

Based on this state of the literature, a field study (survey) was designed to find out the prevalence of bullying victimization in school-aged adolescents, as well as the adverse effects and quantification of the magnitude in internalizing and externalizing Mental Health Problems (MHPs) and in academic failure; with the ultimate aim of providing scientific knowledge in order to guide prevention and intervention programmes applied at this stage of development.

Method

Participants

A total of 561 Spanish adolescents participated in the study, 55.3% females ($n = 310$) and 44.7% males ($n = 251$), aged between 14 and 16 years old ($M = 14.97$, $SD = 0.75$). Regarding the academic year, 39.4% were in 3rd of Compulsory education (14-15 years) and 41.4% in 4th of Compulsory education (15-16 years), while 18.5% were in 1st of Baccalaureate (16-17 years), and the remaining 0.8% in Formative Cycles. Regarding the type of secondary school, 70.1% were to a public school, 26.6% in a state-subsidised school and 3.4% in a private school.

Design and procedure

A non-probabilistic convenience sampling survey was designed (confidence level = 95%, margin of error $\pm 4.13\%$). In order to obtain the sample, first, the request was made to the schools. Once it accepted, informed consent was obtained from the parents or legal guardians (mandatory for < 16 years). After giving informed consent, participants filled in the questionnaires, responding voluntarily, anonymously and individually, supervised by professional staff. The tests were administered to participants during school hours. To counterbalance a possible interaction effect of variables, the order of obtaining the measurements was counterbalanced following a standard rotation procedure (Arce et al., 2000). The collection, storage and treatment of the data was carried out according with the Spanish Data Protection Act (Ley Orgánica 3/2018, de 5 de diciembre, de Protección de Datos Personales y Garantía de los Derechos Digitales, 2018). This study was approved by the Bioethics Committee of the University of Santiago de Compostela (Code: USC54/2022).

Measure instruments

An ad hoc questionnaire was made up to obtain socio-demographic information (i.e., gender, age, academic year and type of school), self-reported by the subjects, and academic performance (grade repetition), reported by the school.

As a measure to assess school bullying, the *Escala de Acoso Escolar* [School Bullying Scale] (UPF-4; Arce et al., 2014) was used. It is a self-report measure designed under the differential criteria of bullying from other anti-normative behavior that occur in the school context, composed of 26 items (e.g., “They insult me, call me nasty names”, “They take things and/or money from me”, “They leave me out of activities or games”, “They ridicule my opinions, tastes or preferences”). It is divided into four factors (i.e., psychological, physical, exclusion, relational), on a 5-point Likert-type scale for frequency (1 = *Never or rarely happens to me*; 2 = *Once a month*; 3 = *Two or three times a month*; 4 = *Once a week*; 5 = *Several times a week*), and 4 points for duration of bullying behavior (1 = *1 month*; 2 = *3 months*; 3 = *6 months*; 4 = *More than 6 months*). This scale was reliable (Arce et al., 2014), $\alpha = .95$, for the diagnosis of bullying victimization (rule of thumb = .95; Nunnally, 1978). The scale presented, with the participants in this study, a good reliability (internal consistency) for basic research, $\alpha = .90$ (Nunnally, 1978).

As for the assessment of psychological adjustment, the *Sistema de Evaluación de Niños y Adolescentes* [Assessment System for Children and Adolescents] (SENA; Fernández-Pinto et al., 2015) was administered. This scale consists of 188 items, structured in 3 measures: mental health problems, vulnerability and personal resources. The response scale is in a 5-point Likert type: *Never* (1), *Rarely* (2), *Sometimes* (3), *Often* (4), and *Always* (5). Within this study, the measurement of mental health problems (MHPs) were used: internalizing problems (i.e., depression, anxiety—generalized—, social anxiety, somatic complaints, and obsessive-compulsive) and externalizing problems (i.e., attention problems, hyperactivity-impulsivity, anger control, aggression, defiant behavior, antisocial behavior). The seminal (Sánchez-Sánchez et al., 2016) reported reliability (internal consistency) for the studied population and measures ranged from .70 (defiant and antisocial behavior) to .91 (depression). In the present study, the internal consistency, Cronbach's alpha, for internalizing and externalizing MHPs was .91 and .80, respectively.

Data analysis

The observed prevalence of victims of bullying was contrasted with a constant, .05, a trivial prevalence (Fandiño et al., 2021) computing Z for the difference between the observed probability and the constant. Effect size was estimated in Cohen's h , being small if $h = 0.20$, moderate if $h = 0.50$ and large if $h = 0.80$ (Cohen, 1988). The rank of the effect was measured with the Probability of Superiority of the Effect Size (PS_{ES} ; Arias et al., 2020) i.e., an estimation of the supervisory of the observed effect over all the possible effects. The effects of bullying victimization on internalizing and externalizing Mental Health Problems were analyzed with MANOVAs. The assumption of homogeneity of variance is compromised for the comparison of different size groups ($396/165 = 2.4$), being F liberal when large variance is for the small size group (Stevens, 1986). Multivariate test Pillai-Bartlett trace is robust to heterogeneous variances (Olson, 1979). When multivariate heterogeneity was observed and Levene's test for univariate effects were significant, three criteria were applied for the purpose of validate the correct rejection of the null hypothesis (Mayorga et al., 2020): a) the theoretical F (3.841) was lower than empirical; b) that the effect size, unbiased Hedges's g , was ≥ 0.20 (small effect); and c) the probability of false acceptance of the null hypothesis/probability of false acceptance of the alternative hypothesis was $\beta/\alpha \geq 1$. All three criteria were met for empirical significant univariate F s. The effect size for multivariate effects was measured as η^2 , interpreted in terms of the explained variance, and ranked with

the PS_{ES} . For univariate effects, the effect size was estimated with the unbiased Hedges's g , interpreting the magnitude in line with Cohen's (1988) interpretation qualitative categories: small ($g = 0.20$), medium ($g = 0.50$) and large ($g = 0.80$). Hence, the magnitude of the effect was quantified with an adaptation of the BESD (Rosenthal & Rubin, 1982), r (Gancedo et al., 2021), and ranked with the PS_{ES} . The quantification in mental health markers was interpreted (Endicott et al., 1976; Vilar-iño et al., 2022) as mild (10% quantified damage < 20%), moderate (10% quantified damage < 20%) and severe damage (10% quantified damage < 20%). The association between variables was analyzed with chi-squared and the test effect size was measured in Odds Ratio (OR), quantifying the magnitude in terms of the Effect Incremental Index (EII; Redondo et al., 2019) that estimates the increase probability of repeat a course over the controls (non-bullied). In sum, the reliability (internal consistency) of the measurement instruments was calculated in the sample of the present study.

Results

Prevalence of school bullying

First, 29.4% ($n = 165$), 95% CI[.256, .332] of participants were diagnosed (reliability, $\alpha = .90$), by the UPF-4 scale as victims of bullying (targeted by peers of psychological, physical, exclusion and/or relational bullying; 1 or more actions implying intentionality; repeated in time ≥ 1 time per week—; and chronic—the bullying actions extended 3 or more months), a significant prevalence ($> .05$), $Z = 26.52$, $p < .001$, and with a large effect size, $h = 0.99$, 95% CI[0.95, 1.03], and greater than 75.80%, $PS_{ES} = .7580$, of all possible sizes. The bullying net effect over a trivial prevalence was 83.0%, EII = .830.

Effects of bullying victimization in internalizing MHPs.

The results showed a significant multivariate effect, $F(6, 554) = 14.60$, $p < .001$, with a total power, $1 - \beta = 1.00$ (i.e., the probability of type II error is 0), of the bullying victimization factor in internalizing MHPs, accounting for 13.7%, $\eta^2 = .137$, of the variance. A large effect size and greater than 71.57%, $PS_{ES} = .7157$ of all possible effect sizes.

As for the univariate effects (see Table 1), results exhibited a significantly higher and large effect for bullying victims in posttraumatic symptoms ($g = 0.78$, 95% CI[0.75, 0.81]); moderate and greater effect than 68.79% greater (that is, the magnitude of the damage in mental health markers is greater than) of all possible in depression, and greater than 68.44 of all possible in generalized anxiety, and greater than 65.91% in somatic complaints, and greater than 62.93% in obsessive-compulsive ($g = 0.47$, 95% CI[0.44, 0.50]); and between small and moderate ($0.20 < g < 0.50$), and greater than 60.64% in social anxiety. Quantitatively, bullying victims reported 36.3% ($r = .363$) more posttraumatic symptoms than non-bullying victims; 33.0% ($r = .330$) more depressive symptoms; 32.2% ($r = .322$) more generalized anxiety symptoms; 27.9% ($r = .279$) more somatic complaints; 22.9% ($r = .229$) more obsessive-compulsive symptoms; and 18.7% ($r = .187$) more social anxiety symptoms. Conversely, the statistical model error (see PIS in Table 1) i.e., the probability of bullying victims with scores under the mean of the non-victims was 24.2% for depression, 24.8% for anxiety (generalized), 35.2% for social anxiety, 28.17% for somatic complaints, 21.8% for posttraumatic symptoms, and 31.9% for obsessive-compulsive.

Table 1. Univariate effects on internalizing MHPs for the bullying victimization factor. Between-subjects effects.

Internalizing MHP	F	p	g[95% CI]	1-β	MBV	MN-BV	PSES	PIS[95% CI]
Depression	65.85	< .001	0.70[0.67, 0.73]	1.00	2.83	2.19	.6879	.242[.207, .277]
Anxiety	56.04	< .001	0.68[0.65, 0.71]	1.00	3.47	2.85	.6844	.248[.212, .284]
Social anxiety	19.96	< .001	0.38[0.35, 0.41]	1.00	3.01	2.65	.6064	.352[.312, .392]
Somatic complaints	43.45	< .001	.058[0.55, 0.61]	1.00	2.88	2.42	.6591	.281[.244, .318]
Posttraumatic symptoms	84.27	< .001	0.78[0.75, 0.81]	1.00	2.67	2.06	.7088	.218[.184, .252]
Obsessive-compulsive	25.99	<.001	0.47[0.44, 0.50]	1.00	2.56	2.20	.6293	.319[.280, .358]

Note. $df(1, 559)$; $g[95\% CI]$: unbiased Hedges's g ; $1-\beta$: achieved power; MBV: Mean of the group of victims of bullying; MN-BV: Mean of the group of non-victims of bullying; PSES: Probability of Superiority of the Effect Size; PSS[95% CI]: Probability of an Inferiority Score[95% Confidence Interval]; Box' $M = 41.57$, $F(21, 388780.890) = 1.95$, $p = .006$.

Table 2. Univariate effects on externalizing MHPs for the bullying victimization factor. Between-subjects effects.

Externalizing MHP	F	p	g[95% CI]	1-β	MBV	MN-BV	PSES	PIS[95% CI]
Attention problems	25.34	< .001	0.46[0.43, 0.49]	.999	2.90	2.52	.6293	.322[.283, .361]
Hyperactivity-impulsivity	21.90	< .001	0.44[0.41, 0.44]	.997	2.47	2.17	.6117	.330[.291, .369]
Anger control	20.42	< .001	0.43[0.40, 0.46]	.995	2.40	2.08	.6179	.334[.295, .373]
Aggression	14.74	< .001	0.34[0.31, 0.37]	.969	1.47	1.33	.5948	.367[.327, .407]
Defiant behavior	15.52	< .001	0.35[0.32, 0.38]	.976	1.77	1.55	.5987	.363[.323, .403]
Antisocial behavior	10.89	.001	0.29[0.26, 0.32]	.909	1.33	1.23	.5832	.386[.346, .426]

Note. $df(1, 559)$; $g[95\% CI]$: unbiased Hedges's g ; $1-\beta$: achieved power; MBV: Mean of the group of victims of bullying; MN-BV: Mean of the group of non-victims of bullying; PSES: Probability of Superiority of the Effect Size; PSS[95% CI]: Probability of an Inferiority Score[95% Confidence Interval]; Box' $M = 71.97$, $F(21, 388780.890) = 3.38$, $p < .001$.

Effects of bullying victimization in externalizing MHPs.

The results exhibited a significant multivariate effect, $F(6, 554) = 6.15$, $p < .001$, with a extremely large power, $1-\beta = .999$ (i.e., the probability of type II error is .001 of the bullying victimization factor in externalizing MHPs, explaining 6.2%, $= .062$, of the variance. A moderate effect size and greater than 64.43%, $PS_{ES} = .6443$, of all possible effect sizes. Comparatively, the magnitude of the effect of suffering of bullying victimization was equal (95% CIs do overlap) in internalizing, $= .137$, 95% CI[.081, .181], and externalizing, $= .062$, 95% CI[.022, .096], MHPs.

The univariate effects (see Table 2) revealed a significantly higher and between small and moderate effect and greater than 62.93% of all possible effects for bullying victims in attention problems, and greater than 61.17% hyperactivity-impulsivity, and greater than 61.79% in anger control, and greater than 59.48% in aggression, and greater than 59.87% in defiant behavior, and greater than 58.32% in antisocial behavior. Quantitatively, bullying victims reported 22.4% ($r = .224$) more attention problems than non-bullying victims; 21.5% ($r = .215$) more hyperactivity-impulsivity problems; 21.0% ($r = .210$) more anger control problems; 16.8% ($r = .168$) more aggression problems; 17.2% ($r = .172$) more defiant behavior problems; and 14.4% ($r = .144$) more antisocial behavior problems. Nevertheless, the statistical model error was 32.2% for attention problems, 33.0% for hyperactivity-impulsivity, 33.4% for anger control, 36.7% for aggression, 36.3% for defiant behavior, and 38.6% for antisocial behavior.

Effects of bullying victimization in academic failure

Academic failure is significantly associated, $\chi^2(1, N = 561) = 8.96$, $p = .004$, to bullying victimization (17.0% of bullying victims repeated course vs. 8.3% of non-bullying victims), thus bullying victims is 2.04 times more probable ($OR = 2.04$) repeat course than non-bullying victims, being the incremental effect due to bullying victimization of 51.1%, $EII = .511$.

Discussion

School bullying has been declared as a main target by the World Health Organization to achieve the Sustainable Development Goals (SDG). Under this framework, a field study was designed to estimate the prevalence of bullying victimization in aged-school adolescents as well as the effects (and quantification) of the victimization in Mental Health Problems (MHPs) and academic achievement. Notwithstanding, this present empirical research has a number of limitations that it must be taken into account when the results are generalized. First, a non-probabilistic convenience sample was designed, so the prevalence estimate is not the true prevalence, but an approximation. Hence, it is recommended to take the prevalence interval, not the estimated raw prevalence. Second, the diagnosis of bullying victimization with a psychometric measure is really a diagnostic impression. Psychometric evaluation must be confirmed with clinical interview for diagnosis (Fariña et al., 2014). Third, in this assessment context—response bias—social desirability, symptom concealment and denial of victimization are suspected in victims' responses (Fariña et al., 2017). Consequently, the prevalence of victimization and harm may be higher than recorded. Bearing in mind these limitations, it proceeds to discuss the results obtained.

In line with the findings of recent literature in other contexts (Chudal et al., 2022), the results reported a significant prevalence of cases of bullying victimization, which reaches around 1/3, 29.4, 95% CI[.256, .332], of school-age adolescents between 14 and 16 years. The registered bullying effect over a trivial effect, 83.0%, states that bullying is pandemic. Then, prevention programs (primary intervention programs) to mitigate the prevalence of bullying in scholar aged children should be mandated (Martínez-Martínez et al., 2021).

Bullying victimization has direct effects on internalizing MHPs beyond anxiety and depression (Christina et al., 2021; Molero et al., 2022; Moore et al., 2017). Thus, results support significantly greater adverse effects (the 95% confidence interval lower limit of the mean

is higher than the upper limit of the other MHPs) in posttraumatic stress (primary adverse effect disorder). Posttraumatic Stress Disorder (PTSD), when it has been established for more than 3 months (criterion for bullying diagnostic), is chronic (American Psychiatric Association [APA], 1994) i.e., with the specification of chronic. Comorbidity studies has established an extraordinarily high prevalence (range: 80–98.8%) of comorbidity and multi-comorbidity of PTSD (APA, 2013; Brady et al., 2000; Kessler et al., 1995), which is associated with severe damage (Kessler et al. 2005; Vilariño et al., 2018). The results support and quantify the severity of the damage: 36.3% more post-traumatic symptoms related to bullying victimization. In turn, our results support such (multi)comorbidity, and that already beyond anxious-depressive disorders also encompass somatization (somatic complaints), obsessions and compulsions. The results also extended the damages to severe (> 30%) in depression and anxiety (generalized); to moderate (20% < quantified damage < 30%) in somatic complaints and obsessive-compulsive; and to mild (10% quantified damage < 20%) and in social anxiety.

It is known that victims of bullying have a higher tendency to develop externalizing MHPs (Hoffman et al., 2017; Ma et al., 2019; Yilmaz et al., 2021), finding that this tendency is reflected in all markers of externalizing MHPs: attention problems, hyperactivity-impulsivity, anger control, aggression, defiant behavior, and antisocial behavior. All of the above are related with violence (Spencer et al., 2021; Torres et al., 2022) and delinquency (Basto-Pereira & Farrington, 2022). Thus, bullying victimization adolescents could be in risk of a delinquent career. The damages were moderate (20% < quantified damage < 30%) in attention problems, hyperactivity-impulsivity, and anger control; and mild (10% quantified damage < 20%) in aggression problems, defiant behavior, and antisocial behavior.

Bullying victimization has also been found to have a direct effect on academic achievement (Davis et al., 2018; Espinoza et al., 2019; Evans et al., 2019). Notwithstanding, our results are not limited to a drop in academic performance, but academic failure is also related to criminal careers and social maladjustment. Specifically, bullying victimization doubles the probability of academic failure. In this context, programs inspired by Olweus' research have demonstrated their effectiveness in reducing bullying (Ttofi and Farrington, 2011) and, hence, reducing possible academic failure in these cases (Borgen et al., 2021).

The following implications for practice are derived from these results. First, it is an obligation of public administration to promote and implement bullying prevention programs for school-aged children and adolescents, given the high prevalence of bullying, as well as the severity of the adverse harms. Second, victims of bullying need specialized clinical care in the treatment of damages caused in internalizing MHPs. Third, victims of bullying need psycho-social care aimed at the treatment of damages caused in internalizing MHPs. Fourth, victims of bullying must be the object of an educational plan to restore the academic failure.

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Conflicts of Interest

The authors declare no conflict of interest.

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