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Not peer-reviewed version

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Prevalence and Quantification of the Effects of Sexual Harassment Victimization of School-Aged Adolescents

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Abstract: Background/aim: Sexual harassment has become a serious social and public health problem in adolescence, causing adverse effects on mental health. Nevertheless, some behaviours arise that, due to their characteristics, might be misinterpreted as sexual harassment. A field study, a survey with a non-probabilistic accidental sampling, was designed in order to estimate the prevalence of sexual harassment victimization in the Spanish adolescent population, as well as to quantify the harms. **Method:** 1028 Spanish adolescents, 54.3% females and 45.7% males, aged 13-17 years (M = 15.21, SD = 1.03), responded to a diagnostic measure of sexual harassment victimization and an inventory measure of internalizing and externalizing Mental Health Problems (MHPs). **Results:** The results showed a significant prevalence of diagnosed sexual harassment victimization of school-aged adolescents, 24.1%, 95% [.215, 267], with adverse effects on internalizing and externalizing MHPs. As for the internalizing MHPs, the results showed moderate adverse effects on depression, anxiety, somatic burns, posttraumatic symptoms, and obsessive-compulsive symptoms; and mild adverse effects on social anxiety. With regard to externalizing MHPs, the results revealed moderate adverse effects on hyperactivity-impulsivity, anger control and antisocial behaviour; and mild adverse effects on attention problems, aggression and defiant behaviour. In addition, it was corroborated that sexual harassment victimization affects adolescent females to a greater extent, with the effect being significantly greater in internalizing than in externalizing MHPs. **Conclusions:** The results obtained are discussed and future lines of research and intervention are proposed to promote the implementation of prevention and intervention programs that address this phenomenon and, in turn, improve the physical, psychological, and social well-being of adolescents.

Keywords: mental health; adolescence; educational field; violence prevention; gender

1. Introduction

Sexual violence and sexual harassment have become social and public health problems of great concern (National Institute of Justice, 2020), especially if it begins in childhood and/or adolescence (Ajayi & Ezegbe, 2020; Baiden et al., 2020; Ngo et al., 2018). In this regard, in their recent research with a sample of 13,052 US children and adolescents, Gewirtz-Meydan & Finkelhor (2020) found that the majority of sexual harassment victimization is committed by other children or adolescents, most often by adolescents aged 14-17 years, and mainly by acquaintances. In terms of gender, epidemiological studies have consistently confirmed a prevalence of unwanted sexual behaviour in females, both in the physical context - face-to-face - (Chen et al., 2020; Johns et al., 2018; Kozak et al., 2018; Smith et al., 2017), and non-conclusive results in virtual context (López-Barranco et al., 2022; Molero et al., 2022; Reed et al., 2019). Noteworthy, a significant prevalence of sexual harassment victimization has also been observed among adolescent males (Gewirtz-Meydan and Finkelhor, 2020; Ngo et al., 2018).

The most widespread definition of sexual harassment at school was provided by the American Association of University Women (AAUW, 1993), which defines it as a set of unwanted sexual behaviours that interfere in the lives of young people. Nevertheless, this is not operational, nor does it delimit (differential diagnosis) child and adolescent sexual harassment from other behaviours within the relational framework of adolescents that begin in this period of development (i.e., kissing,

touching, flirting), and which, due to their characteristics, may be erroneously interpreted like situations of sexual harassment, nor from other criminal typologies such as sexual abuse and aggression (Marcos et al., 2023). Consequently, for a proper diagnosis of sexual harassment victimization of school-aged children and adolescents, it is necessary to specify the behaviours and strategies of sexual harassment, as is the case with other manifestations of bullying (e.g., bullying victimization; Montes et al., 2022). In addition, once it has been established that the individual has been exposed to bullying behaviours and strategies, the diagnostic criteria for bullying must be met: intentionality of the behaviour/action, periodicity and chronicity (American Psychiatric Association [APA], 2013; Arce et al., 2014; Leymann, 1989).

Sexual harassment, as a criminal action, is associated with harm to the victim (victimization) which, in this type of crime, is of an emotional or mental character (United Nations, 1985). The scientific literature refers to this harm as adverse effects on mental health and cognitions (Mathews et al., 2013; Oshodi et al., 2020; Ruiz & Herrera, 2022; Verelst et al., 2014). Given the age of the victims (childhood and adolescence), such mental health effects manifest themselves in both internalizing and externalizing symptoms. In the domain of internalizing Mental Health Problems (MHPs), depression (Molero et al., 2022; Oshodi et al., 2020; Verelst et al., 2014), anxiety (Mathews et al., 2013; Molero et al., 2022; Oshodi et al., 2020; Verelst et al., 2014) and suicidal ideation were registered as primary diagnoses (Baiden et al., 2020; Grendas et al., 2020), both in face-to-face —offline— (Sargent et al., 2020; Torazzi et al., 2021) and virtual contexts —online— (Andalibi et al., 2018).

Adverse effects were also observed on externalizing MHPs. Specifically, on criminal and antisocial behaviour (Connolly, 2020; Kozak et al., 2018; Yoder et al., 2019). In this sense, Braga et al. (2018), following a meta-analytic review, quantified the likelihood of antisocial behaviours among victimized adolescents to be almost twice as high as among their non-victimized peers.

Based on this review, a field study (a survey) was designed to find out the prevalence of sexual harassment victimization in school-aged adolescents, as well as the adverse effects and quantification of the magnitude in internalizing and externalizing MHPs of sexual harassment victimization and the interaction with gender.

2. Method

2.1. Participants

A total of 1028 Spanish adolescents participated in the study, 54.3% females (n = 558) and 45.7% males (n = 470), aged between 13 and 17 years old (M = 15.21, SD = 1.03). Regarding the academic year, 36.3% were in 3rd of Compulsory education (14-15 years) and 39.0%in 4th of Compulsory education (15-16 years), while 17.6% were in 1st of Baccalaureate (16-17 years), 6.0% in 2nd of Baccalaureate (17-18 years) and the remaining 1.1% in Formative Cycles. Regarding the type of secondary school, 73.5% were to a public school, 20.8% in a state-subsidised school and 5.6% in a private school.

2.2. Design and procedure

A non-probabilistic convenience sampling survey was designed (confidence level: 95%; margin of error ±3.03%) to estimate the prevalence of sexual harassment victimization in the Spanish adolescent population, as well as to quantify the damages. In order to obtain the sample, first, the request was made for the schools. Once it was 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 attendance. The order of obtaining the measurements was counterbalanced following a standard rotation procedure (Arce et al., 2000) to counterbalance a possible interaction effect between variables. 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).

2.3. 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 participants.

The diagnosis of harassment requires not only that the person has been subjected to harassing behaviours, in this case sexual harassment, but also that certain criteria must be met to discriminate sexual harassment from other types of actions against sexual freedom (differential diagnosis): intentionality of the conduct, periodicity and chronicity (Arce et al., 2014; Leymann, 1989; Olweus, 1993). Differential diagnosis involves discrimination from other crimes against sexual freedom, i.e., sexual abuse and sexual assault. Abuse occurs when the victim is under age to consent and the perpetrator is over the legal age to consent. Therefore, sexual harassment of school-aged children and adolescents must be produced by peers (perpetrator; Padrón et al., 2022), otherwise it would be abuse (some literature has equated child abuse with aggression). Aggression, on the other hand, involves the use of force, intimidation, or coercion. Substance use is abuse or aggression, according to the applicable literature, but not applicable to bullying.

As a measure of behaviours or strategies that constitute sexual harassment at school, it was found a context effect in the measurement instruments: traditional bullying and online bullying. Thus, surveys were found for the measurement of traditional bullying behaviours (AAUW, 1993, 2011; Ortega et al., 2010) and psychometric instruments of online bullying (Sánchez et al., 2017; Valik et al., 2022). It was pointed out that the instruments introduced measures that implied the use of violence or force, intimidation, or coercion as aggression (e.g., someone has forced you to kiss him/her) or wording that did not directly imply an intention to harass (intentionality criterion). Measures of sexual harassment behaviours and strategies adapted to one or the other context were collated. These measures, which are the basis of the literature reviewed, are of limited validity (they only measure in one or the other context and thus partially assess the construct), without discrimination of other analogous constructs (differential diagnosis) and with diagnostic error (*de facto*, it is diagnosed sexual harassment without verifying intentionality, frequency, and chronicity). Consequently, a pool of items was constructed on the basis of the instruments found, combining, where it was possible, the use of the behaviour or strategy in both contexts in the same item; the items were reworded to imply that the bullying behaviour/strategy was not an aggression and was intentional. Taking into account the resulting set of items and the corrected item-test correlation calculated, those behaviours or strategies with a correlation (r) < .40 were eliminated, such that they are not measuring the same construct. This resulted in a measure of harassment consisting of 19 sexual harassment behaviours/strategies, to which participants responded 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*). In case of a positive response and frequency greater than two or three times a month or more, participants were asked about the periodicity (diagnostic criterion of chronicity of bullying) with which they were being or had been subjected to this bullying behaviour or strategy: "up to one month", "up to three months", "up to six months", or "up to one year or more". For a diagnosis of sexual harassment victimization, participants were required to have been subjected to at least one sexual harassment behaviour, weekly or more frequently (periodicity criterion); and for longer than 6 months (chronicity criterion; APA, 2013; Arce et al., 2014; Leymann, 1989). The resulting inventory of sexual harassment behaviours or strategies presented, with the participants in this study, a reliability (internal consistency) sufficient for measures in applied contexts that serve to make important decisions (e.g., diagnosis), α = .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). In the present study, the internal consistency, Cronbach's alpha, for internalizing and externalizing MHPs was .89 and .91, respectively.

2.4. Data analysis

The prevalence of sexual harassment victimization was calculated by the obtain of the zeta value for the difference between the observed probability with a constant, .05, effect or trivial prevalence (Fandiño et al., 2021) obtaining the effect with Cohen's *h*, interpreting this qualitatively as small (*h* = 0.20), moderate (*h* = 0.50), large (*h* = 0.80) and more than large (*h* = 1.20) (Arce et al., 2015; Cohen, 1982), and quantifying the magnitude of the effect with the Effect Incremental Index (EII; Arias et al., 2020).

A MANOVA test was ran for the comparison of means with a customized design with the victimization factor (victimized vs. non-victimized) and the interaction of the victimization factor and gender (females vs. males), given that the literature has shown that females and adolescent victims of sexual harassment present greater harm in internalizing MHPs than males and adolescent victims (Amado et al., 2015). In multivariate contrasts, multivariate test Pillai-Bartlett trace was taken, since it is robust to homogeneous variance-covariance assumption (Olson, 1976). Heterogeneity of variance was also observed in univariate comparisons (Levene's test), which may cause deviations in the significance of the results (Stevens, 1986). As for dealing with this contingency, the value of the theoretical *F* (Box's test of the equality of covariance matrices) was contrasted with the empirical *F* to validate the correct acceptance or rejection of the null hypothesis: if the empirical *F* is higher than the theoretical *F*, the alternative hypothesis is correctly accepted, and vice versa (Mayorga et al., 2020). This criterion was met for significant univariate *F* values.

In multivariate contrasts, the effect size was calculated as η_p^2 and the standardised mean difference with Hedges' unbiased *g*, the latter being for the comparison between adolescent victims in the significant interaction between the factor's victimization and gender. The magnitude of effect sizes was interpreted qualitatively by taking Cohen's (1988) categories of large (*g* ≥ 0.80, η_p^2 ≥ .1379), moderate (*g* = 0.50, η_p^2 = .0588) and small (*g* = 0.20, η_p^2 = .0099) and quantitatively using the Probability of Superiority of Effect Size (PS$_{ES}$; Arias et al., 2020); that is, the percentage of effect sizes out of the total that would exceed the observed one, and the variance explained for η_p^2. Model error was computed with the Probability of an Inferiority Score (PIS; Vilariño et al., 2022). A derivation of the BESD was used to quantify the deficits resulting from victimization (Gancedo et al., 2021).

Moreover, the reliability (internal consistency) of the measurement instruments was calculated in the sample of the present study.

3. Results

3.1. Prevalence of sexual harassment

24.1% (*n* = 248), 95% CI [.215, .267], of participants were diagnosed (reliability, *α* = .90) with sexual harassment victimization, a significant prevalence (> . 05), *Z* = 28.10, *p* < .001, and with a more than large effect size, *h* = 1.45, 95% CI [1.42, 1.48], and greater than 84.85% (PS$_{ES}$ = .8485), of all possible sizes. The increase in (net effect: prevalence over a trivial effect) of sexual harassment was 79.2%, EII = .792. In relation to gender, female adolescents (30.1%) were significantly more, χ^2(1, *N* = 1028) = 23.87, *p* < .001, victimized than male adolescents (17.0%), although the effect size is small, RP = 1.77, and larger than 58.71% (PS$_{ES}$ = .5871).

3.2. Effects of sexual harassment victimization in internalizing MHPs

The results exhibited a significant multivariate effect, *F*(6, 1019) = 16.36, *p* < .001, with full power, 1-β = 1.00 (i.e., type II error probability is 0), of the sexual harassment victimization factor in internalizing MHPs, explaining 8.8%, η_p^2 =.088, 95% CI [.053, .117], of the variance. Consequently, victims of sexual harassment differ on internalizing MHPs. Likewise, the interaction between sexual harassment victimization and gender was also significant, *F*(12, 2040) = 19.76, *p* < .001, with total

power $1-\beta = 1.00$ and accounting for 10.4%, $\eta_p^2 = .104$, 95% CI [.076, .124], of the variance. That is, female and male adolescent victims and non-victims differ on internalizing MHPs.

As for the univariate effects (see Table 1), the results showed that victims of sexual harassment reported significantly more symptoms and with a moderate to large effect size ($0.50 < g < 0.80$) and larger than 68.79% of all possible effects in depression, 67.72% in anxiety, and larger than 70.54% in posttraumatic symptoms than non-victims; and a moderate size ($g \approx 0.50$) in somatic complaints and larger than 65.91%, and in obsession-compulsion and larger than 59.87%. Quantitatively, victims of sexual harassment informed 33.0% ($r = .330$) more depressive symptoms than non-victims; 30.9% ($r = .309$) more anxiety symptoms; 8.5% ($r = .085$) more social anxiety; 27.9% ($r = .279$) more somatic complaints; 35.9% ($r = .359$) more posttraumatic symptoms; and 24.3% ($r = .243$) more obsessive-compulsive symptoms than non-victims. Notwithstanding, the model error (probability of the victim group scoring below the non-victim group mean) is 24.2% for depression, 25.8% for anxiety, 43.3% for social anxiety, 28.1% for somatic complaints, 22.1% for posttraumatic symptoms, and 30.8% for obsessive-compulsive.

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

Internalizing MHPs	F	p	g[95% CI]	1-β	M_{VAS}	M_{N-VAS}	PS_{ES}	PIS[95% CI]
Depression	65.67	< .001	0.70[0.68, 0.72]	1.00	2.86	2.25	.6879	.242[.216, .268]
Anxiety	49.89	< .001	0.65[0.63, 0.67]	1.00	3.48	2.89	.6772	.258[.231, .285]
Social anxiety	1.69	< .001	0.17[0.15, 0.19]	.255	2.82	2.67	.5478	.433[.403, .463]
Somatic complaints	41.86	< .001	0.58[0.56, 0.60]	1.00	2.91	2.47	.6591	.281[.254, .308]
Posttraumatic symptoms	74.20	< .001	0.77[0.75, 0.79]	1.00	2.68	2.11	.7054	.221[.196, .246]
Obsessive-compulsive	29.91	< .001	0.50[0.45, 0.55]	1.00	2.58	2.22	.5987	.308[.280, .336]

Note. gl(1, 1024); g[95% CI]: unbiased Hedges's g[95% Confidence Interval]; 1-β: achieved power; M_{VAS}: Mean of the group of victims of sexual harassment; M_{N-VAS}: Mean of the group of non-victims of sexual harassment; PS_{ES}: Probability of Superiority of the Effect Size; PIS[95% CI]: Probability of an Inferiority Score[95% Confidence Interval]; Box' M = 180.052, F(63, 319590.1) = 2.81, $p < .001$.

Univariate effects for the interaction between victimization and gender (see Table 2) revealed a significant effect on depression, anxiety, social anxiety, somatic complaints, posttraumatic symptoms and obsessive-compulsive. The standardised mean difference between female ($n = 168$) and male ($n = 80$) victims of sexual harassment was significant (lower bound of the 95% CI > 0.20) of a large magnitude ($g > 0.80$) and larger than 77.34% of all possible effects on anxiety; of a moderate to large magnitude ($0.50 < g < 0.80$) in depression, somatic complaints, posttraumatic symptoms and obsessive-compulsive, being an effect size larger than 67.00%, 67.72%, 68.02%, and 65.17%, respectively; and of small to moderate magnitude ($0.20 < g < 0.50$) in social anxiety, a size larger than 60.64%. Quantitatively, female adolescent victims of sexual harassment notified 29.6% ($r = .296$) more depressive symptoms; 46.8% more anxious symptoms ($r = .468$); 18.7% ($r = .187$) more social anxiety symptoms; 30.9% ($r = .309$) more somatic complaints; 31.3% ($r = .313$) more posttraumatic symptoms; and 26.5% ($r = .265$) more obsessive-compulsive symptoms than male adolescent victims. Nevertheless, the model error (probability in the victim group of scoring below the mean of the non-victim group) is 26.84% for depression, 14.5% for anxiety, 35.2% for social anxiety, 25.8% for somatic complaints, 25.5% for posttraumatic symptoms, and 29.1% for obsession-compulsion.

Table 2. Univariate effects on internalizing MHPs for the interaction between sexual harassment victimization and gender. Between-subjects effects.

Internalizing MHPs	F	p	g[95% CI]	1-β	M_{VAS}	$M_{N\text{-}VAS}$	PS_{ES}	PIS[95% CI]
Depression	45.44	< .001	0.62[0.57, 0.67]	1.00	3.06	2.46	.6700	.268[.213, .323]
Anxiety	116.73	< .001	1.06[1.11, 1.01]	1.00	3.77	2.89	.7734	.145[.101, .189]
Social anxiety	28.56	< .001	0.38[0.33, 0.43]	1.00	2.93	2.58	.6064	.352[.293, .411]
Somatic complaints	58.51	< .001	0.65[0.60,0 .70]	1.00	3.08	2.57	.6772	.258[.204, .312]
Posttraumatic symptoms	38.95	< .001	0.66[0.61,0 .71]	1.00	2.85	2.32	.6802	.255[.201, .309]
Obsessive-compulsive	24.08	< .001	0.55[0.50, 0.60]	1.00	2.72	2.28	.6517	.291[.234, .348]

Note. gl(1, 1024); *g*[95% CI]: unbiased Hedges's *g*[95% Confidence Interval]; 1-β: achieved power; M_{VAS}: Mean of the group of victims of sexual harassment; $M_{N\text{-}VAS}$: Mean of the group of non-victims of sexual harassment; PS_{ES}: Probability of Superiority of the Effect Size; PIS[95% CI]: Probability of an Inferiority Score[95% Confidence Interval]; Box' M = 180.052, *F*(63, 319590.1) = 2.81, *p* < .001.

3.3. Effects of sexual harassment victimization in externalizing MHPs

The results exhibited a significant multivariate effect, $F_{(6, 1019)} = 19.84$, $p < .001$, with a total power, 1-β = 1.00, of the sexual harassment victimization factor in externalizing MHPs, explaining 10.5%, $\eta_p^2 = .105$, IC del 95%[.068, .136], of the variance. Thus, adolescent victims and non-victims of sexual harassment differ in the externalizing symptomatology developed. Similarly, the interaction between sexual harassment victimization and gender was also significant, $F_{(12, 2040)} = 6.96$, $p < .001$, with total power, 1-β = 1.00 and accounting for 3.9%, $\eta_p^2 = .039$, IC del 95%[.020, .052], of the variance. That is, adolescent victims and non-victims differ on externalizing MHPs. Nevertheless, effect was significantly larger for internalizing MHPs (the confidence interval is larger) than for externalizing MHPs.

Univariate effects (see Table 3) revealed for the victimization factor that victims of sexual harassment revealed significantly more symptoms and with a moderate to large effect size (LL 0.50 < *g* < UL 0.80) and larger than 67.36% of all possible effects on anger control, and 65.54% on antisocial behaviour than non-victims; a moderate effect size (95% CI of *g* is greater than 0.50) on hyperactivity-impulsivity and greater than 64.80%, and on defiant behaviour and greater than 62.55%; and a small to moderate effect size (LL 0.20 < *g* < UL 0.50) on attention problems and greater than 62.16%, and on aggression and greater than 61.41%. Quantitatively, victims of sexual harassment reported 21.5% (*r* = .215) more attention problems; 26.1% (*r* = .261) more manifestations of hyperactivity-impulsivity; 30.5% (*r* = .305) more difficulties in anger management; 20.1% (*r* = .201) more aggressive behaviour towards others; 22.0% (*r* = .220) more defiant behaviour towards authority figures; and 27.4% (*r* = .274) more antisocial behaviour than non-victims. Nevertheless, the model error (probability in the victim group of scoring below the mean of the non-victim group) is 33.0% for attention problems, 29.5% for hyperactivity-impulsivity, 26.1% for anger management difficulties, 34.1% for aggression towards others, 32.6% for defiant behaviour towards authority figures, and 28.4% for antisocial behaviour.

Table 3. Univariate effects on externalizing MHPs for the sexual harassment victimization factor. Between-subjects effects.

Externalizing MHPs	F	p	g[95% CI]	1-β	M_{VAS}	$M_{N\text{-}VAS}$	PS_{ES}	PIS[95% CI]
Attention problems	39.50	< .001	0.44[0.39, 0.49]	1.00	2.94	2.57	.6217	.330[.301, .359]
Hyperactivity-impulsivity	58.02	< .001	0.54[0.49, 0.59]	1.00	2.57	2.19	.6480	.295[.267, .323]
Anger control	68.62	< .001	0.64[0.59, 0.69]	1.00	2.51	2.03	.6736	.261[.234, .288]
Aggression	48.20	< .001	0.41[0.36, 0.46]	1.00	1.53	1.34	.6141	.341[.312, .370]
Defiant behavior	45.89	< .001	0.45[0.40, 0.50]	1.00	1.87	1.57	.6255	.326[.297, .355]
Antisocial behavior	81.55	< .001	0.57[0.52, 0.57]	1.00	1.46	1.24	.6554	.284[.256, .312]

Note. gl(1, 1024); *g*[95% CI]: unbiased Hedges's *g*[95% Confidence Interval]; 1-β: achieved power; M_{VAS}: Mean of the group of victims of sexual harassment; $M_{N\text{-}VAS}$: Mean of the group of non-victims of sexual harassment; PS_{ES}:

Probability of Superiority of the Effect Size; PIS[95% CI]: Probability of an Inferiority Score[95% Confidence Interval]; Box' M = 338.343, F(63, 318590.1) = 5.28, p < .001.

Univariate effects for the interaction between victimization and gender (see Table 4) displayed a significant effect on anger management difficulties, aggression behaviours towards others and challenging behaviours towards authority figures. The standardised mean difference between female (n = 168) and male (n = 80) victims of sexual harassment was significant (LL of 95% CI > 0.20) and of small to moderate magnitude (LL 0.20 < g < UL 0.50) for aggression towards others with an effect size greater than 61.03%, and for antisocial behaviour with an effect size greater than 60.26%. Although the interaction of the factors victimization and gender was significant in anger control difficulties, effect for the comparison of interest (female victims vs. male victims) is smaller than small, irrelevant (UL < 0.20). Quantitatively, adolescent victims of sexual harassment reported 19.1% (r = .191) more aggressive behaviours towards others, and 18.2% more antisocial behaviours, than adolescent victims. Even so, the model error (probability of the boy victim group scoring below the mean of the girl victim group) is 34.8% for aggression towards others and 35.6% for antisocial behaviour.

Table 4. Univariate effects on externalizing MHPs for the interaction between sexual harassment victimization and gender. Between-subjects effects.

Externalizing MHPs	F	p	g[95% CI]	1-β	M_{HVA}	M_{MVA}	PS_{ES}	PIS[95% CI]
Attention problems	0.97	.379	0.17[0.12, 0.22]	.220	3.05	2.89	.5478	.433[.371, .495]
Hyperactivity-impulsivity	1.60	.203	0.19[0.14, 0.24]	.339	2.67	2.52	.5517	.425[.363, .487]
Anger control	4.96	.007	-0.12[-0.17, -0.07]	.811	2.44	2.55	.5319	.452[.390, .514]
Aggression	14.54	< .001	0.39[0.34, 0.44]	.999	1.68	1.46	.6103	.348[.289, .407]
Defiant behavior	2.55	.079	0.20[0.15, 0.25]	.510	1.98	1.82	.5557	.421[.360, .482]
Antisocial behavior	10.25	< .001	0.37[0.32, 0.42]	.987	1.58	1.40	.6026	.356[.296, .416]

Note. gl(1, 1024); g[95% CI]: unbiased Hedges's g[95% Confidence Interval]; 1-β: achieved power; M_{VAS}: Mean of the group of victims of sexual harassment; M_{N-VAS}: Mean of the group of non-victims of sexual harassment; PS_{ES}: Probability of Superiority of the Effect Size; PIS[95% CI]: Probability of an Inferiority Score[95% Confidence Interval]; Box' M = 338.343, F(63, 318590.1) = 5.28, p < .001.

4. Discussion

This research is subject to limitations in its generalizability which should be borne in mind. First, the sampling technique applied has margins of error within which the prevalence estimates may oscillate. Second, an inter-subject measurement design (as opposed to a repeated measures design) was used, which does not allow us to understand the evolution of psychological adjustment in victimized individuals from the perspective of individual's development during adolescence. Third, measurement instruments used, since they are self-report measures; in consequence, they may be subject to response bias on the part of the participants. Both, social desirability in responses and denial of harm are suspected (Fariña et al., 2017). Fourth, the diagnosis of sexual harassment was based on a psychometric measure, which in clinical practice has to be endorsed in clinical interview. Fifth, the influence of other types of variables not assessed in this research that could have mediating effects on the variables under study. Bearing these limitations in mind, the results obtained are discussed below.

The results showed that around 1 in 4 adolescents is a victim of sexual harassment, 24.1%, 95% CI [.215, .267], with a significantly higher prevalence among females than among males. The incremental effect on the triviality (net effect) of sexual harassment was 79.2%. Thus, adolescent sexual harassment victimization transcends the trivial; in such a way that it acquires the status of a problem that requires the implementation of prevention programs with the aim of reducing prevalence to trivial. The programs need to be gender oriented as the prevalence is higher for females.

The results corroborated that sexual harassment victimization brings direct adverse effects on the set of internalizing MHPs, quantified as 33.0% more depressive symptoms, 30.9% more anxiety symptoms, 8.5% more social anxiety, 27.9% more somatic complaints, 35.9% more posttraumatic

symptoms and 24.3% more obsessive-compulsive symptoms, than non-victims. These findings reflect the adverse mental health effects of sexual harassment victimization in school-aged adolescents. In summary, the internalizing harm is (multi)comorbid and not only referred, as presumed in previous literature, to anxious-depressive symptoms. Regarding to the judicial context, the verification of harm in posttraumatic symptoms is key to the demonstration of the case as criminal victimization requires harm (United Nations, 1985) which in forensics is Posttraumatic Stress Disorder (PTSD) (in this case Adjustment Disorder, by not referring in PTSD to sexual harassment, but abuse; APA, 2013), as a traumatic event (PTSD would be labelled as Adjustment Disorder), and, being (multi)comorbid, the resulting harm is severe (Kessler et al., 2005; Vilariño et al., 2018; Villalta et al., 2020).

The results also found impairments in externalizing MHPs consequence of sexual harassment victimization. These were estimated at an increase of 21.5% in attention problems; 26.1% in manifestations of hyperactivity-impulsivity; 30.5% in anger control; 20.1% in aggressive behaviour towards other people; 22.0% in defiant behaviour towards authority figures; and 27.4% in antisocial behaviour. These results alert about the need of an intervention in externalizing MHPs associated with sexual harassment victimization with special attention to antisocial behaviours that turn victims into aggressors (Braga et al., 2018).

Comparatively, the effect is significantly larger for internalizing BSPs (the confidence interval is larger) than for externalizing MHPs in line with the transition at these ages from externalizing (younger age) to internalizing (older age) clinical manifestation.

With a view to future lines of research, the present study suggests that the relevance of studies aimed at: a) the creation and validation of a measure of sexual harassment with psychometric properties; b) the specification of the factors associated with peer victimization of sexual harassment at school; c) the mediating variables of the adverse effects of harassment victimization; and d) the causes of aggression. The final aim is to provide a better adjustment of prevalence rates, as well as a better understanding of this phenomenon. Hence, these issues should be kept in mind in the educational setting when designing, developing, implementing prevention and intervention programs to address sexual harassment and, in turn, improve the physical, psychological, and social well-being of young people (Seijo et al., 2023).

Institutional Review Board Statement: This study was approved by the Bioethics Committee of the University of Santiago de Compostela (Code: USC54/2022).

Data availability: The data are available from the authors upon reasonable request.

Declaration of conflict of interest: The authors declare no conflicts of interest.

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