pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

ARTICLES

School violence and the exercise of teacher authority: a study with adolescents in São Paulo [1] [2] [3] [4]

Violência escolar e o exercício da autoridade do professor: um estudo com adolescentes de São Paulo

Gomes, Aline Morais Mizutani [i]
Piccirillo, Debora [ii]
Theodoro, Renan [iii]
Komatsu, André Vilela [iv]

[i] Universidade de São Paulo – USP, Núcleo de Estudos da Violência, São Paulo, SP, Brasil. https://orcid.org/0000-0003-0489-8439, alinemizu@gmail.com

[ii] Universidade de São Paulo – USP, Núcleo de Estudos da Violência, São Paulo, SP, Brasil. https://orcid.org/0000-0003-0280-3918, debora.veiga@usp.br

[iii] Universidade de São Paulo – USP, Núcleo de Estudos da Violência, São Paulo, SP, Brasil. https://orcid.org/0000-0003-4206-139X, renantheodoro@gmail.com

[iv] Universidade de São Paulo – USP, Núcleo de Estudos da Violência, São Paulo, SP, Brasil. https://orcid.org/0000-0001-8508-6787, avk@usp.br

[1] Responsible editor: Wivian Weller <https://orcid.org/0000-0003-1450-2004>

[2] References correction and bibliographic normalization services: Piero Younan Kanaan (Tikinet) <revisao@tikinet.com.br>

[3] Funding: São Paulo Research Foundation, (Grant/Award Number: '2013/07923-7')

[4] English version: Henrique Akira (Tikinet) <traducao@tikinet.com.br>

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

Abstract
This article investigated school violence based on a longitudinal survey conducted with adolescents in São Paulo. This is a quantitative research that analyzed the relation between the experience and the practice of violence among adolescents and their perceptions of the school climate and teachers' authority with a structural equation model. Results showed that school victimization and relational aggression are related and negatively influence the evaluation of the school climate and the legitimacy of teachers. In turn, when teachers exercise their power based on values such as respect and impartiality, there is a positive effect on students' perceptions, which might be a key to avoiding conflicts.
Keywords: school violence, teacher authority, victimization, adolescent, socialization

Resumo
Este artigo investigou a violência escolar a partir de um survey longitudinal realizado com adolescentes de São Paulo. Trata-se de uma pesquisa quantitativa que analisou a relação entre a experiência e a prática de violências pelos adolescentes e suas percepções sobre o clima escolar e sobre a autoridade dos(as) professores(as) por meio de um modelo de equação estrutural. Os resultados demonstraram que a vitimização escolar e a agressão relacional estão relacionadas entre si e influenciam negativamente a avaliação do clima escolar e da legitimidade dos(as) professores(as). Por sua vez, quando os(as) professores(as) exercem seu poder pautados em valores como respeito e imparcialidade, há um efeito positivo sobre a percepção dos alunos, o que pode ser uma chave para evitar os conflitos.
***Palavras-chave**: violência escolar, autoridade docente, vitimização, adolescente, socialização*

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

Introduction

We are social beings. It is through relationships with different others that we constitute ourselves as subjects, and these interactions influence our perceptions and actions about the world (Vigotski, 2001). After the family, the school plays a fundamental role as an agent of socialization for children and adolescents, expanding the circle of relationships and presenting the rules and limits that govern the society of which we are part.

In everyday interactions with colleagues, teachers, and school staff, different values, attitudes, and behavioral models are internalized and contrasted with those initially transmitted by family members. In this sense, in addition to a formal curriculum made up of a series of subjects, such as Portuguese, mathematics, and science, there is in everyday school life a set of knowledge transmitted in an undeclared way—and even in an unintentional way—, which informs children and adolescents about their place and social role, about expectations regarding their ways of being and acting in the world (Weiss & Soares, 2021; Resh & Sabbagh, 2014).

As a social institution, the historical-cultural context directly influences the school. It reproduces dominant patterns, meeting the need to preserve society by transmitting to each generation what has already been built previously (Durkheim, 2013). At the same time, it is a source of social transformation through developing creative potential, critical thinking, and autonomy of its students (Weiss & Soares, 2021).

In other words, the school is the scene of intense ambiguities that present themselves in how violence manifests itself in this environment. On the one hand, children and adolescents have the opportunity at school to receive protection and to feel safe and supported in the face of a series of risks and victimizations suffered in their lives (Gomes, Piccirillo, & Oliveira, 2019). On the other hand, the school can also be a source of violence through aggression among students, disrespect, discrimination, and exclusion (Ruotti, Alves, & Cubas, 2006).

Given these paradoxes, it is essential to discuss ways to avoid the reproduction of violence that consider the contradictions present in schools and break the cycles of violations experienced by many students. We understand that teachers are essential socializing figures in the trajectory of adolescents, and the way they exercise their power in the classroom can be a

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

key to dealing with conflicts, as it affects trusting relationships. In this sense, this article is based on a set of data collected from adolescents in São Paulo to understand the impacts that situations of school victimization had on their perceptions regarding the recognition of the role of teachers and engagement in violent behavior.

The article is organized as follows: It begins with a bibliographic survey on the forms of violence in the school context and their relationships with the school climate and teachers' attitudes. Next, the variables from a survey with adolescents from the São Paulo Legal Socialization Study (SPLSS) and the analysis method are presented. Finally, the results of the developed structural equation model are discussed, highlighting the correlations between the variables.

Violence in the school context and its relationship with the school climate

One of the most profound marks of the Brazilian context is the presence of violence to resolve conflicts in the most diverse circumstances (Adorno, 2013). This is also reflected in the school context. Several studies have already demonstrated that violence at school is a multifactorial phenomenon with multiple meanings and serious consequences for the development and learning of children and adolescents (Abramovay, 2002; Ruotti, Alves, & Cubas, 2006; Tavares & Pietrobom, 2016).

Charlot (2002) presents three forms of manifestation of violence in the school environment: violence *at* school, violence *to the* school, and violence *of the* school. In the first, the school is "invaded" by external violence, which is not directed directly at it, unlike the second form, in which violence is directed at the school's physical structures or professionals. In the third case, it is violence produced against the students themselves, who may have their rights violated physically or psychologically.

While all of these forms of violence have negative impacts, in this work, we will highlight the victimizations suffered and perpetrated by students in the school context. According to research commissioned by the Union of Official Education Teachers of the State of São Paulo (APEOESP), in 2019, cases of bullying have increased in recent years: 37%

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

of students declared having suffered some violence (28% in 2014, and 39% in 2017). That year, 90% of the teachers interviewed said they had learned about cases of violence in their schools. According to data from this research, approximately 37% of students enrolled in the public education network in the State of São Paulo have already suffered some violence (Sacheto, 2020).

In addition to bullying and physical violence, studies have drawn attention to other forms of interpersonal violence in the school environment, such as relational aggression. This concerns a type of psychological violence that aims to cause damage to the relationships between the individual and their peers through the dissemination of rumors, hearsay, manipulations, or exclusion from the group of friends (Mahar, Wongsomboon, & Webster, 2018; Gouveia, Leal, & Cardoso, 2017; Romero-Abrio, Callejas-Jerónimo, Sánchez-Sosab, & Vilarreal-González, 2018).

In a study with Portuguese adolescents, Gouveia et al. (2017) indicated that the perception that the school environment was violent and the weak integration between students and teachers were two predictors of direct and relational aggression. In a study with Mexican adolescents, Romero-Abrio et al. (2018) pointed out that students with worse evaluations of the school environment, negative attitudes towards teachers, and a non-conformist self-perception were more likely to commit relational aggression at school.

This perception about the school environment is related to what is called school climate in the literature, a polysemic concept (Cohen, McCabe, Michelli, & Pickeral, 2009; Cunha, 2014) that encompasses the norms, values, and expectations that allow the different actors in the school community to feel safe in physical, emotional, and social terms (Cohen et al., 2009). There is no univocal definition in the literature for school climate, with other related terms such as "school atmosphere," "school feelings," and "school tone" being common, which refer to both the quality and characteristics of everyday school life (Cohen et al., 2009).

From a methodological point of view, school climate represents a set of variables relating to school dynamics, which act together (Cunha, 2014). For example, Cohen et al. (2009) list at least four dimensions of school climate: safety (physical and emotional); teaching and learning (quality of instruction, social, emotional, and ethical learning, professional development and leadership); relationships (respect for diversity, collaboration with the school community, morality and feeling of connection with the school); school structure and

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

environment (cleanliness, adaptation of spaces). On the other hand, Mucherah et al. (2018) highlighted five dimensions of school climate: satisfaction with the school, friction, competitiveness, cohesion, and support for teachers. Alternatively, as Moro et al. (2018) point out, since there is no single school climate factor, different studies will emphasize different aspects of the variable (social, academic, and organizational aspects) depending on the objectives of these studies. It is, therefore, an abstract notion that encompasses different elements in the daily life of school institutions. For this reason, studies in this field find multiple ways to define and operationalize this concept. However, all these elements point in the same direction: feelings that promote individual and collective well-being at school (Cohen et al., 2009; Cunha, 2014; Mucherah, Finch, White, & Thomas, 2018).

Different studies have demonstrated that a positive school climate is related to a higher quality in the learning process, low dropout rates, greater levels of trust and sense of justice, feelings of well-being, safety, acceptance and belonging to the school, good interpersonal relationships, and attenuation of the negative impact of the socioeconomic context on academic success (Cohen et al., 2009; Silva, Sousa, Negreiros, & Freire, 2021; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013).

On the other hand, there is an association between schools with an adverse school climate and an environment more conducive to violence (Cunha, 2014; Mucherah, Finch, White, & Thomas, 2018; Welsh, 2000). Cunha (2014) surveyed 1600 students in the 9th year of elementary school and 2nd year of high school in Rio de Janeiro. The author identified that the school's evaluation was negatively correlated with the perception of intra-school violence (β =—0.084; $p < 0.001$); with the presence of students carrying alcohol or drugs (β =—0.108; $p < 0.001$); with experience of being approached by the police (β =—0.054; $p < 0.05$); and with the experience of violence (β =—0.064; $p < 0.05$). Using a linear regression model for the dependent variable, "perceptions of intra-school violence," the general evaluation of the school was not significant. However, for perceptions about students using drugs and alcohol, the school's evaluation was significantly negative (β =—0.092; $p < 0.001$), indicating that the more students perceive the existence of other classmates carrying drugs or alcohol, the worse their evaluation of the school institution.

The relationship between school climate and experiences of violence was also the subject of a study conducted by Mucherah et al. (2018) in Kenya. Using a structural equation

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

model, they examined the relationship between school climate, teacher involvement, number of friends, and teachers' actions to prevent bullying (both as a victim and perpetrator). Of the three dimensions of school climate included in the study (satisfaction, attrition, and cohesion), only the perception of school cohesion did not affect the different forms of victimization. The study showed that the more satisfied with the school, the fewer participants reported verbal offenses (β =—0.349; p = 0.001), verbal victimization (β =—0.275; p = 0.008), and physical victimization among their peers (β =—0.288; p = 0.009). The perception of friction at school was related to a more significant occurrence of social offense (such as having convinced students to turn against a friend, β = 0,323; p < 0.001) and more related to physical offense between peers (β = 0.212; p < 0.001).

In this sense, the experiences—good or bad—of students affect their perceptions of the school climate, which, in turn, influence the attitudes and behaviors of students. In another article, with elementary and high school students in Virginia, United States (USA), Cornell, Shukla, and Konold (2016) pointed out that when students perceived that the school rules were clear, they were applied fairly, with space to explain their points of view, they evaluated the school environment as a whole more positively, which tended to have beneficial effects on classroom behavior.

This result draws attention to the importance of establishing a democratic school climate at school, as does a study conducted by Giordani, Seffner, and Dell'Aglio (2017), which investigated the perception of students and teachers from Porto Alegre about violence in schools through the focus groups. The authors highlighted that, in many cases, the physical and psychological violence experienced is a consequence of "when the conflict does not find other channels of expression that could be provided by the school institution through democratic actions involving adolescent participation in decisions that affect them" (Giordani, Seffner, & Dell'Aglio, 2017, p. 108).

Therefore, we observe that one of the aspects that can impact the prevention of violence in the school context is how relationships are established between students and the school institution, or more specifically, with those who represent and define the norms of coexistence.

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

Teachers as authority figures

Generally, the teacher is the child's first authority figure, other than the parents, with whom the child comes into contact. In the school context, leaving the private sphere of life, relationships begin to be guided by more formal rules, and the experience with authority becomes more impersonal. Little by little, children become aware that different types of authority interact with them in different ways, and, more than that, they can act in a certain way with them and differently with other children (Tyler & Trinkner, 2018).

Steven Lukes (1986) recalls that the concept of authority has a common core, which is the "renouncement of private judgment" (1986, p. 833). The relationship of authority is one in which individuals give up their private interests in the name of the demands, rules, and precepts placed by authorities, which are taken as if they were their own. In this way, understanding authority relations in modern societies involves some reconciliation between authority and individual autonomy.

In sociological literature, it was mainly up to Max Weber to present a solution to this problem through the notion of legitimacy (Weber, 1999). For the German sociologist, there are ideally two reasons why individuals can acquiesce in a relationship of authority: either they obey guided by a constellation of personal interests (such as specific gains), or they obey motivated by an ideal that obeying is a duty. Thus, an authority considered legitimate is one whose power to issue orders and establish rules is recognized by the individuals subject to it. Furthermore, legitimate authority is one whose commands and rules are followed because individuals accept it, acting motivated by the belief in the "duty to obey."

More recently, work in a field of studies called Legal Socialization (Rodrigues, Gomes, Piccirillo, Oliveira, & Brito, 2017) focused precisely on the social processes through which individuals come to legitimize or not the authorities. According to several studies produced in this field, including in Brazil, adherence to the values of a given society is fundamental for the legitimization of authorities, which would lead to citizens' voluntary obedience to social rules (Fagan & Tyler, 2005; Trinkner & Cohn, 2014; Trinkner, Rodrigues, Piccirillo, Gifford, & Gomes, 2019). Thus, instead of blind obedience to authority or being guided by fear of punishments and sanctions, voluntary obedience starts from the belief that this is the correct attitude for the good of the collective.

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

However, it is worth highlighting that this legitimation process is constructed daily through interactions between individuals and authorities, and it is especially during adolescence that we observe essential learning about how institutions operate and how authority should exercise its function.

During adolescence, a reorganization of individuals' cognitive structure takes place, which allows the adolescent to develop abstract reasoning and critical thinking (Piaget & Inhelder, 2003). This new way of mental functioning provides adolescents with the tools to analyze the world, understand the functioning of institutions and power relations, and even critically evaluate society's norms and laws.

Furthermore, in our society, it is during adolescence that, in general, individuals prepare to make professional and emotional choices, which implies the construction of new identities. There is a search for differentiation from parents, for autonomy and independence, for belonging to a group, and for experimentation. While this movement is fundamental for adolescents to find their place in the world, it can also lead them to risky and/or deviant behavior, such as aggression, drug abuse, unprotected sexual relations, vandalism, bullying, etc.

From this perspective, it is precisely at this stage that individuals question the authorities' way of acting, as they understand that the authorities cannot act the way they want but must follow specific regulations. This perception, in turn, tends to put tension in these relationships, as authorities do not always perform their functions in the expected way. Studies have shown that at this stage, there is a decline in the level of legitimacy granted to authorities[5].

Thus, the assessment of the legitimacy of institutions and authorities is strongly influenced by how these authorities exercise their functions and make decisions, i.e., whether there is justice, respect, impartiality, and limits in the exercise of power (Tyler & Trinkner, 2018).

This dynamic directly impacts the educational context since teachers seek to assert themselves as legitimate authorities, subject to obedience and cooperation. In a study with

[5] On authorities in general, see Tyler and Trinkner, 2018; on parental legitimacy, see Kuhn and Laird, 2011; Thomas, Rodrigues, Oliveira, and Magino, 2020; on police legitimacy, see Piccirillo et al., 2021; on the legitimacy of teachers, see Graça, Calheiros, and Barata, 2013.

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

Portuguese adolescents, Graça et al. (2013) pointed out that when teachers support students' autonomy in the classroom, adolescents evaluate that there is a legitimate exercise of power on the part of teachers.

In a study conducted interviewing 30 high school adolescents in São Paulo, Schünemann (2016) reported that students understand that the teacher is an authority, but this does not mean that the teachers can act in any way they want, but that their authority is only considered legitimate when exercised within the expected functions.

In the qualitative study by Bueno and Sant'Ana (2011) in São João del-Rei, Minas Gerais, the authors sought to identify which elements were valued by students in attributing legitimacy to teachers' authority. By analyzing not only the speech of adolescents but also observing interactions in the classroom, the authors realized that more traditional conceptions of authority, marked by the hierarchy of knowledge and punishment as a form of control and a "meaning closer to democratic principles, whose power relationship must be established based on a negotiation relationship that guarantees conditions of equality and freedom to the parties" coexist (2011, p. 338).

In another study, Novais (2004), through ethnographic research, investigated how a high school teacher dealt with the issue of her authority. The author observed that the teacher sought to be fair and transparent in her demands and expectations, negotiating the rules without restricting the students' freedom in maintaining discipline. In this process, the author found that the teacher's authority was not imposed on the group but recognized by the students precisely because of this way of conducting the relationship.

In this sense, the objective of this article is to investigate how some experiences of violence suffered and practiced by adolescents are related to their perceptions of the school climate and the authority of teachers. Our first hypothesis is that victimization due to relational aggression and victimization in the school context will subsequently negatively affect adolescents' perceptions of the school climate and their recognition of the legitimacy of teachers. The second hypothesis is that both the perception of the school climate and the recognition of the teachers' legitimacy subsequently explain the engagement of the same adolescents in the practice of relational aggression against their peers.

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

Methodology

This study used data from the SPLSS, a longitudinal survey developed by the Center for the Study of Violence at the University of São Paulo (NEV-USP). The central objective of SPLSS is to understand how adolescents develop values, ideas, and attitudes concerning the central authority figures (parents, teachers, police) and their views on laws. The study collected data annually between 2016 and 2019 through a survey. To be eligible to participate in the study, participants must have been born in 2005 and be enrolled in the sixth year of elementary school in public or private schools in the city of São Paulo.

The sample selection followed the number of students enrolled in both education systems in each of the six major regions of the municipality. Using the Probability Proportional to Size (PPS) method, 64 schools from the public network and 48 schools from the private network were drawn, totaling 112 participating schools. After the schools were drawn, with the consent of the management, field research teams identified eligible individuals, and those who presented authorization signed by their parents or guardians were selected. Data was collected by the Brazilian Institute of Public Opinion and Statistics (IBOPE), and participants received a gift certificate worth approximately 50 BRL.

While some participants dropped out over the years, the study retained 87.75% of the adolescents initially enrolled. The losses did not substantially change the characteristics of the sample, which had 50% female participants overall. The SPLSS sample is characterized by ethnic and social multiplicity. Information on race/color was collected through self-declaration, and the sample is 47% white, 27% mixed race, 12% black, 5% indigenous, and 3% Asian. For socioeconomic characterization, a questionnaire was sent along with the consent form for parents to respond about their income range, among other information. Considering income in six monthly minimum wage ranges, 18% of participants were from families with up to one minimum wage (MW), 28% between 1 and 2 MWs, 23% between 2 and 5 MWs, 13% between 5 and 10 MWs, 6% between 10 and 20 MWs, and 3% with family income above 20 minimum wages.

For this article, data referring to 2018 and 2019 were selected since one of the variables of interest—School Climate—was included in the questionnaires only in these years, totaling 680 participants.

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

a) **School Climate**: The school climate scale measures the participants' perception of justice in school decisions and how democratic the school environment is in collective decision-making. The scale consists of eight items, adapted from Vieno, Perkins, Smith, and Santinello (2005) and Lenzi, Vieno, Sharkey, Mayworm, Scacchi, Pastore, and Santinello (2014), such as "*The school rules are fair*," "*When school rules are broken, the consequences are fair.*" Responses were collected on a four-point Likert scale (1 = Strongly disagree; 4 = Strongly agree), and the mean score was considered so that the higher the score, the better the school climate ($\alpha = 0.71$; M = 3.40; SD = 0.50).

b) **Teachers' Legitimacy**: The legitimacy scale was adapted from studies on legal socialization (Fagan & Tyler, 2005; Trinkner & Cohn, 2014) and comprises seven items (for example, *Your teachers have the right to make the rules in the classroom* and *You must obey your teachers even when you disagree with them*). Responses were collected on a four-point Likert scale (1 = Strongly disagree; 4 = Strongly agree), and the mean score was considered so that the higher the scale score, the greater the teachers' legitimacy ($\alpha = 0.5$; M = 3.10; SD = 0.46).

c) **School Victimization**: Measures the frequency with which participants had direct or indirect contact with different forms of violence in the school environment. The experiences listed in the questionnaire were developed based on a pilot study with students with the same profile as the participants in the final research (for more information: Rodrigues & Gomes, 2019). The scale consists of four items (for example, *Have you witnessed fights or arguments between students at school?* and *Have you been attacked by an adult—teacher, inspector, or school employee—with a slap, punch, kick, or someone throwing an object at you?*) that measure the frequency with which these events occurred in the year before data collection (0 = No; 3 = Many times). For the analyses, the mean value was calculated so that the higher the score, the more frequent the victimization experiences were ($\alpha = 0.5$; M = 0.61; SD = 0.49).

d) **Relational Aggression:** Refers to actions whose purposes were to harm or control another individual in the peer group, spreading rumors or uttering threats (Crick & Grotpeter, 1995; Crick, Ostrov, & Werner, 2006; Mahar, Wongsomboon, & Webster, 2018). The questionnaire brings together five items that relate to

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

behaviors that place participants as responsible for relational aggression (*Have you sworn or verbally offended someone?* or *Has someone spread lies against you in person, by cell phone, or on the internet?*). In both cases, the answers were initially collected on a four-point Likert scale (0 = No; 3 = Many times), using the 12 months before data collection as a reference. For this study, the mean value of the items was calculated so that the higher the score, the greater the frequency of authorship ($\alpha = 0.54$; $M = 0.41$; $SD = 0.44$) or victimization ($\alpha = 0.7$; $M = 0.53$; $SD = 0.61$) for relational aggression.

e) **Analysis procedure:** In the first stage, the variables were correlated and described in terms of mean and standard deviation. To interpret the strength of the associations between the variables, we adopted the criteria suggested by Cohen (1988), in which $r = 0.1$ (small effect), $r = 0.3$ (moderate effect), and $r = 0.5$ (large effect). Next, we ran a structural equation model to test the hypothesis that victimization by relational aggression (RA Vic.) and victimization in a school context (School Vic.) predict School Climate and Teachers' Legitimacy, which, in turn, predict the practice of relational aggression against other peers. Sex (male and female) and the type of educational establishment (private and public) were controlled in all equations, as well as the base levels of relational aggression in 2018. To evaluate the model fit, we used measures of comparative fit index (CFI), the Tucker–Lewis index (TLI), the root mean square of approximation (RMSEA), and the standardized root mean square of residual (SRMR), considering RMSEA and SRMR values below 0.06 as acceptable and CFI and TLI above 0.95 (Hu & Bentler, 1999).

Results

Table 1 presents the correlations between the study variables and the means and standard deviations obtained for the sample. In 2018, the School Climate and Teachers' Legitimacy variables correlated positively with each other and negatively with the variables of School Victimization, Victimization by Relational Aggression, and Practice of Relational Aggression, with the effects of these correlations being considered moderate. The

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

Victimization and Practice of Relational Aggression variables had positive correlations with each other of solid magnitude. In 2019, the patterns were maintained concerning the direction of correlations and the size of the effects, except the correlation between School Climate and Teachers' Legitimacy, which showed an increase in effect, going from moderate to large. Concerning the scale mean values, the variations between 2018 and 2019 were not significant.

Table 1.
Correlation between study variables

						2018		*2019*	
	1	***2***	***3***	***4***	***5***	***M***	***SD***	***M***	***SD***
1. RA Vic.	1	0.49[b]	0.50[b]	−0.24[b]	−0.25[b]	0.53	0.61	0.51	0.60
2. School Vic.	0.51[a]	1	0.38[b]	−0.31[b]	−0.28[b]	0.61	0.49	0.62	0.46
3. Relational Aggression (RA)	0.54[a]	0.38[a]	1	−0.28[b]	−0.36[b]	0.39	0.45	0.41	0.44
4. School Climate	−0.26[a]	−0.25[a]	−0.30[a]	1	0.50[b]	3.40	0.50	3.29	0.58
5. Teac. Leg.	−0.21[1]	−0.23[1]	−0.33[1]	0.37[1]	1	3.10	0.46	3.01	0.50

Note: [a]: correlation between variables measured only in 2018; [b]: correlation between variables measured only in 2019.

Table 2 presents the correlation between the variables measured in 2018 and 2019. All variables were significantly correlated and with effects close to moderate, with Victimization by Relational Aggression, School Victimization, and Relational Aggression positively related to each other but negatively with School Climate and Teachers' Legitimacy. This indicates that students who suffered some form of violence in 2018 tend to respond in 2019 that they had committed some aggression against their classmates. In a similar sense, participants who in 2018 admitted some aggression against colleagues were also victims of relational aggression or school victimization the following year. The data does not match the social stigmas that may affect the students, dividing them into aggressors and victims. Instead, they demonstrate that

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

violence is a social practice that, once present in the interactions between these students, circulates in social relationships, reproducing itself later.

Table 2.
Longitudinal correlation between study variables

	2019 Variable				
2018 Variable	***1***	***2***	***3***	***4***	***5***
1. RA Vic.	0.60	0.37	0.40	−0.19	−0.23
2. School Vic.	0.42	0.50	0.32	−0.25	−0.23
3. Relational Aggression	0.40	0.29	0.60	−0.24	−0.33
4. School Climate	−0.23	−0.19	−0.22	0.52	0.31
5. Teac. Leg.	−0.15	−0.22	−0.25	0.39	0.61

Structural Equation Model

Table 3 shows the result of the structural equation model, which is also represented graphically (Figure 1) to facilitate visualization of the relationships between the variables. The model presented fit indices within what is considered good to excellent in the standards of social and behavioral sciences, with the coefficient of determination indicating that the model explains 35% of the variance in relational aggression. Victimization by Relational Aggression and Victimization in a School Context were positively correlated, and both negatively predicted the perception of a positive School Climate and Teachers' Legitimacy. School Climate and Teachers' Legitimacy are also positively correlated and negatively predict student involvement in the practice of Relational Aggression against peers. While the type of school did not affect the model, sex had a significant effect on two relationships, in which male adolescents tend to legitimize teachers more and also practice relational aggression more frequently.

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

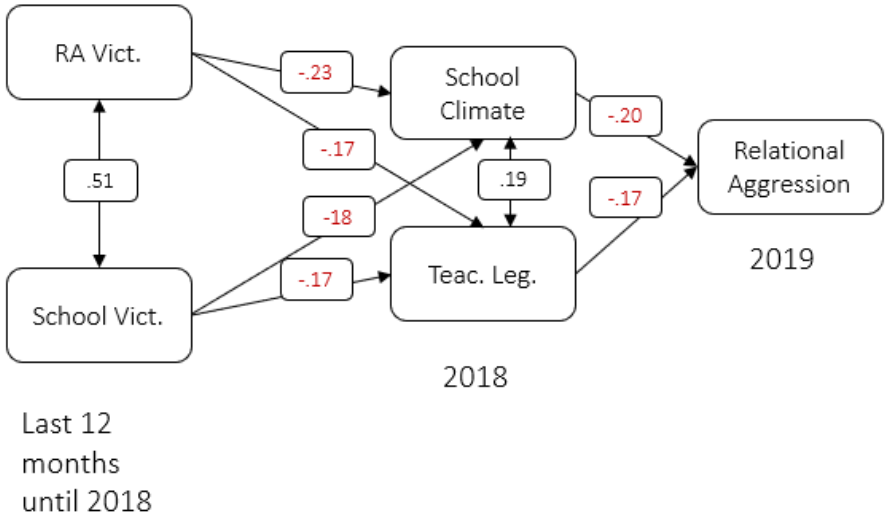
Table 3.
Estimated parameters of the structural equation model

Paths	*β*	*SE*	*95%CI*		*p*
School Climate (2018)			**Lower**	**Upper**	
RA Vic. (2018)	−0.23	0.07	−0.38	−0.09	0.001
School Victimization (2018)	−0.18	0.07	−0.31	−0.04	0.009
Relational Aggression (2018)	−0.26	0.05	−0.37	−0.15	0.000
Sex (Male = 1)	0.06	0.04	−0.02	0.14	0.129
Type of School (Private = 1)	−0.02	0.04	−0.11	0.06	0.606
Teachers' Legitimacy (2018)					
RA Vic. (2018)	−0.17	0.06	−0.29	−0.04	0.008
School Victimization (2018)	−0.17	0.06	−0.29	−0.06	0.004
Relational Aggression (2018)	−0.30	0.05	−0.41	−0.20	0.000
Sex	0.14	0.04	0.06	0.22	0.001
Type of School	−0.04	0.04	−0.13	0.05	0.351
Relational Aggression (2019)					
Teachers' Legitimacy (2018)	−0.17	0.06	−0.29	−0.05	0.005
School Climate (2018)	−0.20	0.06	−0.32	−0.09	0.001
Relational Aggression (2018)	0.37	0.07	0.24	0.51	0.000
Sex	0.10	0.04	0.02	0.19	0.017
Type of School	−0.06	0.05	−0.14	0.03	0.219

Note: $X^2(18) = 50.03$; CFI = 0.99; TLI = 0.95; RMSEA = 0.05; SRMR = 0.03. R^2 for Relational Aggression (2019) = 0.35.

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

Figure 1.
Structural equation model.



Discussion

This study sought to investigate how the different forms of violence in the school environment are related to the school climate and the attribution of legitimacy to teachers. The analyses demonstrated that both school victimization and aggression are related to each other and negatively influence the assessment of the school climate and the legitimacy of teachers, i.e., the more a student experiences these forms of violence, the lower the chances of evaluating the school climate as positive and reducing the chances of seeing the teacher as a legitimate authority.

In turn, a negative evaluation of school authorities and the school environment as a whole can contribute to the practice of aggression in the school environment since students who reported negative views about teachers and school climate also reported more relational aggression in the following year.

The results obtained in this study allow us to infer that school authorities can play a fundamental role in controlling and preventing interpersonal violence at school. In line with specialized literature (Tyler & Trinkner, 2018), it is possible to state that the way school authorities exercise their power in everyday school life influences the behavior of students,

http://dx.doi.org/10.1590/1980-6248-2022-0035EN

impacting experiences of violence. In other words, when authorities exercise their functions within recognized limits, giving space for students to express their opinions, treating everyone equally and without distinction, and making clear the rules and consequences for non-compliance with rules, students perceive school as a fairer and more welcoming environment, which can reduce aggressive action.

This finding is also in line with other studies (Bueno & Sant'Ana, 2011; Graça, Calheiros, & Barata, 2013; Cornell, Shukla, & Konold, 2016; Giordani, Seffner, & Dell'Aglio, 2017; Gouveia, Leal, & Cardoso, 2017), emphasizing that the way to manage conflicts, which inevitably arise in everyday school life, can be the starting point for establishing more democratic relationships between students and between students and teachers, in order to prevent engagement in aggressive or violent behavior.

In a systematic review of the topic of violence in public schools, Silva and Negreiros (2020) highlighted that school violence must be considered multifaceted and multicausal. However, studies also show that "licentious and authoritarian practices on the part of teachers end up creating spaces for social relationships susceptible to the emergence of conflictive situations in which students exhibit violent behavior" (2020, p. 333).

In this sense, the contribution of this study is to affirm that when the teaching authority is not confused with authoritarianism but presents itself as a figure that respects and welcomes the opinions of students, this affects not only the perceptions about the school environment and its actors but also the behaviors between students, who do not need to resort to violence to deal with conflicts.

In the same direction, studies indicate that positive evaluations of the school climate by students are associated with the prevention of violence, and one of the dimensions of the school climate that may be related to this effect is the establishment of a connection with a respectful and welcoming adult (Cohen et al., 2009). Building a relationship of trust with a teacher depends on mutual respect, predictability of actions, and sharing of values. It would result in greater activity engagement and cooperation with the proposed norms.

On the other hand, as Bueno and Santana (2011) point out, when teaching authority is exercised in the name of coercive power, negotiations are not instituted "as an authoritarian pedagogy that gives orders, controls, and submits gains strength" (2011, p. 335). This type of

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

relationship, in turn, can foster an undemocratic school climate and aggressive attitudes among students.

One thing that caught our attention was that male adolescents reported committing relational aggression more frequently. However, contrary to what was expected, they are also the ones who tend to legitimize teachers more. This apparently contradictory result makes us think that other factors affect the attribution of legitimacy that this research could not capture. Further studies would be essential to investigate, for example, the specificities of the context in which these aggressions occur or how much the perception of legitimacy actually translates into a cooperative attitude towards authorities.

Furthermore, it is worth highlighting that the analysis in question consists of an approach focused on the relationship between the variables and not on patterns that specific subgroups may present. Therefore, it is not possible to identify from this type of analysis whether the male adolescents who most practice relational aggression are precisely the same ones who most legitimize teachers.

In any case, it is also worth highlighting that few Brazilian studies have investigated, from a quantitative and longitudinal perspective, the complex relationships that constitute the school universe and impact the perception of the authority of teachers and the experience of victimization. In this sense, the analyses developed in this study strengthen the importance of thinking about dialogical strategies capable of including students' perceptions and discouraging violent attitudes.

Final considerations

This study sought to analyze the relationship between different victimizations, school climate, teacher legitimacy, and the practice of aggression. Thus, the study demonstrated that different forms of violence at school negatively affect the school climate and the legitimacy of teachers. However, other variables may be critical, and future studies should explore them. For example, the present study could not explore the clarity of the school rules and the consequences of non-compliance with them. This could change the results regardless of whether victimizations are high.

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

Considering only the variables used in this study, breaking the cycle of victimization and violence would require improving the school climate and the legitimacy of teachers, which positively correlate with each other and contribute to reducing the practice of relational aggression. Teachers seen as legitimate authorities are better able to establish rules and ensure compliance with them, which, combined with other factors such as students feeling respected and encouraged to give their opinions, creates a good school climate. This would reduce aggression and, consequently, victimization within the school.

Violence between students is not just a consequence of the bad behavior of some individuals. However, it also concerns how school authorities deal with these incidents daily. How to exercise authority and manage conflicts in the classroom are fundamental elements to create a positive school environment and a perception of legitimate authority that, in the long term, influences students' behavior in the classroom, reducing violence between peers.

More broadly, these results also contribute to thinking about teacher training and educational policies. Addressing the issue of school violence is urgent, as we know that experiences of direct or indirect victimization compromise not only learning but also the integral development of children and adolescents. Going further, constructing a democratic society requires an education free from violence. Therefore, it is essential to understand the factors that impact the reproduction of aggressive behaviors and think about ways to prevent them.

References

Abramovay, M. (Org.). (2002). *Escola e violência*. Unesco.

Adorno, S. (2013). Democracy in Progress in Contemporary Brazil: Corruption, Organized Crime, Violence and New Paths to the Rule of Law. *International Journal of Criminology and Sociology*, *2*, 409-425. https://doi.org/10.6000/1929-4409.2013.02.38

Bueno, F. A., & Sant'ana, R. B. (2011). A experiência geracional na fala de alunos de escola pública: a questão da autoridade docente. *Revista Brasileira de Estudos Pedagógicos*, *92*(231), 316-340. http://educa.fcc.org.br/scielo.php?script=sci_arttext&pid=S2176-66812011000200007&lng=es&nrm=iso

Charlot, B. (2002). A violência na escola: como os sociólogos franceses abordam essa questão. *Sociologias*, (8), 432-443. https://doi.org/10.1590/S1517-45222002000200016

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2a ed.). Lawrence Erlbaum.

Cohen, J., McCabe, L., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, & teacher education. *Teachers College Record*, *111*(1), 180-213. https://doi.org/10.1177/016146810911100108

Cornell, D., Shukla, K., & Konold, T. (2016). Authoritative school climate and student academic achievement, grades, and aspirations in middle and high schools. *AERA Open*, *2*(2), 1-18. https://doi.org/10.1177/2332858416633184

Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child development*, *66*(3), 710-722. https://doi.org/10.2307/1131945

Crick, N. R., Ostrov, J. M., & Werner, N. E. (2006). A longitudinal study of relational aggression, physical aggression, and children's social–psychological adjustment. *Journal of abnormal child psychology*, *34*(2), 127-138. https://doi.org/10.1007/s10802-005-9009-4

Cunha, M. B. (2014). Possíveis relações entre percepções de violência dos alunos, clima escolar e eficácia coletiva. *Educação e Pesquisa*, São Paulo, *40*(4), 1077-1092. http://dx.doi.org/10.1590/s1517-97022014005000010

Durkheim, E. (2013). *Educação e sociologia*. Vozes.

Fagan, J., & Tyler, T. R. (2005). Legal socialization of children and adolescents. *Social justice research*, *18*(3), 217-241. https://doi.org/10.1007/s11211-005-6823-3

Giordani, J. P., Seffner, F., & Dell'Aglio, D. D. (2017) Violência escolar: percepções de alunos e professores de uma escola pública. *Psicologia Escolar e Educacional*, *21*(1), 103-111. https://doi.org/10.1590/2175-3539201702111092

Gomes, A. M. M., Piccirillo, D., & Oliveira, R. T. (2019). Violência na escola e no bairro: o impacto da vitimização na autoridade dos professores e nos comportamentos de quebra de regras de adolescentes. *Revista Brasileira de Segurança Pública*, *13*(2), 158-171. https://doi.org/10.31060/rbsp.2019.v13.n2.986

Gouveia, P.; Leal, I., & Cardoso, J. (2017) Bullying e agressão: Estudo dos preditores no contexto de programa de intervenção da violência escolar. *Revista Psicologia*, *31*(2), 69-88. https://doi.org/10.17575/rpsicol.v31i2.1116

Graça, J., Calheiros, M., & Barata, M. (2013). Authority in the classroom: Adolescent autonomy, autonomy support, and teachers' legitimacy. *European Journal of Psychology of Education,* 28, 1065-1076. https://doi.org/10.1007/s10212-012-0154-1.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1-55. https://doi.org/10.1080/ 10705519909540118.

Kuhn, E., & Laird, R. (2011). Individual Differences in Early Adolescents' Beliefs in the Legitimacy of Parental Authority. *Developmental Psychology*, 47, 1353-65. https://doi.org/10.1037/a0024050.

Lenzi, M., Vieno, A., Sharkey, J., Mayworm, A., Scacchi, L., Pastore, M., & Santinello, M. (2014). How school can teach civic engagement besides civic education: The role of democratic school climate. *American journal of community psychology*, *54*(3), 251-261. https://doi.org/10.1007/s10464-014-9669-8.

Lukes, S. (Ed.). (1986). *Power* (Vol. 2). NYU Press.

Mahar, E. A., Wongsomboon, V., & Webster, G. D. (2018). Relational Aggression. In T. Shackelford & V. Weekes-Shackelford (Eds.), *Encyclopedia of Evolutionary Psychological Science*. Springer. https://doi.org/10.1007/978-3-319-16999-6_195-1.

Moro, A., Morais, A. de, Vinha, T. P., & Tognetta, L. R. P. (2018). Avaliação do clima escolar por estudantes e professores: construção e validação de instrumentos de medida. *Revista de Educação Pública*, *27*(64), 67-90. https://doi.org/10.29286/rep.v27i64.3733

Mucherah, W., Finch, H., White, T., & Thomas, K. (2018). The relationship of school climate, teacher defending and friends on students' perceptions of bullying in high school. *Journal of Adolescence*, *62*, 128-139. https://doi.org/10.1016/j.adolescence.2017.11.012

Novais, E. L. (2004). É possível ter autoridade em sala de aula sem ser autoritário? *Linguagem & Ensino*, *7*(1), 15-51.

Piaget, J., & Inhelder, B. (2003). *A Psicologia da Criança.* (O. M. Cajado, Trad., 3a ed.). Difel.

Resh, N., & Sabbagh, C. (2014). Sense of justice in school and civic attitudes. *Social Psychology and Education*, *17*(1), 51-72. https://doi.org/10.1007/s11218-017-9375-0

Rodrigues, H., Gomes, A. M. M., Piccirillo, D., Oliveira, R. T., & Brito, R. C. (2017). Socialização legal de crianças e adolescentes: revisão da literatura e desafios de pesquisa. *Plural,* *24*(1), 105-123. https://doi.org/10.11606/issn.2176-8099.pcso.2017.127330

Rodrigues, H., & Gomes, A. M. M. (2019). Formação de Atitudes em Relação às Leis: Um Estudo sobre Socialização Legal de Adolescentes em São Paulo. *Revista Santa Rita*, *14*, 41-8.

Romero-Abrio, A., Musitua, G., Callejas-Jerónimo, J., Sánchez-Sosab, J. C., & Vilarreal-González, M. E. (2018). Factores predictores de la violencia relacional en la adolescencia. *Liberabit*, *24*(1), 29-43. https://doi.org/10.24265/liberabit.2018.v24n1.03

Ruotti, C., Alves, R., & Cubas, V. de O. (2006). *Violência na escola: um guia para pais e professores*. Andhep, Imprensa Oficial do Estado de São Paulo.

Sacheto, C. (2020, 13 de março). Em SP, 79% da população soube de violência em escolas, diz pesquisa APEOESP. Apeoesp. http://www.apeoesp.org.br/publicacoes/observatorio-da-violencia/em-sp-79-da-populacao-soube-de-violencia-em-escolas-diz-pesquisa/

Schünemann, H. E. S. (2016) A autoridade docente na percepção de alunos adolescentes. *Revista Educação e Cultura Contemporânea*, *13*(32), 235-255. Disponível em: http://periodicos.estacio.br/index.php/reeduc/article/view/1057/1247

Silva, E. H. B. D., & Negreiros, F. (2020). Violência nas escolas públicas brasileiras: uma revisão sistemática da literatura. *Revista Psicopedagogia*, *37*(114), 327-340.

Silva, E. H. B. da, Sousa, Y. L. G. de, Negreiros, F., & Freire, S. E. de A. (2021). Clima escolar: uma revisão sistemática de literatura. *Revista do NUFEN*, *13*(1), 83-97.

Tavares, P. A. & Pietrobom, F. C. (2016). Fatores associados à violência escolar: evidências para o Estado de São Paulo. *Estudos Econômicos*, *46*(2), 471-498. http://dx.doi.org/10.1590/0101-416146277ptf

Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, *83*(2), 357-385. https://doi.org/10.3102/0034654313483907

Thomas, K. J., Rodrigues, H., de Oliveira, R. T., & Magino, A. A. (2020) What Predicts Pre-adolescent Compliance with Family Rules? A Longitudinal Analysis of Parental Discipline, Procedural Justice, and Legitimacy Evaluations. *Journal of Youth and Adolescence 49*, 936-950. https://doi.org/10.1007/s10964-019-01158-0

Trinkner, R., & Cohn, E. S. (2014). Putting the "social" back in legal socialization: Procedural justice, legitimacy, and cynicism in legal and nonlegal authorities. *Law and Human Behavior*, *38*(6), 602-617. https://doi.org/10.1037/lhb0000107

Trinkner, R., Rodrigues, H., Piccirillo, D., Gifford, F. E., & Gomes, A. M. M. (2019). Legal socialization in Brazil: examining the generalizability of the procedural justice model. *International Journal of Comparative and Applied Criminal Justice, 44*(1-2), 7-27. https://doi.org/10.1080/01924036.2019.1587710

Tyler, T. R., & Trinkner, R. (2018). *Why children follow rules: Legal socialization and the development of legitimacy*. Oxford University Press.

Vieno, A., Perkins, D. D., Smith, T. M., & Santinello, M. (2005). Democratic school climate and sense of community in school: A multilevel analysis. *American Journal of Community Psychology*, *36*(3-4), 327-341. https://doi.org/10.1007/s10464-005-8629-8

Vigotski, L. S. (2001). *A construção social do pensamento e da linguagem*. Martins Fontes.

Weber, M. (1999). *Economia e sociedade: fundamentos da sociologia compreensiva*. Editora UnB.

Weiss, R., & Soares, R. (2021). A educação como socialização em Émile Durkheim. *Revista Espaço Pedagógico*, *28*(1), 13-33. 10.5335/rep.v28i1.11520

Welsh, W. N. (2000). The effects of school climate on school disorder. *The Annals of the American Academy of Political and Social Science*, *567*(1), 88-107. https://doi.org/10.1177/0002716200567001

pro-posições
e-ISSN 1980-6248
http://dx.doi.org/10.1590/1980-6248-2022-0035EN

Submission data:

Submitted for evaluation on April 04, 2022; revised on December 19, 2022; accepted for publication on June 20, 2023.

Autor correspondente:

Gomes, Aline Morais Mizutani *- University of São Paulo—USP, Center for the Study of Violence , R. Prof. Lúcio Martins Rodrigues, 310—Cidade Universitária, São Paulo, SP, 05508-020, Brasil.*

Authorship contributions:

Gomes, Aline Morais Mizutani *- Conceptualization (Equal), Data curation (Supporting), Formal analysis (Equal), Investigation (Equal), Methodology (Equal), Writing—original draft (Lead), Writing—review and editing (Lead).*

Piccirillo, Debora *- Conceptualization (Equal), Formal analysis (Equal), Investigation (Equal), Methodology (Supporting), Writing—original draft (Equal), Writing—review and editing (Equal).*

Theodoro, Renan *- Conceptualization (Equal), Formal analysis (Equal), Investigation (Equal), Methodology (Equal), Writing—original draft (Equal), Writing—review and editing (Equal).*

Komatsu, André Vilela *- Data curation (Equal), Formal analysis (Equal), Investigation (Supporting), Methodology (Equal), Writing—original draft (Equal).*