The Relationship between Parenting Style of Parental Rejection and Cyberbullying in College Students: Two Moderating Models

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Abstract. In order to investigate the relationship between parenting style of parental rejection and cyberbullying behavior of college students, as well as the moderating effects of empathy and negative emotional facilitated attention between them, college students were investigated based on the general aggression model. In study 1, 320 students were investigated by questionnaire method to explore the relationship between the parenting style of parental rejection and cyberbullying behavior of college students, as well as the moderating effect of empathy. In study 2, 58 students were selected to adopt a 3(paired picture type: positive-positive, positive-negative consistent, positive-negative inconsistent) ×2 (detection point location: left and right) experimental design to explore the moderating effect of negative emotional facilitated attention on maternal rejection and cyberbullying behavior. The results showed that: (1) Parental rejection positively predicted college students' cyberbullying behavior; Empathy can significantly moderate the influence path on cyberbullying behavior of college students. (2) The interaction between the maternal rejection and the negative emotional facilitated attention was significant on the cyberbullying behavior of college students.

Keywords: Parental Rejection; Parenting Style; Cyberbullying; Empathy; Negative Emotional Facilitated Attention.

1. Introduction

With the continuous progress of science and technology, the phenomenon of cyberbullying is also increasing [1], especially among college students, which has become a serious concern of schools and society [2]. Cyberbullying refers to the repeated dissemination of hostile or offensive information by individuals or groups through electronic or digital media with the intention of causing harm or discomfort to others [3]. In recent years, researchers at home and abroad have conducted a large number of studies to discuss college students' cyberbullying behavior, and many researchers pay special attention to its incidence. For example, Scholar Zhao et al. [4] found that 24.9% of college students in China have been cyberbullied, and 7.5% have bullied others. Cyberbullying will make cyberbullies more inclined to take simple and rough ways to solve conflicts with others in the future, which is easy to form emotional and insolent personality, and may form violent tendency in the long run. In addition, cyberbullying can cause a variety of psychological problems (such as anxiety and depression) in the victims [5], leading to more problem behaviors and even high levels of suicidal ideation [6]. Therefore, the focus on exploring the predictive factors of college students' cyberbullying behavior is helpful to provide a theoretical basis for the prevention and control of cyber bullying.

1.1 The Relationship Between Parenting Style and Cyberbullying

Parenting style is the comprehensive embodiment of parenting concepts, behaviors and emotions in the parenting process of parents [7]. The parenting style of rejection means that parents lack emotional care and love for their children and treat them with neglect, harsh criticism, hostility, indifference and other ways [8]. The general aggression model (GAM) states that individual aggressive behavior is mainly triggered by individual factors and situational factors, which jointly affect the internal state of the individual, thus affecting the evaluation and decision-making process, and finally leading to different behaviors [9]. As a kind of aggressive behavior, the mechanism of bullying can also be explained by the general aggression model. Individual and environmental input

variables jointly affect the cognitive process, and then generate cyberbullying behavior [9]. As a microsystem of individual development, family has a profound influence on individual development and plays a non-negligible role in the occurrence of cyberbullying behaviors of college students. Previous studies have found that parenting styles can significantly predict the occurrence of cyberbullying [11], and there is a significant correlation between cyberbullying and parenting style of parental rejection [12], and the parenting styles of paternal rejection and maternal rejection can increase the online bullying behavior of junior middle school students [13]. There have been studies on the relationship between parenting style and cyberbullying, but most of the research objects are middle school students, and there are few studies on cyberbullying behavior of college students. Based on this consideration, this study attempts to explore the influence of parenting style on cyberbullying behavior of college students and its mechanism, in order to contribute to the prevention and intervention of cyberbullying behavior of college students. Based on this, hypothesis 1 is proposed: the parenting style of parental rejection can predict the cyber bullying behavior of college students.

1.2 The Moderating Effect of Empathy

Empathy refers to a person's ability to empathize with others' situations during interpersonal communication [14]. Previous studies have shown that there is a significant positive correlation between parental rejection and cyberbullying [12], and many studies have found a close correlation between empathy and cyberbullying [15], empathy can increase or decrease aggressive behavior by influencing individual aggression emotion and cognitive arousal level [16]. Cyberbullying behavior is the result of the dynamic interaction between protective factors and risk factors: risk factors such as indifference and other traits make individuals tend to cyberbully others, and protective factors such as empathy may reduce the possibility of cyberbullying. Individuals with high empathy ability can better understand and judge the emotional feelings of cyberbullying participants, and can empathize with the victims of cyberbullying and experience the negative emotions suffered by the victims, so the frequency of cyber bullying behavior is less than that of individuals with low empathy ability [17]. In addition, according to the social information processing model of aggressive behavior [18], individuals' encoding and interpretation of social cues will affect their subsequent behavior. Among them, empathy plays an important role in the encoding and interpretation of social cues, affecting the accuracy of individuals making social explanations. In addition, existing studies have found that empathy can significantly moderate the relationship between parental control and adolescent problem behavior [19], and cyberbullying, as a type of aggressive behavior, may also be similarly mediated. Therefore, hypothesis 2 is proposed in this study: Empathy plays a mediating role between parental rejection and cyberbullying.

1.3 The Moderating Effect of Negative Emotional Facilitated Attention

The Cognitive Theory of Emotion believes that emotion will stimulate specific goals and cognition [20], and an important function of emotion is to change cognition. Compared with non-emotional stimuli, emotional stimuli can attract individual attention faster and have a preference for preference selection [21]. Attention bias to negative emotional information means that individuals pay different attention to negative emotional stimuli and other emotional stimuli, and individuals have a bias to negative emotional stimuli. Facilitated attention, difficulty in disengagement, and attentional avoidance comprise the components of attentional bias. [22], while the negative emotional Facilitated Attention means that individuals can direct their attention to negative emotional stimuli or locations with negative emotion more quickly than other stimuli. Studies have proved that highly explicit attackers have an attentional bias towards angry faces[23], so this connection may be extended to college students with cyberbullying behaviors and ordinary negative emotional stimuli. Negative emotional facilitated attention may be an individual factor that influences environmental factors (parenting styles of rejection) on cyberbullying behavior. In view of this, hypothesis 3 is proposed in

this study: negative emotional facilitated attention plays a moderating role in the relationship between parental rejection and cyberbullying behavior of college students.

2. Study 1: The Moderating Role of Empathy between Parental Rejection and Cyberbullying

2.1 Research Purpose

The questionnaire method was used to investigate the predictive effect of parental rejection on cyberbullying behavior of college students and the moderating effect of empathy between parental rejection and cyberbullying behavior.

2.2 Research Methods

2.2.1 Research Object

A total of 380 questionnaires were collected from undergraduate students, and 320 valid questionnaires were recovered, with an effective rate of 84.21%. The participants ranged in age from 17 to 26 years old (M=19.48, SD=1.29), with 62 males and 258 females.

2.2.2 Research Tools

The Chinese version of the Simplified Parenting Style Questionnaire (s-EMBU-C) Measure parenting styles in this study was translated and tested by Jiang et al.[24]. It is divided into father scale and mother scale, including a total of 21 questions. The father scale includes three dimensions: father's emotional warmth, father's rejection, father's overprotection; The mother scale includes three dimensions: maternal emotional warmth, maternal rejection, and maternal overprotection. Its advantage is that the number of questions is relatively moderate, suitable for a wide range of groups, including middle school and college students. In this study, Cronbach's α coefficient was 0.801 for the father's rejection dimension and 0.743 for the mother's rejection dimension.

The Chinese version of the cyberbullying scale The cyberbullying scale compiled by Erdur and Kavsut [25] was adopted, including two dimensions, the cyberbullying and the cyberbullied subscale, with 18 items each, which has been widely used in China. The higher the score, the more often an individual bullies or is bullied in an online environment. The cyberbullying subscale was used in this study, and the Cronbach's α coefficient of this subscale in this study was 0.684.

The interpersonal response Pointer (IRI-C) scales The scale for measuring empathy is based on the multidimensional theoretical construction of empathy [26]. Taiwanese scholars revised the original scale into the Chinese version formed by 22 items. The higher the score, the better the level of empathy. In this study, the Cronbach's α coefficient of this scale was 0.768.

2.2.3 Data Processing

Data analysis was conducted using SPSS 26.0 and PROCESS 4.0. First, descriptive statistical analysis was performed to calculate the mean (M) and standard deviation (SD) of all the measured variables. Secondly, Pearson correlation analysis was used to test the relationship between the scores of the measured variables. The predictive effect of parental rejection on cyberbullying was then verified by linear regression. Finally, model 1 in PROCESS 4.0 was used to test the adjustment effect. We set the Bootstrap sample size to 5000 and obtained the confidence interval and standard error of parameter estimation at 95% confidence level. If the confidence interval contains 0, the result is not statistically significant; if it does not, the result is statistically significant[27].

2.3 Research Results

2.3.1 Common Method Deviation Test

Self-report method was used to collect data for all variables in this study, and the relationship between variables may be affected by common method bias. Therefore, according to the suggestions of Zhou Hao et al. [28], anonymous survey and reverse scoring of some items were adopted in this

study to control the program, and Harman single factor test was used to test the common method deviation. The results showed that: There were 16 factors with eigenvalue greater than 1, and the variation explained by the first factor was 10.86%, far less than the critical value of 40%, so there was no common method bias problem.

2.3.2 Descriptive Statistics and Correlation Analysis

Descriptive statistical analysis found that 320 college students scored between 0 and 17 points for cyberbullying (M =1.90, SD = 2.72) and 0 to 18 points for paternal rejection (M = 1.78, SD = 2.48). Maternal rejection scores ranged from 0 to 18 (M = 2.13, SD = 2.60), and empathy scores ranged from 26 to 85 (M = 60.35, SD = 9.88). Correlation analysis showed that cyberbullying was positively correlated with paternal rejection (r =0.19, p <0.01) and maternal rejection (r =0.22, p <0.01) (Table 1).

Table 1. Descriptive statistics and correlation analysis of the study variables (n = 320)

variable	*M*	*SD*	1	2	3	4	5	6
1. Gender	1.81	0.40	—					
2. Age	19.48	1.29	-0.18**	—				
3. Paternal rejection	1.78	2.49	-0.14*	-0.02	—			
4. Maternal rejection	2.13	2.60	-0.03	-0.04	0.65**	—		
5. Cyberbullying	1.90	2.72	-0.25**	0.07	0.19**	0.22**	—	
6. Empathy	2.74	0.45	0.06	0.09	-0.13*	-0.02	-0.06	—
*p < 0.05, **p < 0.01, ***p < 0.001								

2.3.3 The Moderating Effect of Empathy

After the centralization of empathy and parental rejection, a moderating model was established through model 1 in Process 4.0. The results showed that there was a significant interaction between empathy and paternal rejection (B =-0.02, p <0.05), but there was no significant interaction between empathy and maternal rejection (B =-0.003, p = 0.58). There was a significant linear relationship between college students' cyberbullying behavior and mother rejection (p <0.001). The data fitting results of the moderating effect of empathy on the relationship between paternal rejection and cyberbullying behavior are shown in Table 2.

Table 2. Data fitting results of empathic regulation

Regression equation		Overall fit index			Significance of regression coefficient			
Result variable	Predictive variable	*R*	R^2	*F*	*B*	LLCI	ULCI	*t*
cyberbullying	Paternal rejection	0.23	0.05	6.02***	1.07	0.36	1.77	2.98**
	Empathy				0.02	-0.02	0.06	0.99
	Paternal rejection x Empathy				-0.02	-0.03	-0.003	-2.46*
*p <0.05, **p < 0.01, ***p < 0.001								

In order to further reveal the specific modality of empathy between paternal rejection and cyberbullying, one standard deviation of the mean value of empathy was taken as the cut-off point. Participants higher than one standard deviation were regarded as the high empathy group, while those lower than one standard deviation were regarded as the low empathy group. The specific moderating effects are shown in Table 3 and Figure 1. When empathy was 1 *SD* below the mean, paternal rejection positively predicts cyberbullying (Effect= 0.29, p < 0.001). When empathy was 1 *SD* above mean, paternal rejection became insignificant in predicting cyberbullying (Effect= 0.01, p = 0.96).

Table 3. The predictive effect of paternal rejection on cyberbullying under different empathic conditions

Empathy	Effect(*SE*)	*t*	LLCI	ULCI
Low(M − 1SD)	0.29(0.07)	4.11***	0.15	0.44
Average(M)	0.16(0.06)	2.51*	0.03	0.28
High(M − 1SD)	0.01(0.10)	0.06	-0.19	0.20
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$				

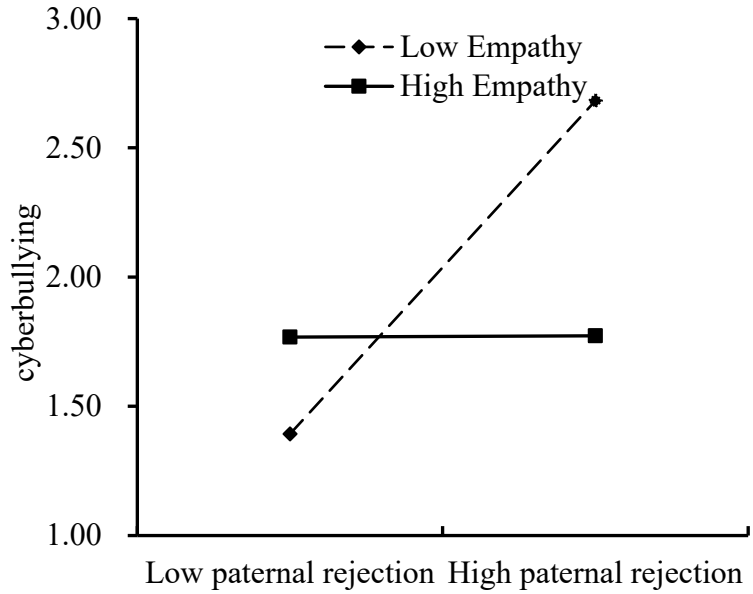

Fig 1. The moderating effect of empathy on the relationship between paternal rejection and cyberbullying

3. Study 2: The Moderating Effect of Negative Emotional Facilitated Attention on Maternal Rejection and Cyberbullying

3.1 Research Purpose

The moderating effect of accelerated negative emotional attention orientation on the relationship between maternal rejection and cyberbullying was further explored by combining experiment and questionnaire.

3.2 Research Methods

3.2.1 Research Object

G*Power 3.1 was used to calculate the sample size required for the study. The repeated measures analysis of variance was used as the statistical method. The parameters were set as follows: repeated measures analysis of variance in subjects, effect size f = 0.25, α = 0.05, 1−β = 0.95, number of groups = 1, number of measurements = 6, correlation between repeated measures = 0.5, and the total sample size was 28. Considering the sample loss rate of about 10% and referring to previous studies[29], we recruited 60 college students, including 30 male and 30 female, aged between 18 and 24. All participants had no mental or physical disease, their vision or corrected vision was normal. At the end of the experiment, a small gift worth 5 yuan was given in return.

3.2.2 Research Materials

Chinese version of the simplified parenting style questionnaire (s-EMBU-C) and Chinese version of the cyberbullying scale, same as Study 1.

At present, the research on individual attention bias mostly uses text or pictures and other stimulus materials. However, written materials mainly rely on its symbolic meaning and need to be processed by human speech system, with relatively low stimulus degree and ecological validity. Therefore, this study uses emotional pictures that are more intuitive and can measure the initial reaction as stimulus materials.

The International Face Emotion Image System (IAPS) was used in this study. At the same time, in order to ensure that the experimental materials meet the research requirements, an additional 30 participants (15 male and 15 female) who do not participate in the formal experiment were recruited. A 9-point score was given for each image's titer (1= very negative, 9= very positive), arousal (1= very low arousal, 9= very high arousal) and familiarity (1= very unfamiliar, 9= very familiar). Finally, 16 negative and 16 positive emotion pictures were selected as experimental stimulus materials. Independent sample T-test analysis showed that there was no significant difference in familiarity and arousal between negative and positive emotion images, but significant difference in titer (see Table 4). The experimental program was compiled by Eprime 2.0 software.

Table 4. Titer, arousal and familiarity scores of images used in Study 2 [$M \pm SD$]

items	Negative emotional picture	Positive emotional picture	t	p
titer	2.87±0.43	7.14±0.79	18.95	<0.001
wakefulness	5.44±0.64	5.77±0.67	1.42	0.17
familiarity	4.61±0.81	5.06±0.38	2.03	0.06

3.2.3 Research Paradigm

The dot-probe paradigm is often considered to be able to examine spatial allocation of attention resources and assess attention bias in patients with affective mental disorders [30]. The dot-probe paradigm is often used to study attention bias [31]. Therefore, this study referred to the point detection experiment design of Scholar Liu et al. [29], and the research process is shown in Figure 2. First, a "+" was presented in the middle of the screen, lasting for 500ms, and the participants were asked to look at "+", and then the "+" disappeared. A pair of emotional pictures appeared in the left and right sides of the screen, and the positions of the two pictures were presented randomly for 500ms, followed by an empty screen for 50ms, and then a detection point was presented in any position where the two pictures had appeared. The detection point is black "*". Participants were asked to respond quickly by pressing the "F" key when the probe point was on the left and the "J" key when the probe point was on the right. They are required to respond quickly and accurately. After the subject presses the button or does not respond at 2000 ms, an empty screen is presented for 1000ms to continue the next try. There are three types of images in the point detection task, namely, positive-positive, consistent positive-negative, and inconsistent positive-negative. Each type of image includes 32 attempts, a total of 96 attempts, which are presented randomly. The detection point appears after the negative image in the positive-negative image pair is the condition of clue consistency, while the detection point appears after the positive image is the condition of clue inconsistency, and the probability of the detection point appearing on the left and right is equal to half. Before the formal experiment began, 8 neutral pictures were used for experimental practice until the participants were familiar with the experimental rules.

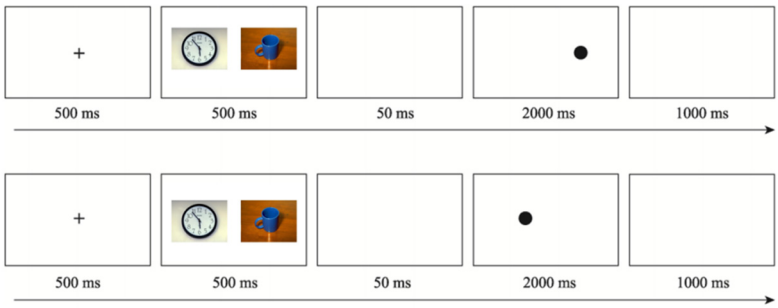

Fig 2. Flow chart of point probe paradigm

In order to further examine the specific components of the attentional bias of negative stimuli, O 'Toole and Dennis[32] calculated the attentional bias and the fractions of each component by referring to the study using positive and negative images as experimental materials: Attention bias = RT (inconsistent)-RT (consistent). If the score is greater than 0, it indicates that there is attention bias for negative information; if the score is less than 0, attention avoidance occurs. Note that facilitated attention = RT (positivity - positivity)-RT (consistency), a score greater than 0 indicates that there is facilitated attention for negative information.

3.2.4 Data Processing and Statistical Analysis

Excel was used to convert and process the original data generated by Eprime 2.0. Firstly, the data was sorted out before formal analysis, and the data less than 200ms and greater than 1200ms at the time of reaction were excluded to reduce the possibility of interference to the experimental results caused by the prediction of the participants [33]. Then the data was further screened, after deleting the data beyond 3 standard deviations and all data with incorrect responses and no response[31], there were 58 valid participants with an average age of 19.79±1.53 years. After completing the preliminary data collation, SPSS 26.0 and PROCESS 4.0 were used for statistical analysis of the data.

3.3 Research Results

3.3.1 Descriptive Statistics and Correlation Analysis

Correlation analysis showed that there was a significant positive correlation between cyberbullying and maternal rejection (r =0.27, p <0.05), while there was no significant correlation between other variables (Table 5).

Table 5. Descriptive statistics and correlation analysis of the study variables (n = 58)

	M	*SD*	1	2	3
1.Negative emotional facilitated attention	-0.16	16.50	—		
2. Mother rejection	1.91	2.46	-0.07	—	
3. Cyberbullying	3.05	3.08	-0.02	0.27*	—
*p < 0.05					

3.3.2 The Moderating Effect of Directional Negative Emotional Facilitated Attention

After centralized treatment of maternal rejection and negative emotional facilitated attention, a moderating model was established through model 1 in Process 4.0, and the results showed that the interaction was significant (B =0.38, p <0.05). The data fitting results of the moderating effect of negative emotional facilitated attention on the relationship between maternal rejection and cyberbullying behavior are shown in Table 6.

Table 6. Maternal rejection mediated by data fitting results

Regression equation		Overall fit index			Significance of regression coefficient			
Result variable	Predictive variable	*R*	R^2	*F*	*B*	LLCI	ULCI	*t*
cyberbullying	Maternal rejection	0.42	0.18	3.91*	0.38*	0.07	0.70	2.47
	NEFA				0.01	-0.03	0.06	0.60
	Maternal rejection x NEFA				0.03*	0.01	0.06	2.60
*p < 0.05; NEFA:Negative emotional facilitated attention								

In order to further reveal the specific regulation model between maternal rejection and cyberbullying, one standard deviation of each standard deviation of the mean value of negative emotional facilitated attention was taken as the cut-off point. Participants higher than one standard deviation were in the group of high negative emotional facilitated attention, while those lower than one standard deviation were in the group of low negative emotional facilitated attention. The specific

moderating effects are shown in Table 7 and Figure 3. Maternal rejection positively predicts cyberbullying when the negative emotional facilitated attention was 1 *SD* above the mean (Effect= 0.93, $p < 0.001$). Maternal rejection became insignificant in predicting cyberbullying when the negative emotional facilitated attention was less than the mean 1 *SD* (Effect=-0.16, $p = 0.52$).

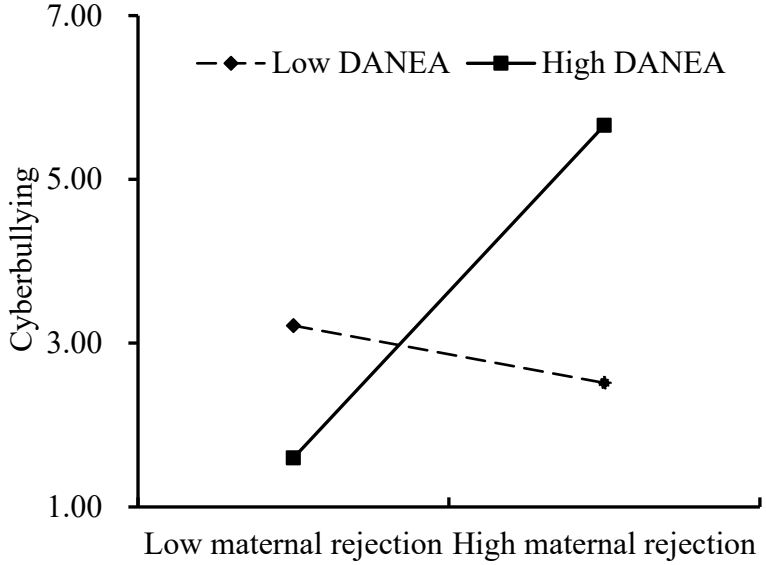

Fig 3. Moderating effect of negative emotional facilitated attention on the relationship between maternal rejection and cyberbullying

Table 7. The predictive effect of maternal rejection on cyberbullying under different negative emotional facilitated attention

DANEA	Effect (*SE*)	*t*	LLCI	ULCI
Low(*M* - 1*SD*)	-0.16(0.25)	-0.65	-0.66	0.34
Average(M)	0.38(0.16)	2.47*	0.07	0.70
High(*M* - 1*SD*)	0.93(0.27)	3.40***	0.38	1.48
*$p < 0.05$				

4. Discussion

Based on the general aggression model and taking college students as the research object, this study verified the predictive effect of parental rejection parenting style on cyberbullying behavior of college students and the moderating effect of empathy and negative emotional facilitated attention through two studies, combined with test method and experimental method. This study expanded the scope of research objects in related fields, and transferred the subjects from primary and middle school students to college students who actually contact the Internet more frequently. In addition, on the basis of only using questionnaire in previous studies, this study adds empirical research to expand the research vision of cyber bullying from the perspective of psychology, so as to provide theoretical basis for the prevention and control of cyber bullying behavior.

4.1 Parenting Style and Cyberbullying Behavior

This study verified hypothesis 1 that parental rejection can positively predict college students' cyberbullying behavior, which is consistent with previous research results [12][13]. As a negative parenting style, parental rejection will undoubtedly limit the optimistic and healthy growth of children, and exert a lasting and far-reaching influence on the physical and mental development of individuals[34]. The parental accept-rejection theory also points out that parental rejection is related to children's psychological disorders, and adolescents will form negative world views and values after

being rejected by their parents [35]. Compared with those who are accepted by their parents, those who are rejected by their parents show many problems of social maladjustment [36] and are more likely to have behavioral problems[37], thus, they are more likely to have cyberbullying behaviors.

4.2 The Moderating Role of Empathy in the Relationship between Parental rejection and Cyberbullying

This study explores the mechanisms by which empathy plays a role in parental rejection and cyberbullying. The results show that both parental rejection and cyberbullying behavior are significantly correlated, and can positively predict cyberbullying behavior, which further extends the previous conclusions in junior high school students to college students[12]. However, empathy can only moderate the prediction effect of paternal rejection on college students' cyberbullying behavior, but cannot moderate the prediction effect of maternal rejection on college students' cyberbullying behavior. Hypothesis 2 is partially verified.

It is found that empathy only moderates the predictive effect of paternal rejection on cyberbullying behavior of college students. Specifically, in college students with low empathy ability, paternal rejection can positively predict cyberbullying behavior, while in college students with high empathy ability, the predictive effect is not significant. This result is consistent with the "risk and protective factor framework" [38] and the "social information processing model of aggressive behavior"[18] : Protective factors such as empathy reduce the possibility of cyberbullying, and college students with low empathy ability are more likely to interpret the parenting style of paternal rejection as a signal of repulsion, which makes college students' attachment needs unsatisfied, so it is easy to generate cyberbullying. However, college students with higher empathy ability will consider from their fathers' perspective, believing that even if their fathers treat them negatively for some reason (for example, they are afraid of their children's pride), they still love them, so they are less likely to do cyberbullying.

However, the results of this study indicate that empathy cannot regulate the predictive effect of maternal rejection on college students' cyberbullying behavior, which may be related to the differences between the roles of fathers and mothers in Chinese cultural background. Under the traditional education model of "strict father and loving mother", mothers are often the earliest and most important attachment objects for their children, and the emotional connection between mothers and children is closer than that between fathers [39]. For most Chinese families, mothers spend more time and energy taking care of their children than fathers [40]. Compared with mothers, fathers' participation is obviously insufficient. Therefore, the attachment degree of Chinese children to their mothers is much greater than that of their fathers. Although college students with high empathy ability can put themselves in their fathers' shoes when they face the rejection of their fathers, they cannot really understand and accept the parenting style rejected by their mothers.

4.3 The Moderating Effect of Negative Emotional Facilitated Attention on Maternal Rejection and Cyberbullying

This study explores the relationship between maternal rejection parenting style and cyberbullying behavior of college students, and the mechanism of negative emotional facilitated attention between them. The results show that maternal rejection is significantly correlated with cyberbullying behavior and can positively predict cyberbullying behavior, which is consistent with the results of previous studies and Study 1 [12]. Further analysis showed that negative emotional facilitated attention played a moderating role in the relationship between maternal rejection and cyberbullying, and hypothesis 3 was verified.

Specifically, in the college students with high acceleration of negative emotional facilitated attention, maternal rejection can positively predict cyberbullying behavior, while in the college students with low negative emotional facilitated attention, the prediction effect is not significant. Therefore, the negative emotional facilitated attention can be used as a protective factor to alleviate the harmful effect of maternal rejected parenting style on college students' cyber bullying behavior.

4.4 Limitations and Future Development Direction

Finally, there are some shortcomings in this study. First of all, the cross-sectional study used in Study 1 of this study, to some extent, could not clarify the causal relationship between variables. Future studies may consider more rigorous research design, such as longitudinal study and experimental design, to further test the hypothesis model, so as to determine the causality of the study. Secondly, due to the restrictions of normal universities, the ratio of men to women in the samples of study 1 is quite different. In the follow-up studies, the ratio of men to women can be 1:1, so as to better extend the conclusion to groups of different genders. Finally, this study only studied the relationship between parenting styles of parental rejection and cyberbullying in the Chinese cultural background, but parenting styles have great cultural differences in different countries and regions, and future research can take cross-cultural factors into account.

5. Conclusion

(1) Parental rejection positively predicted college students' cyberbullying behavior;

(2) Empathy can significantly moderate the influence path of paternal rejection on cyberbullying behavior of college students.

(3) Negative emotional facilitated attention can significantly moderate the influence path of maternal rejection on college students' cyberbullying behavior.

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