

How Does Parent-Adolescent Conflict and Deviant Peer Affiliation Affect Cyberbullying: Examining the Roles of Moral Disengagement and Gender

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Purpose: With the widespread use of the Internet and mobile phone, cyberbullying has become a new type of bullying among adolescents. It is of great practical significance to explore the relevant factors affecting cyberbullying for prevention and intervention of adolescents' cyberbullying. However, few studies have considered the effect of both the family and social factors on cyberbullying. Therefore, the current study examines whether the parent-adolescent conflict as a family factor and deviant peer affiliation as a social factor have an effect on adolescents' cyberbullying, as well as the role of moral disengagement and gender.

Methods: A total of 777 middle school students (females = 336; mean age = 13.57; SD = 0.98) were surveyed by using the Parent-child Relationship Questionnaire, Deviant Peer Affiliation Questionnaire, Moral Disengagement Questionnaire and Cyber Bullying Behavior Questionnaire. SPSS21.0 was used to conduct descriptive statistics, Pearson correlation analysis and *T*-test, PROCESS were used to conduct significance test of moderated mediation effect on the data.

Results: Parent-adolescent conflict does not directly predict cyberbullying. Moral disengagement played a complete mediating role between parent-adolescent conflict and cyberbullying, and gender played a moderating role between moral disengagement and cyberbullying. Deviant peer affiliation directly predict cyberbullying. Moral disengagement played a partially mediating role between parent-adolescent conflict and cyberbullying, and gender played a moderating role between moral disengagement and cyberbullying.

Conclusion: Attention should be paid to the effect of moral disengagement on cyberbullying in family and social factors, as well as the role of gender.

Keywords: parent-adolescent conflict, deviant peer affiliation, moral disengagement, cyberbullying, gender

Introduction

According to the 49th Statistical Report on Internet Development, by December 2022, China had 1.03 billion Internet users.¹ With the popularity of the mobile phone, adolescents' cyberbullying has become a growing concern. Cyberbullying refers to the repeat and deliberate use of electronic information devices such as computer, tablet and mobile phone to harm others.² One study showed that 72.1% of the 950 adolescents had participated in one or more cyberbullying during the past year.³ For adolescents with immature physical and mental development, cyberbullying have a severely negative impact on their physical and psychological development, such as depression, substance use, self-harm, and suicide, etc.⁴⁻⁶ Thus, understanding what factors contribute to cyberbullying is essential to help us develop effective prevention programs.

According to Ecological System Theory, risk factors in different ecological factors have important effect on adolescents' behavior.⁷ The present study focuses on the effect of the family and social factors on cyberbullying. Parent-adolescent conflict, as one of the risks in the family factors, has an effect on adolescents' psychology and behavior.^{8,9} Studies have shown that adolescents who experience parent-adolescent conflict are more likely to exhibit

aggression and bullying behavior.^{10,11} Parent-adolescent conflict puts adolescents in a state of stress and tension, which may also lead to cyberbullying.^{12,13}

After entering adolescence, the influence of peers on adolescents is gradually strengthened, which has become one of the most critical ecosystems affecting adolescents' development. Deviant peer affiliation conflict, as one of the risks in the social factors, has an effect on adolescents' psychology and behavior.¹⁴ Deviant peer affiliation refers to making friends with peers who violate morals and laws.¹⁵ Social learning theory pointed out that individuals learn by observing and imitating role models.^{16,17} In recent years, researchers have examined that deviant peer affiliation positively predicts adolescents' cyberbullying.^{18–20} Hence, the current study hypothesizes that parent-adolescent conflict and deviant peer affiliation will be predictors of adolescents' cyberbullying (Hypothesis 1).

Based on the Ecological System Theory,⁷ parent-adolescent conflict as the family factor and deviant peer affiliation as the social factor, may have indirect effects on adolescents' cyberbullying through their self-factors. A large number of previous studies have examined that moral disengagement is one of the self-factors affecting adolescents' cyberbullying.^{21–23}

The Mediating Role of Moral Disengagement

Moral disengagement refers to specific cognitive tendencies that individuals develop, including redefining their actions to appear less harm, minimizing the responsibility of their action consequences, and reducing recognition with the victim's suffering.²⁴ Moral disengagement will rationalize adolescents' unethical behaviors, leading to more immoral behaviors, such as cyberbullying.^{25,26}

The anonymity, lack of supervision and face-to-face contact between people in the network, resulting in the weakening of moral awareness and moral disengagement is more likely to occur.²⁷ Research shows that moral disengagement is the proximal factor of parent-adolescent conflict and deviant peer affiliation on adolescents' cyberbullying.^{12,28} Notably, Bartolo investigated the mediating role of moral disengagement between family and social factors and cyberbullying, taking into account positive family factor.²⁹ However, we only consider negative family and social factors, parent-adolescent conflict and deviant peer affiliation, which is important to refer to more general parent-child relationships as well as positive relationships. To sum up, the current study proposed the hypothesis that moral disengagement plays a mediating role in the link between parent-adolescent conflict and adolescents' cyberbullying, also deviant peer affiliation and adolescents' cyberbullying (Hypothesis 2).

The Moderating Role of Gender

Previous researches have shown that there are gender differences in cyberbullying. One study indicates that the frequency and extent of cyberbullying are significantly higher for boys than for girls.³⁰ Zhu et al reported that boys would bully others online after being forced offline, while girls will not.³¹ Moreover, a study also found that boys are more likely than girls to engage in cyberbullying.³² According to evolutionary psychology, boys gain more survival and reproductive advantage by using aggression and violence, so boys may be more likely to be involved in cyberbullying.³³ At present, most studies on adolescents' cyberbullying and gender use western teenagers as subjects. Given that there may be cultural differences between Chinese and Western adolescents, it is unclear whether there is a gender difference in cyberbullying among Chinese teenagers. We hypothesized that gender plays a moderating role in the relationship between moral disengagement and cyberbullying (Hypothesis 3).

The Current Study

Although researchers established a preliminary link between parent-adolescent conflict, deviant peer association, moral disengagement, gender, and cyberbullying, there are certain limitations. These studies separately address the relationship between cyberbullying and variables. There is not any research that has examined these relationships together. However, these variables may have a combined effect on cyberbullying besides the independent effects that previous studies have focused on. Therefore, this study examines the moderated mediating model (see Figure 1). This model goes beyond the scope of previous studies on adolescents' cyberbullying and provides a systematic explanation for the positive effect of parent-adolescent conflict and deviant peer affiliation on adolescent cyberbullying.

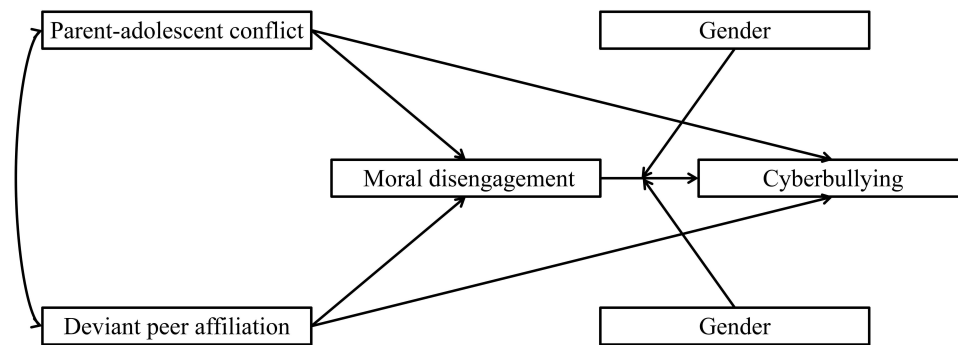


Figure 1 Assumption model of the current study.

Method

Participants and Procedure

In 2021, we conducted a pen-and-paper questionnaire survey in the classroom setting. Psychology graduate students and teachers issued questionnaires to explain matters needing attention (such as research purpose and information confidentiality) and students completed the questionnaire in 30 min, which they could withdraw from the study at any time. The participants were 800 students from two middle schools in Fujian Province, China. Students in grade 1st, grade 2st, and grade 3st were selected by convenient sampling method. After screening for inaccurate or incomplete questionnaires, data from 777 participants were retained. The valid response rate was 97.13%. Of the 777 students, 336 (43.2%) were female, and 441 (56.8%) were male. Among them, 306 students (39.4%) are in the grade 1st, 352 students (45.3%) are in the grade 2st, and 119 students (15.3%) are in the grade 3st. The mean age of the subjects is 13.57 years ($SD = 0.98$, range = 11–16).

Measures

Parent-Adolescent Conflict

Parent-adolescent conflict was assessed by the revised Parent-child Relationship Questionnaire.³⁴ The scale has 8 items, used to investigate the relationship between the participants and their parents. Sample items included “My parents will take my opinion into consideration when we discuss problems together”. “I don’t get much attention from my parents”. A total of eight items were scored on a 5-point scale, with 1(completely disagrees) to 5(completely agrees). The higher the total score, the higher the level of parent-adolescent conflict. In this study, Cronbach’s α for this scale was 0.82.

Deviant Peer Affiliation

Deviant peer affiliation was assessed by the Deviant Peer Affiliation Questionnaire.³⁵ The scale has 8 items, used to investigate the frequency of contact between participants and their deviant peers. Sample items included “My friends steal things from other people or stores”. “My friends robbed, extorted, and threatened people”. A total of eight items were scored on a 5-point scale, with 1(never) to 5(always). The higher the total score, the higher the level of deviant peer affiliation. In this study, Cronbach’s α for this scale was 0.79.

Moral Disengagement

Moral disengagement was assessed by the Moral Disengagement Questionnaire.³⁶ The scale consists of 26-item. Sample items included “In order to let a friend out of trouble, can lie”. “Stealing a little money is not a serious thing compared to someone who steals a lot of money”. The scale uses a 5-point score, with 1(completely disagrees) to 5(completely agrees). The scale includes 8 dimensions, including moral defense, euphemistic labeling, favorable comparison, responsibility shifting, responsibility decentralization, distorted results, blame attribution and dehumanization. The higher the total score, the higher the level of moral disengagement. In this study, Cronbach’s α for this scale was 0.85.

Gender

We used a one-item question that requested students to indicate whether they were boys or girls. Gender was dummy coded such that 1 = male and 2 = female.

Cyberbullying

Cyberbullying was assessed by the Cyber Bullying Behavior Questionnaire.³⁷ The questionnaire consists of six items, such as “I maliciously harass others by phone, text message or Internet”. “I vent my anger by abusing others on the Internet”. Using a 4-point scale, with 1(never) to 4(more than 5 times). The higher the total score, the higher the incidence of cyberbullying. In this study, Cronbach’s α for this scale was 0.78.

Data Analyses

First, SPSS 21.0 was used for data collation and analysis, analyze descriptive statistics, correlation analysis and *T*-test. The second step was to test the mediation model and moderated mediation model using the SPSS macro PROCESS (model 4 and model 59). We boot-strapped 5000 samples from the data and calculated the 95% bootstrap confidence intervals (95% CI), $p < 0.05$ was considered as significance standard. Based on early findings, there are significant differences in cyberbullying rates by grade.³⁸ Thus, the grade was used as control variable in this study.

Results

Common Method Bias

To further test the possible effect of common method bias in the data, Harman single factor test was used to test the common method bias in the collected questionnaire data. The results showed that the variation explained by the largest common factor was 16.24%, lower than the reference standard of 40%.³⁹ This indicates that the effect caused by common method deviation can be ignored in this study.

Preliminary and Descriptive Analyses

The results of the descriptive statistics and correlation analysis are presented in Table 1. There is a positive correlation between parent-adolescent conflict, deviant peer affiliation, moral disengagement and cyberbullying. Gender is positively correlated with deviant peer affiliation, cyberbullying and moral disengagement.

As shown in Table 2, gender differences exist in deviant peer affiliation, cyberbullying and the mediating variable moral disengagement. As shown, males reported higher levels of deviant peer affiliation ($11.08 > 9.98$, $t = 4.53$, $p < 0.001$), moral disengagement ($50.52 > 45.67$, $t = 5.87$, $p < 0.001$) and cyberbullying ($6.62 > 6.18$, $t = 3.86$, $p < 0.001$) than females.

Test of Mediation

Model 4 from the SPSS macro PROCESS was used to test for the mediating hypothesis. As seen in Table 3, after controlling for the grade, multiple regression analysis indicated that the direct effect of parent-adolescent conflict on

Table 1 Descriptive Statistics and Correlations Between All Study Variables

Variables	M (SD)	1	2	3	4	5	6
1. Gender	1.43(0.50)	1					
2. Age	13.57(0.98)	−0.07*	1				
3. Parent-adolescent conflict	21.14(6.31)	0.07	−0.20**	1			
4. Deviant peer affiliation	10.60(3.41)	−0.16**	0.11**	0.21**	1		
5. Moral disengagement	48.42(11.65)	−0.21**	−0.03	0.24**	0.26**	1	
6. Cyberbullying	6.43(1.57)	−0.14**	0.03	0.13**	−0.33**	0.33**	1

Notes: For Gender, Male = 1, Female = 2. * $p < 0.05$. ** $p < 0.01$.

Table 2 Description and Comparison of Key Variables by Gender

Variables	Gender	M	SD	t
Parent-adolescent conflict	Male	20.76	6.42	-1.89
	Female	21.63	6.15	
Deviant peer affiliation	Male	11.08	3.70	4.53***
	Female	9.98	2.87	
Moral disengagement	Male	50.52	12.44	5.87***
	Female	45.67	9.88	
Cyberbullying	Male	6.62	2.00	3.86***
	Female	6.18	0.62	

Note: *** $p < 0.001$.

Table 3 Summary Table of Mediation Effect Analysis

Variables	Moral Disengagement		Cyberbullying	
	β	t	β	t
Grade	0.04	1.85	0.03	2.11*
Parent-adolescent conflict	0.14	6.92***	0.02	1.95
Moral disengagement			0.18	8.88***
R^2	0.06		0.13	
F	24.64***		33.96***	
Grade	-0.00	-0.12	0.01	1.05
Deviant peer affiliation	0.27	7.24***	0.11	5.02***
Moral disengagement			0.17	8.19***
R^2	0.07		0.14	
F	26.91***		42.00***	

Notes: * $p < 0.05$; *** $p < 0.001$.

cyberbullying is not significant ($\beta = 0.02$, $p > 0.05$). Parent-adolescent conflict significantly positively predicted moral disengagement ($\beta = 0.14$, $p < 0.001$). Deviant peer affiliation significantly positively predicted moral disengagement ($\beta = 0.27$, $p < 0.001$) and cyberbullying ($\beta = 0.11$, $p < 0.001$). Hypothesis 1 is partially supported. Controlling for parent-adolescent conflict and deviant peer affiliation, moral disengagement has a significantly positive effect on cyberbullying ($\beta = 0.18$, $p < 0.001$; $\beta = 0.17$, $p < 0.001$). The bias-corrected percentile bootstrap method showed that 95% confidence interval for the mediation effect of moral disengagement excluded zero, therefore validating Hypothesis 2. Moral disengagement plays a completely mediating role in the relationship between parent-adolescent conflict and adolescents' cyberbullying, $ab = 0.03$, 95% $CI = [0.01, 0.04]$. Moral disengagement plays a partially mediating role in the link between deviant peer affiliation and adolescents' cyberbullying $ab = 0.04$, 95% $CI = [0.02, 0.08]$.

Test of the Moderated Mediation Model

Model 59 from the SPSS macro PROCESS was applied to test for the proposed moderated mediation model. As seen in Table 4 and Table 5, Parent-adolescent conflict positively predicted moral disengagement ($\beta = 0.13$, $p < 0.05$). Deviant peer affiliation significantly positively predicted moral disengagement ($\beta = 0.41$, $p < 0.001$) and cyberbullying ($\beta = 0.19$, $p < 0.01$). The interaction of moral disengagement and gender showed effects on cyberbullying ($\beta = -0.14$, $p < 0.01$; $\beta = -0.12$, $p < 0.01$), see Figure 2.

To further determine the specifics of the interaction effect, a simple slope analysis was conducted. As illustrated in Figure 3 and Figure 4, for boys, moral disengagement has a strong positive predictor on cyberbullying ($\beta = 0.22$, $t = 8.55$,

Table 4 Summary of Moderated Mediation Effect Analysis (In terms of Parent-adolescent conflict)

Predictor Variables	Outcome Variables			
	Moral Disengagement		Cyberbullying	
	β	t	β	t
Grade	0.03	1.43	0.02	1.66
Parent-adolescent conflict	0.13	2.28*	0.06	1.73
Moral disengagement			0.35	5.66***
Gender	-0.22	-2.02*	0.27	3.03**
Parent-adolescent conflict \times Gender	0.01	0.21	-0.02	-1.00
Parent-adolescent conflict \times Gender			-0.14	-3.09**
R^2	0.11		0.14	
F	23.33***		20.34***	

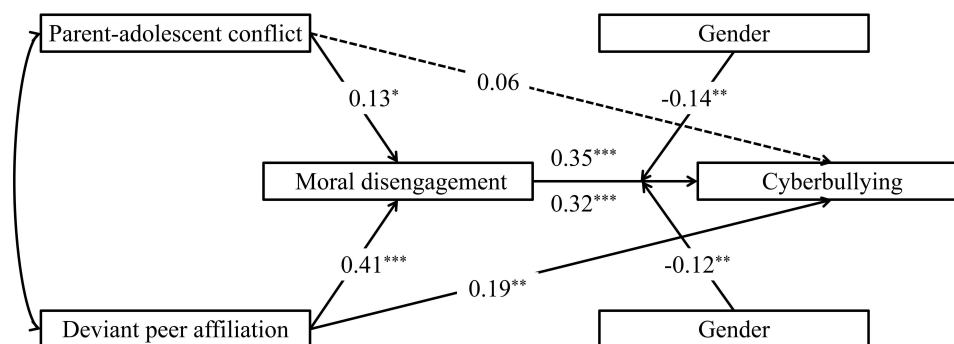
Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 5 Summary of Moderated Mediation Effect Analysis (In terms of Deviant peer affiliation)

Predictor Variables	Outcome Variables			
	Moral Disengagement		Cyberbullying	
	β	t	β	t
Grade	-0.01	-0.35	0.01	0.74
Deviant peer affiliation	0.41	3.77***	0.19	3.00**
Moral disengagement			0.32	5.26***
Gender	0.01	0.13	0.28	3.14**
Deviant peer affiliation \times Gender	-0.13	-1.66	-0.07	-1.50
Deviant peer affiliation \times Gender			-0.12	-2.85**
R^2	0.10		0.16	
F	20.62***		23.75***	

Notes: ** $p < 0.01$; *** $p < 0.001$.

$p < 0.001$; $\beta = 0.20$, $t = 7.94$, $p < 0.001$), and for girls, moral disengagement was a weaker positive predictor of cyberbullying ($\beta = 0.08$, $t = 2.09$, $p < 0.05$; $\beta = 0.08$, $t = 2.14$, $p < 0.001$). These findings indicate that gender played a moderating role in moral disengagement and cyberbullying. Therefore, this validated Hypothesis 3.

**Figure 2** The moderated mediating model.

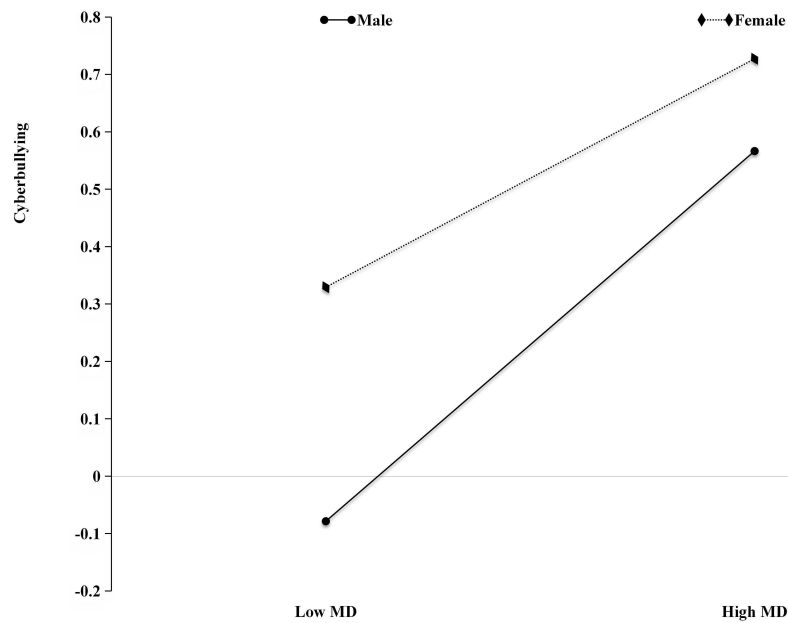


Figure 3 The effect of the interaction between moral disengagement and gender on cyberbullying in adolescent (In terms of Parent-adolescent conflict).

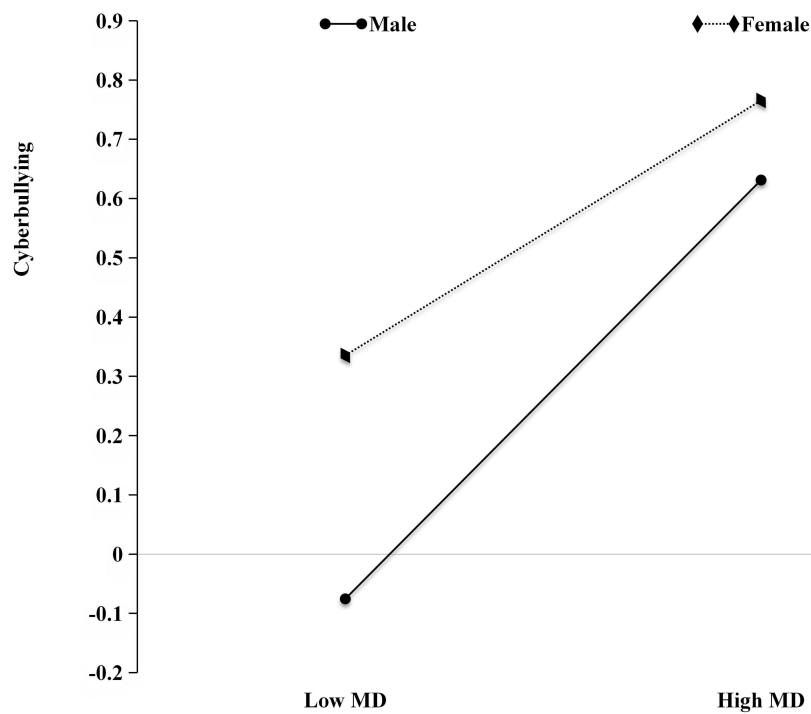


Figure 4 The effect of the interaction between moral disengagement and gender on cyberbullying in adolescent (In terms of Deviant peer affiliation).

Discussion

The current study comprehensively explored the mechanism of family and social factors on adolescents' cyberbullying, with moral disengagement as the mediating variable and gender as the moderating variable. The current study found that parent-adolescent conflict cannot directly predict cyberbullying, while deviant peer affiliation can directly predict cyberbullying. As individuals enter adolescence, their sense of independence and autonomy start to increasing and

gradually drifting away from the parent. With the increasingly frequent contact between adolescents and peers, peers become important objects to meet emotional support and belonging needs. In addition, adolescents are psychologically immature and easily influenced by peers. Peers are models of learning and imitation, so adolescents are more likely to have more cyberbullying under the influence of deviant peers.⁴⁰

We found that moral disengagement mediating the relationship between parent-adolescent conflict and adolescents' cyberbullying, also deviant peer affiliation and adolescents' cyberbullying. Parent-adolescent conflict shows a negative interpersonal conflict communication pattern for adolescents, this pattern will change their moral cognition which may result in an ill cognitive of moral disengagement.¹² Some studies have found that the more conflicts adolescents experience from their parents when they are young, the more likely they are to show more aggressive behaviors when they fall in love and consider such behaviors as normal morally.⁴¹ Deviant peer affiliation has a certain negative effect on the formation and development of adolescents' good moral character, which may lead to the selective failure of adolescents' moral self-regulation function, and then induce high moral disengagement.⁴² In addition, high moral disengagement reduces guilt after immoral behavior through self-rationalization, which contributes to the occurrence of adolescent cyberbullying to some extent.⁴³

Under normal circumstances, particular internal ethical standards will play an automated role, so that individual behavior and social norms, ethics, and morals conform. However, moral disengagement will lower adolescents' internal moral standard or render ethical self-regulation ineffective, and find a "reasonable" excuse and reason for their immoral behavior.⁴⁴ In the network, with the absence of social cues, adolescents will lower their moral standards, and ethical self-regulation is less likely to be activated, and moral disengagement is more likely to occur.⁴⁵ As a result, adolescents with high moral disengagement are more likely to engage in cyberbullying. Moral disengagement provides a perspective for us to understand adolescents' cyberbullying. For adolescents with parent-adolescent conflict and deviant peer affiliation, cyberbullying can be prevented by lowering the level of moral disengagement.⁴⁶

We also found that gender play a moderating role in the link between moral disengagement and cyberbullying, which provides empirical support for the evolutionary psychology. Although the online environment is different from the reality of human evolution, adolescents' online behaviors, for example cyberbullying, are still profoundly influenced by natural selection. On the one hand, in the Chinese culture, men are considered brave, strong, and rational, while women are considered weak and emotional. Boys are encouraged to be violent because it fits into traditional definitions of masculinity. On the other hand, boys are more extroverted and dynamic, with a broader range of activities, and are more likely to be involved in cyberbullying.⁴⁷ Compared with boy, girls are relatively mature and attach more importance to the establishment and maintenance of equal and harmonious interpersonal relationships, and are not prone to direct conflicts.⁴⁸ In addition, some studies have shown that boys have a higher level of moral disengagement than girls.⁴⁹ They use distorted consequences and victim attribution to self-justify immoral behaviors, thus showing more cyberbullying. In this way, boys are more likely to engage in cyberbullying without scruples.⁵⁰

Implications

Our research deepens the theoretical understanding of cyberbullying from parent-adolescent conflict and deviant peer affiliation based on the Ecological System Theory, which has important implications to guide adolescents away from cyberbullying. First, deviant peer affiliation is closely linked with cyberbullying, thus reducing deviant peer affiliation may help reduce cyberbullying. Second, given that moral disengagement mediating the relationship between parent-adolescent conflict and adolescents' cyberbullying, also deviant peer affiliation and adolescents' cyberbullying. Efforts should be made to mitigate the level of adolescents' moral disengagement, to reduce cyberbullying by strengthening the education of network morality and personal morality, setting up a specific supervision mechanism and improving the moral and cultural literacy of adolescents. Third, for boys, moral disengagement has a strong positive predictor on cyberbullying. This result suggests that gender differences should be taken into account in the intervention of adolescents' cyberbullying and targeted measures should be formulated.

Limitations and Directions

At the same time, the present study also has some limitations, which can be further improved from the following perspectives: First, the samples in this study are from two middle schools, and further studies are needed to confirm whether it can be extended to other groups. Second, this study only examined the impact of family and social factors on cyberbullying, not traditional bullying. Future research can examine the effects of family and social factors on both traditional and cyberbullying to deepen the understanding of bullying. Third, this study studies the effect of family and society factors on adolescents' cyberbullying. Future research could explore the effect of school factors on adolescents' cyberbullying.

Conclusion

Our findings suggest that moral disengagement plays a complete mediating role between parent-adolescent conflict and cyberbullying. Although parent-child conflict cannot directly affect cyberbullying, it can indirectly affect cyberbullying through moral disengagement. Deviant peer affiliation not only directly increase the risk of cyberbullying, but also indirectly increases the risk of cyberbullying through moral disengagement. Gender moderates the link between moral disengagement on cyberbullying, both in terms of family and social factors.

Data Sharing Statement

The data that support the findings of this study are openly available in “figshare” at [10.6084/m9.figshare.19574980.v1](https://doi.org/10.6084/m9.figshare.19574980.v1).

Ethical Statement

The study was approved by the Ethics Committee of Fujian Normal University of Technology and all methods were complied with the Declaration of Helsinki. We have obtained the informed consent from the study participants and the parents/legal guardians.

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Disclosure

None of the five authors has any conflict of interest.

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