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A Structural Equation Modeling Study of Parental Psychological Control, Emotion Regulation Difficulties, and Depressive Symptoms among Adolescents: The Mediating Role of Rejection Sensitivity

Erion. Kelmendi[1], Gabrielle. Pelletier[2*], Enkhzul. Batbayar[3]

[1] Department of Psychology, University of Tirana, Tirana, Albania
[2] Department of Educational Psychology, University of Calgary, Calgary, Canada
[3] Department of Psychology, National University of Mongolia, Ulaanbaatar, Mongolia

*** Corresponding author email address**: gabrielle.pelletier@ucalgary.ca

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A B S T R A C T

Objective: This study aimed to examine the direct and indirect relationships among parental psychological control, emotion regulation difficulties, rejection sensitivity, and depressive symptoms in adolescents, with a particular focus on the mediating role of rejection sensitivity.

Methods and Materials: A cross-sectional design was employed with 718 adolescents aged 13–18 years recruited from secondary schools in Canada. Parental psychological control was measured using the Psychological Control Scale–Youth Self-Report, emotion regulation difficulties using the Difficulties in Emotion Regulation Scale (DERS), rejection sensitivity using the Children's Rejection Sensitivity Questionnaire, and depressive symptoms using the CES-DC. Structural Equation Modeling (SEM) was used to test direct and indirect pathways, with model fit evaluated using χ^2, CFI, TLI, IFI, RMSEA, and SRMR indices. Bootstrap resampling with 5,000 iterations was employed to examine the significance of indirect effects.

Findings: SEM analyses revealed that parental psychological control was positively associated with emotion regulation difficulties ($\beta = .58$, $p < .001$) and rejection sensitivity ($\beta = .42$, $p < .001$). Emotion regulation difficulties were positively related to both rejection sensitivity ($\beta = .39$, $p < .001$) and depressive symptoms ($\beta = .49$, $p < .001$), while rejection sensitivity also predicted depressive symptoms ($\beta = .31$, $p < .001$). The direct effect of parental psychological control on depressive symptoms was significant but reduced ($\beta = .11$, $p = .006$), indicating partial mediation. Bootstrap analyses confirmed significant indirect effects through emotion regulation difficulties ($\beta = .284$, 95% CI [.221, .352]), rejection sensitivity ($\beta = .130$, 95% CI [.089, .182]), and the sequential pathway via both mediators ($\beta = .070$, 95% CI [.044, .103]). The model explained 58% of the variance in depressive symptoms.

Conclusion: The findings indicate that parental psychological control contributes to adolescent depressive symptoms primarily through its impact on emotion regulation difficulties and rejection sensitivity.

Keywords: *Adolescents; Parental Psychological Control; Emotion Regulation Difficulties; Rejection Sensitivity; Depressive Symptoms.*

1. Introduction

Adolescence is a critical developmental period characterized by substantial biological, cognitive, emotional, and social changes that increase vulnerability to a range of psychological difficulties. Among these difficulties, depressive symptoms have emerged as one of the most prevalent and concerning mental health problems affecting adolescents worldwide. Depression during adolescence is associated with impaired academic functioning, interpersonal difficulties, reduced quality of life, substance misuse, self-harm behaviors, and an elevated risk of recurrent psychiatric disorders later in adulthood. Contemporary developmental psychopathology perspectives emphasize that adolescent depression develops through the interaction of family, emotional, interpersonal, and cognitive processes rather than through isolated risk factors. Consequently, identifying the mechanisms through which family experiences contribute to depressive symptoms has become an important focus of adolescent mental health research (Dianovinina & Surjaningrum, 2023; Lin & Guo, 2024).

A substantial body of literature has identified parenting behaviors as among the most influential determinants of adolescent emotional adjustment. Within this domain, parental psychological control has received considerable attention because of its pervasive impact on adolescents' psychological development. Psychological control refers to intrusive parenting practices that manipulate children's thoughts, feelings, and emotional experiences through tactics such as guilt induction, love withdrawal, shaming, invalidation of emotions, and excessive control over psychological autonomy. Unlike behavioral control, which involves monitoring and regulating children's activities in developmentally appropriate ways, psychological control undermines adolescents' autonomy and interferes with the development of a coherent sense of self. Research consistently demonstrates that psychologically controlling parenting is associated with a variety of maladaptive outcomes, including anxiety, depression, social withdrawal, low self-esteem, emotional distress, and interpersonal difficulties (Chen et al., 2024; Fu et al., 2024; Guo et al., 2025).

Recent investigations have further highlighted the importance of parental control in shaping adolescents' emotional experiences and psychological well-being. Studies have shown that excessive parental control contributes to negative emotional functioning, social anxiety, maladaptive coping, and broader mental health problems among young people. For example, parental control has been associated with increased social anxiety through dysfunctional emotion regulation strategies, suggesting that parenting practices influence adolescent outcomes partly by shaping emotional processes (Fu et al., 2024). Similarly, parental control has been linked to emotional eating through emotional experiences and emotion regulation difficulties, indicating that its impact extends beyond emotional disorders to broader psychosocial adjustment outcomes (Wang et al., 2025). Research examining parenting styles and depression among high-risk adolescents has also demonstrated that adverse parenting environments significantly contribute to emotional distress and depressive symptomatology (Guo et al., 2025). Furthermore, family climate and intergenerational patterns of distress have been shown to influence adolescents' psychological functioning, reinforcing the central role of family processes in adolescent mental health (Zhou et al., 2025).

One mechanism through which parental psychological control may contribute to depressive symptoms is emotion regulation. Emotion regulation refers to the processes by which individuals monitor, evaluate, modify, and manage emotional experiences in order to achieve personal goals and adapt effectively to environmental demands. Effective emotion regulation is a fundamental developmental task during adolescence because of the heightened emotional intensity and increased social challenges characteristic of this period. Difficulties in emotion regulation have been consistently associated with internalizing disorders, emotional distress, maladaptive coping, and depressive symptoms among adolescents and young adults (Ahmed et al., 2024; Sharma et al., 2024; Yayla et al., 2025).

Growing evidence suggests that family environments play a critical role in the development of emotion regulation capacities. Adolescents learn emotional competencies largely through interactions with caregivers, who provide emotional modeling, validation, guidance, and support. Psychologically controlling parenting may disrupt this developmental process by invalidating adolescents' emotional experiences and discouraging autonomous emotional expression. Consequently, adolescents exposed to high levels of psychological control may struggle to understand, accept, and effectively regulate their emotions. Empirical studies have repeatedly supported this proposition. Child and adolescent emotion regulation has been identified as a significant mediator linking family

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factors to internalizing symptoms across diverse populations (Lin et al., 2023). Similarly, parental support has been found to reduce depressive symptoms through its influence on emotion regulation strategies and resilience (Ye et al., 2022). Research has also demonstrated that parental psychological flexibility affects children's behavioral outcomes through emotion regulation capacities (Ren et al., 2022). Additional studies indicate that parental psychological control is associated with negative emotions, psychological symptoms, and emotional maladjustment through emotion regulation processes (Bekaroğlu & Yılmaz, 2023; Ma et al., 2023).

The role of emotion regulation as a mediator between adverse developmental experiences and psychological symptoms has been documented across numerous contexts. Childhood trauma contributes to psychological symptoms through emotional dysregulation and alexithymia (Sharma et al., 2024). Adverse childhood experiences increase depressive symptoms through insecure attachment and emotion dysregulation strategies (Ye et al., 2023). Bullying victimization predicts depression, anxiety, and stress through cognitive emotion regulation processes (Vacca et al., 2023). Emotion regulation has similarly been identified as a mechanism linking adverse childhood experiences to psychosocial functioning (Brodbeck et al., 2022). Collectively, these findings suggest that difficulties in emotion regulation may represent a central pathway through which parental psychological control increases vulnerability to depressive symptoms.

Another important interpersonal mechanism that may explain the association between parental psychological control and adolescent depression is rejection sensitivity. Rejection sensitivity refers to the tendency to anxiously expect, readily perceive, and intensely react to social rejection. Individuals high in rejection sensitivity often interpret ambiguous social situations as threatening, anticipate rejection even in neutral contexts, and experience heightened emotional reactions to perceived interpersonal exclusion. During adolescence, when peer relationships become increasingly important, rejection sensitivity can exert particularly powerful effects on emotional well-being and psychological adjustment (Minihan et al., 2023).

Theoretical perspectives suggest that rejection sensitivity develops partly through repeated experiences of criticism, emotional invalidation, inconsistency, and conditional acceptance within close relationships. Psychologically controlling parenting may contribute to the development of rejection sensitivity because adolescents learn to associate interpersonal relationships with judgment, criticism, manipulation, and emotional insecurity. As a result, they may become increasingly vigilant to signs of rejection and develop maladaptive expectations regarding social interactions. Empirical evidence supports these assumptions. Childhood psychological abuse and neglect have been associated with relational aggression through the mediating roles of parental attachment and rejection sensitivity, highlighting the importance of rejection-related cognitive processes in the developmental consequences of adverse parenting experiences (Wu, 2026). Furthermore, insecure attachment patterns and attachment-related vulnerabilities have been repeatedly associated with depressive symptoms and broader psychopathology (Scharfe, 2026; Tironi et al., 2021).

Research increasingly demonstrates that rejection sensitivity constitutes a significant risk factor for emotional disorders during adolescence. Adolescents characterized by heightened rejection sensitivity report elevated levels of depression, anxiety, emotional distress, and interpersonal dysfunction (Minihan et al., 2023). The association between rejection sensitivity and depressive symptoms has been supported across diverse populations, with evidence indicating that perceived social acceptance may partially explain this relationship (Giovazolias, 2023). Studies examining peer relationships have similarly demonstrated that social rejection, peer acceptance, and emotional regulation processes collectively influence emotional and behavioral problems among young people (Salerni & Messetti, 2025). The social consequences of peer victimization, exclusion, and rejection have also been linked to adverse neurobiological and psychological outcomes that increase vulnerability to depression (Cubillo, 2022). Evidence from studies of bullying and victimization further indicates that experiences involving rejection and exclusion contribute significantly to emotional difficulties among adolescents (Perwitasari & Wuryaningsih, 2022; Silwal et al., 2025).

Importantly, rejection sensitivity and emotion regulation difficulties may not operate independently. Individuals who struggle to regulate emotions often experience greater emotional reactivity in interpersonal situations, making them more susceptible to interpreting social interactions as threatening or rejecting. Conversely, heightened rejection sensitivity may intensify emotional responses to social experiences, creating additional challenges for emotion regulation. Previous studies suggest that emotional regulation processes and social information processing

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mechanisms jointly contribute to psychosocial functioning and emotional adjustment (Brodbeck et al., 2022). Research examining attachment anxiety and depressive symptoms has similarly shown that emotion regulation serves as an important intermediary process linking interpersonal vulnerabilities to depression (Colonnello et al., 2022). These findings suggest that rejection sensitivity and emotion regulation difficulties may represent interconnected mechanisms through which parental psychological control influences depressive symptoms.

The broader psychological mediation literature further supports the importance of examining indirect pathways when investigating mental health outcomes. Studies across diverse populations have shown that distal risk factors often exert their effects through emotional, interpersonal, and cognitive mediators rather than direct pathways alone (Lattanner et al., 2022; Parnes et al., 2024). Structural equation modeling studies have repeatedly demonstrated the usefulness of testing complex mediation models to understand the mechanisms linking developmental risk factors to psychological symptoms (Younes et al., 2021). Such approaches allow researchers to simultaneously examine multiple pathways and determine the relative contribution of distinct mediating processes.

Despite growing evidence regarding parental psychological control, emotion regulation difficulties, rejection sensitivity, and depressive symptoms, several important gaps remain in the literature. First, many studies have examined these constructs independently rather than within a comprehensive theoretical framework. Second, although emotion regulation has frequently been investigated as a mediator of family influences on psychological outcomes, comparatively fewer studies have simultaneously considered rejection sensitivity as an additional interpersonal mechanism. Third, the combined roles of emotion regulation difficulties and rejection sensitivity in explaining the association between parental psychological control and depressive symptoms among adolescents remain insufficiently understood. Finally, there is a need for research conducted within contemporary adolescent populations using advanced analytical techniques capable of testing multiple direct and indirect relationships simultaneously.

Addressing these gaps may contribute to a more comprehensive understanding of how psychologically controlling parenting influences adolescent mental health. By identifying the emotional and interpersonal mechanisms that connect parental psychological control to depressive symptoms, researchers and practitioners may be better positioned to develop targeted prevention and intervention programs aimed at reducing adolescent depression and promoting adaptive emotional functioning.

Therefore, the present study aimed to examine the direct and indirect relationships among parental psychological control, emotion regulation difficulties, rejection sensitivity, and depressive symptoms among adolescents and to test the mediating role of rejection sensitivity within a structural equation modeling framework.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a cross-sectional correlational design using Structural Equation Modeling (SEM) to examine the direct and indirect relationships among parental psychological control, emotion regulation difficulties, rejection sensitivity, and depressive symptoms in adolescents. The study was conducted in Canada during the 2025–2026 academic year. The target population consisted of adolescents enrolled in public secondary schools across the provinces of Ontario, British Columbia, and Alberta. A multistage cluster sampling procedure was used to recruit participants from selected urban and suburban schools. Initially, several school districts were randomly selected, followed by the random selection of schools and classrooms within each district. Students who met the inclusion criteria, including being between 13 and 18 years of age, having sufficient English language proficiency, and providing informed assent alongside parental consent, were invited to participate in the study.

A total of 742 adolescents participated in the research. Following data screening procedures, including the assessment of missing data, multivariate outliers, and response consistency, 718 questionnaires were retained for the final analysis. The final sample consisted of 376 females (52.4%) and 342 males (47.6%), with a mean age of 15.62 years (SD = 1.47). Participation was voluntary, and confidentiality and anonymity were assured throughout the study.

2.2. Measures

Parental psychological control was assessed using the Psychological Control Scale–Youth Self-Report (PCS-YSR) developed by Barber (1996). This instrument is one of the most widely used measures of psychologically controlling

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parenting behaviors. The scale consists of 8 items designed to assess adolescents' perceptions of parental behaviors characterized by guilt induction, love withdrawal, invalidation of feelings, and intrusive psychological manipulation. Participants respond to each item using a 3-point Likert-type scale ranging from 1 (not like my parent) to 3 (a lot like my parent). Higher scores indicate greater perceived parental psychological control. Previous studies have demonstrated satisfactory psychometric properties for the scale, including acceptable internal consistency, construct validity, and cross-cultural applicability among adolescent populations. Reliability coefficients reported in previous studies have generally ranged from .75 to .86.

Difficulties in emotion regulation were measured using the Difficulties in Emotion Regulation Scale (DERS) developed by Gratz and Roemer (2004). The DERS is a comprehensive self-report measure containing 36 items that assess multiple dimensions of emotion regulation difficulties. The instrument comprises six subscales, including nonacceptance of emotional responses, difficulties engaging in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity. Responses are recorded on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). Higher scores indicate greater difficulties in regulating emotions. The DERS has demonstrated strong psychometric characteristics across adolescent and adult samples, with reported Cronbach's alpha coefficients typically exceeding .85 for the total scale and supporting evidence for convergent and discriminant validity.

Rejection sensitivity was assessed using the Children's Rejection Sensitivity Questionnaire (CRSQ) developed by Downey and Feldman and subsequently adapted for adolescent populations. The instrument evaluates individuals' tendencies to anxiously expect, readily perceive, and intensely react to interpersonal rejection. The questionnaire presents a series of hypothetical social situations involving potential rejection from peers, teachers, or significant others. Participants rate both their level of concern about rejection and their expectations regarding acceptance or rejection in each scenario. Composite scores are calculated according to established scoring procedures, with higher scores reflecting greater rejection sensitivity. Previous research has demonstrated satisfactory reliability and validity of the CRSQ among adolescents from diverse cultural backgrounds, with internal consistency estimates generally ranging from .78 to .88.

Depressive symptoms were measured using the Center for Epidemiologic Studies Depression Scale for Children (CES-DC), developed by Weissman et al. (1980). The CES-DC consists of 20 items designed to assess the frequency of depressive symptoms experienced during the previous week. The instrument evaluates emotional, cognitive, behavioral, and somatic manifestations of depression, including sadness, hopelessness, social withdrawal, and sleep-related difficulties. Responses are provided on a 4-point scale ranging from 0 (not at all) to 3 (a lot). Higher total scores indicate greater depressive symptomatology. The CES-DC has been extensively validated in adolescent populations and has consistently demonstrated good internal consistency, test–retest reliability, and criterion validity. Reported Cronbach's alpha coefficients typically range between .84 and .91.

2.3. Data Analysis

Data were analyzed using IBM SPSS Statistics version 29 and AMOS version 29. Prior to hypothesis testing, data screening procedures were conducted to evaluate missing values, normality, outliers, and multicollinearity. Descriptive statistics, including means, standard deviations, skewness, and kurtosis values, were calculated for all study variables. Pearson correlation coefficients were computed to examine bivariate associations among parental psychological control, emotion regulation difficulties, rejection sensitivity, and depressive symptoms.

Structural Equation Modeling was employed to test the hypothesized mediation model. First, a measurement model was evaluated through confirmatory factor analysis to assess the adequacy of the latent constructs and the relationships between observed indicators and their respective latent variables. Subsequently, the structural model was tested to examine the direct effects of parental psychological control on emotion regulation difficulties, rejection sensitivity, and depressive symptoms, as well as the indirect pathways linking parental psychological control to depressive symptoms through rejection sensitivity and emotion regulation difficulties. Model fit was evaluated using multiple fit indices, including the chi-square statistic (χ^2), Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Incremental Fit Index (IFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). Values of CFI, TLI, and IFI greater than .90 and RMSEA and SRMR values below .08 were considered indicative of acceptable model fit.

The significance of indirect effects was examined using a bootstrap resampling procedure with 5,000 bootstrap samples and 95% bias-corrected confidence intervals. An indirect effect was considered statistically significant when the confidence interval did not include zero. Statistical significance for all analyses was established at $p < .05$. The final SEM model was interpreted based on standardized path coefficients, explained variance estimates, and overall model fit indicators.

3. Findings and Results

A total of 742 adolescents participated in the study. After screening for missing data, response inconsistencies, and multivariate outliers, 718 questionnaires were retained for the final analyses. The final sample consisted of 376 female adolescents (52.4%) and 342 male adolescents (47.6%). Participants ranged in age from 13 to 18 years, with a mean age of 15.62 years (SD = 1.47). Regarding grade level, 31.1% were enrolled in Grade 9, 25.8% in Grade 10, 23.7% in Grade 11, and 19.4% in Grade 12. Approximately 78.6% of participants lived with both parents, whereas 21.4% reported other family arrangements, including single-parent and blended-family households. The demographic distribution indicated that the sample adequately represented adolescents from diverse educational and family backgrounds, supporting the generalizability of the findings within the Canadian adolescent population.

Table 1

Descriptive Statistics and Correlations among Study Variables

Variable	Mean	SD	1	2	3	4
1. Parental Psychological Control	17.84	4.62	—			
2. Emotion Regulation Difficulties	92.57	18.73	.58**	—		
3. Rejection Sensitivity	13.92	3.81	.52**	.61**	—	
4. Depressive Symptoms	22.41	8.64	.49**	.67**	.59**	—

Table 1 presents the descriptive statistics and Pearson correlation coefficients for all study variables. The results indicated moderate to strong positive associations among parental psychological control, emotion regulation difficulties, rejection sensitivity, and depressive symptoms. Adolescents who reported higher levels of parental psychological control also tended to report greater emotion regulation difficulties ($r = .58$, $p < .001$), higher rejection sensitivity ($r = .52$, $p < .001$), and more severe depressive symptoms ($r = .49$, $p < .001$). Emotion regulation difficulties demonstrated the strongest correlation with depressive symptoms ($r = .67$, $p < .001$), suggesting that adolescents who struggled to manage and regulate their emotions were particularly vulnerable to depressive symptomatology. Rejection sensitivity was also strongly associated with both emotion regulation difficulties ($r = .61$, $p < .001$) and depressive symptoms ($r = .59$, $p < .001$). The skewness and kurtosis values for all variables fell within acceptable ranges (−1.5 to +1.5), indicating that the assumption of univariate normality was satisfied. Collectively, these findings provided preliminary support for the hypothesized relationships and justified proceeding with structural equation modeling analyses.

Table 2

Confirmatory Factor Analysis Results for the Measurement Model

Latent Variable	Indicator	Standardized Loading (λ)	SE	CR
Parental Psychological Control	PPC1	.78	.03	26.00
	PPC2	.82	.03	27.33
	PPC3	.75	.03	25.00
	PPC4	.80	.03	26.67
Emotion Regulation Difficulties	ERD1	.81	.02	40.50
	ERD2	.86	.02	43.00
	ERD3	.79	.02	39.50
	ERD4	.83	.02	41.50
Rejection Sensitivity	RS1	.77	.03	25.67
	RS2	.84	.03	28.00

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	RS3	.80	.03	26.67
	RS4	.75	.03	25.00
Depressive Symptoms	DS1	.83	.02	41.50
	DS2	.88	.02	44.00
	DS3	.81	.02	40.50
	DS4	.85	.02	42.50

The measurement model demonstrated an excellent fit to the observed data. All standardized factor loadings were statistically significant and exceeded the recommended threshold of .70, indicating strong relationships between the observed indicators and their underlying latent constructs. Factor loadings ranged from .75 to .88, suggesting that the indicators adequately represented parental psychological control, emotion regulation difficulties, rejection sensitivity, and depressive symptoms. Furthermore, the goodness-of-fit indices supported the adequacy of the measurement model. The Comparative Fit Index (CFI = .965), Tucker-Lewis Index (TLI = .958), and Incremental Fit Index (IFI = .965) all exceeded the recommended criterion of .90, while the RMSEA (.048) and SRMR (.041) remained below the recommended cutoff values of .08. These findings provided evidence for the construct validity of the latent variables and confirmed that the measurement model was suitable for testing the structural relationships among the study variables.

Table 3

Structural Path Coefficients for the Hypothesized Model

Structural Path	β	SE	CR	p
Parental Psychological Control → Emotion Regulation Difficulties	.58	.04	14.50	< .001
Parental Psychological Control → Rejection Sensitivity	.42	.05	8.40	< .001
Emotion Regulation Difficulties → Rejection Sensitivity	.39	.05	7.80	< .001
Emotion Regulation Difficulties → Depressive Symptoms	.49	.04	12.25	< .001
Rejection Sensitivity → Depressive Symptoms	.31	.04	7.75	< .001
Parental Psychological Control → Depressive Symptoms	.11	.04	2.75	.006

The structural model showed a satisfactory fit to the data, $\chi^2(101) = 269.73$, $p < .001$, CFI = .962, TLI = .955, IFI = .962, RMSEA = .049, and SRMR = .044. Examination of the standardized path coefficients revealed that parental psychological control exerted a strong positive effect on emotion regulation difficulties ($\beta = .58$, $p < .001$) and a moderate positive effect on rejection sensitivity ($\beta = .42$, $p < .001$). Emotion regulation difficulties were also significantly associated with rejection sensitivity ($\beta = .39$, $p < .001$), indicating that adolescents who experienced greater difficulties regulating emotions were more likely to anticipate and perceive interpersonal rejection. Both emotion regulation difficulties ($\beta = .49$, $p < .001$) and rejection sensitivity ($\beta = .31$, $p < .001$) emerged as significant predictors of depressive symptoms. Although the direct effect of parental psychological control on depressive symptoms remained statistically significant ($\beta = .11$, $p = .006$), the magnitude of this path was substantially reduced after the inclusion of the mediating variables, suggesting the presence of partial mediation. The structural model explained 34% of the variance in rejection sensitivity, 33% of the variance in emotion regulation difficulties, and 58% of the variance in depressive symptoms, indicating substantial explanatory power.

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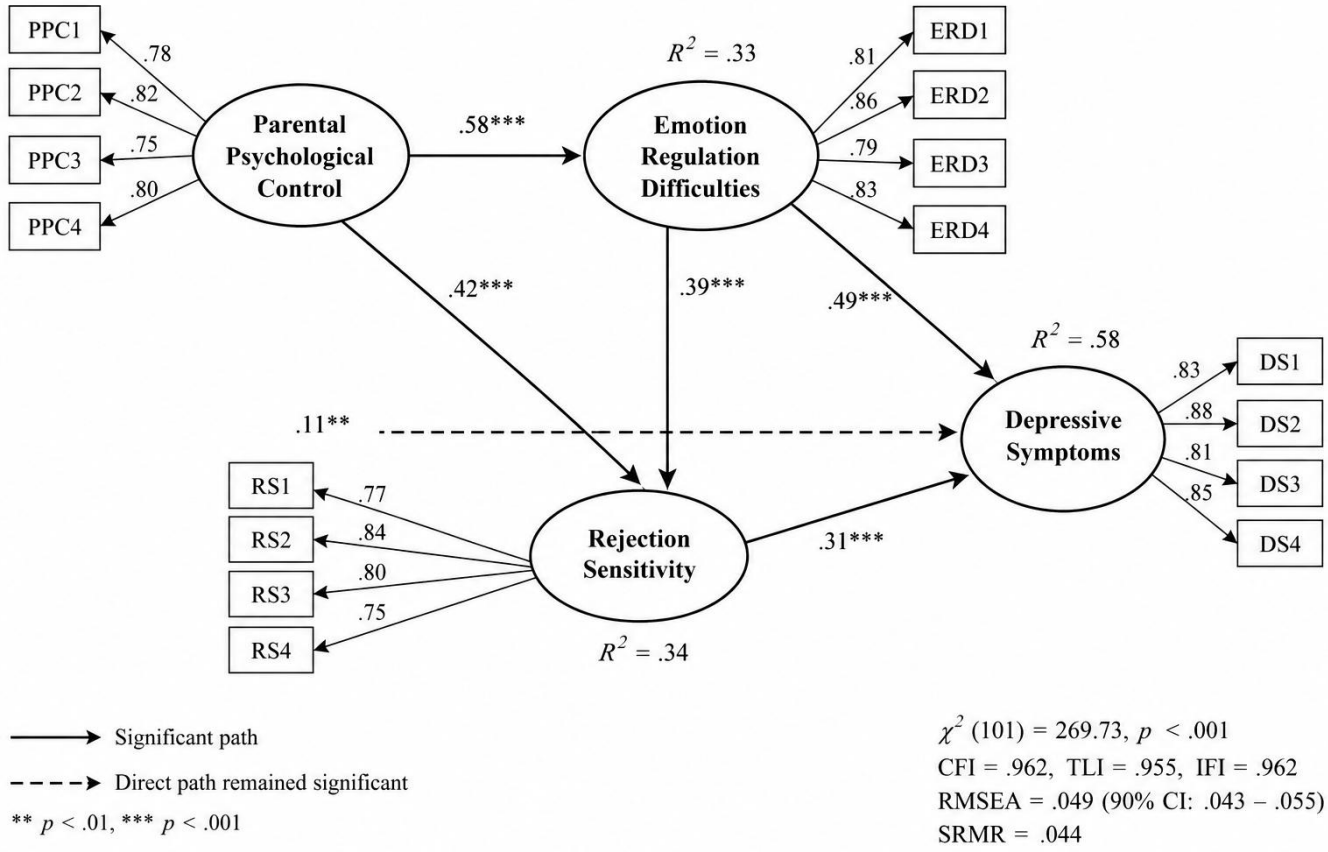
Figure 1

Final Structural Equation Model Examining the Mediating Role of Rejection Sensitivity in the Relationship between Parental Psychological Control, Emotion Regulation Difficulties, and Depressive Symptoms among Adolescents



The final structural equation model demonstrated that parental psychological control influenced depressive symptoms both directly and indirectly through emotion regulation difficulties and rejection sensitivity. The strongest pathway observed in the model linked parental psychological control to emotion regulation difficulties, which subsequently increased adolescents' vulnerability to rejection sensitivity and depressive symptoms. The pattern of standardized coefficients indicated that emotion regulation difficulties represented the most influential proximal predictor of depressive symptoms, while rejection sensitivity served as an important interpersonal mechanism through which family experiences translated into emotional distress. Overall, the model supported the theoretical proposition that psychologically controlling parenting contributes to maladaptive emotional functioning, which in turn increases sensitivity to rejection and elevates the risk of depressive symptomatology during adolescence.

Table 4

Bootstrap Analysis of Indirect Effects

Indirect Effect	Standardized Effect	95% CI Lower	95% CI Upper	p
PPC → ERD → DS	.284	.221	.352	< .001
PPC → RS → DS	.130	.089	.182	< .001
PPC → ERD → RS → DS	.070	.044	.103	< .001
Total Indirect Effect	.484	.401	.563	< .001

The bootstrap mediation analysis based on 5,000 resamples confirmed the significance of all indirect pathways. The indirect effect of parental psychological control on depressive symptoms through emotion regulation

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difficulties was substantial (β = .284, 95% CI [.221, .352]), indicating that adolescents exposed to psychologically controlling parenting were more likely to develop emotional regulation deficits, which subsequently increased depressive symptoms. The indirect pathway through rejection sensitivity was also statistically significant (β = .130, 95% CI [.089, .182]). Additionally, the sequential mediation pathway involving emotion regulation difficulties and rejection sensitivity simultaneously was significant (β = .070, 95% CI [.044, .103]). Because none of the confidence intervals included zero, all mediation effects were considered statistically significant. The total indirect effect (β = .484, 95% CI [.401, .563]) was considerably larger than the remaining direct effect, demonstrating that much of the influence of parental psychological control on adolescent depressive symptoms operated through emotional and interpersonal vulnerability processes. These findings provide strong empirical support for the proposed mediation model and highlight the central role of rejection sensitivity and emotion regulation difficulties in explaining the association between psychologically controlling parenting and depressive symptomatology among adolescents.

4. Discussion

The present study examined the associations among parental psychological control, emotion regulation difficulties, rejection sensitivity, and depressive symptoms in adolescents, with a particular focus on the mediating role of rejection sensitivity using a structural equation modeling (SEM) approach. The findings provide compelling evidence that parental psychological control exerts both direct and indirect effects on adolescent depressive symptoms, largely through emotion regulation difficulties and rejection sensitivity. The results of this study align with developmental and family systems theories that underscore the influence of parental behaviors on adolescent emotional and psychological development, reinforcing the centrality of family processes in the etiology of depressive symptoms during this sensitive developmental period (Dianovinina & Surjaningrum, 2023; Lin & Guo, 2024).

Consistent with the hypothesized model, parental psychological control was significantly associated with increased emotion regulation difficulties among adolescents. This finding is congruent with prior research indicating that psychologically controlling parenting undermines adolescents' emotional competencies, leading to maladaptive emotion regulation strategies and heightened vulnerability to internalizing disorders (Fu et al., 2024; Ma et al., 2023; Sharma et al., 2024). Mechanistically, adolescents exposed to intrusive and emotionally manipulative parenting may experience invalidation of feelings and excessive guilt, which impede the development of adaptive emotional management skills. Such maladaptive regulation patterns have been shown to contribute to depressive symptomatology and general psychological distress (Ahmed et al., 2024; Ye et al., 2022). These results are further corroborated by studies demonstrating that emotion regulation mediates the effects of adverse family environments, including parental psychological control, on depressive outcomes across multiple cultural contexts (Brodbeck et al., 2022; Lin et al., 2023). Taken together, these findings underscore the critical role of emotion regulation as a proximal mechanism through which parental control influences adolescent mental health.

The current study also demonstrated a significant direct association between parental psychological control and rejection sensitivity, suggesting that adolescents subjected to controlling parenting are more prone to anticipate and perceive social rejection. This observation is consistent with prior work emphasizing that rejection sensitivity develops through repeated experiences of relational criticism, emotional manipulation, and conditional parental acceptance (Minihan et al., 2023; Wu, 2026). Adolescents who internalize patterns of relational inconsistency or criticism may become hypervigilant to interpersonal cues, increasing their susceptibility to social stressors and perceived rejection. Research has highlighted that heightened rejection sensitivity is strongly predictive of depressive symptoms and social maladjustment, including peer-related difficulties, social withdrawal, and heightened emotional reactivity (Colonnello et al., 2022; Giovazolias, 2023). The findings of the present study extend these observations by demonstrating that rejection sensitivity operates as a significant intermediary between parental psychological control and adolescent depressive outcomes.

Moreover, emotion regulation difficulties were strongly associated with both rejection sensitivity and depressive symptoms. This supports the theoretical perspective that ineffective regulation of negative affect magnifies adolescents' vulnerability to perceived interpersonal threats, intensifying the emotional consequences of social stressors. Adolescents with poor emotion regulation may experience heightened arousal and rumination in response to ambiguous social situations, predisposing them to interpret benign interactions as rejecting. The interplay between emotion

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regulation difficulties and rejection sensitivity aligns with prior studies demonstrating that these processes jointly mediate the relationship between adverse family environments and psychological distress (Brodbeck et al., 2022; Salerni & Messetti, 2025; Vacca et al., 2023). This finding also aligns with meta-analytic evidence indicating that child emotion regulation mediates associations between family factors and internalizing symptoms, highlighting the importance of considering both intrapersonal and interpersonal mechanisms in understanding adolescent depression (Lin et al., 2023).

The SEM analyses revealed that while parental psychological control maintained a small but significant direct effect on depressive symptoms, the majority of its impact was transmitted indirectly through emotion regulation difficulties and rejection sensitivity. The total indirect effect accounted for a substantially greater proportion of the variance in depressive symptoms, demonstrating the central role of these mediators in the developmental pathway linking parental control to adolescent depression. These results are consistent with the psychological mediation framework, which posits that distal stressors and adverse parenting practices influence mental health outcomes primarily through emotional, cognitive, and interpersonal mediators (Lattanner et al., 2022; Parnes et al., 2024). The sequential mediation pathway observed in this study, where parental psychological control predicted emotion regulation difficulties, which in turn predicted rejection sensitivity, subsequently contributing to depressive symptoms, provides a more nuanced understanding of the interrelated mechanisms underlying adolescent vulnerability to depression.

The findings also highlight the importance of rejecting simplistic direct-effect models in favor of integrative approaches that account for both intrapersonal and interpersonal vulnerabilities. Adolescents' difficulties in regulating emotions may render them particularly sensitive to perceived rejection, and this heightened sensitivity may exacerbate depressive symptoms. This pathway is consistent with prior research linking social and emotional processing mechanisms to psychopathology in adolescents exposed to adverse parenting or peer environments (Cubillo, 2022; Silwal et al., 2025). Furthermore, the results suggest that interventions targeting emotion regulation skills and social cognitive biases, particularly rejection sensitivity, may mitigate the deleterious effects of psychologically controlling parenting on adolescent mental health (Giovazolias, 2023; Minihan et al., 2023; Wu, 2026).

5. Conclusion

Overall, the present findings contribute to the literature by empirically demonstrating a dual mediation model, elucidating how parental psychological control fosters depressive symptomatology through both emotion regulation difficulties and heightened sensitivity to rejection. This integrated perspective advances our understanding of the mechanisms underlying adolescent depression and supports the theoretical assertion that family processes exert their effects via dynamic emotional and interpersonal pathways rather than solely through direct behavioral influence (Dianovinina & Surjaningrum, 2023; Lin & Guo, 2024; Ye et al., 2023).

6. Limitations & Suggestions

Despite the strengths of this study, several limitations warrant consideration. First, the cross-sectional design precludes causal inference, and the directionality of observed associations cannot be definitively established. While the hypothesized model is consistent with developmental theory, longitudinal data are needed to confirm temporal sequences among parental psychological control, emotion regulation difficulties, rejection sensitivity, and depressive symptoms. Second, all measures were self-reported, which may introduce biases related to social desirability, recall inaccuracies, or shared method variance. Future studies incorporating multi-informant assessments, such as parent and teacher reports or observational measures, would enhance validity. Third, although the sample was drawn from diverse regions within Canada, cultural and contextual factors may limit the generalizability of findings to adolescents in other countries or cultural settings. Fourth, while SEM allows for the simultaneous estimation of multiple pathways, unmeasured confounding variables such as peer influence, genetic vulnerability, or environmental stressors may also contribute to depressive outcomes. Lastly, the focus on psychologically controlling parenting did not differentiate between maternal and paternal influences, which may exert distinct effects on adolescent emotional functioning.

Future research should prioritize longitudinal designs to examine the temporal dynamics of parental psychological control, emotion regulation, rejection sensitivity, and depressive symptoms across critical developmental windows. Such studies would clarify causality and identify sensitive periods when adolescents are most vulnerable to the impact of controlling parenting. Researchers should also

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explore potential moderators, including gender, cultural background, socioeconomic status, and peer support, to determine conditions under which the observed pathways are amplified or attenuated. Investigating additional mediators, such as cognitive appraisal, rumination, and self-compassion, may further elucidate the complex mechanisms linking parenting to depressive outcomes. Finally, experimental and intervention studies targeting emotion regulation and rejection sensitivity could provide critical insights into the malleability of these processes and their role in mitigating the impact of adverse parenting on adolescent mental health.

From a practical perspective, these findings underscore the importance of interventions aimed at promoting adaptive parenting practices, particularly by reducing psychologically controlling behaviors. Mental health practitioners, school counselors, and family therapists should incorporate strategies to enhance adolescents' emotion regulation skills and resilience to perceived rejection. Prevention programs could include parent training to foster autonomy-supportive and emotionally validating interactions, alongside adolescent-focused training in coping, emotional awareness, and social problem-solving. Additionally, school-based interventions that provide social-emotional learning opportunities and peer support networks may buffer adolescents from the deleterious effects of controlling parenting, thereby reducing the risk of depressive symptoms. Emphasizing the development of both intrapersonal competencies and interpersonal sensitivity is essential for comprehensive prevention and intervention strategies aimed at improving adolescent psychological well-being.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contributed to this article.

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