

Bullying among adolescents and school measures to tackle it

Bullying entre adolescentes e medidas escolares para combatê-lo

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Abstract

Background: Adolescents are particularly susceptible to the effects of negative social interactions. Thus, knowledge on the behavioral characteristics of adolescents who are targets of bullying can assist with establishing actions directed to protection of the victims. **Objective:** Describe the types of bullying practice and how adolescents perceive this violence, as well as the methods adopted by school to tackle it. **Method:** A cross-sectional study was conducted with 612 public school students aged 10-19 years. Data were collected through the application of a questionnaire developed by the UK-based Kidscape organization. Items were added to this questionnaire aiming to characterize the respondents and their perception regarding the conduct of school administrators in tackling the problem. Statistical analysis involved frequency description and measures of bivariate and multivariate association ($\alpha=5\%$). **Results:** The prevalence of bullying was 21.7%. No significant associations were found between bullying and socio-demographic factors ($p>0.05$). In most cases, the onset of aggressions was at 6-11 years of age of the victim. Verbal aggression was the most frequently observed type of bullying (82.2%), and the classroom was the location where most aggressions occurred (60.2%). Installation of surveillance cameras was the main action taken by school administrators to tackle the problem. **Conclusion:** Prevalence of bullying in the population studied may be considered high, and verbal aggression was the most frequent type of bullying. Actions of school administrators were concentrated on structural reforms.

Keywords: bullying; schools; adolescent.

Resumo

Introdução: Os adolescentes são particularmente suscetíveis aos efeitos das interações sociais negativas. Assim, o conhecimento das características comportamentais dos adolescentes alvos de bullying pode auxiliar no estabelecimento de ações voltadas à proteção das vítimas. **Objetivo:** Descrever as formas de bullying e o modo como os adolescentes percebem essa violência, e os métodos adotados pela escola para combatê-la. **Método:** Foi realizado um estudo transversal com 612 alunos de 10 a 19 anos de idade matriculados em escolas públicas. A coleta de dados foi realizada por meio de questionário desenvolvido pela instituição inglesa Kidscape, à qual foram adicionados itens para a caracterização dos respondentes e suas percepções sobre a conduta dos administradores escolares diante do problema. A análise estatística envolveu uma distribuição de frequência e medidas de associação bivariada e multivariada ($\alpha=5\%$). **Resultados:** A prevalência de bullying foi de 21,7%. Não foram encontradas associações significativas entre bullying e fatores sociodemográficos ($p>0,05$). Na maioria dos casos, o início das agressões começou entre seis e 11 anos de idade da vítima. A forma verbal foi a mais frequente (82,2%) e a sala de aula foi a localidade onde ocorreu a maior parte das agressões (60,2%). A instalação de câmeras de segurança foi a principal ação tomada pelos administradores escolares para combater o problema. **Conclusão:** A prevalência de bullying na população estudada pode ser considerada alta e o abuso verbal é a forma mais frequente. As ações dos administradores escolares concentraram-se em reformas estruturais.

Palavras-chave: bullying; escola; adolescente.

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Financial support: none.

Conflict of interests: nothing to declare.



INTRODUCTION

Adolescence is a period of changes and challenges, especially regarding behavior, psychological orientation, and social interactions. In this phase of life, individuals are particularly susceptible to the effects of negative social interactions on health^{1,2}.

Bullying is a practice found in all cultures that can cause psychological suffering, low self-esteem and isolation, negatively influencing the academic performance of victims¹. School bullying is defined as a form of violence that occurs for no apparent reason, in which a student is systematically exposed to a set of intentional aggressive behaviors on the part of one or more colleagues, leading to pain and suffering^{2,3}.

The different types of bullying include nicknaming, physical aggression, threatening, stealing, and abuse through verbal expressions and gestures that can distress the victim⁴. This type of violence in the school setting often occurs in locations where there is no adult supervision, such as in courtyards and hallways during break time, and most victims do not report acts of bullying^{5,6}. Thus, knowledge on the behavioral characteristics of adolescents who are targets of aggression and intimidation can assist with establishing measures directed to protection of the victims⁷. Moreover, socioeconomic and cultural factors, innate aspects of temperament, and the influence of family, friends, school and the community constitute risk factors for the manifestation of bullying, with an impact on the health and development of children and adolescents⁸. A study was conducted in Brazilian state capitals to describe the occurrence of bullying among students. The prevalence rates in the cities of Recife, João Pessoa and São Paulo were 30.1, 32.2 and 31.6%, respectively⁹. However, there are important aspects that were not addressed in this national survey, such as the motivations for bullying and the measures adopted by school to tackle the problem.

School violence has aroused the interest of researchers because it contradictorily occurs in an educational environment and presents long-term consequences¹⁰. Bullying can be a precursor of antisocial personality disorders and other violent behaviors in adolescence and adulthood⁷. Studies have also reported association between bullying and greater suicidal tendency^{11,12}. Thus, intervention strategies based on knowledge regarding the types and prevalence of bullying in different communities are needed¹³.

This study aimed to describe the types of bullying practice and how adolescents perceive this violence, as well as the methods adopted by school administrators to tackle this problem in state-run public schools in the municipality of Camaragibe, Pernambuco state, Brazil.

METHOD

Study sample

A school-based, cross-sectional study was conducted with adolescents aged 10-19 years enrolled at state-run public schools in the municipality of Camaragibe, northeastern Brazil, in

2013. The study site has an estimated population of 157,000 and has an HDI of 0.692. Adolescents were randomly selected in each school.

The sample size was calculated considering a 95% confidence interval, 5% sampling error, and 50% probability of the occurrence of bullying. The use of this percentage was due to the lack of previous studies on this issue in the region; it also aimed to increase the statistical power, as this value gives the largest sample regardless of the actual prevalence. The sample size was multiplied by 1.2 to account for the design effect and an additional 20% was added to compensate for possible dropouts, leading to a sample of 660 adolescents. The inclusion criteria were as follows: be aged 10-19 years and be enrolled in state-run public schools in the cities investigated.

Pilot study

The face validity method was applied to 10% of the interviewees in order to evaluate the understanding of the response options. The researchers asked the respondents to explain, in their own words, what they understood about each item¹⁴. No interviewee presented any doubts or difficulties in responding to the items on the questionnaire. Test-retest reliability was determined with a 7-day interval between questionnaire applications using the same individuals. Agreement between tests was 90%. Administration of the questionnaire took approximately 10 min. The participants in the pilot study were not included in the main survey.

Data collection

Data collection involved the use of the bullying questionnaire developed by the UK-based Kidscape organization, which enables the evaluation of victims (targets) and perpetrators (bullies) of bullying as well as their characteristics. Victims were asked about the last occasion on which they experienced bullying, how many times they suffered from this event, where it occurred, their feelings about the occurrence, its consequences, the type of intimidation, and who the aggressors were. Other aspects were also investigated in order to characterize the sample (gender, age, and skin color), as well as the perception of the adolescents regarding the conduct of school administrators towards tackling the problem. The Kidscape questionnaire is self-administrated, easy to fill out, and comprises simple, closed-ended response options that allow accurate and reliable analysis.

All legal guardians of the participants signed an Informed Consent Form (ICF) prior to study commencement. The questionnaire was administered collectively in the classroom on previously assigned days. The researcher explained the objectives of the study and the meaning of the term "bullying", providing examples and using appropriate language for the age group of the participants. The researcher clarified the difference between bullying and

occasional aggression and described the particular characteristics of bullying. The students were informed that their participation in the study was voluntary and that they could desist from it at any time with no negative consequences. All information was confidential and the questionnaires were not identified. The only personal data collected were age, gender, and skin color. Maximum time to fill out the questionnaire was 20 min.

Statistical analysis

Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS 17). Descriptive statistics was used to determine the frequency distribution of the data. Both bivariate (Pearson's chi-square test) and multivariate (binary logistic regression) analyses were applied as association measures. Comparison between genders regarding the frequency of bullying occurrence was performed using the Pearson's chi-square test. Binary logistic regression was used to evaluate associations between bullying occurrence and socio-demographic indicators. All independent variables (gender, age, and skin color) were incorporated into the model at the same analysis level, and remained in the model regardless of the significance level so that possible confounding factors could be determined. A significance level of 5% ($p < 0.05$) was adopted for all statistical analyses.

Ethical considerations

This study was approved by the Human Research Ethics Committee (protocol n°. 00587312.4.0000.5207) of the aforementioned Institution following authorization from the State of Pernambuco Secretary of Education. All participants and/or their legal guardians signed an ICF prior to study commencement.

RESULTS

A total of 612 adolescents participated in the present study, corresponding to 92.7% of the number determined by the sample size calculation. There was loss of 48 participants due to incomplete questionnaires ($n=36$) and absence from school on the days scheduled for the administration of the questionnaires ($n=12$).

Table 1 shows the sociodemographic data of the participants. The female gender accounted for 56.0% of the sample. Most adolescents were aged 10-13 years (52.3%) and reported having either black or brown skin (66.3%). The prevalence of bullying was 21.7%. In the multivariate analysis, no significant associations were found between bullying and the sociodemographic variables analyzed ($p > 0.05$) (Table 2).

Figure 1 illustrates the prevalence of victimization due to bullying according to gender. Prevalence of bullying was higher among females, regardless of the number of bullying events, but this association was not statistically significant. Among the victims of bullying, 51.6% reported being victimized by

male individuals, 29% by female individuals, and 19.4% by individuals of both genders. The onset of aggressions was at the age of 6-11 years in 49.6% of the victims, 12-14 years in 33.1%, and >14 years in 13.4%.

Table 1. Distribution of sociodemographic characteristics and prevalence of bullying among adolescents. Camaragibe, Brazil, 2013

Variable	N	%
Prevalence of bullying		
Yes	129	21.7
No	465	78.3
Gender		
Female	337	56.0
Male	265	44.0
Age group		
10-13 years	320	52.3
14-16 years	191	31.2
17-19 years	101	16.5
Skin color		
White	156	26.0
Black or brown	398	66.3
Other	46	7.7

N = number of people

Table 2. Crude and adjusted analysis of associations between occurrence of bullying and sociodemographic indicators among adolescents. Camaragibe, Brazil, 2013

Variables	Crude OR (95% CI)	Adjusted OR (95% CI)
Gender		
Female	1	1
Male	1.19 (0.86-1.66)	1.15 (0.82-1.33)
Age group		
10-13 years	1	1
14-16 years	1.35 (0.94-1.95)	1.32 (0.91-1.91)
17-19 years	0.85 (0.53-1.37)	0.82 (0.51-1.33)
Skin color		
White	1	1
Black or brown	1.01 (0.69-1.48)	1.00 (0.68-1.47)
Other	1.42 (0.73-2.76)	1.34 (0.68-2.62)

OR = odds ratio; CI = confidence interval

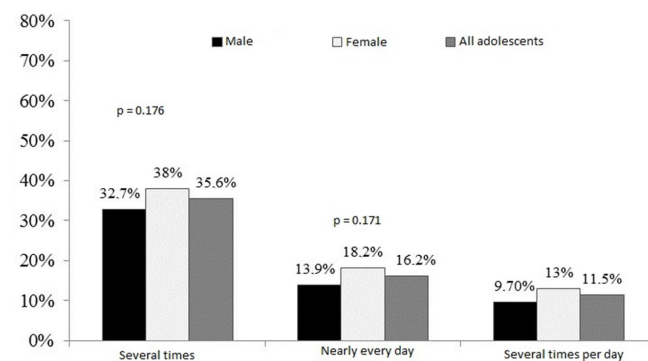


Figure 1. Prevalence of victimization due to bullying among adolescents. Camaragibe, Brazil, 2013

Distribution of the types of bullying was as follows: verbal aggression was the most prevalent (82.2%), followed by emotional aggression (20.2%), physical aggression (17.1%), racism (13.2%), aggression via the Internet or mobile phone (8.5%), and sexual harassment (2.3%). Bullying occurred mainly in the classroom (60.2%), followed by on the way to school (25%), in the school courtyard (19.5%), cafeteria (5.5%), and restrooms (4.7%).

The main reasons for the practice of bullying reported by the adolescents in this survey were physical appearance (28.6%), shyness (18.3%), being strong or weak (15.9%), being studious (11.9%), pacific (14.3%) and clumsy (8.7%), and having an economic status different from that of most schoolmates (4%). Victimization had negative consequences for some of the students, such as isolation (11.5%), loss of interest in school and studying (6.6%), aggressiveness (16.4%), and transfers to other schools (4.1%) (Figure 2). The students also reported having negative feelings towards the bullying perpetrators. Regardless of having been victimized, 42.5% reported not liking their aggressors, 42.3% felt sorry for them and 1.7% liked them. In addition, 14.6% of the respondents reported not having any feelings towards bullying perpetrators whatsoever.

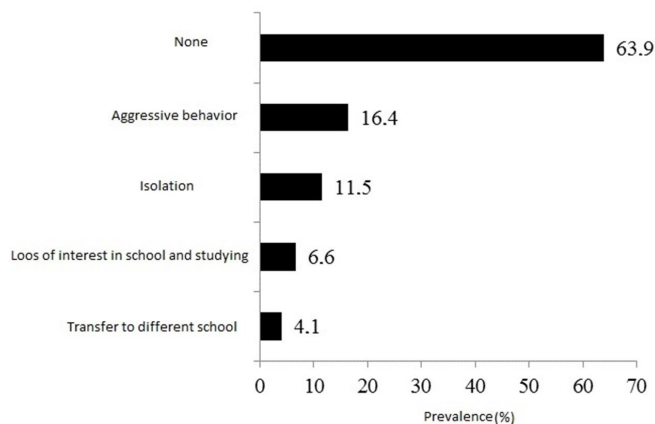


Figure 2. Prevalence of the consequences of victimization due to bullying according to adolescents. Camaragibe, Brazil, 2013

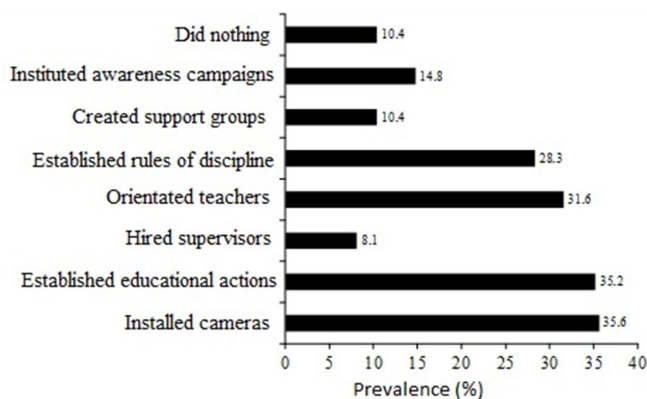


Figure 3. Actions on the part of school administrators to tackle bullying according to perception of adolescents. Camaragibe, Brazil, 2013

Figure 3 shows a list of the students' perceptions of the actions on the part of school administrators in tackling the practice of bullying. Students noticed the installation of surveillance cameras as the main action taken by the school administration to tackle bullying (35.6%). Actions focused on the theme, such as enhancing education (35.2%) and orienting teachers (31.6%) on this issue were also cited.

DISCUSSION

Findings of the present study, conducted with a representative sample, enabled analysis of the prevalence of bullying and its characteristics, as well as of its consequences with regards to both the health and behavior of the victimized adolescents. Perception of the adolescents about the actions taken by educators and school administrators to tackle this practice was also investigated. The prevalence of bullying was relatively high (21.7%), but similar to figures described in previous studies^{9,15,16}. However, a study conducted in the state of Pernambuco in 2009 found a higher prevalence rate (30.1%)⁹. Another study involving data from the National Schoolchildren Health Survey reported an increase in the occurrence of bullying in 2012¹⁷. This difference may be explained by the fact that the studies reported only data on students in major cities, where a larger number of cases of bullying are likely occur. Another explanation is associated with the time stipulated for the diagnosis of bullying. The national survey investigated the occurrence of bullying in the previous 30 days, whereas the Kidscape scale, which was used in the present study, assesses the occurrence of bullying throughout a child's lifetime. Concerns regarding this issue have increased in recent years because of its prevalence, which has drawn the attention of educators, society and families.

Some studies have reported that males are more prone to being bullying targets¹⁸⁻²⁰; however, other surveys verified divergent findings regarding gender differences in cases of bullying and some of them have concluded that gender was not a significant predictor of the occurrence of this practice^{21,22}. Indeed, no significant gender differences were observed in the present study.

Age was also not associated with bullying. However, most cases began at an early age. Studies have demonstrated that the age at which the first aggression occurs influences the physical, psychological and social consequences of bullying^{23,24}.

Verbal aggression was the most prevalent type of bullying observed in this survey, which is in agreement with the data presented in previous studies^{7,16,25}. Verbal and emotional aggressions are the most harmful forms of bullying because they can occur easily and often go unnoticed by others. Such types of bullying increase the risk of the victim to develop complexes that can lead to poor self-image. This type of aggression affects girls more than boys^{26,27} and, according to the findings of this

research, physical appearance is the main motivation for its occurrence.

Bullying has often been associated with psychological disorders such as anxiety, depression, suicidal tendency, low self-esteem, and behavioral problems^{11,12}. Moreover, situations of bullying can contribute to absenteeism and poor academic achievement^{22,28}. These factors underscore the importance of schools in raising the awareness of students and planning suitable actions to tackle the problem.

In the present study, the students reported the installation of surveillance cameras and the establishment discipline rules as some of the actions taken by the school administrators to tackle bullying. Nevertheless, these are aggressive measures that often aggravate the problem without combating the cause. Permanent surveillance and the denial of one's right to privacy inhibit the establishment of self-discipline and a sense of responsibility in students²⁹. If a decision is made to install surveillance cameras, other actions such as the promotion of awareness campaigns should accompany it - an aspect reported by 14.5% of the students.

The students reported that other actions could be taken by school administrators to tackle bullying, such as orientation of teachers and creation of support groups. Indeed, there is consensus that the involvement of teachers, other staff members, parents, and students is fundamental to the implementation of projects aimed at reducing the occurrence of bullying^{8,23,30}. However, no school implements actions to tackle bullying that involve parents/legal guardians. Studies have demonstrated that support from mothers can minimize the risk of developing mental health problems, which suggests that intervention programs for victimized youths can benefit from the participation of parents³¹. Thus, the support of the school community and the involvement of parents in school activities are essential to tackle bullying, as such actions can significantly contribute to reducing the occurrence of this practice and positively influence the school environment³⁰. Actions addressing this theme, such as the training of teachers and school staff, educational campaigns,

support groups, and cooperative learning activities, should be seen as essential and involve the entire school community: students, parents, teachers, and collaborators.

Teachers, administrators and parents need to undergo training so that they are able to identify bullying situations of and be more engaged in reducing the occurrence of this practice and its consequences. However, most bullying occurrences are under-notified, as they often occur in the absence of adults⁶, which can lead to insufficient perception of the extent of bullying by teachers and parents⁸. A study conducted in Brazil showed that 5.5% of students dropped out of school within the first 30 days because they did not feel safe in the environment³². Thus, there is need for further studies on this issue.

These findings should be interpreted in the context of the limitations of this study. The cross-sectional design does not enable inference regarding causal relationships. Furthermore, this study was conducted only at public schools, and the findings cannot be expanded to adolescents who attend private schools. However, previous studies addressing bullying have found no statistically significant differences between public and private schools^{9,17}. Further studies, especially with a longitudinal design, should be conducted to overcome these limitations. Parents and educators are essential to investigate the occurrence of bullying and reduce the consequences of this practice. Therefore, such individuals should be included in studies so that their knowledge and perception on this issue could be evaluated, thus enabling the establishment of better policies and actions aimed at minimizing or even eliminating bullying.

Prevalence of bullying in the population studied was 21.7%, and verbal aggression was the most frequent type of bullying. Physical appearance and personality traits were listed as the most common reasons for bullying. Gender, age, and skin color were not associated with bullying among the adolescents analyzed. Actions of school administrators were concentrated on structural reforms such as the installation of surveillance cameras.

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Received on: Apr. 11, 2018

Accepted on: Jan. 03, 2019