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Trend Analysis (2006-2010-2014) of Bullying Victimization Prevalence in Spanish Adolescent Youth at School

Abstract

BACKGROUND: The present study analyzes trends in bullying victimization prevalence in a representative sample of Spanish adolescent schoolchildren in 2006, 2010, and 2014.

METHODS: This study distinguishes between reported bullying, which is assessed via the global question in the Revised Bully/Victim Questionnaire by Olweus, and observed bullying, which is a measure developed from the answers that the adolescents gave to specific items that refer to different types of bullying and, that have been codified as physical, verbal, and relational bullying.

RESULTS: For 2006 and 2010/2014, the results show stability in the assessment of reported bullying and an increase in observed bullying, analysed both globally and within the 3 categories: physical, verbal and relational.

CONCLUSIONS: A valid, reliable, and accurate measure to detect cases of bullying is necessary, as is the importance of continuing efforts devoted to raising awareness and the prevention of this phenomenon.

Keywords: bullying, adolescence, trend analysis, victimization.

Bullying is a social issue of major interest that has led to a continuous flow of international research since the 1970s. Bullying has also been gradually gaining attention in the media, educational contexts, and public administration. This attention has been translated into the implementation of initiatives and programmes aimed at the prevention of bullying episodes and the promotion of school safety.¹⁻³ If we focus on the Spanish context, in 1995, Royal Decree 732/1995 established the obligation of creating a School Safety Commission in each educational centre to promote school safety through prevention and mediation in conflict resolution; subsequently, various plans and strategies for the promotion of school safety across autonomous regions were launched.⁴⁻⁶ In addition, the National Observatory of School Safety (Observatorio Estatal de la Convivencia Escolar, OECE) was created in 2007 with the purpose of gathering information for analysis, diagnosis, and intervention regarding school safety. According to the Observatory, in 2010, 84.3% of students in secondary education claimed to have taken part in some initiatives or programmes to promote school safety at their schools, and 47.6% of the total claimed the same regarding anti-bullying interventions.⁷

Bullying is defined as a situation in which a student is frequently and intentionally attacked by one or several students who are in a position of power in comparison with the victim. Traditional definitions⁸ therefore agree that bullying has 3 defining features: intentionality, repetitiveness, and power imbalance. According to frequently used classifications^{4,9,10,11} main types of bullying comprise physical bullying (hitting, pushing, shaking, etc.), verbal bullying (mocking, insults, nicknaming, etc.), and social or relational bullying (ignoring the other, spreading rumours, etc.).

Although physical bullying is neither the most prevalent nor has the most negative consequences for victims,^{12,13} the identification of bullying with its physical forms seems to remain present among students and teachers. Teachers are more likely to intervene and put an end to physical bullying than to other types.¹⁴ Students use the term bullying more frequently to refer to physical aggression, whereas they are more likely to use other labels such as "picking on" or "reject" for other types of bullying.^{9,15} Therefore, it is not surprising that bullying perceptions are receiving increasing attention. For example, several studies¹⁵⁻¹⁷ suggest that variations in the prevalence of different types of bullying between countries may be partly explained by the existence of different sensitivity thresholds or cultural variations in the definition of bullying.

Although obtaining an accurate estimation of the prevalence of bullying is not easy,² certain studies have contributed to quantifying this phenomenon. A recent study including 33 countries suggests that in 2010, approximately 11.3% of schoolchildren between the ages of 11 and 15 had been victims of bullying, with the percentage in Spain being 7.5% for boys and 4.3% for girls.¹⁶ At the national level, prevalence data in secondary education reveal a percentage of 3.8 for bullying victimization in 2010. Verbal and relational bullying were the most frequent, affecting approximately 5% and 3.5% of students, respectively, whereas direct physical aggressions were less than 1.5%.⁷

Regarding international trends analyses of bullying, prevalence in most countries decreased in 2010 in comparison to 2002, but trends were diverse to some extent: in some countries there was a continued downward trend, whereas in others, such as Spain, some fluctuations were observed, with a decrease in 2006 and a slight increase in 2010.¹⁶ The most recent report about school bullying in secondary education by the

Spanish Ombudsman¹⁸ noted a decreasing trend in bullying prevalence between 1999 and 2006, although certain variations across different types of bullying were found. Specifically, direct forms of verbal bullying, such as insulting or giving offensive nicknames, and certain forms of relational bullying, such as being ignored, diminished significantly. In contrast, physical abuse and other forms of relational aggression remained unchanged. Despite these positive data, the report also showed that 10% of victims did not ask for help. It was also found that the majority of bullies considered by-standers to remain indifferent during episodes of bullying and that 1 out of 4 classmates encouraged them to bully others. These last 2 issues contribute to sustained episodes of bullying.¹⁸

Given the increasing social concern over bullying and the number of programmes and interventions that have been developed to promote school safety in recent decades,⁷ it is fundamental to know whether bullying prevalence in Spain has changed following the year 2006, both globally and in its specific forms. Furthermore, in line with the research noted above,^{9,16} it seems warranted to explore the role that schoolchildren's perceptions may play in estimates of prevalence. As a result, the aims of this study are:

1. To analyse the trend in the global prevalence of bullying victimization from 2006 to 2014, considering 2 different measures: a direct measure based on student responses regarding whether they had been bullied and a behavior-based measure built from their responses to items describing specific forms of bullying.
2. To analyse the trend in the prevalence of having been the victim of physical, verbal, and relational bullying from 2006 to 2014.

METHODS

Participants and Procedure

The Health Behaviour in School-aged Children (HBSC) study is an international WHO survey, with 44 participating countries, whose main objective is to monitor adolescents' lifestyle and health every 4 years. As part of the 2006, 2010 and 2014 HBSC study editions in Spain, representative samples of adolescent schoolchildren between the ages of 11 and 18 years were selected through random multistage sampling stratified by conglomerates that took into account age, type of school (state vs. private), and geographical area.

The sample consisted of 64,099 adolescents who had participated in the last 3 editions of the study in Spain; the samples for the years 2006 and 2014 are larger because sampling in those editions was representative both at the national and autonomous region levels. The description of the sample is presented in Table 1.

Data were collected via questionnaires completed by students during school hours in compliance with the conditions dictated by the HBSC international protocol, including the confidentiality and anonymity of the data provided.¹⁹

Table 1
Sample Description by Sex and Age in the 3 HBSC Study Editions

		2006	2010	2014	Total
		n (%)	n (%)	n (%)	n (%)
11-12 years	Boys	2,694 (48)	1,209 (50.4)	3,789 (49.1)	7,692 (48.9)
	Girls	2,924 (52)	1,189 (49.6)	3,923 (50.9)	8,036 (51.1)
13-14 years	Boys	2,546 (50.1)	1,568 (48.9)	4,772 (49.7)	8,886 (49.7)
	Girls	2,540 (49.9)	1,641 (51.1)	4,828 (50.3)	9,009 (50.3)
15-16 years	Boys	2,706 (48.6)	1,670 (47.9)	4,521 (49.1)	8,897 (48.7)
	Girls	2,866 (51.4)	1,813 (52.1)	4,692 (50.9)	9,371 (51.3)
17-18 years	Boys	2,552 (46.1)	1,100 (51.4)	2,338 (51.6)	5,990 (49.1)
	Girls	2,983 (53.9)	1,040 (48.6)	2,195 (48.4)	6,218 (50.9)
Total		21,811	11,230	31,058	64,099

Instruments

In addition to the variables sex, age and edition, a series of questions about bullying included in the HBSC questionnaire were selected for the purpose of the study. The HBSC questionnaire and procedure were approved by the Ethics Committee of the University of Seville (Spain).

Specifically, the questions about bullying were adapted from the Revised Bully / Victim Questionnaire.²⁰ A validated Spanish version of this instrument is not available. For this reason, in the present study, these questions were translated and back-translated following the rigorous procedure set up by the international HBSC network,¹⁹ which

ensures the validity of cross-national comparisons. The word bullying was translated as “maltrato”, which is the Spanish term which better captures the English concept bullying.¹²

Among the advantages of this instrument, which is one of the most commonly used internationally, is the inclusion of a clear time reference (the last 2 months) and of a definition of bullying preceding the questions that facilitates the identification of bullying episodes and their differentiation from other types of violence or school conflicts.

Specifically, we used the Revised Bully / Victim Questionnaire global measure (How often have you been bullied at school in the past couple of months?) that is answered by using a Likert scale with 5 possible answers: I have not been bullied at school in the past couple of months; It has only happened once or twice; 2 or 3 times a month; About once a week; and Several times a week. In addition, we used a behaviour-based question adapted from the same instrument (How often have these things happened to you at school in the past couple of months?) which is answered using a similar scale as the above question and comprises the following specific items: 1. I was called mean names, was made fun of, or teased in a hurtful way; 2. Others students left me out of things on purpose, excluded me from their group of friends, or completely ignored me; 3. I was hit, kicked, pushed, shoved around, or locked indoors; 4. Others students told lies or spread false rumours about me and tried to make others dislike me; and 5. Other students made sexual jokes, or gestures to me. The answers to all of these items were dichotomized using the cut-off point recommended by Solberg and Olweus,²¹ according to which anyone who has experienced bullying with a frequency

equal to or greater than 2 or 3 times a month within the last 2 months is considered to be a victim.

Based on prior research,^{12,22} we used 2 indicators to assess the prevalence of bullying. The first, reported bullying, was obtained from the global measure noted above, such that it refers to the frequency with which the students reported that they had been victims of bullying in the past 2 months. The second indicator, observed bullying, is a behaviour-based prevalence measure calculated by using the responses of the students regarding whether specific experiences of bullying had happened to them. Specifically, the measure is the result of calculating the maximum frequency of the abovementioned specific items on bullying; thus, an adolescent whose answers show a frequency of at least 2 or 3 times a month in at least 1 of the 5 items is considered a victim of bullying. In addition, to analyse the evolution of the different types of bullying, we used the following categorization:^{10,11} physical (item 3), verbal (items 1 and 5), and relational (items 2 and 4).

Data Analysis

We used binary logistic regressions for each dependent variable (reported bullying, observed bullying, physical bullying, verbal bullying, and relational bullying). The predictors used for each regression model were sex, age, and edition. The interactions between sex and edition and between age and edition were also included so that, if interaction effects were significant, sample was split and trends analysis across editions was conducted separately in the relevant subgroups. For each logistic regression model, odds ratios (ORs) and their corresponding 95% confidence intervals (95% CIs) were reported.

RESULTS

Table 2 shows the logistic regression results for the dependent variables reported and observed bullying (objective 1).

Table 2
Reported and Observed Bullying Percentages, ORs and 95% CIs. Main Effects of Sex, Age and Edition

	Reported bullying	Observed bullying
<i>Sex</i>		
Boys (%)	5.2	21.2
Girls (%)	3.4	18.9
OR (95% CI)	.62 (.54 – .72)***	.87 (.81 – .94)***
<i>Age</i>		
11-12 years (%)	5.6	23.3
13-14 years (%)	5.0	22.2
OR (95% CI)	.83 (.70 – .99)*	.90 (.82 – .99)*
15-16 years (%)	3.7	19
OR (95% CI)	.61 (.50 – .73)***	.68 (.62 – .75)***
17-18 years (%)	2.5	14.1
OR (95% CI)	.41 (.33 – .50)***	.45 (.40 – .49)***
<i>Edition</i>		
2006 (%)	3.9	17.1
2010 (%)	4.6	24.4
OR (95% CI)	1.14 (.91 – 1.42)	1.27 (1.12 – 1.44)***
2014 (%)	4.4	21.5
OR (95% CI)	.99 (.84 – 1.17)	1.13 (1.02 – 1.24)*
Total (%)	4.3	20

*p < .05; ** p < .01; *** p < .001

As shown in Table 2, results on the prevalence of bullying when using the 2 indicators studied were different. In the case of reported bullying, bullying victimization prevalence was 4.3%, and the main effect of edition was not significant (p = .399), which indicates stability in the percentage of adolescents who considered themselves bullying victims across the different editions. However, if we focus on the observed bullying, the prevalence was 20%, and the effect of edition was significant (p = .001). Specifically, a significant increase was found in the 2014 and 2010 editions compared with the 2006 edition. Although observed bullying decreased by 2.9 points between

2010 and 2014, its prevalence in 2014 was still significantly higher than in 2006 (21.5 versus 17.1%, respectively).

Regarding sex, a significant direct effect on both observed and reported bullying was founded: girls were less likely than boys to perceived themselves as victims of bullying ($p < .001$) and to report specific bullying experiences ($p < .001$). Age also had a significant effect: lower prevalence in both reported bullying ($p < .001$) and observed bullying ($p < .001$) was found in older adolescents. Unlike the interaction between sex and edition, which was not significant ($p = .784$ for reported and $p = .545$ for observed bullying), the interaction between edition and age was significant ($p = .039$ for reported bullying and $p < .001$ for observed bullying). Therefore, main effects of edition were separately analyzed in each age group (see table 3).

Table 3
Percentages of Reported and Observed Bullying, ORs and 95% CIs Disaggregated by Age Group

		Percentage (%)			OR (95% CI)	
		2006	2010	2014	2006-2010	2006-2014
Reported bullying	11-12 years	5.4	6.1	5.5	1.13 (.92 – 1.38)	1.00 (.87 – 1.71)
	13-14 years	4.6	6.1	4.8	1.36 (1.12 – 1.65)**	1.05 (.89 – 1.23)
	15-16 years	3.4	3.8	3.8	1.15 (.92 – 1.44)	1.13 (.94 – 1.35)
	17-18 years	2.3	2.1	3.0	.88 (.62 – 1.25)	1.31 (1.02 – 1.68)*
Observed bullying	11-12 years	21.7	26.4	23.6	1.29 (1.15 – 1.44)***	1.12 (1.02 – 1.22)**
	13-14 years	20.1	23.8	22.9	1.24 (1.11 – 1.39)***	1.18 (1.08 – 1.29)***
	15-16 years	15.9	20.8	20.6	1.38 (1.23 – 1.55)***	1.37 (1.25 – 1.50)***
	17-18 years	11.0	17.4	17.0	1.69 (1.46 – 1.97)***	1.64 (1.45 – 1.85)***

* $p < .05$; ** $p < .01$; *** $p < .001$

As shown in Table 3, some significant changes were found in reported bullying in adolescents aged 13-14 and 17-18 years. In the first group, there was an increase in perceived bullying victimization in 2010 compared to 2006, but no significant differences in 2014 compared to 2006. In contrast in the second group, the percentages were similar in 2006 and 2010, but a significant increase was found in 2014. In adolescents aged 11-12 and 15-16 years continuity was observed across the 3 editions. Regarding observed bullying, prevalence was significantly higher in 2010 and 2014 compared to 2006 in all age groups. However, although the prevalence of observed bullying was significantly higher in 2014 than in 2006, there was a decrease between 2010 and 2014 in all age groups. The logistic regression equations for each age group were conducted controlling for the effect of sex. Both in reported bullying and in observed bullying, the results showed a higher prevalence in boys than in girls in all age groups, with the only exception of observed bullying in 13-14 year-old adolescents, where the differences between girls and boys were not significant ($p = .056$, OR = .93, 95% CI = .86-1.00).

Logistic regression analyses on the prevalence of physical, verbal, and relational bullying (objective 2) showed an overall prevalence of 4.1%, 14.6%, and 13.1%, respectively (see Table 4). Increases in the 3 types of bullying were found between 2006 and 2010, which were maintained until 2014. In addition, prevalence of physical and verbal victimization was significantly lower in girls than in boys, but no significant sex differences were found in relational bullying ($p = .367$). Finally, prevalence significantly decreased with age in all types of bullying (physical, verbal, and relational), except for verbal forms in adolescents in the 13-14 and 11-12 age groups ($p = .834$), where no significant differences were found.

Table 4
Percentages of Physical, Verbal, and Relational Bullying, ORs, and 95% CIs of the Main Effects of Sex, Age and Edition

	Physical	Verbal	Relational
<i>Sex</i>			
Boys (%)	5.8	16.3	13.3
Girls (%)	2.6	13.0	12.9
OR (95% CI)	.40 (.33 – .47)***	.79 (.73 – .88)***	.96 (.88 – 1.05)
<i>Age</i>			
11-12 years (%)	5.8	17	15.9
13-14 years (%)	4.6	16.9	14.6
OR (95% CI)	.73 (.60 – .89)**	.99 (.89 – 1.1)	.82 (.73 – .92)**
15-16 years (%)	3.6	13.8	12.0
OR (95% CI)	.43 (.34 – .54)***	.70 (.62 – .78)***	.61 (.54 – .69)***
17-18 years (%)	2.2	9.5	9.0
OR (95% CI)	.23 (.17 – .30)***	.42 (.37 – .48)***	.46 (.40 – .52)***
<i>Edition</i>			
2006 (%)	2.7	12.6	10.4
2010 (%)	5.1	16.5	14.6
OR (95% CI)	1.46 (1.17 – 1.83)***	1.23 (1.07 – 1.41)**	1.29 (1.11 – 1.49)**
2014 (%)	4.9	15.6	14.7
OR (95% CI)	1.40 (1.17 – 1.67)***	1.15 (1.03 – 1.28)*	1.24 (1.10 – 1.39)***
Total (%)	4.1	14.6	13.1

*p < .05; ** p < .01; *** p < .001

The interaction between sex and edition was not significant ($p = .447$ for physical, $p = .238$ for verbal, and $p = .866$ for relational bullying). However, the interaction between age and edition was significant for all bullying types ($p < .001$ for physical and verbal, and $p = .012$ for relational). Therefore, main effects of edition in the different types of bullying were separately analyzed in each age group (table 5).

Table 5
Percentages of Physical, Verbal, and Relational Bullying, ORs, and 95% CIs Disaggregated by Age Group

	Percentage (%)	OR (95% CI)
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		2006	2010	2014	2006-2010	2006-2014
Physical bullying	11-12 years	4.5	6.9	6.4	1.55 (1.26 – 1.90) ***	1.44 (1.23 – 1.70) ***
	13-14 years	3.4	5.6	4.9	1.68 (1.34 – 2.09) ***	1.47 (1.22 – 1.77) ***
	15-16 years	2.0	4.3	4.4	2.20 (1.69 – 2.86) ***	2.26 (1.81 – 2.82) ***
	17-18 years	1.1	3.1	3.5	2.90 (1.99 – 4.22) ***	3.24 (2.37 – 4.43) ***
Verbal bullying	11-12 years	15.8	19.1	17.4	1.25 (1.10 – 1.41) **	1.12 (1.01 – 1.23) *
	13-14 years	15.7	18.5	17.0	1.22 (1.08 – 1.38) **	1.10 (1.00 – 1.22) *
	15-16 years	11.6	14.8	15.0	1.32 (1.16 – 1.51) ***	1.35 (1.21 – 1.49) ***
	17-18 years	7.3	12.7	11.1	1.81 (1.52 – 2.16) ***	1.55 (1.34 – 1.79) ***
Relational bullying	11-12 years	14.0	17.6	16.9	1.31 (1.15 – 1.49) ***	1.24 (1.12 – 1.37) ***
	13-14 years	11.8	15.8	15.9	1.40 (1.23 – 1.60) ***	1.41 (1.27 – 1.57) ***
	15-16 years	9.1	13.6	13.4	1.58 (1.37 – 1.82) ***	1.56 (1.39 – 1.75) ***
	17-18 years	6.9	10.1	11.3	1.51 (1.25 – 1.82) ***	1.70 (1.47 – 1.97) ***

*p < .05; ** p < .01; *** p < .001

As shown in Table 5, there was an overall upward trend for the 3 types of bullying between 2006 and 2010 and stability or a slight decrease between 2010 and 2014 with the resulting prevalence of physical, verbal, and relational bullying in 2014 being significantly higher than in 2006 for all age groups. However, certain variations can be observed within this general pattern. In physical bullying, OR values suggest that the increase in prevalence compared to 2006 is more marked in adolescents aged 15 years and older. Besides, despite the overall decrease or stability in prevalence between 2010 and 2014, for the 17-18 age group the trend continues to be upward. Regarding verbal bullying, there was an increasing trend between 2006 and 2010, which was slightly steeper among adolescents in the 17-18 age group, and a slight decrease between 2010 and 2014 in all age groups (ORs are smaller for the 2006-2014 comparison than for the 2006-2010 comparison) except for the 15-16 age group, where prevalence was stable between 2010 and 2014. In relational bullying, an increasing trend up to 2010 and stability or a slight decrease in 2014 were found, with the exception of adolescents in the 17-18 age group, in which OR was slightly higher in the

comparison with 2014 than in the one with 2010, which indicates the continuity of a slightly increasing trend.

As with the first objective, in the logistic regression analysis described in Table 5, sex was controlled for. Sex differences found in the analysis of the entire sample, were confirmed across age groups, with a lower prevalence of physical and verbal bullying in girls and no significant differences between girls and boys for relational bullying, except for the 11-12 age group, where the likelihood of being a victim of relational bullying was also slightly lower in girls ($p = .040$, OR = .91, 95% CI = .83-.99).

DISCUSSION

Trend analysis on the global indicator (reported bullying) showed stability in bullying across the years studied (2006, 2010, and 2014), with a mean prevalence of 4.3%. Thus, after the decline that had occurred in this phenomenon in Spain between 2002 and 2006,¹⁶ stability seems to predominate from 2006 onwards. However, the picture is different when we analyse observed bullying, that is, the indicator built from the occurrence or non-occurrence of specific experiences indicative of bullying. In this case, the percentage of victims is significantly higher, with prevalence reaching 20%. In addition, an increase in bullying victimization prevalence is found between 2006 and subsequent editions (from 17.1% in 2006 to 21.5% in 2014). These data have several important implications, which are discussed next.

First, it is important to deepen in results on reported bullying. In the study by Chester et al,¹⁶ bullying in Spain experienced a decrease between 2002 and 2006 and a slight increase between 2006 and 2010. Although those results seem to be contradictory to those presented in the present study, it is necessary to take into consideration that the

sample in the study by Chester et al consisted of adolescents aged 11, 13, and 15 years and, therefore, did not include either the 17-18 age group or even-numbered ages.

However, our results suggest that bullying has changed differently depending on the adolescents' age. In fact, reported bullying did increase between 2006 and 2010 in adolescents aged 13-14 and 17-18 years but that did not seem to be the case in the other age groups, where a predominance of continuity over change was observed.

However, prevalence and trends are notably different in the analyses of observed bullying. This behaviour-based, wider and more comprehensive measure yields higher prevalence data, as was the case with previous research,^{12, 22,23} and suggests an increasing trend in bullying victimization between 2006 and 2010 that remained until 2014. The differences in bullying prevalence found between the 2 indicators should make us reflect on the need to have accurate and reliable assessment measures²⁴ and the importance of combining different measures to obtain a more accurate picture of bullying prevalence without overestimating or underestimating it.

The differences in prevalence depending on the indicator used may have to do with the use of the word bullying in the question, which is part of the question on reported bullying but does not appear in those regarding observed bullying. When the word bullying is used, it is necessary for the victims to perceive themselves as such, and previous studies show that those who identify themselves as victims are qualitatively different from those who are victims of the same behaviours but do not identify with the term 'victim'. Further elaborating in the ideas by Green et al,²³ some victims suffering from repeated bullying can develop a stable and internal attribution on the causes of their victimization experiences, whereas others, even suffering from severe bullying, can attribute the situation to external causes, such as the bully's characteristics. It has

also been hypothesized that the term bullying is associated with a certain stigma, leading adolescents to report less bullying when the term is included in the question.²⁵ Some research also indicates that those who identify with the term bullying are usually individuals suffering from more severe bullying: several types and greater frequency.²²

Our results also show that bullying victimization tends to be higher in boys and that its prevalence is lower in older adolescents. These data are consistent with the findings from national,²⁶ international,^{27,28} and meta-analysis²⁹ studies.

Regarding trends in bullying victimization prevalence for different types of bullying, the aforementioned upward trend in observed bullying found between 2006 and 2010 was also apparent in each of the 3 types: physical, verbal, and relational. Despite stability in prevalence between 2010 and 2014 for the 3 types of bullying and verbal bullying even experiencing a decrease (except in the 15-16 subgroup), physical, verbal and relational bullying prevalence in 2014 were significantly higher than in 2006. Findings from these analyses also provide a more nuanced view of the differences between boys and girls discussed above. Specifically, they showed that boys are more likely than girls to be victims of physical and verbal bullying, whereas no sex differences seem to exist in terms of relational bullying.

Finding a higher global prevalence of observed bullying and of its various types in 2010 and 2014 compared to 2006, highlights the need to not only continue but also intensify the efforts and interventions aimed at promoting school safety and the prevention of bullying in the schools. Results in the present study are worrying when we take into account that the Observatory for School Safety was established in 2007 and school safety and anti-bullying plans have been implemented in schools over the years. The report by the Spanish Ombudsman¹⁸ warned that some victims still tended to

remain silent and that bullies perceived other classmates showed indifference to their actions or even encouraged them to bully others. These facts may contribute to explaining why the downward trend in previous years has not continued.

Previous research has stressed the importance of implementing programmes in childhood and adolescence to promote school safety and prevent school violence,³⁰ which, in view of the break in the declining trend in bullying prevalence that this study shows, is worth reiterating. In addition, it is crucial that all interventions are based on evidence and that their effectiveness is assessed^{5, 31} so that the available resources are invested in effective interventions with sound quality standards.³²

Limitations

There are some limitations that should be taken into account in the interpretation of these findings. There is no doubt that the cross-sectional design of the study limits the generalization of results on changes associated with age. However, our results coincide with previous studies^{29, 33} in showing that bullying victimization is less prevalent in older adolescents, which supports the validity of the obtained findings. Using adolescents' self-reports is another limitation of the study, which makes it advisable to compare these results with others based on observational analyses or other informants' reports. Despite the aforementioned limitations, having conducted the study in a sample of more than 64,000 adolescents and maintaining the very same questions over the years provide a robustness and reliability to the study findings that are not easy to obtain. Furthermore, in a thorough assessment of the functioning of the measure used, Solberg and Olweus²¹ concluded that social desirability did not seem to significantly affect adolescents' answers to the Revised Bully/Victim Questionnaire, thanks to its emphasis on anonymity, which is a key element of the HBSC study.

IMPLICATIONS FOR SCHOOL HEALTH

It is important to note a number of practical implications that derive from the present study.

First, the study provides some evidence on the potential variability in prevalence data associated to the type of measure used. Specifically, prevalence estimates derived from a measure which explicitly refers to bullying tended to be lower than those obtained from behaviour-based items without an explicit mention to the term bullying. It is also apparent that a significant proportion of victims do not seem to perceive themselves as such. Several practical implications can be derived from this finding:

- The use of the word bullying in screening measures used by the schools should be carefully reviewed. The use of alternative terms may allow for identifying victimization cases which otherwise would go undetected.
- Special attention should be paid to promoting greater awareness on the nature of bullying among students and thereby maximize the identification of different types of victimizing behaviours with the phenomenon of bullying. It is likely that those who do not perceive themselves as victims do not take any actions to put an end to the situation in which they are, which may contribute to the invisibility of certain experiences of bullying.
- Partly related with the former, school interventions in this area should also be aimed at reducing the stigma associated to having been a victim of bullying. Likewise students who do not perceived themselves as victims, those who feel ashamed of or guilty for what happened to them are less likely to tell others and

seek for help, which will perpetuate these dynamics, which seriously threaten school safety and the students' wellbeing .

Second, our results shows an increasing trend in bullying victimization, which suggests a limited effectiveness of the interventions implemented to date in our school system for the prevention and reduction of bullying, which also brings with it a number of practical implications:

- It is fundamental to raise awareness that bullying continues increasing and therefore that education professionals, academic institutions and society must remain vigilant and actively involved in fighting against this problem.
- Similarly, more efforts and resources aimed at researching, monitoring, and assessing the quality of the available interventions are needed in this area, to identify effective and ineffective interventions and advocate for the former. In this regard, promising results have been found for comprehensive evidence-based programmes, such as KIVA, which combines actions for all students with indicated actions for bullying episodes.
- Finally, teachers' and other education professionals' roles are fundamental to put an end to the described increasing trend in bullying. In this respect, specific training is needed for the identification of all types of bullying, including the most apparent physical aggressions but also verbal and relational types of bullying.

Human Subjects Approval Statement. HBSC has been approved by the University of Sevilla Ethics Committee.

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REFERENCES

1. Díaz-Aguado MJ. La violencia entre iguales en la adolescencia y su prevención desde la escuela. *Psicothema*. 2005;17(4):549-558.
2. Espelage DL, Swearer SM. Research on school bullying and victimization: what have we learned and where do we go from here? *School Psych Rev*. 2003;32(3):365-383.
3. Ortega R, Mora-Merchán J, Jäger T. *Acting against School Bullying and Violence: the Role of Media, Local Authorities and the Internet*. Landau, Germany: Empirische Paedagogik; 2007.
4. Avilés JM, Irurtia MJ, García-López LJ, Caballo VE. El maltrato entre iguales: “bullying”. *Behavioral Psychology*. 2011;19(1):57-90.
5. Del Barrio C, Barrios A, Granizo L, van der Meulen K, Andrés S, Gutiérrez H. Contribuyendo al bienestar emocional de los compañeros: evaluación del programa Compañeros Ayudantes en un instituto madrileño. *European Journal of Education and Psychology*. 2011;4(1):5-17.

6. Del Rey R, Ortega R. Programas para la prevención de la violencia escolar en España: La respuesta de las comunidades autónomas. *Revista Interuniversitaria de Formación del Profesorado*. 2001;41:133-145.
7. Observatorio Estatal de la Violencia Escolar. *Estudio Estatal sobre la Convivencia Escolar en la Educación Secundaria Obligatoria*. Madrid, Spain: Ministerio de Educación; 2010. Available at:
<https://sede.educacion.gob.es/publivena/detalle.action?codSoporte=19&muestra=0>.
Accessed September 25, 2016.
8. Olweus D. Peer harassment: A critical analysis and some important issues. In: Juvonen J, Graham S, eds. *Peer Harassment in School: The Plight of the Vulnerable and Victimized*. New York, NY: Guilford Press; 2001:3-20.
9. Ortega R, Del Rey R, Mora-Merchán J. Violencia entre escolares. Conceptos y etiquetas verbales que definen el fenómeno del maltrato entre iguales. *Revista Interuniversitaria de Formación del Profesorado*. 2001;41:95-113.
10. Olweus D. School bullying: development and some important challenges. *Annu Rev Clin Psychol*. 2013;9:751-780
11. Stassen Berger K. Update on bullying at school: science forgotten? *Dev Rev*. 2007;27(1):90-126.
12. García-Moya I, Suominen S, Moreno C. Bullying victimization prevalence and its effects on psychosomatic complaints: can sense of coherence make a difference? *J Sch Health*. 2014;84(10):646-653.
13. Nishina A. A theoretical review of bullying: Can it be eliminated? In: Sanders CE, Phee GD, eds. *Bullying: Implications for the Classroom*. San Diego: Elsevier/Academic Press; 2004:35-62.

14. Hazler RJ, Miller DI, Carney JV, Green S. Adult recognition of school bullying situations. *Educ Res*. 2001;43(2):133-146.
15. Smith PK, Cowie H, Olafsson RF, Liefvooghe APD. Definitions of bullying: a comparison of terms used, and age and gender differences, in a fourteen-country international comparison. *Child Dev*. 2002;73(4):1119-1133.
16. Chester KL, Callaghan M, Cosma A, Donnelly P, Craig W, Walsh S, et al. Cross-national time trends in bullying victimization in 33 countries among children aged 11, 13 and 15 from 2002 to 2010. *Eur J Public Health*. 2015;25(S2):61-64.
17. Ortega R, Elipe P, Mora-Merchán J, Genta ML, Brighi A, Guarini A, et al. The emotional impact of bullying and cyberbullying in victims: a European cross-national study. *Aggress Behav*. 2012;38(5):342-356.
18. Defensor del Pueblo. *Violencia Escolar: el Maltrato entre Iguales en la Educación Secundaria Obligatoria 1999-2006*. Madrid, Spain: Defensor del Pueblo; 2007.
19. Roberts C, Freeman J, Samdal O, Schnohr C, de Looze ME, Nic Gabhainn S, et al. The Health Behaviour in School-aged Children (HBSC) study: methodological developments and current tensions. *Int J Public Health*. 2009;54(S2):140-150.
20. Olweus D. *The Revised Olweus Bully/Victim Questionnaire*. Mimeo. Bergen, Norway: Research Centre for Health Promotion (HEMIL Centre), University of Bergen; 1996.
21. Solberg ME, Olweus D. Prevalence estimation of school bullying with the Olweus Bully/Victim Questionnaire. *Aggress Behav*. 2003;29(3):239-268.
22. Theriot MT, Dulmus CN, Sowers KM, Johnson TK. Factors relating to self-identification among bullying victims. *Child Youth Serv Rev*. 2005;27(9):979-994.

23. Green JG, Felix ED, Sharkey JD, Furlong MJ, Kras JE. Identifying bully victims: definitional versus behavioral approaches. *Psychol Assess*. 2013;25(2):651-657.
24. Felix ED, Sharkey JD, Green JG, Furlong MJ, Tanigawa D. Getting precise and pragmatic about the assessment of bullying: The development of the California Bullying Victimization Scale. *Aggress Behav*. 2011;37(3):234-247.
25. Furlong MJ, Sharkey JD, Felix ED, Tanigawa D, Green JG. Bullying assessment: A call for increased precision of self-reporting procedures. In: Jimerson SR, Swearer SM, Espelage DL, eds. *Handbook of Bullying in Schools: An International Perspective*. New York, NY: Routledge; 2010:329-345.
26. García-Continente X, Pérez-Giménez A, Espelt A, Nebot-Adell M. Bullying among schoolchildren: differences between victims and aggressors. *Gac Sanit*. 2013;27(4):350-354.
27. Molcho M, Craig W, Due P, Pickett W, Harel-Fisch Y, Overpeck M, et al. Cross-national time trends in bullying behavior 1994-2006: findings from Europe and North America. *Int J Public Health*. 2009;54(S2):225-234.
28. Vieno A, Lenzi M, Gini G, Pozzoli T, Cavallo F, Santinello M. Time trends in bullying behavior in Italy. *J Sch Health*. 2015;85(7):441-445.
29. Mitsopoulou E, Giovazolias T. Personality traits, empathy and bullying behavior: a meta-analytic approach. *Aggress Violent Behav*. 2015;21:61-72.
30. Garaigordobil M, Martínez-Valderrey V. Effect of Cyberprogram 2.0 on reducing victimization and improving social competence in adolescence. *Revista de Psicodidáctica/Journal of Psychodidactics*. 2014;19(2):289-305.
31. Garaigordobil M, Martínez-Valderrey V. Effects of Cyberprogram 2.0 on “face-to-face” bullying, cyberbullying, and empathy. *Psicothema*. 2015;27(1):41-45.

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32. Mora-Merchán JA, Del Rey R, Elipe P, Solano M. Strategies adopted in Europe to tackle the school bullying phenomenon. In: Battaglia A, ed. *Battle against School Bullying*. Gorle, Italy: Velar; 2012:135-174.
33. Zych I, Ortega-Ruiz R, Del Rey R. Systematic review of theoretical studies on bullying and cyberbullying: facts, knowledge, prevention, and intervention. *Aggress Violent Behav*. 2015;23:1-21.

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