

The Influence of Online Social Exclusion on Adolescent Cyberbullying: the Chain Mediating Effect of Negative Emotion and Moral Disengagement

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ABSTRACT

In order to explore the relationship between adolescents' online social exclusion, negative emotions, moral disengagement and cyberbullying, 2234 adolescents were tested by using the Internet Social Exclusion Questionnaire, Positive and Negative Emotion Scale, Moral Disengagement Questionnaire and Cyberbullying Victimization Scale. The results showed that online social exclusion, negative emotions, and moral disengagement were significantly positively correlated with cyberbullying. Internet social exclusion has a significant positive predictive effect on cyberbullying; online social exclusion affects cyberbullying through the independent mediating role of negative emotions, the independent mediating role of moral disengagement, and the chain mediating role of negative emotions and moral disengagement.

KEYWORDS

Network social Exclusion; Cyberbullying; Negative Emotion; Moral Disengagement; Juvenile Adult

1 Introduction

With the rapid development of the Internet, the popularity of digital products in the youth group is increasing, and the time node of children's first contact with digital products and the Internet shows a trend of younger age. At the same time, social software has become an important platform for young people to communicate with each other, and the characteristics of cyberspace have increased the risk of cyberbullying. Cyberbullying, also known as cyberattacks, electronic bullying, or Internet harassment, refers to attacks launched through technologies such as mobile phones or the Internet, and its impact is multifaceted. For victims, cyberbullying not only causes internalization problems such as anxiety, depression, and decreased self-esteem, but also may lead to suicidal behavior. In addition, cyberbullying can also have a negative impact on the victim's academic performance and social relationships. For bullies, cyberbullying may lead to the lack of moral concepts and the development of problem behaviors. Therefore, cyberbullying, as a social problem, has a profound impact on the lives and social activities of young people. Understanding the formation mechanism of cyberbullying can help us better understand and respond to this social phenomenon. At present, although there are more and more studies on cyberbullying, there are still few studies on the relationship between cyber social exclusion and cyberbullying. Network social exclusion refers to the phenomenon that individuals do not get the expected communication and recognition within an acceptable time range in the network environment, so that they feel ignored, ignored or rejected by others. This phenomenon may be closely related to the occurrence of cyberbullying. Therefore, in order to scientifically prevent and intervene in adolescents' cyberbullying behavior, this study intends to examine the impact of online social exclusion on adolescents' cyberbullying, and to explore the mechanism of negative emotions and moral disengagement.

1.1 The Relationship Between Online Social Exclusion and Adolescent Cyberbullying

According to the demand-threat time model of social exclusion, social exclusion will threaten the basic needs of individuals and make them lose their sense of control over the situation, which may lead individuals to take aggressive behavior to restore their sense of control over the situation and protect themselves. In addition, compared with face-to-face exclusion, the randomness, anonymity and virtuality of cyberspace make it more convenient for individuals to initiate attacks in cyberspace and difficult to blame the attackers, thus exacerbating the risk of cyberbullying. In recent years, researchers have explored the relationship between online social exclusion and cyberbullying, and found that individuals who suffer from online social exclusion may show more externalizing problem behaviors. Based on the above analysis, this study proposes hypothesis 1, online social exclusion can positively predict adolescent cyberbullying.

1.2 The Mediating Effect of Negative Emotion

Social exclusion is an important factor that triggers negative emotions. Individuals with higher social exclusion experience are more likely to experience negative emotions in daily life. Especially in a virtual social network, the negative

emotions caused by online social exclusion may be more prominent. Studies have found that online social exclusion, as a non-positive and negative interpersonal experience, can lead to adolescent maladaptation, resulting in negative emotions such as social anxiety, depression, and loneliness. In addition, according to the theory of emotion regulation, when individuals are in a negative emotional state, they may use aggressive behavior to regulate emotions in an attempt to restore balance. Specifically, individuals may choose cyberbullying as a way to relieve their negative emotions. Therefore, Hypothesis 2 is proposed : negative emotions play a mediating role in online social exclusion and cyberbullying.

1.3 The Mediating Effect of Moral Disengagement

Moral disengagement refers to the cognitive tendency of individuals to alleviate or eliminate the constraints on their own immoral behaviors through a series of cognitive mechanisms to make them more likely to accept and implement immoral behaviors. These mechanisms include moral rationalization, responsibility dispersion, behavior comparison and vague speech.

Through these mechanisms, individuals can rationalize their behavior and redefine it as a manifestation of moral standards or social expectations, thereby reducing the sense of conflict and ambivalence within. As a negative environmental pressure factor, online social exclusion will lead individuals to spend more cognitive resources to deal with their disadvantageous position and sense of exclusion in social networks. The loss of such cognitive resources may weaken individuals' ability to think and make decisions on moral issues, create conditions for moral disengagement and then show more cyberbullying behavior.

Based on this, hypothesis 3 is proposed : moral disengagement plays an intermediary role in online social exclusion and cyberbullying.

1.4 The Chain Mediating Effect of Negative Emotion and Moral Disengagement

According to the extension-construction theory, negative emotions will narrow the individual's thinking and action resources, make the individual produce a specific action tendency, reduce their cognitive and behavioral control ability and change the way individuals deal with social information in a negative emotional state. It is acceptable to make unethical behavior, that is, moral disengagement. The general aggression model believes that after the input variables have an impact on the individual's internal state, they will potentially evaluate and control the individual, and generate bullying behavior by activating certain cognitive patterns of the individual. Specifically, as a negative event in cyberspace, online social exclusion will cause a negative emotional state, and negative emotions will narrow the individual's thinking state and weaken its moral constraints. In this case, individuals may use strategies in the moral disengagement mechanism to blame others or external factors rather than their own behavior. They may think that their aggressive behavior is to defend themselves or respond to others' provocations, thereby reducing their sense of guilt. Therefore, Hypothesis 4 is proposed : negative emotions and moral disengagement play a chain mediating role between online social exclusion and cyberbullying.

2 Research Object and Method

2.1 Research Object

In this study, a convenient sampling method was used to select junior and senior high school students in Henan Province, Yunnan Province and Guangxi Province for questionnaire survey. Finally, 2234 valid questionnaires were obtained, and the effective rate of the questionnaire was 95.348 %. There were 1129 boys and 1105 girls.

2.2 Research Tools

2.2.1 Network Social Exclusion Questionnaire

The " Online Social Exclusion Questionnaire " compiled by Tong Yuantian was used . There are 14 items in the questionnaire, including three dimensions : online personal chat exclusion, online group chat exclusion and online personal space exclusion. Using 5-point scoring, the higher the score, the higher the degree of individual network exclusion. The reliability coefficient of the questionnaire in this study is 0.914.

2.2.2 Cyberbullying Victimization Scale

The cyberbullying subscale in the Cyberbullying Victimization Scale revised by Xiaolong et al. ^[4] was developed by

Shapka et al. The subscale has a total of 6 items, single dimension. Using 5-point scoring, the higher the score, the higher the degree of cyberbullying. The reliability coefficient of the subscale in this study was 0.908.

2.2.3 Positive and Negative Affect Scale

Watson et al. "positive and negative emotion scale" revised by Huang et al. The questionnaire has two dimensions: positive emotion and negative emotion. A 5-point scale was used. The high score of positive emotion indicated the individual's energetic, focused and happy emotional state, while the low score indicated indifference. The higher the negative emotion score, the higher the subjective feeling of pain and confusion, while the lower the negative emotion score, the higher the subjective feeling of calm. In this study, the negative emotion dimension was used, and the reliability coefficient was 0.849.

2.2.4 Moral Disengagement Questionnaire

The "Moral Disengagement Questionnaire" was developed by Bandura et al. and revised by Wang Xingchao et al. The questionnaire consists of 32 items, including 8 dimensions: responsibility decentralization, favorable comparison, distorted results, dehumanization, responsibility transfer, euphemistic labeling, blame attribution and moral defense. Using 5 points scoring, the higher the score, the higher the level of individual moral disengagement. The reliability coefficient in this study was 0.936.

2.3 Data Processing

Descriptive statistics and correlation analysis were performed using SPSS 26.0, and the SPSS macro process program compiled by Hayes was used to test the model. Previous studies have shown that gender and age affect adolescent cyberbullying. Therefore, this study included gender and age as control variables in the analysis.

3 Statistical Result

3.1 Common Method Deviation Test

Harman single factor test was used to test the common method deviation. The results showed that there were 10 factors with eigenvalues greater than 1, and the variation explained by the first factor was 21.713 %, which was less than the critical value of 40 %, indicating that there was no serious common method bias in this study.

3.2 The Correlation Analysis of Network Social Exclusion, Negative Emotion, Moral Disengagement and Cyberbullying

The correlation analysis of online social exclusion, negative emotions, moral disengagement and cyberbullying shows that online social exclusion, negative emotions, moral disengagement and cyberbullying are significantly positively correlated with each other, as shown in Table 1.

Table1 The correlation analysis of network social exclusion, negative emotion, moral disengagement and cyberbullying($n=2234$)

variable	sexuality	age	Network exclusion	negative emotion	moral disengagement	cyberbullying
sexuality	1					
age	-0.081***	1				
Network exclusion	-0.113***	-0.013***	1			
negative emotion	0.028**	-0.004	0.316***	1		
moral disengagement	-0.265***	0.083***	0.184***	0.156***	1	
cyberbullying	-0.119***	-0.006--	0.242***	0.196***	0.391***	1
<i>M</i>	1.490	15.110	26.467	24.939	66.087	1.243
<i>SD</i>	0.500	1.535	9.747	7.653	20.219	0.519

Annotation: * $p<0.05$, ** $p<0.01$, *** $p<0.001$, Same below

3.3 The Mediating Analysis of Network Social Exclusion, Negative Emotion, Moral Disengagement and Cyberbullying

Use the SPSS macro program process compiled by Hayes. In the case of controlling age and gender, the mediating effects of negative emotions and moral disengagement in the relationship between online social exclusion and

adolescent cyberbullying are tested, as shown in Table 2. Regression analysis showed that online social exclusion had a significant positive predictive effect on adolescent cyberbullying ($\beta = 0.143$, $P < 0.001$). Online social exclusion positively predicted negative emotions ($\beta = 0.327$, $P < 0.001$) and moral disengagement ($\beta = 0.111$, $P < 0.001$). Negative emotions positively predicted moral disengagement ($\beta = 0.136$, $P < 0.001$) and adolescent cyberbullying ($\beta = 0.096$, $P < 0.001$). Moral disengagement positively predicted adolescent cyberbullying ($\beta = 0.352$, $P < 0.001$).

Table 2 Regression analysis of online social exclusion, negative emotions, moral disengagement and cyberbullying($n=2234$)

regression equation		The overall fit index			significance of regressioncoefficient	
outcome variable	prognosis variate	R	R ²	F	β	t
negative emotion	sexuality	0.330	0.109	90.590***	0.192	0.040**
	age				0.005	0.384
	Network exclusion				0.327	16.226***
moral disengagement	sexuality	0.340	0.115	72.630***	-0.511	-12.644***
	age				0.042	3.204**
	Network exclusion				0.111	5.208***
	negative emotion				0.136	6.450***
cyberbullying	sexuality	0.447	0.200	111.144***	-0.044	-1.113
	age				-0.062	-4.959
	Network exclusion				0.143	7.032**
	negative emotion				0.096	4.743***
	moral disengagement				0.352	17.452

Further analysis of the mediating role of negative emotions and moral disengagement. The results of mediating effect analysis showed that the mediating effect was composed of the indirect effects of three paths : indirect effect 1 (0.031) through the way of network social exclusion $\rightarrow$ negative emotion $\rightarrow$ cyberbullying ; the indirect effect 2 (0.040) through the way of network social exclusion $\rightarrow$ moral disengagement $\rightarrow$ cyberbullying ; the indirect effect 3 (0.016) produced by the way of network social exclusion $\rightarrow$ negative emotion $\rightarrow$ moral disengagement $\rightarrow$ cyberbullying. Table 3 data show that the Bootstrap 95 % confidence intervals of the three paths do not contain a value of 0, indicating that the three indirect effects are significant, so hypothesis 2, hypothesis 3 and hypothesis 4 are valid. See Table 3.

Table 3 The mediating effect of negative emotion and moral disengagement on online social exclusion and cyberbullying($n=2234$)

path	effect size	SE	95%confidence interval	
			upper limit	lower limit
Network exclusion $\rightarrow$ negative emotion $\rightarrow$ cyberbullying	0.031	0.009	0.015	0.049
Network exclusion $\rightarrow$ moral disengagement $\rightarrow$ cyberbullying	0.040	0.009	0.023	0.058
Network exclusion $\rightarrow$ negative emotion $\rightarrow$ moral disengagement $\rightarrow$ cyberbullying	0.016	0.004	0.009	0.023

4 Discussion

The results of this study found that there was a significant correlation between online social exclusion, negative emotions, moral disengagement and adolescent cyberbullying. The results of mediating effect test show that online social exclusion can not only directly affect adolescents ' cyberbullying, but also indirectly affect adolescents ' cyberbullying through negative emotions and moral disengagement.

4.1 The Relationship between Online Social Exclusion and Adolescent Cyberbullying

This study found that online social exclusion has a significant positive predictive effect on cyberbullying, which supports research hypothesis 1 and is consistent with previous research results ^[12]. In interpersonal interaction, being recognized and accepted by others is one of the basic social needs of human beings.

Online social exclusion can lead to individual 's basic needs (sense of belonging and relationship needs) blocked, and lead to anxiety, depression, aggression and other adaptation problems. With the continuous development of Internet social platforms, adolescents increasingly rely on online social platforms to seek social identity and sense of belonging, ^[28] which increases the possibility of adolescents suffering from online social exclusion in online communication. When adolescents feel isolated, unacceptable, or even insulted in an online environment, they may compensate for this psychological deficit through cyberbullying, which may be a way for them to try to regain a sense of control and belonging. Therefore, online social exclusion not only affects the mental health of adolescents, but also may prompt them to commit cyberbullying.

4.2 The Mediating Role of Negative Emotions

The study found that adolescents' negative emotions play an independent mediating role between online social exclusion and cyberbullying. This result supports Hypothesis 2, that is, suffering from online social exclusion will cause adolescents to accumulate more negative emotions, which in turn leads to cyberbullying. This finding further supports the theory of emotion regulation. Negative emotions can cause individual imbalance in moral cognition (moral disengagement), which may further affect the individual's evaluation and decision-making before making aggressive behavior, and aggravate cyberbullying. In addition, in cyberspace, network social exclusion will form a tense and oppressive communication atmosphere, which will hinder the normal interpersonal communication of young people. As time goes on, it will cause young people to produce emotional depression and accumulate negative emotions. Therefore, in order to reduce the negative emotions caused by online social exclusion, adolescents may vent their emotions through the implementation of cyberbullying, thus transforming passive rejection into active attack.

4.3 The Mediating Role of Moral Disengagement

This study also found that moral disengagement plays an independent mediating role between online social exclusion and cyberbullying, which verifies Hypothesis 3. As a negative life event, online social exclusion will, to some extent, facilitate the individual's moral disengagement mechanism to rationalize or justify their behavior and increase the risk of cyberbullying. For example, cyber-social ostracists believe that the bullied should pay some responsibility for their exclusion to some extent, or regard the bullied as an abstract object rather than a real one with feelings and needs. These cognitive mechanisms reduce the moral burden of cyberbullying^[16]. In addition, cyberspace is often seen as different from real life, and teenagers may think that bullying in it is not as serious as in the real world. Therefore, cyber social exclusion will have an impact on the individual's moral cognitive mechanism, reduce the moral burden of bullying, and lead to the occurrence of cyber bullying.

4.4 The Chain Mediating Effect of Negative Emotion and Moral Disengagement

This study found that negative emotions and moral disengagement play a chain mediating role between online social exclusion and cyberbullying, which supports hypothesis 4. On the one hand, negative emotions may trigger individual defensive responses, prompting individuals to try to cope with negative emotions to reduce discomfort. In this case, moral disengagement may be seen as a coping mechanism to evade responsibility and relieve guilt. On the other hand, negative emotions may weaken the individual's moral sensitivity. When emotions are high, it may be easier for individuals to ignore or weaken their moral judgments, so that emotions prevail and moral principles are secondary. This reduction in moral sensitivity can provide more space for moral disengagement and make it easier for individuals to rationalize their unethical behavior. Therefore, online social exclusion can lead to emotional problems (such as negative emotions) in adolescents, which in turn affects the moral cognitive mechanism of adolescents (i.e., moral disengagement), weakens their moral burden on bullying behavior, and leads to the occurrence of cyberbullying. Therefore, in order to reduce the occurrence of cyberbullying among adolescents, future interventions need to start with the cognitive and emotional processes of adolescents, pay attention to the emotional needs of adolescents, and deeply understand the mechanism of cyberbullying in order to take targeted and effective interventions.

5 Conclusion

Online social exclusion can significantly positively predict adolescent cyberbullying behavior. Negative emotions and moral disengagement can play an independent mediating role between online social exclusion and cyberbullying, and can also play a chain mediating role between the two. That is, online social exclusion will lead to negative emotions in adolescents, which will lead to moral disengagement and eventually cyberbullying.

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