

# Harsh parental discipline and school bullying among Chinese adolescents: The role of moral disengagement and deviant peer affiliation

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## ABSTRACT

School bullying is prevalent worldwide and poses a serious threat to the safety of school and students. However, few studies have explored the relationship between harsh parental discipline and adolescents' school bullying. The current study aims to explore the internal mechanism between the two in the Chinese cultural context, and further test the mediating effect of moral disengagement and the moderating effect of deviant peer affiliation. This study recruited 1,246 students in eastern and southern China (average age = 14.48 ± 1.48) to complete the Parent-Child Conflict Tactics Scale, Moral Disengagement Scale, Deviant Peer Affiliation Scale, and the Olweus Bully Questionnaire. The results showed that: The prevalence of school bullying among adolescents accounted for 33.5 %, from most to least are verbal bullying, relational bullying and physical bullying. Harsh parental discipline positively predicted school bullying among Chinese adolescents. After controlling for gender and school type, moral disengagement partially mediated the association between harsh parental discipline and school bullying, and deviant peer affiliation moderated the first and second halves of the mediation effect. Current findings reveal that parents should adopt proper parenting styles and intervene appropriately in their children's dating choices.

## 1. Introduction

School bullying refers to the intentional and repeated negative behavior of one or more students in school, which results in physical and psychological discomfort or injury to other students (Olweus, 2005). Bullying in the traditional sense includes verbal, physical, and relationship bullying (Rivers & Smith, 1994); cyberbullying, is also a form of bullying that happens outside of school following the development of the Internet (Smith, 2015). According to the Global School Bullying Report released by UNESCO in 2019 (UNESCO, 2019), school violence and bullying are prevalent worldwide, with about 32 % of students experiencing at least one instance of bullying. School bullying is also more common in China. For example, Han, Zhang, and Zhang (2017) conducted a large-scale survey in seven Chinese provinces and found that 26.1 % of students reported having experienced bullying. Bullying can result in a range of negative physical and psychological effects for both the bully and the victim (Liu, Qiu, Zhang, & Fan, 2022). In a survey of 1174 Chinese adolescents, Fan et al. (2021) found that bullying

victimization was significantly and positively associated with depressive symptoms. Simultaneously, Sentse (2015) found that chronic bullying can also lay the groundwork for bullies to commit delinquent acts in adulthood and become a potential threat to social safety. Therefore, school bullying has become a recognized school safety issue worldwide.

According to the common view, school bullying is driven by daily conflict among students (Chen & Chen, 2020). However, some studies indicate that compared with school factors, family factors are more likely to contribute to school bullying (Baek, Roberts, Seepersad, & Swartz, 2019). Following the Chinese proverb "Spare the rod, and spoil the child" in traditional Chinese family education philosophy, harsh parental discipline is often considered an expression of parents' love and care. Therefore, in the traditional Chinese cultural context, harsh parental discipline is generally considered beneficial to the development of children and not as neglect (Wang & Liu, 2018). However, in recent years, researchers have found that harsh parental discipline does not always have a positive effect on the development of children and results in negative consequences, such as internalizing and externalizing

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problems (Liu & Wang, 2018; Wang, Wang, & Liu, 2016). Does harsh parental discipline cause school bullying in adolescents? If so, what are the mechanisms (mediating and moderating mechanisms) of the two? These two questions are unclear and deserve in-depth exploration. Therefore, the current study is based on the Chinese cultural context with adolescents as subjects, expecting to provide useful empirical references for family education and school bullying interventions.

### 1.1. Harsh parental discipline and school bullying

Harsh parental discipline belongs to a negative and authoritarian parenting style, which refers to the coercive disciplinary behavior of parents in response to their children's misbehavior (Erath, Elsheikh, & Mark Cummings, 2009). Psychological aggression and corporal punishment are the two forms of harsh discipline with the highest incidence in homes, followed by physical abuse (Liu & Wang, 2018; Wang & Liu, 2014). Harsh parental discipline has a significant effect on the physical and mental development of children; for example, Liu and Wang (2018) found that harsh parental discipline is associated with high levels of adolescent externalizing and internalizing behavior. Wang, Wang, and Xing (2018) showed that both parental psychological aggression and corporal punishment can directly influence child anxiety and that parental psychological aggression is a stronger predictor of child anxiety than corporal punishment. A follow-up study also showed that individuals who experienced high levels of harsh parental discipline exhibited more aggressive behavior in subsequent years (Wang & Liu, 2018). Although bullying is a form of aggressive behavior, it is more serious than aggressive behavior owing to its nature and consequences (Smith, 2015). Therefore, it is necessary to examine the relationship between harsh parental discipline and bullying behavior. Whelan, Kretschmer, and Barker (2014) found that harsh parenting was a predictor of child bullying. Related studies have showed that parental corporal punishment is significantly and positively associated with aggressive behavior among children (Ferguson, 2013; Gómez-Ortiz, Romera, & Ortega-Ruiz, 2016). However, most of these research conclusions are based on the Western cultural background. Whether the same conclusions can be reached in China, where harsh discipline is generally regarded as the correct way of parenting, remains to be studied. A recent study examined the single dimension of harsh parental discipline and found that corporal punishment positively predicted physical bullying among Chinese children (Liu et al., 2022). Based on this, the study proposes hypothesis 1: Harsh parental discipline significantly and positively predicts school bullying among Chinese adolescents.

### 1.2. The mediating role of moral disengagement

As an external factor, harsh parental discipline may not only have a direct effect on problem behavior among adolescents but may also play a role through other internal factors of the individual. Various theories suggest that harsh parental discipline may contribute to school bullying by influencing the internal perceptions of children. For example, according to the General Aggression Model (GAM), input variables such as the external environment, affect the cognitive processes of an individual, which trigger aggressive behavior and school bullying (DeWall, Anderson, & Bushman, 2011). Regarding adolescent aggressive behavior, moral disengagement is the core cognitive variable that has received the most attention, referring to some specific moral cognitive tendencies of individuals, including making the behavior appear less harmful by redefining their behavior, minimizing their responsibility in the consequences of the behavior, and mitigating their identification with the victims' suffering (Bandura, 1999). Related research has shown that there is a significant association between moral disengagement and bullying behavior among adolescents. For example, moral disengagement can significantly and positively predict cyberbullying among adolescents (Kowalski, Giumetti, & Schroeder, 2014). Moral

disengagement was also found to be a significant predictor of traditional bullying behavior, with higher levels of moral disengagement associated with higher rates of bullying (Robson & Witenberg, 2013). Additionally, individuals' levels of moral disengagement are also influenced by the external environment, with the influence of negative family factors on moral disengagement receiving significant attention from researchers (Mazzone & Camodeca, 2019). One study found that harsh parenting significantly and positively predicted moral disengagement among adolescents (Qi, 2019). Children that are subjected to harsh parental discipline and abuse experience impaired moral cognition (Koenig, Cicchetti, & Rogosch, 2004), although they have similar levels of moral disengagement as non-abused individuals, they perceive their moral transgressions as acceptable (Smetana & Kelly, 1989). All these findings suggest that negative, rough family parenting tends to drive children to increase their levels of moral disengagement. Therefore, this study proposes hypothesis 2: Moral disengagement mediates the relationship between harsh parental discipline and school bullying among Chinese adolescents.

### 1.3. The moderating role of deviant peer affiliation

According to the Ecosystem Theory, parents and peers are important proximal factors in the development of adolescents (Bronfenbrenner, 1979). To explore school bullying among adolescents, in addition to focusing on harsh parental discipline, research should also explore peer interactions among adolescents. As children enter adolescence, they interact with their peers more frequently. The kind of peers they associate with during adolescence have a greater impact on their socialization process than at other ages (Steinberg & Monahan, 2009). Particularly, poor peer interaction results in more antisocial behavior among adolescents, such as deviant peer affiliation (Steve & Lee, 2010). Deviant peer affiliation refers to the involvement of adolescents in negative behavior such as fighting, drug abuse, alcoholism, etc., by associating with peers who have violated morals, discipline, or even the law (Rudolph et al., 2014). Social Learning Theory states that peer behavior serves as a role model and reinforcement for adolescents (Song et al., 2014). Related research shows that deviant peer affiliation is a significant risk factor of predicting antisocial behavior among adolescents (Steve & Lee, 2010). For example, one study found that deviant peer affiliation can have a significant positive effect on aggressive behavior among adolescents (Ellis & Zarbatany, 2007). Regarding the research on bullying behavior, Wang, Yang, Wang, Zhang, and Lei (2019) found that the more frequent the deviant peer affiliation, the more the school bullying of individuals. However, most of the existing studies focused on the influence of a single risk factor on individual bullying behavior, whereas according to the Ecosystem Theory, individuals are inevitably affected by the superposition of multiple risk factors in real life (Appleyard, Egeland, van Dulmen, & Sroufe, 2005). For example, Tian, Yang, Sun, and Bian (2018) found that friendship quality could moderate the relationship between parental conflict and the externalizing problem behavior among junior high school students. They further found that parental conflict had a significant effect on externalizing problem behavior when friendship quality was low. Thus, we hypothesized that high deviant peer affiliation may contribute to the positive effect of parental harsh discipline on adolescent school bullying. This study proposes hypothesis 3a: Deviant peer affiliation moderates the relationship between parental harsh discipline and school bullying among Chinese adolescents.

Deviant peer affiliation affects not only an individual's external behavior but also their internal cognitions and attitudes. Bandura (1996) argued that moral disengagement can be acquired through interacting with peers and that peer support for the results of moral disengagement would reinforce this particular cognitive pattern. The link between deviant peer affiliation and moral disengagement was stronger in adolescence than in childhood (Caravita, Sijtsema, Rambaran, & Gini, 2014). Wang et al. (2019) also found a significant positive

correlation between deviant peer affiliation and adolescent moral disengagement. Deviant peer affiliation has been found to moderate the effects of external environmental factors on intra-individual systems. For example, Wang et al. (2017) found that the promotion effect of parent-child attachment on the psychological capital of middle school students would be significantly weakened when there was too much association with deviant peers. Therefore, we hypothesize that the more frequent the interaction with deviant peers, the stronger the positive predictive effect of harsh parental discipline on the moral disengagement of adolescents. Furthermore, in the process of moral disengagement positively predicting school bullying, more frequent interactions with deviant peers may be more likely to contribute to the occurrence of school bullying among adolescents. Although no studies have directly examined the moderating role of deviant peers in the relationship between moral disengagement and school bullying, one study has found that deviant peers enhance the risk effect of anger/frustration on drug use among reform school students; in other words, the higher the number of deviant peers, the stronger the positive predictive effect of anger/frustration on drug use (Ye, Fang, Liu, Zheng, & Ye, 2016). This suggests that deviant peer affiliation can moderate the relationship between individuals and external behavior. Therefore, this study proposes hypothesis 3b: Deviant peer affiliation moderated the mediating effect of moral disengagement; specifically, the first and second half paths were moderated.

#### 1.4. Current study

In summary, this study constructs a moderated mediation model (see Fig. 1) based on the General Aggression Model and Social Learning Theory to comprehensively explore the relationship between harsh parental discipline and school bullying in the Chinese cultural context. In order to enrich theoretical and empirical studies on the causes of school bullying.

## 2. Methods

### 2.1. Participants

The data of the current study was collected in November to December 2021. A total of six schools (three junior high schools and three senior high schools) were selected from the eastern and southern regions of China; six regular classes were randomly selected in each school for uniform testing using the whole group sampling method. A total of 1302 students participated in this study, of which the data of 56 participants were excluded owing to inattentive responses or incomplete questionnaire information; 1246 valid data were finally obtained, with a valid recall rate of 95.7%. There were 656 male (52.6%) and 590 female students (47.4%). Specifically, in junior high school, 325 (53.2%) were male and 286 (46.8%) were female; in high school, 334 (52.6%) were male and 301 (47.4%) were female; 611 were in junior high school while 635 were in senior high school. These students had an average age

of  $14.48 \pm 1.48$  years. 533 urban students and 713 rural students. In terms of monthly household income, 55 students had less than ¥1000, 338 students had ¥1000 ~ ¥3000, 616 students had ¥3000 ~ ¥6000, 188 students had ¥6000 ~ ¥9000, and 49 students had more than ¥9000.

The current study was approved by the Institutional Review Board, Department of Psychology, Renmin University of China (Approval Number: 2021-1105). When collecting information about the participants, they followed the principle of voluntariness. All the participants provided written informed consent per the Declaration of Helsinki. However, they were free to withdraw during the research process. The questionnaire was filled out anonymously to ensure that their privacy and personal information were kept confidential.

### 2.2. Measures

#### 2.2.1. Harsh parental discipline

This study used the Chinese version of the Parent-Child Conflict Tactics Scale (CTSPC) developed by Straus, Hamby, Finkelhor, Moore, and Runyan (1998) and revised by Wang and Liu (2014). The original scale encompasses nonviolent discipline, psychological aggression, corporal punishment, physical abuse, and severe physical abuse. In this study, psychological aggression (e.g., shouted, yelled, or screamed at me), corporal punishment (e.g., spanked me with bare hand), and physical abuse (e.g., kicked and punched me) were selected as indicators of harsh parental discipline. Children were asked to report the frequency of psychological aggression, physical punishment, and physical abuse by parents in the past year. The original questionnaire used a scale of 0 to 7, with 0 meaning "0 times," 1 meaning "1 time," 2 meaning "2 times," 3 meaning "3 to 5 times," 4 meaning "6 to 10 times," 5 meaning "11 to 20 times," 6 meaning "more than 20 times," and 7 meaning "not in the last year, but before." In line with previous studies, the number of choices of the subjects was transformed into specific frequencies (specific transformations: 0 for "0 times," 1 for "1 time," 2 for "2 times," 3 for "4 times," 4 for "8 times," 5 for "15 times," 6 for "25 times," and 7 for "0 times"; Wang & Liu, 2018). In conclusion, the scores for psychological aggression (5 items), corporal punishment (6 items), and physical abuse (3 items) were summed to give a total score for harsh parental discipline, with higher scores indicating more frequent harsh parental discipline. Related studies have shown that this scale is appropriate for evaluating harsh parental discipline in the Chinese culture (Liu & Wang, 2018). In this study, Cronbach's  $\alpha$  coefficients of the three dimensions and the overall scale were 0.86, 0.93, 0.93, and 0.94, respectively.

#### 2.2.2. Moral disengagement

This study used the Chinese version of the Moral Disengagement Scale revised by Wang and Yang (2010). It encompasses eight dimensions, with a total of 32 questions (e.g., pushing people is just a joke). A 5-point Likert scale was used, with 1 meaning "totally disagree" and 5 meaning "totally agree"; higher scores indicated higher levels of moral disengagement. In this study, the Cronbach's  $\alpha$  coefficient of the scale was 0.94.

#### 2.2.3. Deviant peer affiliation

This study used the Chinese version of the Deviant Peer Affiliation Scale revised by Li et al. (2013) to examine the frequency of contact and interaction between the subject and deviant peers. It is an 8-item scale with a 5-point Likert scale, where 1 means "never" and 5 means "always," and with higher scores indicating more frequent interactions with deviant peers (e.g., cheat in a test; fighting). This study used the adolescent self-report method rather than peer nomination in the anonymity condition, which helped to collect a representative large sample of survey data and reduce the social approval of the subjects. In this study, the Cronbach's  $\alpha$  coefficient of the scale was 0.88.

#### 2.2.4. School bullying

The Chinese version of the Bully Questionnaire developed by Olweus

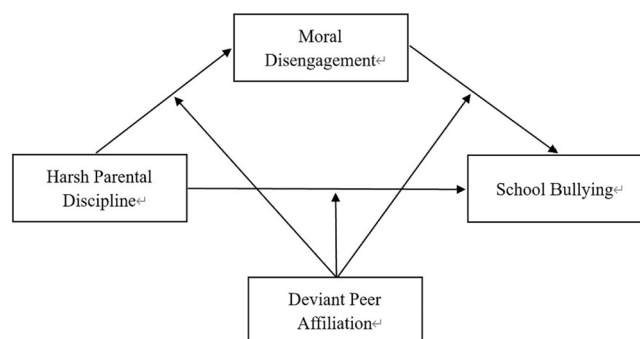


Fig. 1. Moderated mediation model hypothesis diagram.

(1996) was revised by Zhang, Wu, and Kevin (1999). It is a 6-item scale with a 5-point Likert scale, where 0 means “never,” 1 means “Only once or twice,” 2 means “2 to 3 times per month,” 3 means “about once a week,” and 4 means “many times a week.” Physical bullying (I have hit, kicked, pushed, hit or threatened a classmate), verbal bullying (I used to give a classmate nasty nickname), and relational bullying (I had spread some rumors about a classmate) were evaluated separately. Moreover, the subjects were asked how often they had engaged in different bullying behavior in the past six months, with higher scores indicating more frequent school bullying. In this study, the Cronbach’s  $\alpha$  coefficient of the scale was 0.93.

### 2.3. Procedure

First, before the test, we obtained the consent of the school leader, classroom teachers, students’ parents and the students themselves. The experimenters encompassed doctoral students majoring in psychology. After the experimenters read the instructions to the students and confirmed their understanding of the subjects, they asked the students to follow the instructions carefully. The average completion time was approximately 20 min. For the convenience of data sorting, the questionnaire was completed in the computer room of each school. Finally, a notebook was gifted to the participants as a token of appreciation for participating in the study.

### 2.4. Statistical analyses

First, data collation and analysis were performed using SPSS 24.0. Importantly, there may be issues of common method bias as the data for this study were obtained through the subjects’ self-reports. Therefore, we adopted some appropriate means during the study (e.g., anonymous responses, use of reverse scoring, etc.). Second, the means and standard deviations of the main study variables as well as the correlations between demographic information and the main study variables were calculated. Third, according to Aiken and West (1991), all the predictive variables were standardized. Then, structural equation modeling (SEM) was constructed to test the moderated mediation model. Finally, in order to more intuitively reveal the moderating effect of deviant peer affiliation on the mediation model, a simple slope test was conducted for each significant interactive effect. In this study, we used SPSS 24.0, Mplus7.0, and PROCESS 3.0 for data analysis.

## 3. Results

### 3.1. Common method bias test

We used the Harman single factor test for the common method bias test (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003) to further ensure the scientific validity of the data results. The results showed that 10 components emerged with eigenvalues greater than 1 and that the largest single component accounted for 27.63 % of the variance, which was far less than the critical value of 40 %. In addition, we conducted confirmatory factor analysis on all the topics of the study variables, and the results were shown in Table 1. The four-factor model fitted best compared to the other three competing models, indicating that the four variables had good discriminant validity. Therefore, there was no significant common method bias in this study.

### 3.2. Preliminary analyses

Based on previous research, the respondent was considered a bully in the case they exhibited any of the forms of bullying behavior (Guo, Zhu, Fang, Zhang, & Wang, 2020). In this study, bullying was reported by 418 students (33.5 % of the total). Specifically, 11.2 %, 29.7 %, and 20.3 % of students reported having experienced physical bullying, verbal bullying, and relational bullying respectively.

**Table 1**  
Confirmatory factor analysis.

Model	$\chi^2/df$	CFI	TLI	RMSEA	SRMR
$M_1$	19.93	0.31	0.28	0.15	0.18
$M_2$	11.41	0.50	0.59	0.13	0.12
$M_3$	5.36	0.86	0.84	0.07	0.09
$M_4$	2.98	0.95	0.96	0.04	0.05

**Note:**  $M_1$  = Single Factor Model (harsh parental discipline + moral disengagement + deviant peer affiliation + school bullying);  $M_2$  = Two Factor Model (harsh parental discipline + moral disengagement + deviant peer affiliation; school bullying);  $M_3$  = Three Factor Model (harsh parental discipline + moral disengagement; deviant peer affiliation; school bullying);  $M_4$  = Four Factor Model (harsh parental discipline; moral disengagement; deviant peer affiliation; school bullying).

### 3.3. Correlation analysis

Table 2 shows the correlation matrix of the variables in this study. As shown in Table 2, the demographic information on gender and school type was significantly associated with school bullying ( $ps < 0.05$ ). Specifically, school bullying was significantly higher among boys than girls ( $M_{male} = 1.27 \pm 0.63$ ,  $M_{female} = 1.16 \pm 0.45$ ,  $p < 0.01$ ). And school bullying of junior high school students was significantly higher than that of senior high school students ( $M_{junior\ high\ school} = 1.28 \pm 0.68$ ,  $M_{senior\ high\ school} = 1.19 \pm 0.48$ ,  $p < 0.05$ ). Moreover, age, residence and income were insignificantly associated with school bullying ( $ps$  greater than 0.05). Therefore, we entered the control variables of gender and school type in the analysis below. The correlations between the study variables were all significant ( $ps < 0.01$ ), with harsh parental discipline, moral disengagement, and deviant peer affiliation all significantly and positively correlated with school bullying among adolescents. We include further analysis of the relationships between the variables.

### 3.4. The moderated mediation model test

We used Mplus7.0 to test the moderated mediation model, and the results were shown in Fig. 2.

The results showed that the model fit the data well ( $\chi^2/df = 2.58$ , CFI = 0.95, NFI = 0.94, GFI = 0.95, RMSEA = 0.04). After controlling for gender and school type, harsh parental discipline significantly and positively predicted school bullying among adolescents ( $\beta = 0.29$ ,  $SE = 0.03$ ,  $t = 8.89$ ,  $p < 0.001$ ), the harsh parental discipline significantly and positively predicted moral disengagement ( $\beta = 0.31$ ,  $SE = 0.03$ ,  $t = 10.97$ ,  $p < 0.001$ ), the moral disengagement significantly and positively predicted school bullying ( $\beta = 0.39$ ,  $SE = 0.03$ ,  $t = 12.41$ ,  $p < 0.001$ ), and that the predictive effect of harsh parental discipline on school bullying remained significant ( $\beta = 0.17$ ,  $SE = 0.03$ ,  $t = 6.89$ ,  $p < 0.001$ ). This suggested that harsh parental discipline directly predicted school bullying among adolescents and indirectly predicted school bullying through moral disengagement. The indirect effect was further tested using the bootstrap method (see Table 3). It showed a mediating effect value of 0.13 for moral disengagement, accounting for 39.4 % of the total effect.

For the moderating effect of deviant peer affiliation, the results showed that the interaction of harsh parental discipline and deviant peer affiliation significantly and positively predicted moral disengagement ( $\beta = 0.11$ ,  $SE = 0.02$ ,  $t = 4.22$ ,  $p < 0.001$ ), and that the interaction between moral disengagement and deviant peer affiliation significantly and positively predicted school bullying ( $\beta = 0.19$ ,  $SE = 0.02$ ,  $t = 7.23$ ,  $p < 0.001$ ). In contrast, the interaction between harsh parental discipline and deviant peer affiliation insignificantly predicts school bullying ( $\beta = 0.03$ ,  $SE = 0.02$ ,  $t = 1.85$ ,  $p = 0.07$ ). The results showed that deviant peer affiliation moderated the mediating effect in the first and second half paths, rather than in the direct path.

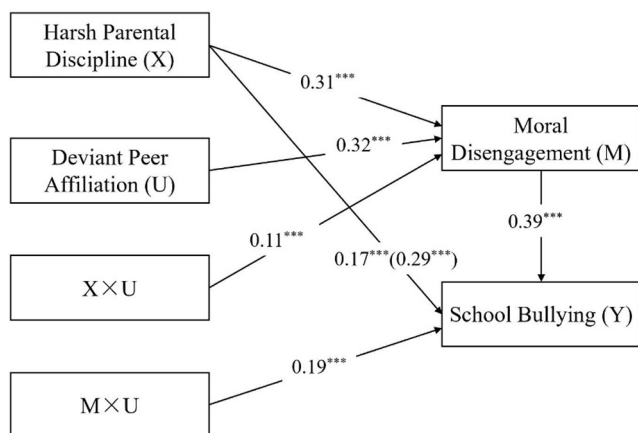
We further performed a simple slope analysis used PROCESS 3.0 to illustrate the moderating effect of deviant peer affiliation more directly.



**Table 2**  
Correlation matrices of variables ( $N = 1246$ ).

	M	SD	1	2	3	4	5	6	7	8	9
1. Gender <sup>a</sup>	—	—	1								
2. Age	14.48	1.48	-0.03	1							
3. School type <sup>b</sup>	—	—	-0.02	0.77**	1						
4. Residence <sup>c</sup>	—	—	0.02	0.04	-0.02	1					
5. Income <sup>d</sup>	—	—	0.03	0.03	0.03	-0.27**	1				
6. HPD	28.81	63.16	-0.02	-0.02	0.02	-0.02	0.01	1			
7. MD	1.81	0.82	-0.08*	0.06	0.09*	0.02	-0.01	0.27**	1		
8. DPA	1.25	0.56	-0.08*	0.14**	0.16**	-0.10*	0.10*	0.37**	0.31**	1	
9. SB	1.22	0.56	-0.09*	0.06	0.07*	-0.05	0.04	0.28**	0.44**	0.32**	1

**Note:** “a” was a virtual variable, 0 = junior high school, 1 = senior high school; “b” was a virtual variable, 0 = male, 1 = female. “c” was a virtual variable, 0 = urban, 1 = rural; “d” was also a virtual variable, 1 = less than ¥1000, 2=¥1,000 ~ ¥3000, 3=¥3000 ~ ¥6000, 4=¥6000 ~ ¥9000, 5 = more than ¥9000; HPD = Harsh Parental Discipline, MD = Moral Disengagement, DPA = Deviant Peer Affiliation, SB = School Bullying, \* $p < 0.05$ , \*\* $p < 0.01$ .



**Fig. 2.** Moderated mediation model structural equation modeling. *Note:* The number in brackets represents the coefficient on the direct path before adding the mediation variable. For the sake of brevity, the control variables of gender and school type were not shown in the figure, the same below.

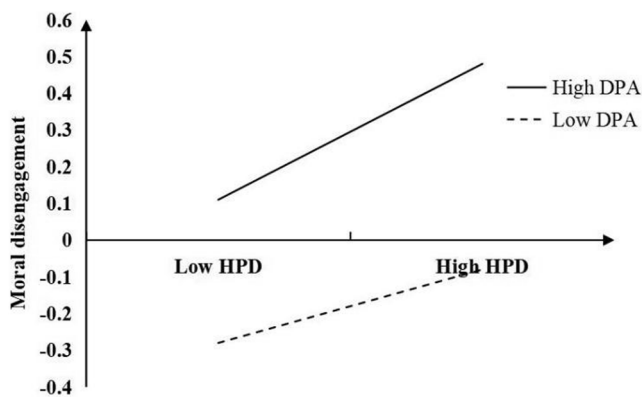
**Table 3**  
Breakdown of the total, direct and mediating effects.

	Effect values	SE	95 % Confidence interval
Total effect	0.33	0.03	[0.28, 0.39]
Direct effect	0.20	0.03	[0.16, 0.25]
Mediating effect	0.13	0.02	[0.09, 0.17]

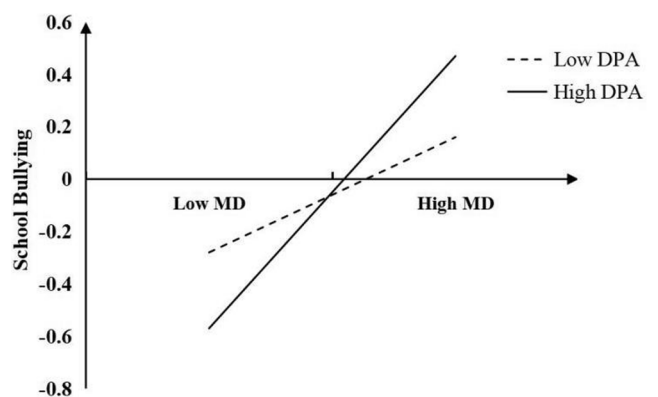
Deviant peer affiliation was divided into “high deviant peer affiliation” and “low deviant peer affiliation” according to the mean  $\pm$  1 standard deviation. As shown in Fig. 3, compared with adolescents with low deviant peer affiliation (*simple slope* = 0.14,  $t = 3.85$ , 95 %CI = [0.07, 0.21]), the positive predictive effect of harsh parental discipline on moral disengagement was stronger among adolescents with high deviant peer affiliation (*simple slope* = 0.31,  $t = 5.11$ , 95 %CI = [0.28, 0.35]). As shown in Fig. 4, compared with adolescents with low deviant peer affiliation (*simple slope* = 0.23,  $t = 5.95$ , 95 %CI = [0.16, 0.29]), the positive predictive effect of moral disengagement on school bullying was stronger among adolescents with high deviant peer affiliation (*simple slope* = 0.52,  $t = 13.57$ , 95 %CI = [0.44, 0.59]). The moderated mediation model is shown in Fig. 5.

**4. Discussion**

This study explores the relationship between harsh parental discipline and school bullying among Chinese adolescents based on the General Aggression Model and Social Learn Theory. The results showed that the prevalence of school bullying among adolescents accounted for 33.5 %, with the highest proportion being that of verbal bullying, followed by relational bullying and physical bullying. This is consistent with previous research (Han et al., 2017), suggesting that verbal bullying is the most prevalent form of school bullying. In the demographic information, school bullying was significantly higher among boys than girls, which was consistent with the findings of previous studies (Scheithauer, Hayer, Petermann, & Jugert, 2010). On the one hand, this may be related to biological factors, as adolescent boys may be influenced by androgenic hormones and thus show higher levels of aggressive behaviors than girls; On the other hand, school bullying in boys may be related to the goal of achieving higher status in the group and gaining dominance, while girls are relatively weaker (Sijtsema,



**Fig. 3.** The moderating effect of deviant peer affiliation on harsh parental discipline and moral disengagement. *Note:* HPD = Harsh Parental Discipline, DPA = Deviant Peer Affiliation.



**Fig. 4.** The moderating effect of deviant peer affiliation on moral disengagement and adolescent school bullying. *Note:* MD = Moral Disengagement, DPA = Deviant Peer Affiliation.

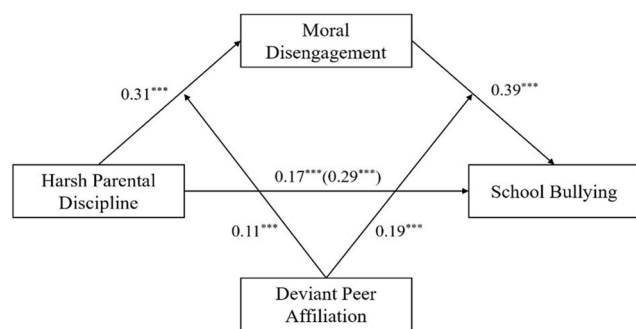


Fig. 5. Moderated mediation model diagram.

Veenstra, Lindenberg, & Salmivalli, 2009). School bullying was significantly higher among junior high school students than senior high school students, consistent with previous studies (Nansel, Overpeck, Pilla, Ruan, & Scheidt, 2001). Junior high school students are weak in moral judgment and self-control due to their rapid physical development and lagging mental development in adolescence. However, senior high school students are close to adults in terms of both mental and moral judgment, and school bullying is relatively rare. Additionally, harsh parental discipline was significantly and positively associated with school bullying behavior among adolescents, validating hypothesis 1. This suggests that harsh parental discipline is a risk factor for predisposing adolescents to school bullying in the Chinese cultural context.

Additionally, moral disengagement as a cognitive factor mediated the relationship between harsh parental discipline and school bullying among adolescents, hence verifying hypothesis 2. Existing studies on harsh parental discipline and adolescent internalization, have identified self-control as an important mediating factor (Bunch, Iratzoqui, & Watts, 2018; Inzlicht, Schmeichel, & Macrae, 2014). However, the research on cognitive mechanisms is scant. According to the Problem Behavior Theory, problem behavior among adolescents is socially constructed and results from interactions between individual characteristics and their social environments, a negative external environment affects an individual's internal cognition and consequently induces problematic behavior (Lee, Kim, Hong, & Marsack-Topolewski, 2021). It is observed that both General Aggression Model and Problem Behavior Theory emphasize that external factors affect aggressive behavior through the internal cognitive processes of individuals, so that harsh parental discipline as a negative external environmental stimulus can result in bullying by positively affecting moral disengagement. Furthermore, Bandura, Barbaranelli, Caprara, and Pastorelli (1996) argued that moral disengagement stems from social learning and is a poor cognitive disposition developed during socialization. Harsh parental discipline drives children to develop an attitude that rationalizes antisocial behavior. Therefore, adolescents subjected to harsh discipline are more likely to have distorted moral cognitions than other adolescents, resulting in more aggressive and bullying behaviors (Mazzone & Camodeca, 2019). Therefore, parents should focus on adopting appropriate and reasonable parenting styles to help their children develop correct moral perceptions and therefore reduce their antisocial behavior.

Regarding the moderating effect of deviant peer affiliation, the results of the study found that the direct pathway between harsh parental discipline and school bullying was not moderated, which is inconsistent with the results of previous studies; therefore, hypothesis 3a was not tested. One possible reason is cultural differences. First, there are differences in parenting goals. Influenced by individualism, which encourages individuality, independence and self-actualization, parents in Western countries (Western Europe, North America) attach importance to their children's independence and self-actualization, and do not pay too much attention to academic achievement. While influenced by collectivism, which values social norms, dependence, obedience and

interpersonal harmony, parents in Eastern countries (China, Japan) attach importance to their children's obedience and obedience to elders, and overemphasize the influence of academic achievement on their life (Chao, 2000; Rao, McHale, & Pearson, 2010). Second, there are differences in parenting styles. Influenced by Confucianism, Chinese parents are obliged to intervene in their children's development, including all aspects of life. Because of the emphasis on the parenting goal of "dependence and obedience", they are more likely to adopt authoritarian parenting style. While in Western countries, because of the emphasis on the parenting goal of "independence and autonomy", they are more likely to adopt democratic parenting style (Schwarz, Schaffermeier, & Trommsdorff, 2005). Thus, the degree of parental influence on their children clearly varies across cultures. Some Chinese scholars have pointed out that parental violence and abuse in Chinese families are the most critical and direct predicting risk factors of adolescent bullying behavior (Zhu, Chan, & Chen, 2018). Thus, although deviant peer affiliation can also contribute to bullying and antisocial behavior among adolescents (Wang et al., 2019), it is not the most important risk factor. The results also showed that both the first and second halves of the mediating effect of moral disengagement were moderated by deviant peer affiliation, verifying hypothesis 3b. This suggests that the effect of deviant peer affiliation mainly affects the cognition of adolescents. According to Fig. 3, the more frequent the deviant peer affiliation, the more likely the cognitive biases formed by family influence are reinforced. Generally, deviant peers have higher levels of moral disengagement (Caravita et al., 2014). So deviant peer affiliation as a catalyst promotes the positive predictive effect of harsh parental discipline on moral disengagement. The results in Fig. 4 suggest that moral disengagement is a stronger positive predictor of school bullying is highly deviant peer affiliations. Social Learning Theory suggests that when adolescents want to bully others and feel justified, they are encouraged and supported by their deviant peers, which consequently increases the incidences of school bullying (Dishion & Tipsord, 2011). Therefore, parents need to intervene and guide their children appropriately during the process of making friends.

This study constructs a moderated mediation model to show, for the first time, the relationship between harsh parental discipline and school bullying among Chinese adolescents. On the one hand, this study found that the mediating role of cognition cannot be ignored in the process of environmental factors affecting individual bullying behavior, at the same time, poor peer relationships are an important risk factor for school bullying. The study enriches the theoretical and empirical studies on school bullying. On the other hand, the study demonstrates that although harsh parental discipline had good effects on children, it also had negative effects. It inspires Chinese parents to choose a reasonable approach to raising their children, such as temper justice with mercy. It is also necessary to intervene in the peer selection of adolescents, to reduce the incidence of externalizing problems.

This study has three limitations: First, this study analyzes both harsh parental discipline and school bullying as an overall factor and does not comprehensively explore the specific relationships between the three sub-dimensions of harsh parental discipline and the three sub-dimensions of school bullying. There are eight dimensions of moral disengagement. Moreover, the dimension of children's moral disengagement that is likely to be enhanced by harsh parental discipline is unclear. Therefore, in future research, we aim to investigate the intrinsic relationship between the sub-dimensions of each variable comprehensively. Second, this study examines the relationship between harsh parental discipline and school bullying among adolescents in a Chinese cultural context. There is a need for cross-cultural research to compare whether the findings apply to other countries and cultures. Third, this study is a cross-sectional study and cannot determine the causal relationship between variables, so longitudinal studies can be used for in-depth analysis in the future.

## 5. Conclusion

The following conclusions were drawn from this study: (1) The prevalence of school bullying among Chinese adolescents accounted for 33.5 %, with verbal bullying being the highest and physical bullying being the lowest. (2) There was a significant positive correlation between harsh parental discipline and school bullying. (3) Moral disengagement played a mediating role in the relationship between harsh parental discipline and school bullying. (4) Deviant peer affiliation moderated the first and second halves of the mediating mechanism of moral disengagement.

## Ethics

The survey materials and study procedures were approved by the Ethics in Human Research Committee of the Department of Psychology, Renmin University (protocol number: 21-009).

**Informed consent:** Informed consent was obtained from all participants included in this study.

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## CRediT authorship contribution statement

**Hang Fan:** Conceptualization, Validation, Writing – review & editing. **Lulu Xue:** Conceptualization, Project administration, Supervision. **Jianwu Xiu:** Methodology, Formal analysis. **Lipeng Chen:** Conceptualization, Supervision, Writing – review & editing. **Shen Liu:** Conceptualization, Supervision, Writing – review & editing.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

Data will be made available on request.

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