

School climate and bullying behavior among Brazilian adolescent students*Sandra Adriana Nunes¹; Ana Julia Paulina²***Abstract**

This study aimed to investigate whether victims and non-victims and aggressors and non-aggressors of bullying (cyberbullying, physical, verbal and relational) differ in their perception of school climate. 194 subjects participated, 61.3% female (Mean age = 17.46 years; SD = 1.26). The following instruments were used: sociodemographic questionnaire, Bullying Victimization/Behavior Scales and the School Environment Perception Scale. We found that victims of cyberbullying and verbal bullying perceive that they are not accepted by their peers and feel unsafe at school. Besides, victims of cyberbullying and relational bullying perceive that school is unfair and non-democratic. A tendency of the same perception regarding unfairness and democracy at school was also observed among victims of physical bullying and verbal bullying. Victims of verbal and relational bullying tend to perceive less parental involvement at school. On the other hand, aggressors of cyberbullying tend to have a lower sense of belonging and satisfaction in regarding school. Those who practice physical and relational bullying tend to perceive that they are less accepted by their peers, feel less safe and perceive the school as less fair and less democratic. Finally, physical bullies also perceive their parents to be less involved in their school activities.

Keywords: Bullying; school climate; victims; aggressors.

Resumen

Este estudio tuvo como objetivo investigar si las víctimas y no víctimas y si agresores y no agresores de acoso (ciberacoso, físico, verbal y relacional) difieren en términos de su percepción del clima escolar. Participaron 194 sujetos, 61,3% mujeres (Edad media = 17,46 años; DE = 1,26). Se utilizaron: cuestionario sociodemográfico, Escalas de Victimización/Comportamiento del Bullying y Escala de Percepción del Ambiente Escolar. Se ha observado que las víctimas de cyberbullying y acoso verbal se dan cuenta de que no son aceptados por sus compañeros y se sienten inseguros en la escuela. Las víctimas de cyberbullying y de bullying relacional perciben que la escuela es injusta y antidemocrática. Se observó una tendencia hacia la misma percepción sobre la injusticia y la democracia en la

¹ Instituto Federal de Ciência e Tecnologia da Bahia. Email: sandranunes@ufsb.edu.ar

² Instituto Federal de Ciência e Tecnologia da Bahia. Email: ailujproftec@outlook.com

escuela entre las víctimas de acoso físico y verbal. Además, las víctimas de acoso verbal y de acoso relacional tienden a percibir una menor participación de los padres en la escuela. Por otro lado, los agresores de ciberbullying suelen tener un menor sentido de pertenencia y satisfacción en relación con la escuela. Quienes practican acoso físico y relacional tienden a percibir que son menos aceptados por sus compañeros, se sienten menos seguros y perciben la escuela como menos justa y menos democrática. Finalmente, los agresores físicos también perciben que sus padres se involucran poco en sus actividades escolares.

Palabras clave: Bullying; clima escolar; víctimas; agresores.

In the late 1960s and early 1970s, a great interest in society in acts of peer-to-peer violence emerged in Sweden, involving children and adolescents in schools (Olweus, 1973). Later on, in Norway, Olweus began his research, initially motivated by the increase in suicide cases among teenagers. The results found led him to characterize the social phenomenon known as bullying. Thus, initially, Olweus (1991) offers a very specific definition of bullying as “repeated, negative actions over time, including hitting, kicking, threatening, locking people in a room, saying unpleasant things, and teasing” (Olweus, 1991, p. 413)

In addition to this more direct form, bullying can also be expressed in a more indirect way, as is the case of forced social exclusion of a student, promoting their social isolation (Olweus & Solberg, 1998). Occurring directly or indirectly, what most characterizes bullying is physical or psychological intimidation, which occurs

repeatedly, creating a pattern of harassment and abuse (Rigby, 2005). Additionally, bullying is always intended to harm another student or group of students (El-ony et al., 2023) who are considered to have less power than the perpetrator(s) (Salmivalli & Peets, 2018).

In a meta-analysis study with an overall sample of 335.519 youth (12-18 years), Modeck et al. (2014) found a mean prevalence of 35% for traditional bullying. In certain nations, like India, the findings are particularly concerning, as very recent studies show that a large percentage of teenagers—around 63.7% of those surveyed—experienced bullying and victimization for a minimum of one month (Sindhu et al., 2024).

In South America, a recent study involving 566 high school students from three schools in Paraná, in Entre Rios, Argentina, comprising 46% boys and 54% girls, found that 8% were victims, 14% were aggressors, and 6% were both victims and

aggressors, with males predominating in the last category (Resett, 2024). The author notes that, in comparison to Europe, there is a lack of research on this topic in Argentina and other Latin American nations.

In terms of national prevalence, the results of the 4th edition of the National School Health Survey - PeNSE, carried out in 2019 (IBGE, 2021), which involved 125,123 participants, indicate that 23% of students suffered verbal bullying, with a higher percentage among girls (26.5%) than boys (19.5%) and lower for students in private schools (22.9%) than in public schools (23.0%). Regarding cyberbullying, 13.2% responded positively, with more girls (16.2%) than boys (10.2%) saying they had been victims of this type of bullying and more students from public schools (13.5%) than private schools (11.8%). Concerning the reasons for being bullied, students indicated firstly the appearance of their body (16.5%), second appearance of their face (11.6%) and thirdly their color or race (4.6%). With regard to aggressive behavior, only 12% of students admit that they have already practiced verbal bullying against a colleague, with a higher percentage among boys (14.6%) than girls (9.5%) and among students from private (13.5%) than public schools (11.8%)

Bullying is classified into physical, verbal, relational and electronic forms (Berger, 2007; Çalışkan et al., 2019;

Menesini & Salmivalli, 2017; Resett, 2024). The physical type includes punching, kicking, pushing, stealing snacks or school materials, for example. This type is more common in young children, since they have not yet developed their language skills, and tends to decrease with age (Coyne et al., 2011). The verbal type takes place with the development of the language and includes swearing, assigning nicknames and insulting. It is more common than the physical type and increases with age. The relational type involves exclusion of the victim from peer groups and is the type most common in puberty, when peer acceptance becomes crucial for the adolescent's psychosocial development. Finally, the electronic type, cyberbullying, manifests itself through verbal attacks, defamation or exposure of private images via the internet (Berger, 2007; Çalışkan et al., 2019; Menesini & Salmivalli, 2017; Rolim, 2008). It has become increasingly common in society, and has started early in life (Barlett & Coyne, 2014). There seems to be some overlap between bullying forms (Johansson & Englund, 2021; Zhang et al., 2014), although it is also important to differentiate them, since they are distinctive constructs which are associated to several correlates (Dukes et al., 2010; Travlos et al., 2018).

School bullying is recognized as a major risk factor that can adversely affect

the mental health and psychological well-being of children and adolescents (UNESCO, 2023; Resett, 2021). Being a victim has been linked to a range of psychosocial adjustment problems, which can manifest both at the individual level—such as low self-esteem, anxiety, and depression—and at the interpersonal level, including difficulties in social relationships, social isolation, and poor peer interactions (Lai et al., 2024; Vacca et al., 2023). Conversely, individuals who perpetrate bullying typically display a pattern of externalizing or conduct-related issues, which involve problems in their interactions with society and others (Arnett, 2010). These behaviors often include antisocial tendencies, aggression, and substance abuse (Nansel et al., 2004; Olweus, 1993, 2013; Sindhu et al., 2024). As a result, bullies tend to be more impulsive and aggressive, frequently resorting to violence as a means of asserting dominance and maintaining control (Olweus, 2013; Resett, 2021).

The school, in addition to the family, can be seen as an important microsystem that can affect the occurrence of bullying behaviors in children and adolescents, depending on how it is perceived by students. In fact, some studies have shown that factors related to the way adolescents perceive school can favor school bullying, especially the feeling of weak connection with school (Matos et al., 2009), the

perception of school as an unsafe and a poorly supervised place (Lopes Neto & Saavedra, 2003), the perception of external and internal violence promoting insecurity and the mischaracterization of the school's functions (Cocco & Lopes, 2010). A school environment permeated by bullying practices creates a hostile and violent atmosphere, becoming a risk factor for the biopsychosocial development of children and adolescents (Resett, 2021). Thus, school climate becomes the target of studies when exploring the occurrence of bullying.

In this regard, school climate has been investigated as a variable that can be associated with positive and negative student outcomes (Gálvez-Nieto et al., 2022). It refers to the quality of social relationships and the character of school life (Cohen et al., 2009; Grazia & Molinari, 2020) affecting learning and academic achievement (Berkowitz et al., 2017) as well as problem behaviors or violence in school (Reaves, et al., 2018). In this sense, this construct is central in school life since it establishes socially acceptable behavior at school, which in turn may influence and shape interactions between all school members (Orozco-Solis et al., 2016).

A positive and democratic school climate tends to promote prosocial behavior (Luengo et al., 2017; Villardón-Gallego et al., 2018), engagement, feeling of security and perception of healthy

relationships in the environment (Welsh, 2000), the development of self-identity and self-esteem (Coelho et al., 2020) and academic success (Berkowitz et al., 2017; Li et al., 2020; Trinidad, 2020). It also prevents from school dropout, presence of offenses and misconduct at school (Welsh, 2000; Cohen et al., 2009). Moreover, students who perceive their teachers as understanding, respectful and willing to help them tend to exhibit a series of positive behaviors at school (Alonso-Tapia et al., 2020; Keppens & Spruyt, 2019).

Conversely, a negative school climate has been associated with school violence (Moore et al., 2020), truancy (Hamlin, 2020) and bullying (Cui, 2020; Xu et al., 2020]. Espelage and Swearer (2003) found that teachers who did not promote respectful interaction among students and did not speak out against bullying had a higher prevalence of aggressive behavior in their classrooms.

Taking this into consideration, this study aimed to investigate whether victims and non-victims and aggressors and non-aggressors of bullying (cyberbullying, physical, verbal and relational) differ in terms of their perception of school climate in a sample of Brazilian students. Drawing from the literature review, two main hypotheses were tested: H1: Victims of bullying will perceive the school climate more negatively compared to non-victims

and H2: Aggressors will perceive the school environment more negatively than non-aggressors.

Method

Participants

194 students participated in this study, being 119 (61.3%) female and 75 (38.7%) male, with an average age of 17.46 years ($SD = 1.26$), regularly enrolled in the 1st to 4th year of the integrated courses in Computer Science, Construction, and Environment at the Federal Institute of Science and Technology of Bahia – IFBA / Brazil. The IFBA institution features a multi-campus and multidisciplinary structure. Data from the 2021 annual report indicate that 1,365 students were enrolled across different levels and programs at the site of the study. These encompass the final phase of basic education through integrated technical courses alongside high school, advanced technical courses, undergraduate degrees, and a postgraduate program.

The type of sampling was by convenience and the statistical power ($1 - \beta$) of the sample size used was .8. Based on the size of the population (N), the margin of error of 5%, and a reliability margin of 90% the minimum number of participants required was 191.

The criteria for inclusion were voluntary participation, enrollment in one of the integrated courses, and, for minors,

parental consent and agreement to participate fully in the study by providing all requested information. Exclusion criteria involved not completing any of the scales or items on the sociodemographic questionnaire, as well as being subject to disciplinary action, suspended from academic activities with medical approval, or experiencing any physical or emotional condition that could hinder the student's ability to take part in the research.

Instruments

In the present study, in addition to the sociodemographic questionnaire, three more scales were used.

Sociodemographic and course-related questionnaire: It consisted of 15 questions covering information related to age, gender, race/ethnicity, mother's and father's education level, self-declared social class, family income, religion, who they live with, in addition to questions related to the course.

Bullying victimization scale: This scale consists of 30 Likert-type items, ranging from 0 (none) to 4 (four or more times a week). The scale was developed by Souza and Medeiros (2019) and is four-dimensional and allows identifying the extent to which an individual has been victimized by physical (11 items; e.g., My clothes and objects are torn or broken.), verbal (6 items; e.g., I have been a victim of

offensive jokes), relational (4 items; e.g.: Isolation due to my physical characteristics (for example, having bow legs, wearing glasses, being toothy, etc.), and cyberbullying (9 items; e.g.: Publication of videos on the internet, in intimate and embarrassing situations). Scores are computed separately for each type of bullying. Higher scores in each subscale that measured the different types of bullying mean that the student was a victim of bullying. In the validation study (Gomes, 2020), the results suggest acceptable evidence of validity and precision [CFI = .98, TLI = .98, RMSEA (90% CI) = .032 (.015 – .045)]. The Cronbach's alphas found in the present study were as follows: Victimization by Physical Bullying ($\alpha = .79$), Victimization by Verbal Bullying ($\alpha = .81$), Victimization by Relational Bullying ($\alpha = .67$) and Victimization by Cyberbullying ($\alpha = .63$).

Bullying Behavior Scale: This scale was developed by Medeiros et al. (2015) and also contains 30 Likert-type items ranging from 0 (none) to 4 (four or more times a week). It allows investigating the extent to which an individual practices bullying behaviors in the same four dimensions of bullying: physical (11 items; e.g., I pushed colleagues), verbal (6 items; e.g., I nicknamed colleagues), relational (5 items; e.g., I excluded and/or convinced friends to isolate other colleagues from

groups for no apparent reason (e.g., work, play, etc.) and cyberbullying (9 items; e.g., I created false (fake) profiles of colleagues on social networks). Higher scores in each subscale that measured the different types of bullying mean that the student expressed bullying behavior towards peers. The scale was validated only through Exploratory Factor Analysis (AFE) (Medeiros et al. 2015). The Cronbach's alphas were: physical bullying = .62, verbal bullying = .79, relational bullying = .60 and cyberbullying = .73).

School Environment Perception Scale: This scale originally had 20 Likert-type items, with 4- and 5-point items, and was part of the questionnaire applied in the European study entitled Health Behavior in School-aged Children (HBSC/WHO) in 1998 (Currie et al., 2000; Matos et al., 2000). The scale measures the student's perception of how they are treated in the school environment (by teachers, other students and how they perceive the quality

of the school environment, or school climate, in general). As the scale had not been validated for Brazil, a preliminary validation procedure was carried out, using Exploratory Factor Analysis (AFE) and reliability analysis. In the EFA carried out, all database adequacy criteria were met (Bartlett's sphericity test $\geq .001$; Kaiser-Meyer-Olkin (KMO) test = .807). The Oblimin rotation method with Kaiser normalization was adopted, which suggests that we should extract only factors with an eigenvalue greater than 1. Furthermore, the component retention criterion used was to observe loadings greater than .40. Thus, the final solution used in this study, after EFA, was only 13 items, since 7 items did not obtain satisfactory loadings. Four factors were extracted, which are presented in Table 1, with their respective items and loadings, in addition to Cronbach's alphas. The four factors explained 47.56% of the sample's variability.

Table 1.

Components of the School Environment Perception Scale, with their respective items and loadings, in addition to Cronbach's alphas.

School Environment Perception Scale	
Extracted factors, items and Cronbach's alpha ($\alpha = .76$)	Loadings
Factor 1- Belonging and satisfaction with school	
9. Our school is a good place to be.	.81
10. I feel like I belong at this school.	.77
3. At the current moment, how do you feel about the school	.56
Factor 2 - Parental involvement with school ($\alpha = .70$)	
19. If I have problems at school, my parents are ready to help.	.86
17. My parents encourage me to get good grades.	.70
18. My parents voluntarily come to school to talk to the teachers.	.48
Factor 3 – Peer acceptance and safety ($\alpha = .81$)	
15. My colleagues accept me as I am.	.85
14. Most of my colleagues are friendly and helpful.	.54
16. Do you feel safe at school?	.45
Factor 4 – Fairness and democracy at school ($\alpha = .68$)	
12. Teachers treat us fairly.	.73
8. The rules at this school are fair.	.54
11. I am encouraged to express my views in class.	.43

Data collection Procedure

Initially, the director of the Institution was approached to sign the Term of Consent, formalizing the agreement to carry out the research in the Institution. Then, students over 18 years of age signed the Informe Consent Form (ICF) and parents or guardians of minors signed the ICF. The project was presented to the students, during class times, when they were invited to participate in the research. In the case of

minors, the researcher informed them that their parents had already formalized their acceptance, and, therefore, they all received the link to access/confirm their consent. The researcher made herself available to the participants if anyone needed to clarify any questions related to the research.

The project followed the guidelines of Resolutions 466/2012 and 510/2016 of the National Health Council and was submitted to the Human Research Ethics Council of

the Federal University of Southern Bahia, having obtained approval, under registry number: 4.594.739 (CAAE: 40189420.6.0000.8467), on March 16, 2021.

Participants were assured that their data would remain confidential, with only the researchers having access to sensitive information. Their identities and privacy were maintained, as no identifying information was included in the data collection tools. Furthermore, participation was entirely voluntary, and individuals had the right to withdraw at any point without facing any personal or academic repercussions.

Data Analysis Procedure

This was a quantitative, descriptive, cross-sectional, relational and ex post facto study. The data were analyzed using descriptive (mean, standard deviation, minimum and maximum) and inferential statistics to test the study hypotheses. To verify the normality of distribution of the data, the skewness and kurtosis coefficients were used, with acceptable values being considered for those found in the range of -2 and $+2$ (Hair et al., 2022). Once we found that the distributions of the variables were non-normal, we decided to use non-parametric tests for the analyses. To compare the two groups (victims and non-

victims; aggressors and non-aggressors) of four types of bullying (cyberbullying, verbal, relational and physical) regarding perception of school climate we used the Mann Whitney test.

Results

Descriptive analysis

Regarding victimization, 66 (34%) were victims of cyberbullying, 123 (63.4%) of verbal bullying, 72 (37.1%) of physical bullying and 83 (42.8%) of relational bullying. In respect to bully behaviors, 17 (8.8%) were cyberbullying aggressors, 101 (52.1%) verbal bullying aggressors, 36 (18.6%) physical bullying aggressors and 28 (14.4%) relational bullying aggressors. When considering typologies, 16 students (8.2%) were only aggressors, 45 were only victims (23.2%), 94 were victims/aggressors (48.5%) and 39 (20.1%) had no involvement in bullying behaviors.

Inferential analysis

Table 2 presents the results of the comparison between students who have already been victims of the four types of bullying and those who said they have never been, with regard to how they perceive school climate, in terms of perception of belonging and satisfaction in relation to school, parental involvement in school life, peer acceptance and sense of safety and, finally, in terms of perception of fairness and democracy at school.

Table 2.

Mann-Whitney U test comparing the rankings' positions of adolescent victims and non-victims of some type of bullying, in relation to the perception of the quality of the school environment (n = 194).

		Mann Whitney Test U		
		Rank Positions		
		Victim of cyberbullying (n = 66)	Non-victims (n = 128)	P Value
Belonging and satisfaction in relation to school		89.73	101.51	.16
Parental involvement with school		90.60	101.06	.22
Peer acceptance and safety		80.35	106.34	.00**
Fairness and democracy at school		81.64	105.68	.00**
		Victim of verbal bullying (n = 123)	Non-victims (n = 71)	
Belonging and satisfaction in relation to school		93.68	104.12	.21
Parental involvement with school		92.28	106.54	.09 [§]
Peer acceptance and perception of safety		88.57	112.96	.00**
Fairness and democracy at school		92.13	106.80	.08 [§]
		Victim of physical bullying (n = 72)	Non-victims (n = 122)	

Belonging and satisfaction in relation to school	98.25	97.06	.88
Parental involvement with school	95.40	98.74	.69
Peer acceptance and perception of safety	92.88	100.23	.37
Fairness and democracy at school	88.33	102.91	.08 [§]
Victim of relational bullying (n = 83) Non-victims (n = 111)			
Belonging and satisfaction in relation to school	94.01	100.11	.45
Parental involvement with school	89.70	103.33	.09 [§]
Peer acceptance and safety	90.78	102.53	.14
Fairness and democracy at school	88,23	104.43	0.05*

§ Effect tendency

* Significant difference $p \leq .05$

** Significant difference $p \leq .01$

Table 2 shows that students who are victims of cyberbullying perceive that they are less accepted by their peers and feel less safe [$Z = -3.088$, $p \leq .00$] and that there is little fairness and democracy at school [$Z = -2.840$, $p \leq .00$] compared to their peers who never suffered this type of bullying. Victims of verbal bullying also feel less accepted by their peers and feel unsafe at school [$Z = -2.946$, $p \leq .01$] and victims of relational

bullying tend to perceive that the school environment is more unfair and think they are not democratically treated [$Z = -1.999$, $p \leq .05$].

An effect tendency was observed that suggests that adolescents who are victims of verbal bullying tend to perceive less parental involvement at school [$Z = -1.715$, $p = .09$] and less fairness and democracy [$Z = -1.715$, $p = .08$]. A tendency of effect was

also observed, indicating that victims of physical bullying tend to perceive unfairness and do not feel encouraged to express his/her views at school [$Z = -1.757$, $p = .08$] and victims of relational bullying tend to perceive less parental involvement at school [$Z = -1.684$, $p = .09$]. Apparently, this tendency of effect could be confirmed if the size of the sample was larger.

Table 3 presents the results of the comparison between adolescents who

reported some bully-type behavior and those who said they had never committed any type of bullying in terms of how they perceive school climate (their sense of belonging and satisfaction regarding the school, their perception of parental participation in school life, their perception of peer acceptance and sense of safety at school and, finally, their perception of fairness and democracy at school).

Table 3.

Mann-Whitney U test comparing rankings' positions of students who admit to having practiced some type of bullying and those who have never practiced it, in relation to the perception of the quality of the school environment ($n = 194$).

Mann Whitney Test U			
Rank Positions			
	Aggressor of cyberbullying (n = 17)	Non-aggressor (n = 177)	P value
Belonging and satisfaction in relation to school	121.38	95.21	.06 ^s
Parental involvement with school	85.29	98.67	.43
Peer acceptance and safety	101.26	97.14	.77
Fairness and democracy at school	109.71	96.33	.34
	Aggressor of verbal bullying (n = 101)	Non-aggressor (n = 93)	

Belonging and satisfaction in relation to school	94.65	100.59	.46
Parental involvement with the school	95.33	99.86	.57
Peer acceptance and safety	91.04	104.51	.09 [§]
Fairness and democracy at school	92.05	103.41	0.16
Aggressor of physical bullying (n = 36)			
Belonging and satisfaction in relation to school	84.60	100.44	.12
Parental involvement with the school	76.42	102.30	.01**
Peer acceptance and safety	83.50	100.69	.09 [§]
Fairness and democracy at school	81.38	101.17	.05*
Aggressor of relational bullying (n = 28)			
Belonging and satisfaction in relation to school	92.64	98.32	.62
Parental involvement with the school	92.34	98.37	.60
Peer acceptance and safety	81.14	100.26	.09 [§]
Fairness and democracy at school	75.55	101.20	.02*

§ Effect tendency

* Significant difference $p \leq 0.05$

** Significant difference $p \leq 0.01$

Table 3 shows that adolescents who practice cyberbullying tend to report less sense of belonging and less satisfaction in relation to school, but in this case only an

effect tendency was observed, which means that the p value was close to significant [$Z = -1.860$, $p = .06$]. Apparently, with an increase in sample size, this difference

between groups could be confirmed. There was also a tendency of effect that indicates that aggressors of physical and relational bullying perceive themselves as less accepted by peers and feel less safe at school if compared with their peers who do not practice these types of bullying [$Z = -1.675$, $p = .09$ and $Z = -1.684$, $p = .09$, respectively].

On the other hand, significant effects were also found: preparators of physical bullying and relational bullying perceive school as less fair and less democratic than their peers who do not bully [$Z = -1.920$, $p \leq .05$ and $Z = -2.249$, $p \leq .05$, respectively]. Finally, physical bullies perceive their parents to be less involved in their school activities [$Z = -2.513$, $p \leq .01$].

Discussion

The objective of this study was to investigate whether victims and non-victims and aggressors and non-aggressors of bullying (cyberbullying, physical, verbal and relational) would differ in relation of their perception of the school climate (in terms of belonging and satisfaction with the school, parental involvement with the school activities, peer acceptance and perception of safety and, finally, fairness and democracy at school). Taking into account all the findings related to victimization, the first hypothesis was partially supported, as bullying victims

perceived certain aspects of the school climate more negatively than those who were not victims.

Specifically, victims of cyberbullying and verbal bullying feel that they are not accepted by their peers e feel unsafe at school. According to Allen and Kern (2017), the feelings of having a place within the school, of attachment to others, and a sense of inclusion are pivotal to students because they are related to the sense of safety and belonging to the school. To Porter et al. (2021), when students report relationships with teachers and peers, they normally do it in the context of feeling safe to be themselves. In a study exploring factors related to students' perception of school safety across 13 Asian and European countries (with a sample of 21,688 adolescents aged 13-15), Mori et al. (2022) discovered that both traditional victimization and a combination of victimization types were highly linked to feelings of insecurity among both males and females. In a year-long longitudinal study (Sentse et al., 2015) investigating the relationships between bullying, victimization, and social status (including acceptance, rejection, and perceived popularity), peer rejection was found to predict subsequent victimization at different time points. However, the opposite pattern—where victimization at the first time point (T1) predicted peer rejection at

the second time point (T2)—was observed only among girls. Therefore, it seems understandable that victims of cyberbullying and verbal bullying feel that they are not well liked (Sentse et al., 2015) and feel insecure in the school environment (Mori et al. 2022; Mowen & Freng, 2019).

Furthermore, victims of cyberbullying and relational bullying perceive that the school environment is unfair and non-democratic. Additionally, a tendency of the same perception regarding unfairness and democracy was also observed among victims of physical bullying and verbal bullying. Different theoretical perspectives have established a positive association between perceived unfairness and bullying (Lenzi et al., 2014). School fairness has been considered an important aspect of school climate (Wang & Degol, 2016), which refers to the consistency and fairness of discipline practices within the school and it has been associated to several outcomes, such as delinquency, school avoidance, academic achievement, victimization and bullying perpetration (Fissel et al., 2019; Hurd et al., 2018; James et al., 2020; Nguyen et al., 2020; Stutzenberger, 2020). In this respect, Stutzenberger (2020) also found that perceived school rule fairness was linked to verbal bullying victimization. Similarly, Overstreet et al. (2022) found that bullying victimization (of physical and verbal

bullying) is more prevalent among students who believe that their schools are unfair. The literature indicates that positive and democratic school climates promote engagement, feeling of security and perception of healthy relationships in the environment (Welsh, 2000).

If tendency of effect is considered, we also found that adolescents who are victims of verbal bullying and relational bullying tend to perceive less parental involvement at school. Parents play an important role in the learning environment, in defining school policies and practices, as well as in the academic and social performance of students (Park et al., 2017). Parental involvement is considered as an essential factor for school climate, contributing to promote good students' educational results, as well as better social functioning (Caridade et al., 2020; Castillo-Eito et al., 2020; Cunha et al., 2023; Resett, 2021). In fact, Caridade et al. (2020) found a mediating effect of parental involvement in the relationship between the school climate and behavior problems. Finally, the findings of this research add to previous results (Batsche & Knoff, 1994; Slee, 1994) regarding the fact that the less parental monitoring or involvement in academic life of children, the higher the feeling of insecurity/trust in the school environment, resulting in increased vulnerability of the victim who in many cases does not report

bullying actions because they do not believe that the school environment is committed to preventing and combating violence.

With regard to the aggressor's behavior, the second hypothesis was also partly supported, as bullies viewed various aspects of the school environment more negatively than students who did not engage in bullying. Specifically, those who practice cyberbullying tend to have a lower sense of belonging and satisfaction in relation to school. Xu and Fung (2021) found a significant negative correlation between students' school belonging and subjective well-being. In fact, school belonging mediates the negative correlation between school bullying and subjective well-being of middle school. Regarding this, Underwood and Ehrenreich (2014) postulated that children may hit, exclude, or harass their peers electronically when they feel that their needs for belongingness are threatened. Goodenow (1993, p. 80) defined students' sense of belonging as “ (...) the extent to which students feel personally accepted, respected, included and supported in the school social environment”, a definition that has been frequently used in research (Allen & Kern, 2017). Thus, ultimately it is possible to admit that adolescents who commit cyberbullying feel bad for not belonging and for feeling dissatisfied with school and that may lead them to resort to this behavior.

Furthermore, those who practice physical and relational bullying tend to perceive that they are less accepted by their peers and feel less safe at school. These results corroborate the findings of Hawkins et al. (1992) and Sentse et al., (2015), in the sense that aggressive attitudes are linked, among other things, to little acceptance from peers. In a longitudinal study, Sentse et al. (2015) observed that peer rejection at the first time point (T1) was associated with increased levels of bullying at the second time point (T2) among boys, while bullying did not predict peer rejection. Furthermore, there was a positive correlation between peer rejection and bullying measured simultaneously at T1.

Finally, perpetrators of physical and relational bullying perceive the school as unfair and little democratic and of physical bullying also perceive their parents to be less involved in their school activities. Previous studies found that rules fairness plays a role in decreasing bullying and violent behaviors (Aldridge et al., 2018; Lindstrom Johnson et al., 2017). In this regard, Beatty-O'Farrall et al. (2010) conclude that supportive relationships between students and teachers, student participation in school decisions (thus, its respectful and democratic character), and clear guidelines against violence were significantly related to lower levels of bullying. Following the same line of

reasoning, Espelage and Swearer (2003) found that in contexts in which teachers did not promote respectful interaction between students, and did not speak out against bullying, students were more aggressive. Moreover, perception of teachers' acts of unfair treatment might also can trigger in students the sense of loss of legitimacy of the teacher as an authority figure (Tyler & Lind, 1992). This, in turn may make aggressive and deviant behaviors in schools more difficult to control (Santinello et al., 2011; Vieno et al., 2011). Besides, according to Lenzi et al., (2014), the perception of unfair treatment at school may lead to the belief that disrespectful behaviors are tolerated and even allowed, making easier the decision to adopt this kind of behaviors in the relationships with peers.

Regarding parental involvement, there has been suggestions that it is associated with lower rates of bullying (Jeynes, 2008). For this reason, parental involvement has been recognized as central to create effective anti-bullying programs in schools (Ttofi & Farrington, 2011; Cunha et al. 2023). In her study, Corsaro (2104) found that what parents and students felt to be appropriate or inappropriate behaviors, along with parental involvement in their child's academic life helps to explain the way their child behaves and treats their school mates. Finally, Figueira et al. (2022) found that greater parental supervision

reduced the odds of bullying victimization and perpetration among adolescent students.

Final considerations

This study is one of the first to assess adolescent students' perception of school climate and comparing victims and non-victims and aggressors and non-aggressors of four different types of bullying regarding this perception in the Brazilian context. The results show that both victims and perpetrators of bullying feel unsafe and wronged, and think that they are not well liked by their peers. In general, they do not have a positive perception of the school environment, regarding fairness and democratic participation, nor do they enjoy parental involvement in their school life. Therefore, the findings provide partial support for the two hypotheses proposed in this study and underscore the importance of considering the potential impact of students' perceptions of the school climate when explaining the bullying phenomenon.

This study advances in relation to national studies on bullying because it investigates the role of a variable (school climate) that is little studied in Brazil in the explanation of this type of behavior. Furthermore, it either used instruments validated for the Brazilian context or proceeded with a preliminary validation of a scale that had not yet been validated in the country.

On the other hand, it also has some limitations: the sample size is relatively small and convenience sampling was used, collecting data from just one educational institution. Therefore, it is not possible to state that the findings can be generalized to Brazil or even to the state of Bahia. Furthermore, non-parametric tests were used, which are less robust (have less power). These tests decrease the probability of rejecting the null hypothesis when it is true (type I error). However, considering that the data distribution was non-normal, this is the most indicated statistical

procedure. Finally, as a limitation, this study is cross-sectional, which makes it impossible to monitor the evolution of the phenomenon over time. It is suggested that future studies should consider longitudinal data collection so that it is possible to examine school climate as a predictor of bullying behaviors. Likewise, future studies can also advance in investigating the effects of other socialization contexts in which adolescents participate, such as family and community, so that the phenomenon is fully understood.

References

- Aldridge, J. M., McChesney, K., & Afari, E. (2018). Relationships between school climate, bullying and delinquent behaviours. *Learning Environments Research*, 21(2), 153–172. <https://doi.org/10.1007/s10984-017-9249-6>
- Allen, K., & Kern, M. L. (2017). *School belonging in adolescents: Theory, research and practice*. Springer.
- Alonso-Tapia, J., Quijada, A., Ruiz, M., Huertas, J. A., Ulate, M. A., & Biehl, M. L. (2020). A cross-cultural study of the validity of a battery of questionnaires for assessing school climate quality. *Psicología Educativa*, 26(2), 109–119. <https://doi.org/10.5093/psed2020a2>
- Arnett, J. J. (2010). *Adolescencia y adultez emergente. Un enfoque cultural*. Pearson.
- Batsche, G. M., & Knoff, H. M. (1994). Bullies and their victims: Understanding a pervasive problem in the schools. *School Psychology Review*, 23, 165–174. <https://doi.org/10.1080/02796015.1994.12085704>
- Beaty-O’Ferrall, M. E., Green, A., & Hanna, F. (2010). Classroom management strategies for difficult students: promoting change through relationships. *Middle School Journal*, 41, 4–11. <http://eric.ed.gov/?id=EJ887746>

- Berkowitz, R., Moore, H., Astor, R. A., & Benbenishty, R. (2017). A research synthesis of the associations between socioeconomic background, inequality, school climate, and academic achievement. *Review of Educational Research*, 87(2), 425–469. <https://doi.org/10.3102/0034654316669821>
- Berkowitz, R., Moore, H., Astor, R. A., & Benbenishty, R. (2017). A research synthesis of the associations between socioeconomic background, inequality, school climate, and academic achievement. *Review of Educational Research*, 87(2), 425–469. <https://doi.org/10.3102/0034654316669821>
- Caridade, S. M. M., Sousa, H. F. P. E., & Pimenta Dinis, M. A. (2020). The mediating effect of parental involvement on school climate and behavior problems: School personnel perceptions. *Behavioral sciences (Basel, Switzerland)*, 10(8), 129. <https://doi.org/10.3390/bs10080129>
- Castillo-Eito, L., Armitage, C. J., Norman, P., Day, M. R., Dogru, O. C., & Rowe, R. (2020). How can adolescent aggression be reduced? A multi-level meta-analysis. *Clinical psychology review*, 78, 101853. <https://doi.org/10.1016/j.cpr.2020.101853>
- Cocco, M., & Lopes, M. J. M. (2010). Violência entre jovens: dinâmicas sociais e situações de vulnerabilidade. *Revista gaúcha de enfermagem. Porto Alegre. Vol. 31, n. 1 (mar. 2010), p. 151-159.* <https://www.seer.ufrgs.br/RevistaGauchadeEnfermagem/article/view/10620>
- Coelho, V. A., Bear, G. G., & Brás, P. (2020). A multilevel analysis of the importance of school climate for the trajectories of students' self-concept and self-esteem throughout the middle school transition. *Journal of youth and adolescence*, 49(9), 1793–1804. <https://doi.org/10.1007/s10964-020-01245-7>
- Cohen, J., McCabe, E. M., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers College Record*, 111(1), 180–213. <https://doi.org/10.1177/016146810911100108>
- Corsaro, K. L. (2014). *Parental involvement and its effects on bullying and student behaviors*. [Master of Science in Education], State University of New York at Fredonia, New York. <http://hdl.handle.net/20.500.12648/529>
- Cui, K., & To, S.-m. (2021). School climate, bystanders' responses, and bullying perpetration in the context of rural-to-urban migration in China. *Deviant Behavior*, 42(11), 1416–1435. <https://doi.org/10.1080/01639625.2020.1752601>

- Cunha, F., Hu, Q., Xia, Y., & Zhao, N. (2023). *Reducing bullying: Evidence from a parental involvement program on empathy education* (NBER Working Paper No. 30827). National Bureau of Economic Research.
- Currie, C., Hurrelmann, K., Settertobulte, W., Smith, R., & Todd, J. (2000). *Health and health behaviour among young people*. HEPCA series: WHO. Obtido em https://www.euro.who.int/_data/assets/pdf_file/0006/119571/E67880.pdf
- Espelage, D. L., & Swearer, S. M. (2003). Research on school bullying and victimization: What have we learned and where do we go from here? *School psychology review*, 32(3), 365-383. <https://psycnet.apa.org/record/2003-09341-007>
- Figueira, M. P., Okada, L. M., Leite, T. H., Azeredo, C. M., & Marques, E. S. (2022). Association between parental supervision and bullying victimization and perpetration in Brazilian adolescents, Brazilian National Survey of Student's Health 2015. *Epidemiologia e Serviços de saúde: Revista do Sistema Único de Saúde do Brasil*, 31(1), e2021778. <https://doi.org/10.1590/S1679-49742022000100025>
- Fissel, E. R., Wilcox, P., & Tillyer, M. S. (2019). School discipline policies, perceptions of justice, and in-school delinquency. *Crime and Delinquency*, 65(10), 1343-1370. <https://doi.org/10.1177%2F0011128718794186>
- Gálvez-Nieto, J. L., Polanco-Levicán, K., Trizano-Hermosilla, Í., & Beltrán-Véliz, J. C. (2022). Relationships between school climate and values: the mediating role of attitudes towards authority in adolescents. *International journal of environmental research and public health*, 19(5), 2726. <https://doi.org/10.3390/ijerph19052726>
- Goodenow, C. 1993. The psychological sense of school membership among adolescents: scale development and educational correlates. *Psychology in Schools*, 30(1), 79-90. <https://doi.org/10.1002/1520-6807>
- Grazia, V., & Molinari, L. (2021). School climate multidimensionality and measurement: a systematic literature review. *Research Papers in Education*, 36(5), 561-587. <https://doi.org/10.1080/02671522.2019.1697735>
- Griethuijsen, R. A. L.F., Eijck, M. W., Haste, H., Brok, P. J., Skinner, N. C., Mansour, N., ... & Boujaoude, S. (2014). Global patterns in students' views of science and interest in science. *Research in Science Education*, 45(4), 581-603. <https://doi.org/10.1007/s11165-014-9438-6>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (3 ed.). Sage.

- Hamlin D. (2020). Can a positive school climate promote student attendance? Evidence from New York City. *American Educational Research Journal*, 58, 315–342. <https://doi.org/10.3102/0002831220924037>
- Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: implications for substance abuse prevention. *Psychological Bulletin*, 112(1), 64. Obtido em <https://psycnet.apa.org/buy/1992-40647-001>
- Hawkins, J.D., Catalano, R.E. and Miller, J.Y. (1992) Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, 112, 64-105. <https://doi.org/10.1037/0033-2909.112.1.64>
- Hurd, N. M., Hussain, S., & Bradshaw, C. P. (2018). School disorder, school connectedness, and psychosocial outcomes: Moderation by a supportive figure in the school. *Youth & Society*, 50(3), 328–350. <https://doi.org/10.1177/0044118x15598029>
- James, K., Watts, S. J., & Evans, S. Z. (2020). Fairness, social support, and school violence: Racial differences in the likelihood of fighting at school. *Crime and Delinquency*, 66(12), 1655–1677. <https://doi.org/10.1177/0011128719890269>
- Jeynes, W. H. (2008). Effects of parental involvement on experiences of discrimination and bullying. *Marriage and Family Review*, 43(3), 255–268. <https://doi.org/10.1080/01494920802072470>
- Keppens, G., & Spruyt, B. (2019). The school as a socialization context: Understanding the influence of school bonding and an authoritative school climate on class skipping. *Youth & Society*, 51(8), 1145–1166. <https://doi.org/10.1177/0044118X17722305>
- Klicpera, C., & Gasteiger Klicpera, B. (1996). *Die Situation von "Tätern" und "Opfern" aggressiver Handlungen in der Schule*. <http://psydok.psycharchives.de/jspui/handle/20.500.11780/2177>
- Lai, S., Li, J., Shen, C. et al. (2024). School Bullying Victimization and Depression Symptoms in Adolescents: The Mediating Role of Internet Addiction and Moderating Role of Living Areas. *Psychiatry Quaterly*, 95, 481–496. <https://doi.org/10.1007/s11126-024-10083-w>
- Lenzi, M., Vieno, A., Gini, G., Pozzoli, T., Pastore, M., Santinello, M., & Elgar, F. J. (2014). Perceived teacher unfairness, instrumental goals, and bullying behavior in early

- adolescence. *Journal of Interpersonal Violence*, 29(10), 1834-1849. <https://doi.org/10.1177/0886260513511694>
- Li, L., Chen, X., & Li, H. (2020). Bullying victimization, school belonging, academic engagement and achievement in adolescents in rural China: A serial mediation model. *Children and Youth Services Review*, 113, Article 104946. <https://doi.org/10.1016/j.childyouth.2020.104946>
- Lindstrom Johnson, S., Waasdorp, T. E., Cash, A. H., Debnam, K. J., Milam, A. J., & Bradshaw, C. P. (2017). Assessing the association between observed school disorganization and school violence: Implications for school climate interventions. *Psychology of Violence*, 7(2), 181–191. <https://doi.org/10.1037/vio0000045>
- Lopes, A. A. N & Saavedra, L. H. (2003). Diga não para o *Bullying* – Programa de redução do comportamento agressivo entre estudantes. Abrapia.
- Luengo Kanacri, B. P., Eisenberg, N., Thartori, E., Pastorelli, C., Uribe Tirado, L. M., Gerbino, M., & Caprara, G. V. (2017). Longitudinal relations among positivity, perceived positive school climate, and prosocial behavior in Colombian adolescents. *Child development*, 88(4), 1100–1114. <https://doi.org/10.1111/cdev.12863>
- Matos, M., Negreiros, J., Simões, C., & Gaspar, T. (Eds.). (2009). *Violência, bullying e delinquência* (1.^a ed.). Coisas de Ler.
- Matos, M., Simões, C., Carvalhosa, S., Reis, C., & Canha, L. (2000). *A saúde dos adolescentes portugueses*. FMH /PEPT-Saúde.
- Medeiros, E. D. D., Gouveia, V. V., Monteiro, R. P., Silva, P. G. N. D., Lopes, B. D. J., Medeiros, P. C. B. D., & Silva, É. S. D. (2015). Escala de Comportamentos de Bullying (ECB): Elaboração e evidências psicométricas. *Psico-USF*, 20(3), 385-397. <https://doi.org/10.1590/1413-82712015200302>
- Menesini, E., & Salmivalli, C. (2017). Bullying in schools: the state of knowledge and effective interventions. *Psychology, Health & Medicine*, 22(sup1), 240–253. <https://doi.org/10.1080/13548506.2017.1279740>
- Modecki, K. L., Minchin, J., Harbaugh, A. G., Guerra, N. G., & Runions, K. C. (2014). Bullying prevalence across contexts: a meta-analysis measuring cyber and traditional bullying. *The Journal of adolescent health: official publication of the Society for Adolescent Medicine*, 55(5), 602–611. <https://doi.org/10.1016/j.jadohealth.2014.06.007>
- Mori, Y., et al. (2022). Feeling unsafe at school among adolescents in 13 Asian and European countries: Occurrence and associated factors. *Frontiers in Psychiatry*, 13, Article 823609. <https://doi.org/10.3389/fpsy.2022.823609>

- Moore, H., Astor, R. A., & Benbenishty, R. (2020). Role of school-climate in school-based violence among homeless and nonhomeless students: Individual- and school-level analysis. *Child abuse & neglect*, 102, 104378. <https://doi.org/10.1016/j.chiabu.2020.104378>
- Mowen, T. J., & Freng, A. (2019). Is more necessarily better? School security and perceptions of safety among students and parents in the United States. *American Journal of Criminal Justice*, 44(3), 376–394. <https://doi.org/10.1007/s12103-018-9461-7>
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Jama*, 285(16), 2094-2100. <https://doi.org/10.1001/jama.285.16.2094>
- Nansel, T., Craig, W., Overpeck, M., Saluja, G. y Ruan, W. (2004). Cross-national consistency in the relationship between bullying behaviours and psychosocial adjustment. *Pediatric and Adolescent Medicine*, 158(8), 730-736. <https://doi.org/10.1001/archpedi.158.8.730>
- Nguyen, K., Yuan, Y., & McNeeley, S. (2020). School security measures, school environment, and avoidance behaviors. *Victims & Offenders*, 15(1), 43–59. <https://doi.org/10.1080/15564886.2019.1679307>
- Orozco-Solis M., Colunga-Rodriguez C., Vazquez-Colunga J., Vazquez-Juarez C., Angel-Gonzalez M., Johnson S., Bradshaw C. Characterization of school climate perception in Mexican middle school students. *Psychology*, 7, 1562–1574. <https://doi.org/10.4236/psych.2016.713151>
- Olweus, D. (1973). Hackkycklingar och översittare. Forskning om skolmobbing. Almqvist & Wicksell.
- Olweus, D. (1993). Bullying at school: What we know and what we can do. Blackwell.
- Olweus, D. (1991). Bully-victim problems among school children: Basic facts and effects of a school-based intervention program. In D. Pepler e K. Rubin (Eds.), *The development and treatment of childhood aggression* (p. 411-448). Lawrence Erlbaum.
- Olweus, D. (2013). School bullying: Development and some important challenges. *Annual Review of Clinical Psychology*, 9, 751-780. <https://doi.org/10.1146/annurev-clinpsy-050212-185516>
- Overstreet, S., Sriken, J., Lapsey, D. S., & McNeeley, S. (2023). School fairness and repeated bullying victimization among high school students. *Crime & Delinquency*, 69(8), 1391-1413. <https://doi.org/10.1177/00111287221130965>

- Park S., Stone S., Holloway S. School-based parental involvement as a predictor of achievement and school learning environment: An elementary school-level analysis. *Children and Youth Services Review*, 82, 195–206. <https://doi.org/10.1016/j.childyouth.2017.09.012>.
- Porter, J., McDermott, T., Daniels, H., & Ingram, J. (2024). Feeling part of the school and feeling safe: Further development of a tool for investigating school belonging. *Educational Studies*, 50(3), 382–398. <https://doi.org/10.1080/03055698.2021.1944063>
- Reaves, S., McMahon, S. D., Duffy, S. N., & Ruiz, L. (2018). The test of time: A meta-analytic review of the relation between school climate and problem behavior. *Aggression and Violent Behavior*, 39, 100–108. <https://doi.org/10.1016/j.avb.2018.01.006>
- Resett, S. (2021). ¿Aulas peligrosas? Qué es el bullying, el cyberbullying y qué podemos hacer. Editorial Logos.
- Resett, S. A. (2024). Victimización y bullying en adolescentes: Su asociación con problemas emocionales y de conducta. *Investigando en Psicología*, 2(25), 103-115. <http://orcid.org/0000-0001-7337-0617>
- Sentse, M., Kretschmer, T., & Salmivalli, C. (2015). The longitudinal interplay between bullying, victimization, and social status: Age-related and gender differences. *Social Development*, 24(3), 659–677. <https://doi.org/10.1111/sode.12115>
- Sentinello, M., Vieno, A., & DeVogli, R. (2011). Bullying in Italian schools: The role of perceived teacher unfairness. *European Journal of Psychology of Education*, 26(2), 235-246. <https://doi.org/10.1007/s10212-010-0050-5>
- Slee, P. T. (1994). Situational and interpersonal correlates of anxiety associated with peer victimization. *Child psychiatry and human development*, 25(2), 97-107. <https://doi.org/10.1007/BF02253289>
- Sindhu, D.M., Rajkumar, E. y Romate, J. (2024). Victimization by Bullying as a Predictor of Antisocial Behavior Among Adolescents. *International Journal of Bullying Prevention*. <https://doi.org/10.1007/s42380-024-00213-0>
- Smith, P. K., & Thompson, D. (1991). *Practical approaches to bullying*. David Fulton.
- Souza, I. M, & Medeiros, E. D. (2019). Evidências preliminares de validade e precisão da escala de vitimização de *bullying* (EVB). Comunicação Oral. Seminários Integrados da UFPI. https://www.researchgate.net/publication/337445985_Evidencias_preliminares_de_validade_e_precisao_da_escala_de_vitimizacao_de_bullying_EVB

- Streiner, D. L. (2003). Starting at the beginning: an introduction to coefficient alpha and internal consistency. *Journal of personality assessment*, 80(1), 99-103.
https://doi.org/10.1207/S15327752JPA8001_18
- Stutzenberger, A. (2020). *Exploring pathways of bullying victimization: A test of two competing victimization theories to better understand risk of bullying experiences among middle school youth*. [Doctoral dissertation, University of Cincinnati]. ProQuest Dissertations Publishing.
- Trinidad, J. E. (2020). Material resources, school climate, and achievement variations in the Philippines: Insights from PISA 2018. *International Journal of Educational Development*, 75, 1–9. <https://doi.org/10.1016/j.ijedudev.2020.102174>
- Ttofi, M. M., and Farrington, D. P. (2011). Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *Journal of Experimental Criminology*, 7, 27–56. <https://doi.org/10.1002/cl2.1143>
- Tyler, T., & Lind, A. (1992). A relational model of authority in groups. *Advances in Experimental Psychology*, 25, 115-191. [https://doi.org/10.1016/S0065-2601\(08\)60283-X](https://doi.org/10.1016/S0065-2601(08)60283-X)
- Underwood, M. K., & Ehrenreich, S. E. (2014). Bullying may be fueled by the desperate need to belong. *Theory into Practice*, 53(4), 265–270.
<https://doi.org/10.1080/00405841.2014.947217>
- United Nations Educational, Scientific and Cultural Organization (UNESCO, 2023). What you need to know about school violence and bullying.
<https://www.unesco.org/en/articles/whatyou-need-know-about-school-violence-and-bullying#:~:text=A%20recent%20UNESCO%20report%20revealed,and%20physical%20and%20mental%20health>
- Vacca M, Cerolini S, Zegretti A, Zagaria A, y Lombardo C. (2023). Bullying Victimization and Adolescent Depression, Anxiety and Stress: The Mediation of Cognitive Emotion Regulation. *Children*, 10(12), 1897. <https://doi.org/10.3390/children10121897>
- Vieno, A., Gini, G., Santinello, M., Lenzi, M., & Nation, M. (2011). Violent behavior and unfairness in school: Multilevel analysis of Italian schools. *Journal of Community Psychology*, 39(5), 534–550. <https://doi.org/10.1002/jcop.20450>
- Villardón-Gallego L., García-Carrión R., Yáñez-Marquina L., & Estévez A. (2018). Impact of the interactive learning environments in children's prosocial behavior. *Sustainability*, 10, 2138. <https://doi.org/10.3390/su10072138>.
- Waasdorp, T. E., Bradshaw, C. P., & Leaf, P. J. (2012). The impact of schoolwide positive behavioral interventions and supports on *bullying* and peer rejection: A randomized

- controlled effectiveness trial. *Archives of pediatrics & adolescent medicine*, 166(2), 149-156. <https://doi.org/10.1001/archpediatrics.2011.755>
- Wang, M. T., & Degol, J. L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. *Educational Psychology Review*, 28, 315–352. <https://doi.org/10.1007/s10648-015-9319-1>
- Welsh, W. N. (2000). The effects of school climate on school disorder. *Annals of the American Academy of Political and Social Science*. 567, 88-107. <https://doi.org/10.1177/000271620056700>
- Xu S., Ren J., Li F., Wang L., & Wang S. (2020). School bullying among vocational school students in China: Prevalence and associations with personal, relational, and school factors. *Journal of Interpersonal Violence*, 37, 104–124. <https://doi.org/10.1177/0886260520907360>
- Xu, Z., & Fang, C. (2021). The relationship between school bullying and subjective well-being: The mediating effect of school belonging. *Frontiers in psychology*, 12, 725542. <https://doi.org/10.3389/fpsyg.2021.725542>

Fecha recepción: 23 de mayo de 2024

Fecha aceptación: 20 de mayo de 2025