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Path Analysis of Teachers' and Parents' Support on School Bullying: The Mediator Role of Discipline Climate

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Abstract

Bullying is a significant problem, but there is uncertainty surrounding ways to reduce it. This study utilizes cross-country data from PISA 2018 to investigate potential influences on bullying. Additionally, existing literature on bullying is reviewed to identify promising policy changes. The findings indicate several significant factors related to school bullying, including student gender, grade, family socioeconomic status, school nature, and region. The study reveals that the school discipline climate acts as a mediator between teacher support and school bullying, as well as between parent support and school bullying. It is evident that support from both families and teachers plays a crucial role in effectively preventing school bullying. Although absenteeism and tardiness do not significantly moderate school bullying, they do show a positive correlation with it. Therefore, fostering a positive school atmosphere can help reduce the occurrence of school bullying. These findings provide evidence-based insights into the impact of family and school support on bullying in educational settings. Based on the research, implementing prevention strategies at the school, teacher, family, and student levels is recommended.

Keywords

School bullying, discipline climate, parents' support, teachers' support

1. Introduction

School bullying often refers to the imbalance of students' rights and status, resulting in long-term and repeated deliberate harm toward weak, small, and less privileged individuals (Whitney & Smith, 1993). Bullying encompasses not only physical acts such as beating and physical aggression but also verbal abuse. Verbal bullying constitutes a significant portion of bullying behaviors in several provinces and cities in China. Although the damage caused by verbal bullying may not be visible, its psychological impact can sometimes be more severe than physical harm. According to the theory of social interaction, school bullying is deeply rooted in the dynamics between society, school, family, and students, leading to detrimental effects on various aspects of students' learning and life. These effects are often long-lasting and complex, influencing not only the victim's current education and behavior but also their future as adults. The experience of bullying during adolescence has been found to have a significant association with anxiety indicators in adulthood. Students who have been bullied are at a higher risk of developing anxiety disorders later in life (Armitage et al., 2021). Additionally, school bullying during adolescence can have a subtle impact on students' mental health, leading to an

increased likelihood of displaying anti-social behavior in the future (Bender & Losel, 2011). Therefore, it is crucial to explore prevention strategies for school bullying in order to promote the physical and mental well-being, as well as the overall development, of students.

Numerous studies have consistently shown that school bullying has a significant impact on student's academic achievement and mental well-being. However, there is currently no accurate and practical method to effectively prevent school bullying. Existing research on prevention strategies primarily focuses on establishing the relationship between students' personal and external factors and mitigating school bullying incidents. Regarding personal factors, studies have primarily examined the association between students' self-efficacy and school bullying. Lin (2020) and other researchers discovered that self-efficacy acts as a complete mediator between individual adaptability and school bullying among German middle school students, whereas Chinese students exhibit a partial mediating role. This disparity may be attributed to varying social contexts, as individualistic and collectivistic societies can influence students' self-efficacy levels (Lin et al., 2020). The same situation has been observed in Turkey, where self-efficacy plays a crucial role in the relationship between victims and bullying. A decrease in self-efficacy can result in an increase in bullying behavior. Additionally, Greco (2021) conducted quasi-experimental research and found that Italian students' self-efficacy and adaptability effectively reduce the occurrence of school bullying (Greco, 2021). Victims of bullying may find themselves trapped in a vicious cycle. They may feel a lack of support from the outside world and question their own abilities, which further diminishes their sense of self-efficacy and increases the likelihood of future bullying. Students with high self-efficacy are more likely to seek help and effectively address bullying incidents, whereas those with low self-efficacy often experience fear and avoidance, which can lead to more instances of bullying both behaviorally and psychologically.

The prevention of school bullying is influenced by various external factors, including social factors, school factors, family factors, and student-peer factors. Research has consistently shown that social support plays a crucial role in reducing the incidence of school bullying. For instance, Kastytis (2018) conducted a study in 9 European countries and found that all forms of social support were significantly associated with a decrease in violence among school-age children (Šmigelskas et al., 2018). Therefore, it is important to include different types of social support in strategies aimed at preventing school violence, regardless of socio-economic, historical, or cultural differences between countries. Insufficient social support can leave victims feeling helpless and lead them to choose silence, patience, or even fear of social interaction. Studies have also shown that a lack of social support can contribute to depression among victimized students (Palomares et al., 2018). The prolonged absence of social support can heighten the risk of students experiencing school bullying and developing depression. Students who endure persistent physical and verbal bullying are more likely to have suicidal thoughts. However, they also face the enduring effects of physical bullying. A study conducted in the United States revealed that social support plays a crucial role in moderating the association between victimization and suicidal thoughts. Therefore, social support is essential for preventing and addressing school bullying (Eze et al., 2019). In the context of school research, there is a significant emphasis on the role of school intervention, school belonging, and school atmosphere in preventing school bullying. A study conducted by Díaz Caneja et al. (2021) compared the effectiveness of online intervention, diversity respect and empathy online training, and teachers' intervention against bullying with traditional schools. The results showed that one year after the implementation of these interventions, the school bullying index decreased. Additionally, a positive school atmosphere has been found to have a positive impact on students' academic and social aspects, leading to a reduction in the incidence of bullying. Hultin et al. (2021) discovered that students in schools with a good atmosphere had a lower adjusted odds ratio of bullying compared to students in schools with the worst school atmosphere. Furthermore, when considering the influence of students' families, it has been observed that family dysfunction and negative emotions within the family emotional atmosphere indirectly contribute to school bullying. On the other hand, positive family education methods have been shown to enhance teenagers' interpersonal skills (Chui, Xue, & Khiatani, 2020). In addition, parental violence is a significant contributing factor to bullying. According to a Canadian survey, students who come from families where there is violence between parents and violence from parents towards their children are more prone to being bullied by their peers (Palomares et al., 2018). The words and actions of young people are greatly influenced by their parents. The example effect plays a role here, as parents' violent behavior can impact their children's behavior, leading to either aggressive or submissive tendencies. Consequently, the family environment has a substantial influence on students' involvement in bullying and their behavior at school, shaped by their parents' upbringing and conduct. Furthermore, peer bullying and victimization are prevalent among adolescents. Research conducted by Sabine (2017) on Dutch school-age students revealed that 36% of adolescents engage in moderate to severe bullying of their peers. Additionally, boys are more likely than girls to bully others and become victims themselves (Sabine et al., 2017). According to the study, certain individual characteristics such as obesity and immigration can contribute to an increased likelihood of peer bullying. The research revealed that obesity increases the probability of peer bullying by 3.015 times ($P = .018$). Additionally, the study found that an increase in trait anxiety and depression symptoms also raises the

possibility of peer bullying (Ahin & UKrl, 2021).

In conclusion, the current research results on school bullying prevention strategies consider various factors such as students' personal, family, school, society, and peers. The researchers have used quantitative research methods to construct a path analysis model that examines the relationship between school bullying and these factors. The main methods employed include multi-layer regression and structural equation modeling. However, it is important to note that the research has some limitations. The researchers failed to consider the important role of teachers' and parents' support in protecting students, enhancing discipline, and reducing high-risk behavior when developing the relationship models between family and school bullying, school and school bullying, and school atmosphere and school bullying. Furthermore, they did not attempt to establish the relationship between family-school atmosphere and school bullying, as well as school support-school atmosphere and school bullying. Therefore, this study aims to examine the connection between external support, discipline atmosphere, and school bullying, using a structural equation model to investigate the relationship between these variables. The findings of this study can provide theoretical and practical support for preventing school bullying. This paper is divided into three main parts. Firstly, it provides a theoretical background on the role of teachers' and parents' support, school atmosphere, and campus bullying. Secondly, it presents the research methods and results of this study. Finally, based on the research findings, prevention strategies for bullying at the school, family, and individual levels are discussed.

2. Influencing factors of school bullying

2.1 Effects of parent and teacher support on school bullying

School bullying has detrimental effects on students' academic performance and their overall personality development. These negative consequences can persist into adulthood, leading to problematic behaviors later in life. Research suggests that bullying during adolescence or being a victim of bullying can significantly impact individuals in their adult years. However, the support provided by parents as a form of family capital can effectively enhance students' sense of protection and reduce the likelihood of school bullying. Numerous studies have demonstrated that maintaining warm family relationships and fostering a positive family environment can help mitigate the occurrence of bullying in schools and minimize the negative impact on victims (Bowes et al., 2010). Moreover, offering support to students who have experienced bullying can also reduce the risk of developing depression in adulthood (Stapinski et al., 2014). Therefore, parents should engage in timely communication with their children, covering not only academic performance but also emotions and relationships with peers. Some children may suffer from low self-esteem due to their family background or educational methods, leading them to follow the herd mentality and engage in bullying. Research has shown that when parents communicate with their children, understand their peers, provide support during difficult times, and encourage learning, it effectively reduces the likelihood of bullying or being bullied by other students (Shetgir et al., 2012). Conversely, when parents and teachers show less care towards children, students may seek attention by bullying others and disrupting the classroom. Teachers' support for students plays a crucial role in protecting them from psychological or physical harm caused by school bullying, especially during difficult times. A study conducted by Reavis, Keane, and Calkins (2010) revealed that students who were not bullied perceived twice as much support from teachers compared to those who were bullied. When teachers demonstrate support for students, they become more attuned to their emotional changes, thereby helping to prevent school bullying. Conversely, inadequate support from teachers may result in missed opportunities to prevent bullying, increasing the likelihood of students becoming victims (Furlong, 1995). Adolescent students are particularly vulnerable to external influences. A supportive school environment with clear rules and regulations encourages students to exhibit confidence when faced with bullying incidents and provides them with necessary assistance, reinforcing their anti-bullying stance (Miranda, Oriol, & Amutio, 2019). Existing studies have also shown that teachers' support for students has a unique preventive effect on adolescent bullying (Demol et al., 2020).

2.2 Effects of parental and teacher support and disciplinary climate on school bullying

Observing discipline is a fundamental requirement for managing schools and ensuring a conducive learning environment. It serves as a means to instill behavior norms in students. However, in educational practice, students often engage in disruptive behaviors that disturb classroom order, hinder other students' learning, set a negative example, and create an unhealthy atmosphere. Discipline, in this context, does not merely involve adhering to rules or blindly following teachers' instructions without questioning. It refers to behaviors that have a negative impact, such as being unable to settle down before class, causing disturbances during class, frequently being absent or late, and other actions that disrupt the flow of the class. Although research has shown that absenteeism, such as arriving late or leaving early, may not significantly affect student performance, it can be an indicator of potential dropouts and can disrupt the overall school environment, leading to high-risk behaviors (Smerillo, Reynolds, & Temple, 2018). This phenomenon may be attributed to the fact that

truancy provides students with unsupervised time, during which their behavior is not restricted by rules. This can lead to school bullying, fighting, and excessive internet usage outside of school. A survey conducted in the United States revealed that students who frequently skip classes are more likely to engage in alcohol and drug use (Hallfors et al., 2002). Other studies have also found a strong correlation between students who frequently skip class and their involvement in school bullying and disruption of school discipline, which can negatively impact other students (Wilson et al., 2008). Adolescent students, who are in a stage of physical and mental development, tend to imitate the behaviors of their peers and teachers. When their peers exhibit disciplinary behaviors such as absenteeism and tardiness, students who are not engaged or interested in learning often perceive these behaviors as acceptable and may adopt them as well. Arriving late and leaving early reflect to a certain extent students' attitudes toward fleeing from school and idleness. Studies have shown that students who are bullied are more likely to be absent from school and be late than those who are not bullied (Townsend et al., 2008). Due to fear and embarrassment, bullied students tend to skip class as a negative behavior to avoid school bullying (Hutzell & Payne, 2012). Student chronic absence is correlated with school fear and the school bullying index (Dunne et al., 2013). However, implementing strict school discipline can help reduce risky behaviors among high school students, such as fighting and gang formation, and also prevent school bullying (Crowley & Datta, 2018). In other words, strict school discipline promotes positive behaviors and decreases high-risk behaviors among students. Furthermore, research has found that teachers' support and parental supervision are among the main factors influencing students' class skipping, which has become a significant predictor of student drinking and drug use. Allowing students to spend more time in school during class hours can contribute to the prevention or delay of unhealthy behaviors, such as drug abuse, among young people (Henry & Huizinga, 2007). Therefore, it is important for parents and teachers to enhance their support for students, effectively communicate with them, and provide timely assistance, especially when students face difficulties in school. This support should not only focus on academic performance and progress but also on the overall development of students, including their self-protection awareness and communication skills. The stronger the support from parents and teachers, the less likely students are to skip school, and the more conducive the disciplinary atmosphere becomes. The plasticity of the teacher-student relationship and teachers' support can not only enhance students' learning vision but also stimulate their learning and increase their recognition of the school (Gehlbach, Brinkworth, & Harris, 2012). A positive school atmosphere, along with organized teaching and clear rules and regulations, can reduce students' violations of discipline and other disruptive behaviors. Additionally, it has been found that a strong teacher-student relationship, coupled with effective classroom management and a positive disciplinary climate, is significantly associated with a decrease in students' negative behaviors (Jennings & Greenberg, 2009). Therefore, educators play a crucial role in preventing bullying in schools. Bullying incidents are closely linked to disciplinary violations, such as disrupting classroom order and school absences (Jiménez et al., 2021). Creating a supportive environment can enhance students' willingness to seek help, enabling them to concentrate on their studies and fostering positive peer relationships (Ma, 2002).

3. Research and design

3.1 Data source

The data used in this study are sourced from The Program for International Student Assessment (PISA) database, which is a research project conducted by the Organization for Economic Cooperation and Development (OECD). PISA aims to evaluate the reading, mathematics, and science abilities of 15-year-old students, assessing their mastery of knowledge and skills necessary for societal participation. The sampling process utilized stratified sampling and two-stage sampling in four provinces and cities in China. A total of 12,058 students from 361 sample schools were selected to participate in the test. The research data comprises students' background questionnaires, encompassing variables related to school, family, and personal factors, which are relevant to the research objectives. Leveraging the PISA 2018 data, this study aims to investigate the correlation between school bullying, discipline climate, and external support in China. The findings seek to offer insights for educational decision-making.

3.2 Variables description

3.2.1. Explanatory variables: parents' support, teachers' support

The independent variables of this research consist of parents' support and teachers' support, which include two dimensions and 7 questions. In PISA 2018, the degree of parents' support for students is examined, which includes three aspects: supporting students' efforts and achievements in education, providing support when students encounter difficulties in school, and encouraging students to be confident. Each observation indicator is collected using a 4-point scale (1=strongly disagree/4=strongly agree). A higher index indicates a greater degree of parents' support. Teachers' support includes four aspects: showing a strong interest in each student's learning, providing extra help when students need it, assisting students

in learning, and continuing teaching until students understand. Each observation indicator is collected using a 4-point scale (1=never or almost never, 2=some classes, 3=most classes, 4=all classes). For the convenience of analysis, the research has performed reverse scoring for this variable (Assignment method: 1=never or almost never, 2=some classes, 3=most classes, 4=all classes). A higher index indicates a greater degree of teachers' support.

3.2.2 Intermediary variables: classroom discipline, absenteeism, and lateness

The mediation variable includes two dimensions and a total of 8 questions. In terms of classroom discipline, PISA2018 investigated the frequency of various incidents in the classroom. These incidents include students not listening to the teacher, the class being chaotic and noisy, the teacher having to wait a long time for the students to calm down, students not studying well, and students not being engaged in learning for a long time after the beginning of school. The index for classroom discipline indicates that a higher value represents better discipline in the classroom. Another aspect examined in PISA 2018 was absenteeism and lateness. The survey measured the frequency of students being chronically absent for a whole day and being late for some classes. The index for absenteeism and lateness indicates that a higher value represents a higher frequency of students being late.

3.2.3 Explained variable: school bullying

PISA2018 examined the frequency of various experiences among students, using a scale of 1 to 4 to indicate the occurrence (1=never or almost never, 4=once a week or more). These experiences included being deliberately excluded by other students, being made fun of, being threatened, having belongings taken or destroyed by classmates, being physically assaulted or pushed around, and being subjected to the spread of malicious rumors by other students. The 4-point integration method was employed to measure the extent of bullying faced by students, with a higher index indicating a greater degree of victimization.

4. Descriptive statistics

Based on the statistical analysis of sample differences (Table 1), it was found that there are significant differences in the control variables. Firstly, a significant difference was observed between girls and boys (Mfemale = 1.19 < Mmale = 1.34, t = -19.38, P < .001). Boys exhibited a higher vulnerability to school bullying compared to girls. Secondly, a significant difference was found between private schools and public schools (Mpublic = 1.26 < Mprivate = 1.32, t = -4.652, P < .001). Private school students were found to be more susceptible to school bullying when compared to students in public schools. Lastly, there was also a significant difference between urban and rural schools (Murban = 1.25 < Mrural = 1.29, t = -4.130, P < .001). The study found that bullying was more prevalent in rural schools compared to urban schools. Additionally, there were significant differences in the social and economic status of students in the schools (MESCS high = 1.25 < MESCS low = 1.29, t = -4.437, P < .001). Students from lower socio-economic backgrounds were found to be more susceptible to bullying compared to students from higher socio-economic backgrounds. Furthermore, the analysis revealed significant differences in students' grades (Msenior = 1.26 < Mjunior = 1.28, t = -1.971, P < .05). Junior middle school students were found to be more vulnerable to bullying compared to senior high school students.

Table 1. The sample descriptive statistics

	Female-Male	Public-Private	City-Village	ESCS High-Low	High school-junior middle school
	Female	Public	City	ESCS High	High school
N	5775	10408	7433	5995	7740
M	1.19	1.26	1.25	1.25	1.26
SD	0.35	0.45	0.45	0.45	0.45
	Male	Private	Village	ESCS Low	Junior middle school
N	6283	1650	4625	5995	4318
M	1.34	1.32	1.29	1.29	1.28
SD	0.53	0.49	0.48	0.47	0.47
			difference (t)		
School bullying	-19.385***	-4.652***	-4.130***	-4.437***	-1.971*

Note：*** P<0.001，** P<0.01，* P<0.05

5. Correlation analysis

To further examine the relationship between the variables, a correlation analysis was conducted (Table 2). The findings revealed significant correlations between parents' support, teachers' support, classroom discipline, late arrival and early leave, and school bullying, thus providing a basis for future research. Specifically, school bullying displayed a significant negative association with parents' support (r=-0.146, p0, p<0.001), while showing significant negative correlations with absenteeism and lateness (r<0, p<0.001). The support of teachers and parents can help decrease school bullying by improving classroom discipline and encouraging students to follow school rules and regulations. On the other hand, arriving late and leaving early can contribute to the occurrence of school bullying, which provides initial evidence for the research hypothesis. Additionally, the discrimination validity (AVE) is above 0.36, which falls within an acceptable range. Moreover, the square of the discrimination validity (AVE) is higher than the standardized correlation coefficient of each dimension, indicating that the latent variables in this study have good convergent and discriminant validity.

Table 2. Latent variable correlation coefficient matrix and discrimination validity

	Mean	AVE	Parents' support	Teachers' support	Classroom discipline	School bullying	Absenteeism and lateness
Parents' support	3.330	0.769	**0.877**				
Teachers' support	3.393	0.618	0.202***	**0.786**			
Classroom discipline	3.414	0.610	0.150***	0.281***	**0.781**		
School bullying	1.268	0.485	-0.146***	-0.176***	-0.262***	**0.696**	
Absenteeism and lateness	1.163	0.368	-0.097***	-0.097***	-0.180***	0.178***	**0.607**

Note：*** P<0.001； The black body on the diagonal is the AVE root value; the lower triangle is the Pearson correlation coefficient.

6. Setting model and hypothesis testing

Based on the theoretical model constructed in the previous article, this study aims to analyze the impact of parents' and teachers' support on school bullying using a structured equation model. The study also examines the mediator effect of external support on school bullying through discipline climate. The model data was tested using AMOS 23.0.0 software, and the results indicate that the model fit index is better, suggesting that the constructed model aligns well with the observed data. The model is considered a strong theoretical model (2/df=12.778, RSMEA=0.0310.9, NFI=0.981>0.9, TLI=0.982>0.9, CFI=0.982>0.9). The study obtained standardized path coefficients for the latent variables of external support, discipline climate, and school bullying (Figure 1), and each path was found to be statistically significant (p<0.001) based on the theoretical model. The research assumes that obtaining support from parents and teachers (H1-H7) is associated with improved classroom discipline, reduced student tardiness, and decreased occurrences of school bullying. Classroom discipline and absenteeism are identified as intermediary factors. Specifically, parental support can contribute to the reduction of school bullying by enhancing classroom discipline (20.19%) and preventing absenteeism (11.34%). Similarly, teacher support indirectly reduces school bullying by improving classroom discipline (42.57%) and preventing absenteeism (16.31%).

Based on the standardized coefficient diagram in Figure 1, this study conducts a path test on the relevant research hypotheses in the model to clarify the effect of each latent variable. The Bootstrap program is used to test, and the significance of the hypothesis test result is determined by whether the 95% confidence interval contains 0 (Baron & Kenny, 1986). According to the mediation effect test procedure proposed by Wen Zhonglin et al., Table 3 shows that parents' support has a direct effect of -0.0719 on school bullying, with a Bootstrap 95% confidence interval of [-0.0843, -0.0596]. Since the confidence interval does not include 0, it indicates that the direct effect is significant and suggests that parents' support can reduce school bullying. The results support hypothesis H1, indicating that there is a mediator effect of classroom discipline between parents' support and school bullying. The coefficient for this mediator effect is -0.0242, with a Bootstrap 95% confidence interval of [-0.0285, -0.0201]. Since the confidence interval does not include 0, it suggests that the indirect effect is significant. Furthermore, the mediator effect accounts for 23.05% of the relationship between parents' support and school bullying. Similarly, there is also a mediator effect of absenteeism and lateness between parents' support and school bullying. The coefficient for this mediator effect is -0.0089, with a Bootstrap 95% confidence interval of [-

0.0117, -0.0063]. Again, the confidence interval does not include 0, indicating a significant indirect effect. The mediator effect accounts for 8.47% of the relationship between parents' support and school bullying. In summary, these findings suggest that parents' support can indirectly reduce school bullying by improving classroom discipline and preventing absenteeism and lateness. The results confirm hypotheses H5 and H6. The direct effect of teachers' support on school bullying is -0.105 (Bootstrap 95% confidence interval: [-0.0813, -0.0578]). As the confidence interval does not include 0, it indicates that the direct effect is significant, suggesting that teachers' support for students can significantly reduce the occurrence of school bullying. Therefore, Hypothesis H2 is supported. The mediator effect of classroom discipline between teachers' support and school bullying is -0.0392 (Bootstrap 95% confidence interval: [-0.0449, -0.034]), and the confidence interval does not include 0, indicating that the indirect effect is significant. The mediator effect accounts for 33.51%. Similarly, the mediator effect of absenteeism and lateness between parents' support and school bullying is -0.0084 (Bootstrap 95% confidence interval: [-0.0113, -0.006]), and the confidence interval does not include 0, suggesting a significant indirect effect. The mediator effect is 6.84%, demonstrating that teachers' support can indirectly reduce school bullying by improving classroom discipline and preventing absenteeism and lateness. The verification of hypotheses H3 and H4 is supported by the output. Furthermore, based on the data presented in Table 3, it can be concluded that classroom discipline has the most significant mediating effect on the relationship between teachers' support and school bullying (B=-0.0392, P<0.001). On the other hand, absenteeism and lateness have a relatively small mediating effect (P<0.001).

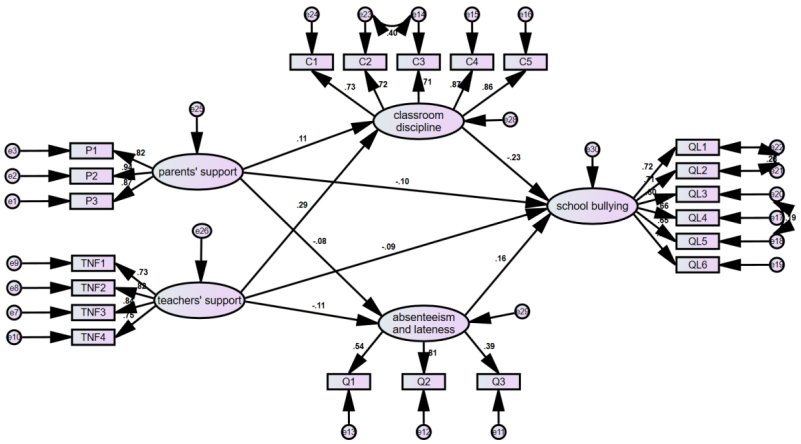

Figure 1. Result verification of structural equation model.

Table 3. Path test on Bootstrap mediation effect

path	Point estimate	SE	Bootstrap 95%CI		p
			Upper limit	Lower limit	
parents' support-classroom discipline-school bullying					
direct effect: parents support school bullying	-0.0719	0.0063	-0.0843	-0.0596	***
parents' support-classroom discipline-school bullying	-0.0242	0.0026	-0.0285	-0.0201	***
parents' support-arrival late and leave early-school bullying	-0.0089	0.0014	-0.0117	-0.0063	***
Total indirect effect	-0.0330	0.0026	-0.038	-0.028	***
Total effect	-0.105	0.0080	-0.122	-0.089	***
teachers' support-classroom discipline-school bullying					
direct effect: teachers support school bullying	-0.0696	0.006	-0.0813	-0.0578	***
teachers' support-classroom discipline-school bullying	-0.0392	0.0028	-0.0449	-0.034	***
teachers' support-arrival late and leave early-school bullying	-0.0084	0.0014	-0.0113	-0.006	***
Total indirect effect	-0.0476	0.0031	-0.0538	-0.0419	***
Total effect	-0.1170	0.0070	-0.1320	-0.103	***

7. Research results

This study utilizes the PISA2018 national survey data to construct a structural model that examines the impact of teachers' and parents' support, as well as discipline climate, on school bullying. It further investigates the mechanism through which teachers' support, parents' support, classroom discipline, absenteeism, and lateness influence school bullying. The findings of this study are as follows:

7.1 Male students, students from private schools, students from rural areas, students with low socioeconomic and cultural status (ESCS), and junior high school students were found to have a higher likelihood of experiencing bullying at school

The results of the analysis indicate significant variations in school bullying based on gender, residence type, school type, family economic income, and student grade. Boys are more prone to being bullied in school compared to girls. Students in private schools experience higher levels of bullying than those in state schools. Additionally, students in rural schools report a significantly higher incidence of bullying compared to those in urban schools. Furthermore, students from lower socioeconomic backgrounds are more likely to be victims of bullying compared to their counterparts from higher socioeconomic status families. High school students also face a higher risk of being bullied. These findings align with previous research studies (James & Unnever, 2004; Chester, 2015; Craig, 2009; Khoury et al., 2004). The study establishes a connection between students' gender, school type, family socioeconomic status, and their vulnerability to bullying (Saarento, Garandeau, & Salmivalli, 2015).

7.2 The discipline atmosphere partially acts as an intermediary between the support provided by parents and teachers and the occurrence of campus bullying

The study revealed significant negative correlations between parental and teacher support and school bullying, as well as between classroom discipline and school bullying. On the other hand, absenteeism and lateness showed a significant positive correlation with school bullying. Parental and teacher support were found to be effective in preventing school bullying while fostering a positive school atmosphere can effectively reduce the risk of bullying. Students who frequently arrive late or leave early are more likely to experience disciplinary issues and engage in school bullying. These findings align with previous research conducted by Hellfeldt et al. (2020) and Sung, Valcke, and Chen (2020). Students' perception of external support and a positive school environment play a crucial role in preventing campus bullying, while a disciplinary atmosphere reduces the likelihood of such behavior (Michal, 2021). Furthermore, this study demonstrates that parental support not only directly reduces school bullying but also indirectly through the promotion of a disciplinary climate. Teachers' support can have a direct impact on reducing school bullying. Additionally, it can indirectly contribute to reducing bullying by fostering a positive disciplinary climate. Classroom discipline acts as an intermediary between the support provided by teachers and parents and its effect on school bullying. Although absenteeism and lateness have a minor mediating effect on the impact of support from teachers and parents on bullying, they significantly contribute to the occurrence of bullying ($B=0.16$, $P<0.001$). This finding aligns with previous research that has shown that support from families and teachers effectively prevents school bullying (Ma, 2002). Furthermore, a positive school atmosphere, as opposed to a negative one, can also help reduce the frequency of bullying (Låftman, Östberg, & Modin, 2017).

8. Discussion and suggestions

8.1 Strengthen school mental health education and publicize anti-bullying laws

The indifference to bullying is even more terrifying than bullying itself. It is crucial to enhance the staff's understanding of bullying behaviors and promptly identify and address them. Schools should not only provide mental health education for students but also prioritize the dissemination of mental health education among teachers. By doing so, we can raise awareness among education managers about the dangers of bullying in schools. Teachers should be educated about the various types of bullying behaviors and be equipped to recognize and intervene when bullying occurs. The absence of ideological education and mental health education within the school environment not only impacts the mental well-being of students but also encourages anti-social behaviors. The act of being 'anti-classroom' directly contributes to students' disobedience and disrupts the order within the classroom. The psychology of the 'false audience' intensifies this situation. Despite teachers criticizing disruptive behaviors in the classroom, it fails to calm the 'leadership awareness' and 'focus awareness' of adolescent students. This leads to students appearing to obey management while actually inciting, instigating, or deliberately challenging classroom discipline. Unhealthy classroom discipline not only hampers students' learning

but also gives rise to more serious risk behaviors such as bullying, ridicule, squeezing, and pushing others. If schools do not sufficiently acknowledge and address bullying incidents in a timely manner, it can reinforce students' perceptions of bullying and encourage unhealthy behaviors. Therefore, it is crucial to enhance students' mental health education, promote awareness of laws pertaining to school bullying, and pay special attention to rural and private schools. Carrying out school bullying education based on specific bullying cases can help students understand the negative impact of school bullying and the unhealthy experiences of bullied students. This education is beneficial for improving students' legal awareness, promoting the development of positive peer relationships, enhancing their self-protection awareness, and guiding them to consciously abide by school regulations. Bullies often exhibit self-centered behavior and are more narcissistic and arrogant than their peers. They may hold prejudice against students who are not part of their small groups and consider bullying as a normal behavior. Students who engage in bullying often fail to comprehend the harm they inflict on others. They view bullying as a means to solidify their social status and derive pleasure from it within their small groups. Therefore, it is crucial to strengthen students' ideological health education to address these tendencies. While bad habits can be formed quickly, correcting them may require more time and effort. Additionally, parents and teachers should pay particular attention to the mental health of boys, as they are more susceptible to being bullied in school compared to girls.

8.2 Pay attention to the performance of students in school and grasp the handling standards

The evaluation method based solely on marks hinders parents and teachers from understanding students' mental health and neglects the development of their interpersonal relationships and emotional management skills. The consequences of school bullying extend beyond physical harm and include psychological stimuli such as 'ridicule' and 'rumors' that are not directly observable by parents and teachers. Bullied students often become introverted, have difficulty communicating, struggle with peer relationships, and lack problem-solving skills (Hong & Espelage, 2012). Providing support from parents and teachers can effectively reduce the occurrence of school bullying and encourage students to adhere to classroom rules. However, the level of support from teachers varies, and they may not be able to address every instance of aggressive behavior or bullying experienced by students. When teachers handle bullying incidents unfairly or inadequately, it can reinforce a culture of bullying among students, as the perpetrators of previous bullying incidents did not receive the expected punishment. Teachers should exercise caution when addressing these incidents, ensuring that punishments and sarcastic remarks are not excessively severe as they may amplify students' animosity towards victims. It is important not to overly focus on the specifics of the bullying behavior, but rather on putting an end to bullying, providing education to students involved, and safeguarding the well-being of victims, particularly those from disadvantaged backgrounds. The findings of this study reveal that students from higher socioeconomic backgrounds receive significantly more support from teachers compared to their counterparts from lower socioeconomic backgrounds, while the latter group is more susceptible to experiencing bullying in school. Lastly, adolescence represents a crucial stage for students to establish friendships and receive support from their peers through continuous role interactions and exchanges. Parents and teachers should prioritize students' mental health over their academic performance. Additionally, it is essential for parents and teachers to manage their own negative emotions without venting them onto students, as students may inadvertently transmit these emotions to others through the 'cat-kicking effect,' resulting in negative behaviors among students.

8.3 Create a supportive environment and create a positive school atmosphere

According to Eccles and Roeser (2011), spending more time in class and campus activities is crucial for the cultivation of teenagers' personalities and control of social emotions. The study's findings indicate that a positive discipline climate can effectively reduce school bullying, while absenteeism and lateness can contribute to its occurrence ($B=0.16$, $P<0.001$). Students who are frequently absent or late miss out on important schoolwork and class opportunities, resulting in a lack of engagement and academic difficulties. This can lead to a cycle where students become more reluctant to attend classes, further exacerbating disciplinary issues such as weariness, absenteeism, and lateness. The main reasons for student disruption in the classroom are lack of understanding, inability to learn, and lack of motivation to learn. Some students may perceive disruptive behavior as a way to gain 'honor' and elevate their social status within the class, which can lead to a spread of negative behavior. This negative ethos often results in risky behaviors such as stealing or damaging other students' belongings in order to assert dominance. Effective classroom discipline management depends not only on students' individual characteristics and academic performance but also on teachers' professional qualities and experience. When teachers are highly attentive to students' behavior and respond promptly, it subtly influences students' overall behavior and allows for adjustments in management strategies, thereby reducing disciplinary violations (Allen, 2010). This study has also discovered that support from teachers and parents can directly decrease incidents of school bullying. Additionally, it can indirectly reduce school bullying by fostering a disciplinary climate. As a result, it is crucial for parents and teachers

to make efforts to provide students with support and attention, acknowledge the influence of bullying, and promptly address disruptive behavior in the classroom.

Strict classroom discipline should not be seen as suppressing students' nature or creating a boring and rigid learning atmosphere. Instead, it aims to control disruptive behaviors that hinder classroom progress, disturb others' learning, and meet students' learning needs. To achieve this, it is important to strengthen ideological education on absenteeism and lateness, establish effective communication channels between home and school, encourage collaboration between families and schools, and enhance students' sense of discipline. In summary, creating a healthy behavior culture, promptly addressing students' destructive behaviors, implementing clear anti-bullying rules, and fostering a positive school atmosphere are crucial in preventing bullying.

9. Research limitations and prospects

This study constructed a structural model to examine the relationship between teachers' and parents' support, discipline climate, and school bullying. However, it is important to note that there are several other factors that can influence school bullying, such as family economic and cultural capital, school location and size, online activities, and peer relationships. The study solely focused on the relationship between parental and teacher support, school bullying, and discipline climate, without considering the behavioral and psychological variables of students after breaking the discipline. Therefore, future research should explore the behavioral and psychological changes that occur after disruptive behaviors and provide empirical evidence for effective school bullying prevention strategies.

Data Availability Statements

All data generated or analyzed during this study are included in this published article. The other datasets generated during and analyzed during the current study are available from the corresponding author upon reasonable request.

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