

Perceived Parental Rejection, Bullying Perpetration, and Peer Victimization: The Moderating Role of Self-Control

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Abstract

This study explored the associations of perceived paternal and maternal rejection with bullying perpetration and peer victimization among Pakistani schoolchildren and the moderating role of self-control. A cross-sectional correlational design was used with 300 schoolchildren (150 boys and 150 girls), aged 11–14 years, recruited through purposive sampling from public and private schools in Lahore and Sargodha, Pakistan. Participants completed child-report measures of parental acceptance–rejection, self-control, bullying perpetration, and peer victimization. Pearson correlation analysis, multiple regression analysis and moderation analysis were conducted using Hayes' PROCESS macro Model 1. Paternal and maternal rejection were positively correlated with bullying perpetration ($r = .45$ and $.37$, respectively) and peer victimization ($r = .46$ for both). Self-control was negatively correlated with bullying perpetration ($r = -.55$), peer victimization ($r = -.55$), paternal rejection ($r = -.28$), and maternal rejection ($r = -.29$). All four dimensions of paternal and maternal rejection were significant positive predictors of both bullying-related outcomes in their respective regression models. The associations between perceived parental rejection and bullying perpetration and peer victimization were significantly moderated by self-control, with weaker positive associations at higher levels of self-control. The findings highlight the relevance of perceived parental rejection and individual regulatory characteristics to bullying involvement among Pakistani schoolchildren.

Highlights

- Perceived paternal and maternal rejection positively correlated with bullying perpetration and peer victimization.
- Higher self-control was linked to lower levels of bullying perpetration and peer victimization.
- Self-control moderated the associations between parental rejection and both bullying-related outcomes.
- The findings underscore the importance of family relationships and self-regulation for children's peer experiences.

Introduction

In children and adolescents, bullying perpetration and peer victimization pose significant concerns since these experiences have been associated with emotional distress, behavioral difficulties, and interpersonal difficulties. Olweus (1993) distinguishes bullying from other forms of peer aggression by its repetitive nature and imbalance of power between those involved. Although bullying perpetration and peer victimization are conceptually distinct, children may be involved in both types of bullying. Ye et al. (2023) reported a significant association between bullying involvement and depressive symptoms among children and adolescents, highlighting the significance of bullying for psychological well-being. According to recent research, it is also important to consider individual characteristics as well as social and educational environments when examining bullying-related experiences (Chu & Chen, 2025; Grama et al., 2024). The factors associated with bullying perpetration and peer victimization are particularly relevant during late childhood and early adolescence when peer relationships are increasingly salient and emotional and behavioral regulation is developing.

Children's emotional functioning, interpersonal expectations, and behavioral development are strongly influenced by their family relationships. Affection, responsiveness, and emotional availability of parents may contribute to children's social competence; however, hostility, neglect, and rejection may be associated with difficulties in regulating their emotions and forming interpersonal relationships. The interpersonal acceptance–rejection theory (IPARTheory) provides a theoretical framework for examining these experiences. Based on this theory, children's perceptions of acceptance and rejection by significant caregivers are related to psychological adjustment across developmental and cultural contexts (Rohner & Lansford, 2017). There are four dimensions of parental rejection: lack of warmth/affection, hostility/aggression, indifference/neglect, and undifferentiated rejection (Rohner et al., 2005). Children's behavior and interpersonal functioning may be affected by these dimensions of perceived rejection. Moreover, perceived parental rejection reflects children's subjective experiences of their relationships with caregivers and does not necessarily reflect parental intentions or independent observations of parenting practices.

Meta-analytic evidence suggests that parenting characteristics contribute to children's involvement in bullying and peer victimization. According to Chu and Chen (2025), 107 studies involving 162,203 participants showed that positive parenting was negatively associated with both outcomes, whereas harsh and uninvolved parenting was positively associated with both outcomes. A psychologically controlling parenting style was also associated with greater peer victimization, although its relationship with bullying perpetration was less consistent. In terms of caregiver identity, country, and measurement characteristics, the strength of these associations varied. Accordingly, different dimensions of parenting may be associated with bullying involvement in different ways, emphasizing the importance of analyzing specific parental experiences rather than relying solely on generic parenting classifications. As well, Grama et al. (2024) conducted a systematic review of parental risk and protective factors and found positive associations between aversive parenting and parental withdrawal with peer victimization, whereas parental warmth and supportive parenting characteristics were negatively associated with victimization. Despite the small size of the observed associations, the findings highlight the importance of family-related experiences in shaping children's relationships with their peers.

Researchers have found that parental rejection is associated with bullying-related experiences based on evidence focusing specifically on the issue. A population-based case–control study of Chinese children and adolescents was conducted by Xiao et al. (2023) found that children who were bullied in school received greater parental rejection and lower parental emotional warmth, with peer victimization particularly associated with parental rejection. In light of these findings, it may be possible that perceived parental rejection may contribute to children's adverse peer experiences beyond broader classifications of parenting styles. In addition, Grama et al. (2024) identified parental rejection as a factor associated with peer victimization and stressed the need for further research into the underlying psychological and interpersonal factors.

The emotional and behavioral responses of children to interpersonal adversity may contribute to the explanation of the association between perceived parental rejection and bullying behavior. It may be difficult for children who perceive that their parents are hostile, unavailable emotionally, or neglectful to regulate negative emotions and respond constructively to social conflicts. As a result of these difficulties, aggressive behavior may also be observed during peer interactions. In a study involving 1,567 Chinese college students, Lan et al. (2025) examined the relation between parental rejection and cyberbullying, identifying empathy and moral disengagement as mediating factors. According to their findings, parental rejection may contribute to aggressive online behavior through social cognition and emotional responsiveness. As the study involved college students and focused on cyberbullying, its findings may not be directly applicable to traditional school bullying. Therefore, when interpreting this research, developmental differences as well as the distinct characteristics of online and school-based bullying should be taken into consideration.

Psychological and interpersonal factors may play a role in the association between perceived parental rejection and peer victimization. Children who are experiencing adverse family relationships may report difficulties with emotional adjustment, interpersonal confidence, or perceived social support, which may also be related to their peers' experiences. Despite this, peer victimization is caused by aggressive behavior on the part of peers and should not be attributed to the characteristics or behavior of the victimized child. Grama et al. (2024) proposed that emotional, regulatory, and interpersonal factors may be involved in the association between parental characteristics and peer victimization. According to Christou et al. (2026), specific dimensions of perceived paternal acceptance and rejection were related to peer victimization, although the patterns differed between children with and without special educational needs. In children without special educational needs, paternal hostility/aggression was directly related to peer victimization, whereas in children with special educational needs, lower parental warmth and greater paternal indifference/neglect were associated with a higher level of victimization.

In order to understand children's bullying experiences, it is important to examine perceived maternal rejection separately from perceived paternal rejection. Children may perceive and interpret their relationships with mothers and fathers differently, even though both parents may contribute to their emotional and behavioral development. According to Chu and Chen (2025), caregiver identity is a potential source of variation in associations between parenting characteristics and bullying involvement. As well, Grama et al. (2024) reported broadly comparable associations between several maternal and paternal characteristics and peer victimization. The findings suggest that maternal and paternal experiences may have similar developmental relevance, although their associations with specific outcomes may differ in strength and nature. In light of this, it may be useful to examine perceived paternal and maternal rejection separately in order to gain a better understanding of the family-related correlates of bullying perpetration and peer victimization. In addition, it may be useful to examine specific dimensions of perceived rejection, such as lack of warmth or affection, hostility or aggression, indifference or neglect, and undifferentiated rejection, in order to clarify their respective associations with bullying-related outcomes.

The strength of these associations may vary depending on the individual regulatory characteristics, although family-related experiences are associated with children's peer functioning. Tangney et al. (2004) describe self-control as the capacity to regulate impulses, inhibit inappropriate behavioral responses, and direct behavior towards personal or socially acceptable objectives. As a result, it is possible to manage frustration, inhibit aggressive impulses, and select constructive responses during peer interactions. In their study, Denson et al. (2012) emphasized the importance of self-control in aggression, suggesting that a person's ability to regulate their behavior could influence how aggressive impulses are expressed. Consequently, higher levels of self-control may be associated with lower rates of bullying perpetration, particularly in situations involving interpersonal conflict and frustration. In the context of peer victimization, however, the relationship is less straightforward because victimization also depends on peer behavior, group dynamics, and school environments. It is nevertheless possible that self-control contributes to children's adjustment to challenging social situations and their overall interpersonal adjustment.

Recent longitudinal research has linked self-control to adverse family experiences and bullying involvement. In Song et al. (2025), 899 Chinese adolescents were examined on the issues of parent-adolescent conflict, self-control, school climate, and bullying perpetration. According to their findings, self-control mediated the relationship between parent-adolescent conflict and subsequent bullying perpetration, but school climate moderated the relationship. The findings suggest that behavioral regulation may be relevant to the relationship between adverse family interactions and aggressive peer behavior. However, parental-adolescent conflict and perceived parental rejection are conceptually distinct, and little research has been conducted directly examining self-control as a moderator of the association between perceived parental rejection and bullying involvement. In examining self-control as a moderator, a different research question is addressed by exploring whether the strength of these associations varies across levels of behavioral self-regulation.

In previous research, self-control has also been examined as a moderating factor in bullying experiences. According to Liang et al. (2025), 1,113 high school students were examined for their vulnerability to traditional bullying, psychological maladaptation, self-control, and bullying perpetration. According to their findings, self-control moderated the association between traditional bullying victimization and traditional bullying perpetration, but not the association between cyberbullying perpetration and traditional bullying victimization. In light of these findings, self-control may play a different role in moderating bullying across traditional and online forms. Jiang et al. (2024) examined parental phubbing, cyberbullying, and cyber victimization and found that self-control moderates associations involving negative parent-child interactions as well as online bullying. The results of these studies provide a rationale for investigating whether self-control may also moderate the association between perceived parental rejection and bullying perpetration and peer victimization.

The children who perceive a greater degree of parental rejection may experience a higher level of interpersonal frustration or distress, though their responses to these experiences may differ depending on their level of self-control. The relationship between perceived parental rejection and bullying perpetration may be weaker if children with stronger self-control are better able to inhibit aggression and regulate their responses to peer conflict. A

similar moderating association may be hypothesized for peer victimization, although its theoretical interpretation requires greater caution. Self-control does not prevent peers from engaging in bullying, but it may be related to aspects of social functioning and interpersonal adjustment relevant to victims' experiences. Therefore, the proposed moderating role of self-control is viewed as a statistical buffering association rather than a causal protective factor.

An additional rationale for investigating these associations among Pakistani schoolchildren is the cultural context of family relationships and peer interactions at school. Chu and Chen (2025) identified cross-national and ethnic variations in associations between parenting characteristics and bullying involvement, which indicates that findings may not necessarily be generalized across populations. Furthermore, research involving Pakistani adolescents has shown that regulatory processes play a significant role in bullying-related experiences. According to Shafiq and Batool (2021), rejection sensitivity, self-regulation, bullying, and victimization play a mediating role. However, rejection sensitivity differs conceptually from perceived paternal and maternal rejection because it focuses on expectations and concerns about interpersonal rejection rather than children's perceptions of parental behavior. Additionally, mediation and moderation address different research questions: mediation examines indirect associations through an intervening variable, while moderation examines the strength of an association across levels of another variable. These distinctions highlight the need to investigate perceived paternal and maternal rejection separately, bullying perpetration and peer victimization as different outcomes, and self-control as a potential moderator among Pakistani schoolchildren.

The Present Study

The present study examined the associations of perceived paternal and maternal rejection with bullying perpetration and peer victimization among Pakistani schoolchildren, emphasizing self-control as a moderating factor. This study examined whether these associations differed across levels of self-control based on interpersonal acceptance–rejection theory and behavioral self-regulation research. In order to account for the possibility of distinct parent–child relationships, perceived parental rejection and perceived maternal rejection were examined separately, whereas bullying perpetration and peer victimization were considered separate outcomes. Both bullying-related outcomes were also examined for their associations with specific dimensions of perceived parental rejection, such as lack of warmth/affection, hostility/aggression, indifference/neglect, and undifferentiated rejection.

The following five hypotheses were proposed:

H1. Perceived paternal and maternal rejection would be positively associated with bullying perpetration and peer victimization.

H2. Self-control would be negatively associated with bullying perpetration and peer victimization.

H3. Perceived paternal and maternal rejection would be negatively associated with self-control.

H4. Self-control would moderate the associations between perceived paternal and maternal rejection and bullying perpetration, such that these positive associations would be weaker at higher levels of self-control.

H5. Self-control would moderate the associations between perceived paternal and maternal rejection and peer victimization, such that these positive associations would be weaker at higher levels of self-control.

Method

Participants

In this study, 300 Pakistani schoolchildren aged 11–14 (150 boys and 150 girls) studying in Grades 6–8 were recruited through purposive sampling from public and private schools in Lahore and Sargodha. As part of the eligibility criteria, students were required to attend school regularly, enroll in the specified grade ranges, comprehend English-language questionnaires, and reside with both parents during data collection in order to determine perceived rejection by both parents. In order to assess the perception of parental and maternal rejection, all participants attended schools that used English as the language of instruction.

Upon completion of the Bully-Victimization Scale (BVS), all 300 participants were classified according to their scores on the subscales measuring bullying perpetration and peer victimization. It was determined that children with higher bullying perpetration scores than peer victimization scores were primarily involved in bullying perpetration, while those with higher peer victimization scores were primarily victimized by peers. In accordance with the classification procedure applied during data collection, 150 participants were categorized as primarily involved in bullying perpetration and 150 as primarily experiencing peer victimization, with 75 boys and 75 girls in each group. However, bullying perpetration and peer victimization were retained as separate continuous variables for the primary statistical analysis. To describe the sample, demographic, educational, and family information was also collected.

Measures

Parental Acceptance–Rejection Questionnaire–Short Form (PARQ)

The Parental Acceptance–Rejection Questionnaire–Short Form (Rohner, 2005) was used to assess perceived parental and maternal rejection. There are 24 items in each version assessing perceived parental behavior across four dimensions: warmth/affection (8 items), hostility/aggression (6 items), indifference/neglect (6 items), and undifferentiated rejection (4 items). The items were rated on a Likert-type scale from 1 (almost never true) to 4 (almost always true). In this study, items measuring warmth/affection were reverse-scored so that higher scores indicated a perceived lack of warmth or affection. Item 13, which assessed indifference and neglect, was also reverse-scored.

Paternal and maternal rejection scores were calculated separately, ranging from 24 to 96. A higher score indicates greater perceived parental rejection. A multiple regression analysis was conducted separately for mothers and fathers to examine the four dimensions. In the paternal dimensions, internal consistency coefficients were $\alpha = .87$ for lack of warmth/affection, $\alpha = .83$ for hostility/aggression, $\alpha = .83$ for indifference/neglect, and $\alpha = .84$ for undifferentiated rejection. The Cronbach's alpha for the total paternal rejection score was 0.840. In the maternal dimensions, $\alpha = .85$, $\alpha = .80$, $\alpha = .80$, and $\alpha = .81$, respectively. For the total maternal rejection score, Cronbach's alpha was .82.

Brief Self-Control Scale

According to Tangney et al. (2004), self-control was measured using a 10-item version of the Brief Self-Control Scale. The items were rated on a 5-point scale ranging from 1 (very much like me) to 5 (not at all like me). Before calculating the total score, Items 1, 2, 3, 7, 8, 9, and 10 were reverse-scored in accordance with the scoring procedure used on the administered questionnaire. The English-language questionnaire was administered because participants were attending English-medium schools and were capable of comprehending its items. Scores ranged from 10 to 50, with higher scores indicating greater self-control. This study examined self-control as a continuous variable in correlation analysis and as a moderator in moderation models. Cronbach's alpha for the present study was .82.

Bully–Victimization Scale (BVS)

Using the Bully–Victimization Scale (Reynolds, 2003), bullying perpetration and peer victimization were assessed. A total of 46 items were included in the administered measure, including 23 items assessing bullying perpetration and 23 items assessing peer victimization. The items were scored on a 4-point scale from 0 to 3. The total score for bullying perpetration and peer victimization was calculated separately, with possible scores ranging from 0 to 69. A higher score indicates greater bullying perpetration or more frequent experiences of peer victimization.

As described in the Participants section, participants were classified according to their relative subscale scores following administration of the BVS. Despite this, the scores of the two subscales were analyzed independently as continuous outcome variables rather than categorical group membership. Internal consistency coefficients were $\alpha = .85$ for bullying perpetration and $\alpha = .86$ for peer victimization.

Procedure

In January and April 2023, data were collected from public and private schools in Lahore and Sargodha, Pakistan. Ethical approval was obtained from the Institutional Review Board before data collection, along with permission from the school administrations. Prior to participation, parents or legal guardians were required to provide written informed consent and assent, respectively.

Under the researcher's supervision, data collection was conducted during regular school hours in classrooms. After completing the Bully-Victimization Scale, participants were asked to complete questionnaires assessing Parental acceptance-rejection as well as self-control. Additionally, demographic information was collected, including age, gender, grade level, school type, and family background.

As part of the study, participants were informed about the study's purpose, procedures, voluntary nature, confidentiality, as well as their right to withdraw without penalty before administering questionnaires. Questions and instructions were clarified when necessary without influencing participants' responses. The questionnaires were completed in approximately 30 to 40 minutes.

Data Analysis

The data were analyzed using IBM SPSS Statistics, Version 27. In this study, descriptive statistics including means, standard deviations, and observed minimum and maximum scores were calculated for perceived paternal rejection, perceived maternal rejection, self-control, bullying perpetration, and peer victimization. In order to assess the internal consistency of the study measures, Cronbach's alpha coefficients were calculated. The study variables were analyzed using Pearson product-moment correlations.

Multiple linear regression analyses were conducted to examine how specific dimensions of paternal and maternal rejection are associated with bullying perpetration and peer victimization. A total of four regression models were estimated. In first and second models, the four dimensions of paternal and maternal rejection were simultaneously entered as predictors of bullying behavior. Similarly, in the third and fourth models, the corresponding dimensions of paternal and maternal rejection were entered separately as predictors of peer victimization. The F statistic, coefficients of determination (R^2), and adjusted R^2 were used to evaluate the model fit. Individual predictors were evaluated using unstandardized regression coefficients (B), standardized regression coefficients (β), and p-values. In order to assess multicollinearity, tolerance values and variance inflation factors (VIFs) were examined.

Hayes' PROCESS macro for SPSS (Hayes, 2022) was used to conduct four moderation analyses using Model 1. In the first model, perceived paternal rejection was specified as a predictor, bullying perpetration as an outcome, and self-control as a moderator. In the second model, perceived maternal rejection was analyzed as a predictor of bullying perpetration, with self-control as a moderator. Third and fourth models examined perceived parental rejection, respectively, as predictors of peer victimization, and self-control as a moderator. Predictor and moderator variables were mean centered before the interaction terms were constructed. It was examined whether the associations between perceived parental rejection and bullying-related outcomes differed across self-control levels by examining the statistical significance of each interaction.

The additional variance explained by each interaction was evaluated using the change in R^2 (ΔR^2). The conditional effects of perceived paternal and maternal rejection were examined at low (16th percentile), median (50th percentile), and high (84th percentile) levels of self-control. A Johnson–Neyman analysis was also conducted to determine the ranges of self-control at which the conditional associations were statistically significant. For the moderation analyses, unstandardized regression coefficients, standard errors, and confidence intervals were reported. The statistical tests were all two-tailed, with a significance level of $p < .05$.

Results

Descriptive Statistics and Internal Consistency

The descriptive statistics and internal consistency coefficients of the study variables are presented in Table 1. The mean scores for perceived paternal rejection were 60.50 (SD = 12.30) and perceived maternal rejection were 60.28 (SD = 11.89). The mean self-control score was 29.26 (SD = 8.46), whereas the mean scores for bullying perpetration and peer victimization were 34.21 (SD = 12.76) and 34.68 (SD = 12.23), respectively. The Cronbach's alphas of the study variables and sub scales were acceptable to good in the range of .81 to .87.

Table 1
Descriptive Statistics and Internal Consistency of Study Variables (N = 300)

Variable	Items	Min	Max	M	SD	α
Paternal Warmth/Affection	8	8.00	32.00	20.16	6.39	.87
Paternal Hostility/Aggression	6	6.00	24.00	14.91	4.89	.83
Paternal Indifference/Neglect	6	6.00	24.00	15.24	5.01	.84
Paternal Undifferentiated Rejection	4	4.00	16.00	10.19	3.68	.84
Perceived Paternal Rejection	24	27.00	93.00	60.50	12.30	.84
Maternal Warmth/Affection	8	8.00	32.00	20.01	6.22	.85
Maternal Hostility/Aggression	6	6.00	24.00	15.12	4.72	.81
Maternal Indifference/Neglect	6	6.00	24.00	15.03	4.71	.81
Maternal Undifferentiated Rejection	4	4.00	16.00	10.12	3.48	.82
Perceived Maternal Rejection	24	30.00	88.00	60.28	11.89	.83
Self-control	10	12.00	48.00	29.26	8.46	.83
Bullying	23	8.00	67.00	34.21	12.76	.85
Victimization	23	7.00	68.00	34.68	12.23	.86
Note. Min= Observed Minimum; Max= Observed Maximum; M= Mean; SD= Standard Deviation; α = Cronbach's alpha						

Correlations among Study Variables

The Pearson correlations between the perceived paternal and maternal rejection subscales, self-control, bullying, and victimization are shown in Table 2. Paternal rejection was positively correlated with bullying perpetration ($r = .45, p < .001$) and peer victimization ($r = .46, p < .001$). Likewise, perceived maternal rejection had a positive correlation with bullying perpetration ($r = .37, p < .001$) and with peer victimization ($r = .46, p < .001$). Both paternal rejection ($r = -.28, p < .001$) and maternal rejection ($r = -.29, p < .001$) were negatively associated with self-control.

Table 2
Pearson Correlations Among Perceived Parental Rejection Dimension, Self-Control, Bullying and Victimization (N = 300)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Paternal Warmth/Affection	—												
2. Paternal Hostility/Aggression	.23***	—											
3. Paternal Indifference/Neglect	.11	.13*	—										
4. Paternal Undifferentiated Rejection	.09	.18**	.26***	—									
5. Perceived Paternal Rejection	.68***	.62***	.59***	.53***	—								
6. Maternal Warmth/Affection	.12*	.08	.02	.04	.12*	—							
7. Maternal Hostility/Aggression	.05	.03	.02	.11	.08	.18**	—						
8. Maternal Indifference/Neglect	.13*	.04	.19**	.05	.17**	.14*	.26***	—					
9. Maternal Undifferentiated Rejection	.11	.06	.14*	.06	.15**	.11	.13*	.20***	—				
10. Perceived Maternal Rejection	.16**	.09	.13*	.10	.20***	.68***	.63***	.63***	.48***	—			
11. Self-Control	-.15*	-.24***	-.15**	-.16**	-.28***	-.18**	-.17**	-.16**	-.20***	-.29***	—		
12. Bullying	.30***	.31***	.24***	.22***	.45***	.26***	.22***	.22***	.23***	.37***	-.55***	—	
13. Victimization	.27***	.35***	.25***	.26***	.46***	.30***	.25***	.30***	.27***	.46***	-.55***	.71***	—
* p < .05. ** p < .01. *** p < .001													

Table 3
Multiple Regression Analysis of Perceived Parental Rejection Subscales Predicting Bullying and Victimization (N = 300)

Predictor	Perceived Paternal Rejection → Bullying β	Perceived Maternal Rejection → Bullying β	Perceived Paternal Rejection → Victimization β	Perceived Maternal Rejection → Victimization β
Warmth/Affection	.22***	.20***	.18***	.23***
Hostility/Aggression	.22***	.14*	.26***	.13*
Indifference/Neglect	.16**	.12*	.16**	.20***
Undifferentiated Rejection	.12*	.16**	.15**	.19***
R ²	.20	.14	.22	.21
Adjusted R ²	.19	.13	.21	.20
F(4, 295)	18.43***	12.33***	20.96***	19.80***
*p < .05. **p < .01. ***p < .001				

The four paternal and maternal rejection dimensions were all positively linked to bullying perpetration and peer victimization, and negatively linked to self-control. Self-control was negatively associated with bullying perpetration ($r = -.55, p < .001$) and peer victimization ($r = -.55, p < .001$). Furthermore, bullying perpetration and peer victimization were positively correlated ($r = .71, p < .001$).

Multiple Regression Analysis

Four additional multiple regression models were tested to investigate the relationships between the parental rejection subscales and bullying perpetration and peer victimization. The paternal rejection subscales collectively accounted for 20% of the variance in bullying perpetration, $F(4, 295) = 18.43, p < .001$, whereas maternal rejection subscales accounted for 14%, $F(4, 295) = 12.33, p < .001$. For peer victimization, paternal and maternal rejection subscales explained 22% and 21% of the variance, respectively, $F(4, 295) = 20.96, p < .001$, and $F(4, 295) = 19.80, p < .001$. Within each model, all four subscales were significant positive predictors. Hostility/aggression showed the highest standardized coefficient ($\beta = .26, p < .001$) for paternal

rejection and peer victimization. Warmth/affection showed the highest standardized coefficient ($\beta = .23, p < .001$) for maternal rejection and peer victimization.

Moderating Role of Self-Control

Four moderation analyses were conducted using Hayes' PROCESS macro (Model 1) to examine whether self-control moderated the associations of perceived paternal and maternal rejection with bullying perpetration and peer victimization (Table 4). Self-control significantly moderated the association between perceived paternal rejection and bullying perpetration, $B = -.02, SE = .01, p < .01, 95\% CI [-.03, -.01], \Delta R^2 = .02$. A significant interaction was also observed between perceived maternal rejection and self-control in predicting bullying perpetration, $B = -.03, SE = .01, p < .001, 95\% CI [-.04, -.02], \Delta R^2 = .04$. For peer victimization, self-control significantly moderated the association with perceived paternal rejection, $B = -.02, SE = .01, p < .001, 95\% CI [-.03, -.01], \Delta R^2 = .04$. Similarly, the interaction between perceived maternal rejection and self-control was significant, $B = -.02, SE = .01, p < .001, 95\% CI [-.03, -.01], \Delta R^2 = .03$.

Table 4
Moderating Effects of Self-Control on the Associations of Perceived Parental Rejection with Bullying and Victimization (N = 300)

Predictor and outcome	B	SE	95% CI		R ²	ΔR^2
			LL	UL		
Paternal Rejection × Self-Control → Bullying	-.02**	.01	-.03	-.01	.42	.02
Maternal Rejection × Self-Control → Bullying	-.03***	.01	-.04	-.02	.40	.04
Paternal Rejection × Self-Control → Victimization	-.02***	.01	-.03	-.01	.44	.04
Maternal Rejection × Self-Control → Victimization	-.02***	.01	-.03	-.01	.43	.03
p < .01. *p < .001						

An analysis of conditional effects indicated that the positive associations between perceived parental rejection and both bullying perpetration and peer victimization were generally weaker at higher levels of self-control. Interestingly, the association between maternal rejection and bullying perpetration was significant at low and median levels of self-control, but not at high levels ($B = .01, p = .874$). Across all three levels of self-control, the remaining three associations were statistically significant, although their magnitudes decreased as self-control increased.

Discussion

A study was conducted to investigate the association between perceived paternal and maternal rejection and bullying perpetration and peer victimization among Pakistani schoolchildren, with a particular focus on the moderating effect of self-control. All five hypotheses were supported by the findings. A higher level of perceived rejection from both parents was associated with a higher level of bullying perpetration and peer victimization, whereas a lower level of self-control negatively correlated with both outcomes. Perceived paternal and maternal rejection was negatively associated with self-control. Additionally, significant interaction effects indicated that the positive associations between perceived parental rejection and bullying-related outcomes are weaker at higher levels of self-control. The findings of these studies highlight the importance of perceived parent-child relationships and individual regulatory characteristics in understanding bullying involvement in schools.

According to the first hypothesis, perceived paternal and maternal rejection was positively associated with bullying perpetration. Children who reported greater parental rejection were also more likely to perpetrate bullying. Researchers have found a reciprocal relationship between negative parenting experiences and bullying perpetration among children. In a longitudinal study of 891 Chinese children, Wu et al. (2023) identified reciprocal relationships between parental maltreatment and bullying perpetration, indicating that adverse family experiences may have a direct impact on children's aggressive peer behavior in the future. Similarly, Fang et al. (2026) found that rejection of parents was associated with subsequent traditional bullying and cyberbullying among college students, with rejection sensitivity and hostility contributing to these relationships. In spite of the fact that that study was conducted on an older population, the findings of the present study suggest that perceived parental rejection may be relevant to aggressive peer behavior at different developmental stages.

The multiple regression analyses demonstrated that each of the four dimensions of perceived parental and maternal rejection was a significant positive predictor of bullying perpetration when analyzed concurrently. The reverse-scored warmth/affection dimension was positively associated with bullying perpetration, demonstrating that lower perception of parental warmth was associated with greater involvement in bullying behaviors. This finding is consistent with Qin and Gan (2024), who examined parental emotional warmth and bullying involvement among Chinese adolescents in the context of non-suicidal self-injury among Chinese adolescents. This discussion is extended by the present findings which demonstrate that perceived hostility/aggression, indifference/neglect, and undifferentiated rejection were also independently associated with bullying perpetration when other rejection dimensions within each model were also considered. According to these results, children's involvement in bullying perpetration is dependent on multiple aspects of perceived parental rejection, rather than merely low parental warmth.

Additionally, the first hypothesis was supported by the positive association between perceived paternal and maternal rejection and peer victimization. A higher percentage of children experiencing rejection from either parent also experienced peer victimization as a result of their experiences. A number of

longitudinal studies have suggested that the relationship between parental experiences and peer victimization may involve complex developmental processes. A study by Cheng et al. (2025) examined maternal parenting, children's self-esteem, and peer victimization across three assessment points, identifying longitudinal relationships between maternal rejection, maternal warmth, self-esteem, and victimization. Consequently, such findings suggest that family relationships and peer experiences are likely to be interconnected over time. However, the cross-sectional design of the present study does not establish whether perceived parental rejection precedes peer victimization or if experiences of victimization are associated with changes in children's perceptions of parental relationships. However, these findings highlight the relevance of both parental and maternal rejection to children's self-reported peer victimization.

Self-control was associated negatively with both bullying perpetration and peer victimization, supporting the second hypothesis. Self-control was associated with lower participation in bullying perpetration and lower peer victimization among children reporting higher levels of self-control. In line with research emphasizing the importance of emotional and behavioral regulation in aggressive peer interactions, this association with bullying perpetration is consistent with this finding. The results of Bäker and Wilke (2023) indicate that difficulty in emotion regulation is positively correlated with bullying perpetration and victimization among students ages 10–15. Various forms of bullying involvement may be associated with difficulty managing emotional responses in these studies. Although emotion regulation and self-control are distinct constructs, both involve regulating responses to challenging interpersonal situations. This study extends this literature by demonstrating a negative relationship between self-control and bullying behaviors among Pakistani schoolchildren.

Furthermore, the negative association between self-control and peer victimization warrants careful consideration. Even though children with greater self-control may respond differently to interpersonal challenges, the responsibility for peer victimization lies with bullies rather than the victimized children. Previous longitudinal research has identified reciprocal associations between peer victimization and emotion dysregulation, suggesting that emotional dysregulation may precede and follow victimization experiences (Herd et al., 2024). As a result of such findings, the association observed in the present study may reflect complex developmental processes rather than a straightforward protective effect of self-control. Thus, the negative relationship between self-control and peer victimization should be interpreted as a correlation rather than a demonstration that improving children's self-control alone will prevent victimization.

A third hypothesis was supported by a negative association between perceived rejection from both parents and self-control. This finding suggests that perceived parent–child relationships may be relevant to children's regulatory capacities. Children who reported higher levels of rejection from either parent also tended to report lower self-control. As reported by Boullion et al. (2023), a longitudinal study examining parental warmth and adolescent adjustment found that parental warmth correlated with adolescents' subsequent emotional adjustment resulting from emotional regulation strategies. Despite the fact that the study examined emotion regulation rather than self-control, its findings provide a useful developmental perspective on the relationship between parental experiences and regulatory processes. These results contribute to this literature by demonstrating that perceived rejection from both parents negatively correlates with self-control among Pakistani schoolchildren.

The fourth hypothesis was supported by significant interaction effects between self-control and perceived paternal and maternal rejection in predicting bullying behavior. As self-control increased, the association between perceived parental rejection and bullying perpetration became weaker, which is consistent with the hypothesis that self-control plays a statistical buffering role. Furthermore, conditional-effect analyses revealed that the relationship between paternal rejection and bullying perpetration remained significant at higher levels of self-control, while the relation between maternal rejection and bullying perpetration was no longer statistically significant at the 84th percentile. It is possible that children who report greater self-control may be better able to regulate their behavior in response to interpersonal frustration, although the present study did not directly explore this issue. that self-control plays an important role in the relationship between anger rumination and cyberbullying perpetration As a result of a longitudinal study of 442 middle school students, anger rumination mediated the relationship between traditional bullying victimization and subsequent cyberbullying perpetration, whereas self-control moderated the relationship between anger rumination and cyberbullying perpetration. This association was particularly strong among adolescents with low self-control (Jiang et al., 2025). Despite the fact that that research examined different interpersonal experiences and an online form of bullying, it provides a relevant context for interpreting the current findings. By demonstrating that self-control statistically moderates both paternal and maternal rejection with bullying behaviors, the current study extends this line of investigation.

The fifth hypothesis was supported by significant interactions between self-control and perceived paternal and maternal rejection in predicting peer victimization. Based on the negative interaction coefficients, higher levels of self-control were associated with a weaker positive association between perceived parental rejection and peer victimization. Additionally, conditional-effect analyses indicated that these associations remained statistically significant for low, median, and high levels of self-control, although their magnitudes decreased as self-control levels increased. These findings suggest that individual differences in self-control may be relevant to the strength of the associations between perceived family experiences and peer victimization. In spite of this, it is unclear what mechanisms underlie these interactions. Previously, research has highlighted the potential transactional nature of parenting experiences and peer victimization, which suggests that children may experience adjustment difficulties or victimization experiences as a result of changes in parental responses (Altinoz et al., 2025). These findings demonstrate the interconnection between family relationships, individual characteristics, and peer experiences as a whole. In spite of this, the researchers do not establish that self-control directly prevents peer victimization or that improving self-control alone will reduce children's experiences of victimization.

In addition, bullying perpetration was positively correlated with peer victimization, indicating that children who reported greater involvement in bullying perpetration also experienced a higher rate of peer victimization. Although the cross-sectional design does not establish their temporal sequence or the extent to which individual children occupy separate or overlapping bullying roles, this finding suggests that the two forms of bullying involvement are

closely related. Bäker et al. (2023) stressed the importance of individual regulatory characteristics when examining bullying perpetration and victimization. In light of perceived family relationships and individual differences in self-control, the present findings highlight the importance of examining bullying perpetration and peer victimization separately but as interrelated outcomes.

Theoretical and Practical Implications

Several theoretical implications of the present findings can be drawn for the understanding of the relationship between schoolchildren's bullying involvement and perceived parental rejection. In this study, both maternal and paternal rejections are examined separately, contributing to the literature informed by interpersonal acceptance–rejection theory. As a consequence, bullying perpetration and peer victimization are associated with perceived rejection from both parents. Significant associations between warmth/affection, hostility/aggression, indifference/neglect, and undifferentiated rejection further emphasize the multidimensional nature of parental rejection as perceived. Moreover, the significant moderation effects suggest that individual differences in self-control may be relevant to the strength of the associations between perceived parental rejection and bullying-related outcomes. It is important to consider family relationships as well as individual regulatory characteristics when examining children's behavioral and interpersonal development.

The findings also have practical implications for parents, educators, school counselors, and mental health professionals working with children. Bullying-related outcomes are positively associated with perceived parental rejection, suggesting supportive parental–child relationships, emotional responsiveness, and constructive family communication may be important considerations when attempting to prevent bullying. The school-based counseling and psychoeducational programs can also provide support to children experiencing bullying perpetration and peer victimization, along with their perceptions of parental rejection. Furthermore, the negative associations between self-control and bullying-related outcomes, coupled with the significant moderation effects, suggest that self-regulation skills warrant consideration in future prevention research. It may be possible to evaluate age-appropriate strategies for impulse regulation, interpersonal frustration, and conflict resolution as aspects of comprehensive bullying prevention programs. However, the current findings do not establish the effectiveness of these strategies. To prevent peer victimization, efforts should be focused on addressing bullying behavior and promoting a safe, supportive school environment rather than requiring victimized children to regulate their own behavior.

Limitations and Future Directions

In interpreting the findings, several limitations should be considered. First, a cross-sectional design prevents conclusions regarding causality or temporal ordering of perceived parental rejection, self-control, bullying perpetration, and peer victimization. Although significant associations and moderation effects were observed, the direction of these relationships remains unclear. In the future, longitudinal studies could examine how parental rejection, self-control, and bullying-related experiences change over time and whether these associations are consistent across developmental stages.

Secondly, the study relied exclusively on children's self-reported perceptions of parental rejection, self-control, bullying perpetration, and peer victimization. In spite of the value of self-report measures as a source of information about children's subjective experiences, responses may be influenced by recall difficulties, social desirability, and shared method variance. Research in the future could include reports from parents, teachers, and peers, as well as observational assessments, to obtain a more comprehensive understanding of family relationships and bullying involvement.

Third, participants were recruited from public and private English-medium schools in Lahore and Sargodha, Pakistan, by purposive sampling. In this study, children aged 11–14 years who lived with both parents were included, which may limit the generalizability of the results to children in other geographical regions, educational settings, or age groups. In future studies, probability sampling could be employed when possible, as well as the inclusion of participants from a variety of linguistic, socioeconomic, educational, and family backgrounds.

Lastly, although self-control significantly moderated the associations between perceived parental rejection and bullying-related outcomes, the study did not examine the psychological mechanisms or broader contextual factors that might explain the associations. As well as emotion regulation, peer relationships, school climate, and perceived social support, other factors may also influence the results. Researchers may use longitudinal or multilevel designs in future studies to investigate these factors and assess whether school- and family-based interventions emphasizing supportive relationships and regulatory skills may have positive effects on children's peer experiences.

Conclusion

The present study demonstrated significant associations between perceived paternal and maternal rejection among Pakistani schoolchildren and bullying perpetration and peer victimization. Bullying perpetration and peer victimization were directly correlated with perceived parental rejection, while self-control was negatively correlated with perceived parental rejection and both bullying-related outcomes. It was also found that self-control moderated the associations between perceived parental rejection and bullying perpetration and peer victimization, with weaker positive associations observed at higher levels. This study contributes to understanding how perceived family relationships and individual regulatory characteristics influence children's peer experiences by examining paternal and maternal rejection separately and considering their specific dimensions. Future research on bullying prevention should consider supportive parent-child relationships and self-regulation skills as relevant considerations. For the purpose of clarifying the underlying processes and assisting in the development and evaluation of family- and school-based interventions, longitudinal and multi-informant studies are required.

Declarations

Author Contribution

A.N. contributed to the study conception and design, data collection, statistical analysis, interpretation of findings, and preparation of the original manuscript. H.I. contributed to the interpretation of findings, critical revision of the manuscript, and intellectual content. R.I. contributed to the study design, research supervision, interpretation of findings, and critical revision of the manuscript. All authors reviewed and approved the final manuscript and agreed to be accountable for their contributions.

Data Availability

The datasets generated and analyzed during the current study are not publicly available due to privacy and confidentiality considerations involving minor participants but may be made available in de-identified form from the corresponding author upon reasonable request, subject to applicable ethical and institutional requirements.

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