# BULLYING: PREVALENCE AND FACTORS ASSOCIATED WITH VITIMIZATION AND AGGRESSION IN THE SCHOOL QUOTIDIAN<sup>1</sup>

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#### **ABSTRACT**

**Objective:** to analyze the prevalence of bullying victimization and aggression and the typologies associated with the sociodemographic factors and risk behaviors in students.

**Method:** cross-sectional study, developed in municipal schools of elementary education in Campina Grande, Paraíba, Brazil, with the sample being comprised of 678 adolescents enrolled in the 6<sup>th</sup> to 9<sup>th</sup> school years. The data were processed using the statistical school program Statistical Package for the Social Sciences, considering a significance level of 5% and a confidence interval of 95% for carrying out the Person's chi-squared test.

Results: the prevalence of bullying victimization reached 29.5%, with a predominance of psychological bullying, 23.3%, with the majority involved being male. Regarding the practice of bullying, 8.4% of the students said they practiced bullying against their peers.

**Conclusion:** an association between bullying aggressors and risk behavior in school was observed.

DESCRIPTORS: Violence. Bullying. Adolescent. Victimization. Aggression.

# BULLYING: PREVALÊNCIA E FATORES ASSOCIADOS À VITIMIZAÇÃO E À AGRESSÃO NO COTIDIANO ESCOLAR

#### **RESUMO**

**Objetivo**: analisar a prevalência de vitimização e agressão por *bullying* e tipologias associadas aos fatores sociodemográficos e comportamentos de risco em estudantes.

**Método**: estudo transversal, desenvolvido em escolas municipais de ensino fundamental em Campina Grande, Paraíba, Brasil, sendo a amostra representada por 678 adolescentes matriculados do 6º ao 9º ano escolar. Os dados foram atualizados com o programa escolar estatístico *Statistical Package for the Social Sciences*, sendo utilizado nível de significância de 5% e intervalo de confiança de 95% para realização do teste qui-quadrado de Person.

**Resultados**: a prevalência de vitimização de *bullying* alcançou 29,5%, com predomínio do *bullying* psicológico, 23,3% e envolvimento majoritário do sexo masculino. Quanto à prática de *bullying*, 8,4% dos estudantes afirmaram praticarem *bullying* contra os pares.

Conclusão: pode-se observar associação entre agressores de bullying com comportamento de risco na escola.

DESCRITORES: Violência. Bullying. Adolescente. Vitimização. Agressão.

### INTRODUCTION

Bullying emerges as a form of violence in the school, being distinguishes as it relates to the affirmation of interpersonal power through aggression/violence. The term bullying refers to actions of aggression, intimidation, mistreatment and attacking others, based on a relationship of unequal power, aimed at making the victim feel inferior and producing social exclusion.<sup>1-2</sup>

The phenomenon occurs through the offensive use of power over the other in a subtle, intentional and repetitive way and for an extended period of time. Thus, bullying, in addition to assuming the behavior of persecution and intimidation of the individual, is usually associated with individual characteristics such as age, size, physique, personality traits, emotional development and formation of groups of students.<sup>1-3</sup>

It is a complex, multidimensional and relational public health problem among peers that requires scientific and political investments to broaden the focus on the issue, in order to characterize it as an object of intersectoral investigation permeated by a diversity of forms of manifestation.<sup>4-6</sup>

The acts of aggression that comprise bullying are classified into three main groups: physical, such as hitting, kicking and using weapons to attack; verbal/psychological, which includes threats, insults, tricks, nicknames and humiliation; and indirect, represented by behaviors of social exclusion, indifference and extortion.<sup>7-9</sup> There is also the form called cyber-bullying, which covers repeated aggression with intent to persecute and humiliate, through electronic devices, especially cell phones and the internet.

At the international level, the prevalence of bullying varies from 32% to 2%. <sup>11</sup> Research data developed by the Organization for Economic Cooperation and Development (OECD) found the prevalence of students victimized by bullying to vary between 8.0% and 46.0%, and of aggressors between 5.0% and 39.0%, with 20.0% of children in both categories. <sup>2</sup> In Brazil, the National Survey of School Health (PENSE) of 2012 revealed that suffering bullying by a colleague affected 7.2% of schoolchildren, while 20.8% of students showed some kind of bullying against schoolmates. <sup>8</sup>

When analyzing the international scientific production on the subject, there were obstacles in the conceptualization and operationalization of the term bullying, as well as in the translation itself. In addition to conceptual differences, another aspect

that generates disagreement is the definition of a cut-off point for bullying, that is, the minimum frequency capable of transforming a violent school event into bullying. <sup>12-13</sup> The construction of a scientific consensus would contribute to the formulation of the understanding of the phenomenon, since studies show a direct relationship between the consequences of involvement in bullying and the frequency, duration and severity of these actions. <sup>14</sup>

Considering these scientific weaknesses and the impact on the health of children and adolescents, it is necessary to identify the elements that contribute to the emergence and propagation of bullying. This could assist in the construction of patterns of interpretation and analyses related to this everyday phenomenon of the school environment, with the possibility of intervention in the field of collective and individual health.

The aim of this study was to analyze the prevalence of bullying and aggression in its various typologies, associated with sociodemographic factors and risk behaviors in students of the 6<sup>th</sup> to 9<sup>th</sup> year, from municipal schools of Elementary Education of Campina Grande, Paraíba, Brazil.

### **METHOD**

This cross-sectional, exploratory, epidemiological study<sup>15</sup> was aimed at adolescents enrolled in urban municipal public schools, in the grades of the 6<sup>th</sup> to 9<sup>th</sup> years of Elementary Education, in the city of Campina Grande, Paraíba, Brazil. The inclusion criteria considered were: to be adolescents, classified through the concept of the World Health Organization,<sup>16</sup> which defines adolescents as being between 10 and 19 years of age; to be regularly enrolled in the grades of the 6<sup>th</sup> to 9<sup>th</sup> years; and to be present in the classroom at the time of data collection. The exclusion criteria established were: to be regularly enrolled in school for less than six months and to be over 19 years of age.

Of the 86 urban municipal public schools in the city of Campina Grande, 13 provided classes of the 6<sup>th</sup> to 9<sup>th</sup> years. From these, one was selected, by convenience, for the pilot study; the 12 remaining urban municipal schools configured the data collection scenario, with a total of 2,565 regularly enrolled students.

The type of sampling technique used was probabilistic conglomerate sampling in a stratum (classes), with proportional distribution of the sample, considering the number of students per school and the selection of these by convenience. The

sample was calculated considering the prevalence of 50% for the phenomenon of school violence, with a confidence level of 95% and a margin of error of 5%, a design effect (Deff) of 1.7 and an increase of 20% for losses. The final sample was 678 students.

Data were collected between March and July 2014, using a validated questionnaire called the School Violence Scale (EVE – *Escala de Violência Escolar*), scored on a Likert-type scale, with this study focusing on student victimization, aggression against another student and risk behavior.<sup>11</sup> This scale aims to investigate the frequency and severity of school violence in schools, evaluating how many students are victims and perpetrators of school violence,<sup>17</sup> thus the scale allows the analysis of the frequency and intensity of the types of school violence, aspects that are directly related to bullying.

Data collection was carried out in two stages. In the first, the classes were approached and the aims of the study were presented, with the delivery of the consent form for the parents or guardians to sign and return. In the second, the EVE questionnaire was applied in the classrooms during class time of the students, with those students who presented the consent form signed by the parents or guardian and that agreed to participate in the study.

For the statistical analysis, the following variables were defined: victim of bullying, victim of physical bullying, victim of psychological bullying, victim of virtual bullying, aggressor of bullying, aggressor of physical bullying, aggressor of psychological bullying, aggressor of virtual bullying, victim of school violence, and aggressor of school violence. These variables were analyzed in conjunction with sex, age, tobacco use, alcohol use, use of illicit drugs (marijuana, crack, glue), carrying a weapon, carrying a firearm.

The SPSS (Statistical Package for the Social Sciences) was used to perform the descriptive analysis from the distribution of absolute and relative frequencies, mean, median and standard deviation for the sociodemographic variables and typologies of bullying, dichotomized. The inferential analysis was then performed using Pearson's chi-squared test with a 5% significance level and 95% confidence interval adopted in the statistical test, allowing the verification of association between the variables of bullying victimization and aggression and between the sociodemographic variables and risk behavior.

It should be noted that the cutoff point for the classification of bullying victimization and aggression was based on an English study, 18 which established the repetition of more than four episodes of a

certain situation of school violence within a period of six months as a case of bullying.

The ethical parameters of Resolution No. 466/2012 of the National Health Council were followed, and the research was approved by the Ethics Committee CAAE 27623214.3.0000.5187. All the schoolchildren that participated in the study, under the age of 18, were authorized by the parents and/or guardians through the signing of the consent form; with the students also signing terms of consent to participate in the study.

## **RESULTS**

The results showed that 61.8% of the interviewees were female, 86.7% were between 10 and 14 years of age, with the mean age of the students being 12.67 years and the median 12.0 (SD±1.61). According to the data presented in figure 1, the prevalence of self-reported bullying victimization among the adolescents interviewed was 29.5% of the schoolchildren, considering situations of school violence with a bullying character, that is, the repetition of violent situations targeted at the same student more than four times within the six months prior to the moment of application of the instrument.

Among the types of bullying suffered by the students, psychological bullying (spreading gossip, excluding from activities, cursing, threatening, ridiculing) predominated in the situations, with 23.3% of the students reporting having suffered this type of school violence. While physical bullying (slapping, punching, kicking, pushing) and virtual bullying (sending threats, abuse, ridicule or offensive messages over the phone or internet) affected 15% and 5.5% of the students, respectively.

Regarding the prevalence of the self-reported practice of bullying, 8.4% of the students reported having bullied someone, characterizing themselves as the aggressors. Psychological bullying proved to be the most practiced by the students; 5.3% reported the practice of this, while 4.6% reported practicing physical bullying and only 0.6% reported practicing virtual bullying with their peers.

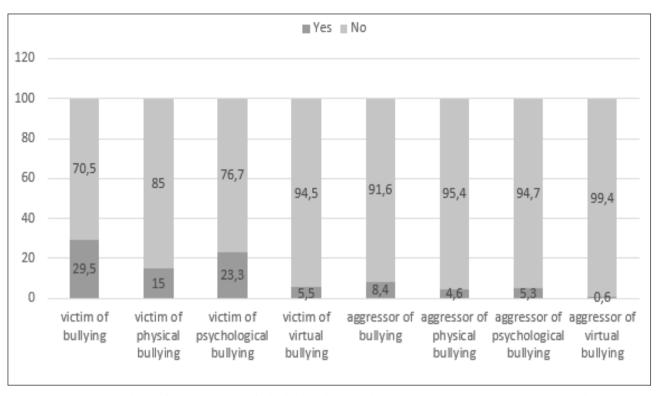


Figure 1 - Distribution of prevalence of victimization and aggression through school bullying and its typologies

Table 1 shows that male students predominantly suffered bullying (33.8%). Furthermore, the greater victimization of boys in all types of bullying is highlighted; with psychological bullying being in the first position (26.6%). The next most prevalent was physical bullying (20.1%), followed by virtual bullying (6.8%). In view of this association

between being a victim of bullying and the sex of the student, the table shows that male adolescents were 0.71 times more likely to suffer bullying in all its manifestations, specifically regarding physical bullying, with adolescent boys being 0.53 more likely to be victims of physical bullying compared to the girls.

Table 1 - Association between sex and age categories of victims of bullying, physical bullying, psychological bullying and virtual bullying in schools of the public education system of the city of Campina Grande, Paraíba, Brazil, 2014. (n=678)

|                                  |     | Sex   |     |              |       | RP*         |       | A     | ge    |       | Valor p | RP*         |
|----------------------------------|-----|-------|-----|--------------|-------|-------------|-------|-------|-------|-------|---------|-------------|
|                                  | F   | Fem   |     | <b>I</b> ale |       |             | 10-14 |       | 15-19 |       |         |             |
|                                  | n   | 0/0   | n   | 0/0          |       |             | n     | %     | n     | 0/0   |         |             |
| Victim of bullying               |     |       |     |              |       |             |       |       |       |       |         |             |
| Yes                              | 111 | 26,74 | 89  | 33,84        | 0,048 | 0,71        | 166   | 28,97 | 29    | 32,95 | 0,44    | 0,83        |
| No                               | 304 | 73,26 | 174 | 66,16        |       | 0,51 - 0,99 | 407   | 71,03 | 59    | 67,05 |         | 0,51 - 1,34 |
| Total                            | 415 | 100   | 263 | 100          |       |             | 573   | 100   | 88    | 100   |         |             |
| Victim of physical bullying      | 5   |       |     |              |       |             |       |       |       |       |         |             |
| Yes                              | 49  | 11,80 | 53  | 20,15        | 0,003 | 0,53        | 87    | 15,18 | 14    | 15,9  | 0,86    | 0,94        |
| No                               | 366 | 88,20 | 210 | 79,85        |       | 0,37 - 0,81 | 486   | 84,82 | 74    | 84,1  |         | 0,51 - 1,75 |
| Total                            | 415 | 100   | 263 | 100          |       |             | 573   | 100   | 88    | 100   |         |             |
| Victim of psychological bullying |     |       |     |              |       |             |       |       |       |       |         |             |

|                            | Sex |       |      |       | P-value | RP*         | Age   |       |    |       | Valor p | RP*         |
|----------------------------|-----|-------|------|-------|---------|-------------|-------|-------|----|-------|---------|-------------|
|                            | Fem |       | Male |       |         |             | 10-14 |       | 1  | 5-19  |         |             |
|                            | n   | 0/0   | n    | 0/0   |         |             | n     | 0/0   | n  | 0/0   |         |             |
| Yes                        | 88  | 21,20 | 70   | 26,61 | 0,10    | 0,74        | 131   | 22,86 | 23 | 26,13 | 0,49    | 0,83        |
| No                         | 327 | 78,80 | 193  | 73,39 |         | 0,51 - 1,06 | 442   | 77,14 | 65 | 73,87 |         | 0,50 - 1,40 |
| Total                      | 415 | 100   | 263  | 100   |         |             | 573   | 100   | 88 | 100   |         |             |
| Victim of virtual bullying |     |       |      |       |         |             |       |       |    |       |         |             |
| Yes                        | 19  | 4,57  | 18   | 6,84  | 0,20    | 0,65        | 30    | 5,06  | 8  | 9,09  | 0,12    | 0,53        |
| No                         | 395 | 95,43 | 245  | 93,16 |         | 0,33 - 1,27 | 543   | 94,94 | 80 | 90,91 |         | 0,23 - 1,20 |
| Total                      | 415 | 100   | 263  | 100   |         |             | 573   | 100   | 88 | 100   |         |             |

Pearson's chi-squared test with 5% significance level and 95% confidence interval adopted in the statistical test \*RP:

Table 2 shows the association between practicing bullying and risk behaviors in school. Specifically, it was found that adolescent students who used tobacco at school had a 0.40 more chance of practicing bullying against colleagues compared to students who did not report this type of beha-

vior (p=0.04; RP 95%CI=0.4; 0.16-1.01). The same relationship was established regarding the use of alcohol. Students who consumed alcoholic beverages at school had a 0.28 higher chance of being aggressors of bullying (p=0.28; RP 95%CI=0.28; 0.13-0.58).

Table 2 - Association between bullying aggressor and risk behavior in schools of the public education system of Campina Grande, Paraíba, Brazil, 2014. (n=678)

|                      | F  | Bullying aggre | ssor |      |         |             |
|----------------------|----|----------------|------|------|---------|-------------|
|                      |    | 'es            |      | No   | P-value | RP          |
|                      | n  | 0/0            | n    | 0/0  |         |             |
| Use of tobacco       |    |                |      |      |         |             |
| Yes                  | 6  | 10,5           | 28   | 4,5  | 0,04    | 0,40        |
| No                   | 51 | 89,5           | 590  | 95,5 |         | 0,16 - 1,01 |
| Total                | 57 | 100            | 618  | 100  |         |             |
| Use of alcohol       |    |                |      |      |         |             |
| Yes                  | 11 | 19,3           | 39   | 6,3  | 0,00    | 0,28 0,13 - |
| No                   | 46 | 80,7           | 579  | 93,7 |         | 0,58        |
| Total                | 57 | 100            | 618  | 100  |         |             |
| Use of illicit drugs |    |                |      |      |         |             |
| Yes                  | 0  | 0              | 12   | 2    | -       | -           |
| No                   | 57 | 100            | 605  | 98   |         |             |
| Total                | 57 | 100            | 618  | 100  |         |             |
| Carrying weapon      |    |                |      |      |         |             |
| Yes                  | 2  | 3,5            | 35   | 5,6  | 0,49    | 1,65 0,38 - |
| No                   | 55 | 96,5           | 583  | 94,3 |         | 7,04        |
| Total                | 57 | 100            | 618  | 100  |         |             |
| Carrying firearm     |    |                |      |      |         |             |
| Yes                  | 3  | 5,2            | 13   | 2,1  | 0,13    | 0,38 0,10 - |
| No                   | 54 | 94,8           | 605  | 97,9 |         | 1,39        |
| Total                | 57 | 100            | 618  | 100  |         |             |

Pearson's chi-squared test with 5% significance level and 95% confidence interval adopted in the statistical test

Table 3 shows an association between bullying and school violence, demonstrating that bullying victims were more likely to suffer from school violence compared to adolescent students who had not

experienced any violence at school. The data show a 47.43 greater chance of a victim of bullying being a victim of school violence.

Table 3 - Association between victim and aggressor of school violence with bullying victim and typologies in schools of the municipal public education system, in the city of Campina Grande, Paraíba, Brazil, 2014. (n=678)

|                               | Victim of school violence |       |    |     | P-value | RP            | Aggressor of school violence |      |     |       | P-value | RP          |
|-------------------------------|---------------------------|-------|----|-----|---------|---------------|------------------------------|------|-----|-------|---------|-------------|
|                               | 1                         | Yes   |    | lo  |         |               | Yes                          |      | No  |       |         |             |
|                               | n                         | 0/0   | n  | 0/0 |         |               | n                            | 0/0  | n   | 0/0   |         |             |
| Victim of bullying            |                           |       |    |     | 0,00    | 47,43         |                              |      |     |       | 0,00    | 1,92        |
| Yes                           | 199                       | 34    | 1  | 1   |         | 6,56 - 342,83 | 116                          | 36,6 | 83  | 23    |         | 1,37 - 2,69 |
| No                            | 386                       | 66    | 92 | 99  |         |               | 201                          | 63,4 | 277 | 77    |         |             |
| Total                         | 585                       | 100   | 93 | 100 |         |               | 317                          | 100  | 360 | 100   |         |             |
| Victim of physical bullying   |                           |       |    |     |         |               |                              |      |     |       |         |             |
| Yes                           | 101                       | 17,26 | 1  | 1   | 0,00    | 19,19         | 63                           | 19,8 | 38  | 10,55 | 0,001   | 2,10        |
| No                            | 484                       | 82,74 | 92 | 99  |         | 2,64 - 139,35 | 254                          | 80,2 | 322 | 89,45 |         | 1,36 - 3,24 |
| Total                         | 585                       | 100   | 93 | 100 |         |               | 317                          | 100  | 360 | 100   |         |             |
| Victim of psychological bully | ing                       |       |    |     |         |               |                              |      |     |       |         |             |
| Yes                           | 158                       | 27    | 0  | 0   | 0,00    | 1,21          | 91                           | 28,7 | 67  | 18,6  | 0,002   | 1,76        |
| No                            | 427                       | 73    | 93 | 100 |         | 1,17 - 1,26   | 226                          | 71,3 | 293 | 81,4  |         | 1,22 – 2,52 |
| Total                         | 585                       | 100   | 93 | 100 |         |               | 317                          | 100  | 360 | 100   |         |             |
| Victim of virtual bullying    |                           |       |    |     |         |               |                              |      |     |       |         |             |
| Yes                           | 37                        | 6,33  | 0  | 0   | 0,013   | -             | 26                           | 8,2  | 11  | 3     | 0,003   | 2,82        |
| No                            | 547                       | 93,67 | 93 | 100 |         |               | 291                          | 91,8 | 348 | 97    |         | 1,37 - 5,81 |
| Total                         | 584                       | 100   | 93 | 100 |         |               | 317                          | 100  | 359 | 100   |         |             |

Pearson's chi-squared test with 5% significance level and 95% confidence interval adopted in the statistical test

There was no association between bullying victimization and age group, demonstrating that there was no difference in victimization between the school age groups.

There was also an association between bullying victimization and being a school violence aggressor, evidenced by the 1.92 greater probability that the bullying victim became the producer of some violence against another student.

### **DISCUSSION**

Based on the results, the relevant prevalence of bullying victimization was highlighted among the schoolchildren, representing a greater number of victims in relation to aggressors. The present study identified a prevalence of bullying victimization of 29.5%, in line with the international average and studies developed in the United States, one of which showed bullying victimization of 20.1% and another of 21.4% of adolescent victims of bullying. 19-20 According to the Health Behavior in School-aged Children (HBSC), the prevalence of bullying victimization ranges from 3% to 33% in adolescents aged 11 to 15 years, therefore the prevalence of bullying in the present study fits into this range, corroborating the aforementioned international body of research in school children.<sup>21</sup>

It also resembles the results of a national study, carried out by the Brazilian Multiprofessional Association for the Protection of Children and Adolescents (ABRAPIA – Associação Brasileira de Proteção à Infância e à Adolescência), which verified bullying victimization in 27.8% of the students, while a previous study carried out in the same municipality as the present one found a rate of bullying victimization of 23.6%.<sup>22</sup>

In relation to the victimized students, the association between being a victim of bullying and the sex of the student demonstrated a greater propensity for the boys to become victims of the phenomenon, which corroborates the majority of the studies in the area. <sup>22-24</sup> Various studies<sup>8,11,22,25</sup> have demonstrated the prevalence of bullying victimization among male students.

A Brazilian national study<sup>8</sup> identified a percentage of 26.1% of boys as bullying aggressors and 7.9% as victims, a higher number when compared to girls, who presented 16.0% (aggressors) and 6.5% (victims), rates below those found in the present study. However, a study<sup>21</sup> conducted in the northeast region corroborates the present one, as it presented a percentage of 31.5% of bullying victimization for the boys. A Brazilian study<sup>26</sup> developed in the southern region of the country highlighted

the involvement of students in bullying situations, indicating that boys are about twice as likely to participate in these practices in the school environment.

Another Brazilian study<sup>27</sup> presented opposite results, demonstrating a higher percentage of victimization than of bullying aggression in girls (victims: 57.8%; aggressors: 53.3%), with the girls being more involved in these situations; even though the boys (victims 42.2%, aggressors 46.7%) also participated in high percentages. This configuration of greater involvement of girls in situations of bullying is reaffirmed in another Brazilian study,<sup>28</sup> which showed a higher percentage in the various types of bullying victimization in girls (verbal bullying: 92% of the girls, 84% of the boys; psychological: 70% of the girls, 53% of the boys; physical: 46% of the girls, 44% of the boys; and virtual: 13% of the girls, 12% of the boys).

In general, international studies<sup>11,25</sup> have demonstrated greater involvement of male students as victims and aggressors, highlighting the majority status of boys as victims of all types of bullying analyzed: psychological, physical and virtual, however with a greater chance of being victims of physical bullying. These results identified that male students remain more involved in situations of physical bullying and/or direct forms of bullying, while female students are more involved in indirect forms of bullying. However, psychological bullying stands out among the typologies of the phenomenon as the one that affects the highest number of victims of both sexes, showing itself to be the most frequent among the students. One study<sup>29</sup> showed greater victimization of both boys and girls through psychological bullying. This typology is associated with the stereotype of less severity, which contributes to the process of naturalization of these actions in the school community.

Regarding the age group, it should be noted that there were no significant statistical differences between the occurrence of bullying in relation to the ages of the students analyzed, presenting similar rates of bullying victimization, in both the age group of 10 to 14 years, as well as that of 15 to 19 years. However, the national and international scientific literature<sup>8,25-26</sup> highlights students aged from 10 to 14 years as the group with the highest occurrence of being victims of bullying, with a progressive reduction with increasing age, since the older students present characteristics that can protect them from victimization.

In this study, the practice of bullying by schoolchildren against their peers was manifested

in 8.4% of these, less than that found by the Brazilian PENSE (National Study of School Health), which identified bullying in 20.8% of students.<sup>8</sup> However, caution is needed in the analysis of this result, since in the current study the practice of bullying was self-reported, whereby a margin for the under-reporting of the manifestation of the act should be considered.

Theoretical discourses have attempted to explain the act of practicing bullying based on seeking affirmation of the superiority of power through the humiliation and persecution of peers, with no evident motivation on the part of the victim,<sup>6</sup> associated with risk behaviors, such as consumption of tobacco, alcohol, and other drugs.<sup>30,22</sup> This being consistent with data highlighted in this study, which evidenced a statistical association between smoking and alcohol use at school with being a bullying aggressor.

This superiority of power over others, which is the basis of the relationships in which bullying is established, shows evidence of greater male involvement in bullying situations as the victims, as well as the aggressors, because the cultural differences in the formation and development of boys and girls can sustain such behaviors. From childhood, boys are permeated by aggressive tendencies in behavior which encourage them to maintain hostile attitudes towards peers and emanate masculinity through the imposition of physical strength and prowess. These are behaviors that promote the use of violence/aggression in relationships established among boys.<sup>31</sup>

In addition to the macrosocial impact, bullying has a direct effect on the emotional, psychological, physical and social dimensions. The victims are mostly characterized as defenseless, insecure and with low self-esteem, mainly because they present some socially discriminating characteristics, making them the target of the bullying aggressor. This persecution produces severe repercussions in the health of the victimized schoolchildren. They develop emotional instability, tendency toward psychic disorders, depression and suicide, as well as unhappiness related to the school environment triggering low levels of learning and even school abandonment, with a consequent reduction in the quality of life of these adolescents. 2,6,15,29,32

One study<sup>33</sup> showed that the negative effects are not only restricted to the victims. The aggressors, who already have emotional instability and social relationship difficulties, tend to potentialize this antisocial behavior, isolation and criminality with overvaluation of violence as a way of obtaining power and social inclusion.

Considering bullying as the tip of the school violence iceberg,<sup>34</sup> the data presented in the final table of this study can be understood: the association of bullying victimization with school violence victimization, as well as with the practice of school violence, demonstrating that bullying victimization does not occur in isolation. It is not possible to affirm, through the present study, which phenomenon constitutes the precursor of the other, however, it was verified that a violent school environment foments the violence itself.

In this exchange of roles a cycle of violence is (re)constructed in the school space, in which there is the displacement of roles between victims and aggressors, which shows the complexity of factors that circumscribe bullying. This cannot be analyzed in a simplified and reduced way because it is a two-way street in that aggressors cannot be solely responsible for acts of violence because they are also the product of violence.<sup>35</sup> In addition, this cyclical framework tends to broaden and intensify the violence in this environment producing negative consequences for the whole school community. Breaking this cycle is essential to confront bullying in schools, with interventions capable of interfering with the promotion and mobilization aspects of the bullying in school relationships.<sup>34</sup>

# **CONCLUSION**

The scientific findings of this study provide support for the understanding of the reality of bull-ying in schools and the factors potentially associated with the manifestation of this phenomenon, from the perspective of both the victims and aggressors, since it converges with the international scientific scenario in terms of presentation of the manifestations of victimization and aggression and in association with the characteristics of these students (sex, age, typology).

The existence of a cycle of school violence was observed, fomented by the bullying itself and other forms of violence in this environment, which, in turn, allowed the mechanism for the persistence of violence in schools to be interpreted. As an intervention process faced with the problem, it is necessary to prioritize the disruption of this cycle, noting that it remains directly related to the social determinants and the contexts in which it is inserted. This requires multidisciplinary and intersectoral actions in the sense of implementing public policies that aim to encourage values and attitudes of peace and healthy coexistence in schools. In addition, educational actions to prevent bullying in school should be directed toward the priority groups identified

in this study, i.e., male school children who have significant involvement in situations of bullying.

Regarding the advantages/disadvantages of a cross-sectional study, on one hand, this does not allow cause and effect relationships between the variables studied to be established, while, on the other hand, since self-reported responses by the students were adopted, these can be influenced by the particular understandings and memories of each student. In conclusion, these limitations are intrinsic to the study of the phenomenon of violence, considering that it is a social and subjective phenomenon that is difficult to measure.

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