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Multi-Group Structural Equation Modeling of Adolescent Externalizing Problems Based on Interparental Conflict, Emotional Insecurity, Parent–Adolescent Attachment, and Family Cohesion

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A B S T R A C T

Objective: This study aimed to examine the structural relationships of interparental conflict, emotional insecurity, parent–adolescent attachment, and family cohesion with adolescent externalizing problems and to determine whether these relationships differed between male and female adolescents.

Methods and Materials: This cross-sectional correlational study was conducted among 684 adolescents aged 13–18 years enrolled in public secondary schools in Toronto, Canada, during the 2025–2026 academic year. Participants were selected using multistage cluster sampling and included 332 boys and 352 girls. Data were collected using the Children's Perception of Interparental Conflict Scale, Security in the Interparental Subsystem Scale, Inventory of Parent and Peer Attachment, Family Adaptability and Cohesion Evaluation Scales IV, and Youth Self-Report. Data were analyzed using confirmatory factor analysis and multi-group covariance-based structural equation modeling. Configural, metric, scalar, and strict measurement invariance were examined before comparing structural paths across gender groups. Indirect effects were tested using bias-corrected bootstrapping with 5,000 resamples.

Findings: The structural model demonstrated good fit, $\chi^2(548) = 1012.74$, $\chi^2/df = 1.85$, CFI = .952, TLI = .947, RMSEA = .035, and SRMR = .044. Interparental conflict significantly predicted greater emotional insecurity, weaker parent–adolescent attachment, lower family cohesion, and higher externalizing problems in both groups. Emotional insecurity positively predicted externalizing problems, whereas attachment and cohesion showed significant negative effects. The direct effect of interparental conflict on externalizing problems was stronger among boys ($\beta = .25$) than girls ($\beta = .12$, $p = .026$), whereas the effects of interparental conflict on emotional insecurity and emotional insecurity on externalizing problems were stronger among girls. All three indirect effects were significant. The model explained 48% and 53% of the variance in externalizing problems among boys and girls, respectively.

Conclusion: Adolescent externalizing problems appear to be embedded in interconnected family processes, with interparental conflict exerting both direct and indirect associations through emotional insecurity, attachment, and family cohesion.

Keywords: *Adolescent Externalizing Problems; Interparental Conflict; Emotional Insecurity; Parent–Adolescent Attachment; Family Cohesion*

1. Introduction

Adolescence is a developmental period characterized by substantial biological, cognitive, emotional, and social transformations, during which young people progressively seek autonomy while remaining strongly embedded within their family relationships. Although these developmental changes provide opportunities for identity formation and increasing independence, they may also heighten vulnerability to behavioral difficulties when the family environment is unstable or conflictual. Externalizing problems, including aggression, oppositional behavior, rule-breaking, impulsive conduct, and other forms of behavioral dysregulation, constitute a particularly important category of adolescent adjustment difficulties because they can disrupt academic functioning, peer relationships, family interactions, and subsequent psychosocial development. Evidence increasingly suggests that externalizing behaviors should not be interpreted solely as individual-level deficits but rather as outcomes embedded within interconnected family processes. Recent family research has therefore moved toward systemic models in which marital functioning, emotional security, parent–child relationships, and broader family organization are considered simultaneously when explaining adolescent adjustment (Fatmasari et al., 2026). Person-centered evidence likewise indicates that different configurations of family dynamics are associated with distinct patterns of child and adolescent adaptation, reinforcing the need to investigate multiple family processes within an integrated framework (Bi, 2025).

Among the family processes associated with adolescent maladjustment, interparental conflict has received sustained empirical attention. Interparental conflict encompasses recurrent disagreement, hostility, verbal aggression, destructive communication, withdrawal, coercion, and, at its most severe level, physical violence between parental figures. Exposure to persistent destructive conflict may undermine adolescents' sense that the family is a stable and predictable source of protection. Research has demonstrated that the developmental significance of parental conflict extends beyond the immediate distress generated by witnessing disagreements, because adolescents observe, interpret, and respond to patterns of conflict that influence their emotional and behavioral organization. Network-based evidence has recently shown that specific dimensions of interparental conflict, adolescents' responses to such conflict, and adjustment symptoms are dynamically interconnected rather than operating as isolated processes (Jia et al., 2026). Similarly, longitudinal and intervention research indicates that changing parents' conflict behaviors and their understanding of conflict can generate meaningful changes in family functioning over time (Devonshire et al., 2023). These findings suggest that the behavioral consequences of interparental conflict may emerge through multiple pathways linking marital processes to the adolescent's psychological and relational environment.

Externalizing behavior is one particularly plausible consequence of chronic exposure to destructive interparental conflict. Adolescents living in conflictual homes may learn coercive patterns of problem solving, experience heightened irritability and physiological arousal, become less sensitive to aggressive behavior, or use externalizing responses as maladaptive strategies for managing emotional distress. Research involving adolescents exposed to interparental conflict has documented externalizing difficulties sufficiently pronounced to warrant targeted behavioral interventions (Joseph & Canlas, 2024). Evidence concerning domestic violence similarly demonstrates meaningful associations with juvenile delinquency, while also suggesting that the strength and expression of these relationships may differ between boys and girls (Hong & Han, 2025). Other work has shown that family economic strain may contribute to adolescent aggression partly by increasing interparental and parent–child conflict, illustrating how conflict can function as a proximal family mechanism through which broader stressors are translated into adolescent behavioral problems (Wang et al., 2022). More contemporary manifestations of externalizing behavior have also been linked to family conflict; for example, interparental conflict has been associated with adolescent online flaming through increased psychological stress and online disinhibition (Zeng et al., 2026). These findings support conceptualizing externalizing problems broadly as behavioral manifestations of dysregulation that may develop when destructive family interactions undermine adaptive emotional and relational processes.

The impact of interparental conflict, however, cannot be adequately understood through a simple direct-effect model. Emotional Security Theory proposes that children's and adolescents' perceptions of security within the interparental relationship represent a central mechanism through which exposure to parental conflict influences adjustment. From this perspective, adolescents are motivated to preserve emotional security in the family system. Recurrent hostile, unresolved, or threatening parental conflict may activate concerns regarding family stability, parental availability,

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abandonment, or personal involvement in conflict. These concerns may be reflected in heightened emotional reactivity, avoidance, behavioral dysregulation, or inappropriate involvement in parental disagreements. Evidence across different family structures has confirmed the importance of interparental conflict for adolescent emotional security, suggesting that emotional insecurity is not limited to one particular household arrangement (O'Hara et al., 2023). Research examining children's risky involvement in parental conflict has similarly demonstrated that maladaptive responses to interparental discord can initiate developmental sequelae extending beyond immediate exposure (Thompson et al., 2021).

Emotional insecurity may be especially relevant to externalizing problems because it creates a persistent state of perceived interpersonal threat. Adolescents who anticipate conflict, fear family disruption, or feel compelled to intervene in parental disagreements may exhibit hypervigilance, anger, impulsivity, aggression, and difficulties regulating behavior. Importantly, emotional insecurity represents more than a transient negative emotion; it reflects an organizational process through which adolescents interpret family events and regulate their responses to interpersonal threat. Preventive-intervention studies provide particularly strong evidence for its causal relevance. Family interventions designed to improve family processes have produced reductions in multiple components of adolescent emotional insecurity over extended periods (Dennis et al., 2024). Related randomized intervention research has demonstrated simultaneous benefits for adolescents' emotional insecurity and attachment to fathers, indicating that the security of the interparental system and parent–adolescent relationships may be developmentally intertwined (Dennis et al., 2023). Such findings support testing emotional insecurity as a central construct in structural models of adolescent behavioral adjustment.

The importance of emotional insecurity is also reinforced by evidence demonstrating that it operates alongside attachment processes. One investigation of destructive interparental conflict found that emotional insecurity and parent–child attachment represented indirect pathways linking parental conflict to children's emotional and behavioral problems (Yang et al., 2022). This dual pathway is theoretically important because it suggests that conflict between parents may affect adolescents both by threatening their sense of safety within the broader family system and by changing their perception of the availability, responsiveness, and trustworthiness of individual parents. Interparental conflict may consume parents' emotional resources, increase irritability, disrupt consistent parenting, or spill over into parent–adolescent interactions. Consequently, a young person exposed to frequent conflict may not only feel insecure about the stability of the family but may also experience diminished closeness and trust in the parental relationship.

Parent–adolescent attachment therefore represents another important component of the proposed model. Secure attachment during adolescence involves confidence in parental availability, open communication, trust, and the perception that parents remain dependable sources of emotional support despite adolescents' increasing autonomy. When this attachment relationship is secure, adolescents may be better able to regulate anger, seek support during distress, interpret interpersonal events flexibly, and inhibit impulsive responses. Conversely, attachment insecurity can interfere with adaptive emotional regulation and increase vulnerability to maladaptive behavioral patterns. Longitudinal findings demonstrate that interparental and parent–teen relationships during adolescence predict later intra- and interpersonal emotion-regulation capacities, emphasizing the long-term developmental significance of family relationships (Wilson et al., 2024). Parent–adolescent relationship quality has also been found to mediate associations between parental conflict and problematic adolescent behaviors such as online gaming addiction (Wang, 2021), suggesting that deterioration in the parent–adolescent relationship may constitute an important mechanism linking marital difficulties with behavioral dysregulation.

Recent evidence further indicates that the overall quality of parent–adolescent relations provides an important relational context within which day-to-day interpersonal processes influence adolescent emotional functioning (Chen et al., 2026). This broader relational context is likely to be important for externalizing problems because secure parental relationships can provide adolescents with emotional scaffolding and models of constructive conflict management. Conversely, exposure to conflict combined with insecure attachment may amplify behavioral vulnerability by removing a primary source of emotional regulation. Evidence from Arab adolescents has demonstrated connections among interparental relationships, attachment orientations, and potentially risky adolescent behavior (Daw et al., 2025). Studies extending into later development further indicate that insecure attachment may represent a pathway through which

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witnessing interparental violence influences adult role functioning (Cloutier & Barling, 2022). Collectively, these findings suggest that attachment security is not merely an outcome of family functioning but a potentially protective relational resource whose presence or absence may influence how adolescents adapt to family stress.

The broader emotional climate of the family must also be considered. Family cohesion refers to the emotional bonding, connectedness, support, cooperation, and sense of belonging experienced among family members. Cohesion does not imply the absence of disagreement; rather, it reflects whether family members retain supportive and emotionally connected relationships despite developmental changes and interpersonal stress. During adolescence, appropriate family cohesion can provide a secure relational base while allowing increasing autonomy. A cohesive family may buffer the effects of parental disagreements because adolescents can continue to perceive the family as supportive, available, and predictable. In contrast, low cohesion may intensify the effects of conflict by creating an environment characterized by fragmentation, emotional distance, and reduced opportunities for supportive communication. Research examining adolescents' appraisals of intact-family relationships emphasizes that adolescents actively evaluate multiple dimensions of their family environment rather than simply responding to isolated parental behaviors (Fatmasari et al., 2026). The quality of these perceptions is therefore likely to contribute substantially to behavioral adjustment.

Family cohesion is conceptually related to, but distinguishable from, parent–adolescent attachment. Attachment primarily reflects the adolescent's relationship with a specific caregiver, whereas cohesion concerns emotional connectedness across the family system. This distinction is important because adolescents may retain a strong relationship with one parent despite low overall family cohesion or, conversely, experience an apparently cohesive family environment while lacking secure communication with a particular parent. Family psychosocial environments characterized by supportive relational qualities have been associated with stronger psychological resources and lower emotional symptoms among adolescents (Liu et al., 2022). Research on associations between interparental and sibling relationships likewise shows that relational processes within one family subsystem are linked with functioning in other subsystems (Zemp et al., 2021). These findings support a family-systems perspective in which conflict, attachment, cohesion, and adolescent behavior are mutually embedded within an interconnected relational ecology.

The disruptive effects of interparental conflict may extend to multiple family subsystems through spillover, triangulation, harsh discipline, and weakened family solidarity. For example, exposure to interparental conflict has been associated with parent–child triangulation, which can mediate subsequent emotional difficulties in early adolescence (Wang et al., 2023). Conflict can also interact with characteristics of the father–adolescent relationship in predicting harsh disciplinary practices (Platts et al., 2022). Such findings suggest that adolescents are rarely passive observers of parental discord. They may become emotionally or behaviorally involved, experience altered parenting, or perceive broader changes in family relationships. Research examining attachment networks has similarly demonstrated that interparental conflict and patterns of attachment within the family jointly predict behavioral problems in children (Bcherraoui et al., 2026). Accordingly, structural models that examine interparental conflict in isolation may underestimate the relational mechanisms through which marital discord becomes associated with externalizing behavior.

The developmental consequences of interparental conflict may also extend beyond immediate externalizing symptoms. Long-term evidence indicates that family conflict during adolescence may influence later interpersonal functioning and aggression. Adolescents' relationships with parents and peers have been shown to predict verbal aggression in subsequent adult romantic relationships (Allen et al., 2024). A systematic review similarly concluded that exposure to interparental conflict can have implications for young adults' later romantic relationships (Singh & Thomas, 2022). Such developmental continuity can be understood through social-learning, attachment, and emotional-security processes. Repeated exposure to destructive conflict may normalize aggression, undermine trust in close relationships, and interfere with the development of effective interpersonal regulation. Research on parental relationships and children's psychological development similarly highlights the broader developmental significance of relational quality within the family (Zhao, 2021). Identifying pathways associated with adolescent externalizing behavior may therefore have implications extending beyond the adolescent period itself.

Externalizing problems also coexist with other forms of behavioral and emotional dysregulation. Research has linked interparental conflict with adolescent internet addiction

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through mechanisms such as rejection sensitivity, while demonstrating that contextual resources such as school connectedness can modify vulnerability (Tao et al., 2022). Self-regulation has likewise been identified as an important process in understanding problematic internet use during adolescence (Zhu, 2023). Interparental conflict has been associated with poorer academic performance through psychological and relational mechanisms (Liu & He, 2025), and parental marital conflict has also been associated with adolescent anxiety (Yan et al., 2026). These findings indicate that the influence of family conflict crosses traditional distinctions between internalizing, externalizing, educational, and technology-related outcomes. They also emphasize that the psychological response to family conflict is heterogeneous, making it important to identify relational processes that may explain why some adolescents respond primarily through behavioral dysregulation whereas others develop emotional symptoms.

A further consideration is that adolescents may differ in their sensitivity to these family processes according to gender. Gender differences have been documented in research connecting domestic violence exposure with juvenile delinquency (Hong & Han, 2025), while gender has also been identified as a moderator of associations between parental marital conflict and adolescent psychological symptoms (Yan et al., 2026). These differences may reflect gendered socialization, variations in emotional expression, differential involvement in family conflict, distinct coping patterns, or differences in the behavioral manifestations of distress. Boys have often been found to express family-related distress through overt behavioral problems, whereas girls may be particularly sensitive to interpersonal and relational threat; nevertheless, such patterns are neither universal nor sufficiently understood to justify assuming structural equivalence across groups. A multi-group structural equation modeling framework is therefore valuable because it permits empirical examination of whether the same measurement model applies across groups and whether the magnitude of structural associations differs.

Studies of interparental violence also indicate that protective processes and symptom profiles may vary considerably among exposed young people (Jiménez et al., 2025). This heterogeneity underscores the limitations of examining only average associations in a pooled sample. Even when interparental conflict predicts externalizing problems at the overall level, the pathways responsible for that association may differ across subgroups. For example, direct behavioral modeling of parental hostility may be especially relevant for one group, whereas emotional insecurity may play a stronger role for another. Evidence concerning adolescent aggression, attachment, and family stress likewise suggests that multiple interacting relational processes should be considered rather than assuming a uniform developmental pathway. Research on family structures and emotional security has shown that core family processes can operate across diverse contexts while varying in magnitude and organization (O'Hara et al., 2023). Multi-group analysis can therefore distinguish structural similarities from meaningful group-specific differences.

Another reason for adopting a multivariate structural approach concerns the substantial overlap among interparental conflict, emotional insecurity, attachment, and cohesion. High parental conflict is likely to correlate with greater emotional insecurity, poorer parent–adolescent attachment, and lower cohesion. If these constructs are examined separately, their associations with externalizing behavior may partly reflect shared family dysfunction rather than their distinctive contributions. Structural equation modeling addresses this limitation by simultaneously estimating latent relationships while accounting for measurement error. It also permits testing whether interparental conflict retains a direct association with externalizing behavior after emotional insecurity, attachment, and cohesion are considered. Existing evidence suggests that this distinction is important. The course of child adaptation in the context of parental separation or divorce is strongly shaped by the nature and timing of interparental conflict rather than by family structure alone (Cao et al., 2022). Similarly, family processes surrounding conflict influence multiple developmental outcomes, emphasizing the need to distinguish the direct impact of conflict from relational processes through which its effects may be transmitted.

Theoretical integration of emotional security, attachment, and family-systems perspectives consequently offers a stronger framework than any single perspective in isolation. Emotional Security Theory explains how parental conflict becomes threatening to adolescents' sense of family stability. Attachment theory explains how the availability and responsiveness of caregivers shape adolescents' capacity to seek support and regulate affect. Family-systems theory emphasizes that interparental, parent–child, and whole-family processes are interconnected and that difficulties in one subsystem can spill over into another. Contemporary research supports this integration by showing that adolescents' responses to conflict operate within wider

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networks of family relationships and adjustment processes (Jia et al., 2026). Studies of family-based prevention additionally demonstrate that modifying family processes can improve emotional security and attachment-related outcomes (Dennis et al., 2023; Dennis et al., 2024). Such evidence strengthens the rationale for a model in which interparental conflict, emotional insecurity, parent–adolescent attachment, and cohesion jointly explain externalizing problems.

Despite considerable evidence linking these constructs individually, fewer studies have simultaneously evaluated their unique structural contributions to adolescent externalizing problems while testing whether the structural model is equivalent across gender groups. This gap is important because identifying only a general association between parental conflict and adolescent maladjustment provides limited guidance for family assessment and intervention. If emotional insecurity is the dominant pathway for one group, interventions emphasizing family safety and reducing adolescents' exposure to destructive conflict may be especially important. If attachment or cohesion demonstrates a stronger protective association in another group, strengthening supportive parent–adolescent communication or whole-family connectedness may warrant greater emphasis. Understanding these distinctions requires measurement invariance to be established before group-specific structural pathways are compared, thereby ensuring that observed group differences represent substantive relational differences rather than differences in how constructs are measured.

Accordingly, the aim of the present study was to use multi-group structural equation modeling to examine adolescent externalizing problems based on interparental conflict, emotional insecurity, parent–adolescent attachment, and family cohesion and to determine whether the structural relationships among these constructs differed between male and female adolescents.

2. Methods and Materials

2.1. Study Design and Participants

The present study used a cross-sectional correlational design and covariance-based structural equation modeling to examine the structural relationships among interparental conflict, emotional insecurity, parent–adolescent attachment, family cohesion, and externalizing problems among Canadian adolescents. The study population consisted of adolescents enrolled in public secondary schools in Toronto, Ontario, Canada, during the 2025–2026 academic year. A multistage cluster sampling procedure was used. In the first stage, schools were selected from different educational districts to improve socioeconomic and geographic representation. In the second stage, classes within participating schools were randomly selected, and all eligible adolescents in the selected classes were invited to participate. A total of 731 questionnaires were distributed. Twenty-nine students declined participation or did not return parental consent, and 18 questionnaires were excluded because more than 10% of the study items were missing or because response patterns indicated insufficient engagement. The final analytical sample therefore consisted of 684 adolescents, representing 93.6% of the questionnaires initially distributed. Participants ranged from 13 to 18 years of age, with a mean age of 15.41 years (SD = 1.28). The sample included 332 boys and 352 girls. Eligibility criteria were enrollment in Grades 8 through 12, age between 13 and 18 years, living with or maintaining regular contact with at least one parental caregiver, sufficient English proficiency to understand the questionnaires, provision of adolescent assent, and provision of written parental or guardian consent. Adolescents were excluded when they had a documented cognitive or developmental condition that substantially interfered with independent questionnaire completion or when their questionnaires contained extensive missing data. Data were collected during regular school hours in quiet classroom settings under the supervision of trained research assistants. Participation was voluntary, responses were anonymous, and students were informed that they could discontinue participation at any time without academic or personal consequences. Written informed consent was obtained from parents or legal guardians and written assent was obtained from all adolescents before participation.

2.2. Measures

Children's Perception of Interparental Conflict Scale. Interparental conflict was assessed using the Children's Perception of Interparental Conflict Scale developed by Grych, Seid, and Fincham in 1992. The original instrument contains 48 items designed to assess children's and adolescents' perceptions and interpretations of conflict between parental figures. The instrument assesses dimensions including conflict properties, perceived threat, and self-blame, with conflict properties encompassing features such as frequency, intensity, and resolution of parental disagreements. Items are rated on a three-point

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response format, with higher scores indicating greater perceived destructive interparental conflict. Because the present study focused on the adolescent's overall exposure to and appraisal of interparental conflict, the total score was used as the observed indicator source for the latent interparental-conflict construct. Negatively worded items were reverse-scored before total and parcel scores were calculated. The scale has been extensively used in research examining the consequences of parental conflict and has demonstrated acceptable factorial validity, convergent validity, and internal consistency among child and adolescent populations. In the present sample, Cronbach's alpha for the overall scale was .90, indicating excellent internal consistency.

Security in the Interparental Subsystem Scale. Emotional insecurity was measured using the Security in the Interparental Subsystem Scale developed by Davies, Forman, Rasi, and Stevens in 2002. The instrument was designed within Emotional Security Theory to measure children's and adolescents' emotional and behavioral responses to conflict between parents. The scale evaluates major manifestations of insecurity, including emotional reactivity, behavioral dysregulation, involvement in parental conflict, and avoidance-related responses. Participants indicate the degree to which each statement describes their reactions when parental figures disagree. Higher scores represent greater insecurity in the interparental subsystem. Items were scored according to the instrument guidelines, with reverse-scored items recoded before calculating scale scores. For structural modeling, indicators representing the principal emotional-insecurity dimensions were used to define the latent construct. Previous studies have supported the measure's construct validity and internal consistency and have shown that it is sensitive to both naturally occurring differences in family conflict and changes following family-based preventive interventions. Cronbach's alpha for the emotional-insecurity measure was .88 in the present study.

Inventory of Parent and Peer Attachment. Parent–adolescent attachment was assessed using the parent section of the Inventory of Parent and Peer Attachment originally developed by Armsden and Greenberg in 1987. The instrument was designed to assess adolescents' perceptions of the affective and cognitive dimensions of their close attachment relationships. The parental component assesses trust, quality of communication, and alienation. Items are rated on a five-point Likert-type scale ranging from responses indicating that the statement is almost never true to responses indicating that it is almost always true. Items representing alienation were reverse-coded so that a higher overall score represented more secure parent–adolescent attachment. Trust reflects adolescents' perceptions of parental understanding and respect, communication assesses perceived quality and accessibility of interpersonal communication, and alienation reflects emotional distance, anger, and isolation within the relationship. The Inventory of Parent and Peer Attachment has demonstrated satisfactory factorial validity, convergent validity, and reliability across adolescent samples and has been widely used as a measure of perceived attachment security during adolescence. The three parental-attachment dimensions served as indicators of the latent attachment construct in the present analysis. Cronbach's alpha for the parent–adolescent attachment score was .91.

Family Adaptability and Cohesion Evaluation Scales IV. Family cohesion was measured using the Balanced Cohesion subscale of the Family Adaptability and Cohesion Evaluation Scales IV developed by Olson in 2011. The balanced cohesion dimension evaluates emotional bonding, mutual support, family involvement, togetherness, and the capacity to balance closeness with age-appropriate individuality. The subscale consists of seven items rated on a five-point Likert-type scale ranging from strongly disagree to strongly agree. Higher scores indicate greater balanced family cohesion. The scale was selected because it operationalizes cohesion as adaptive emotional connectedness rather than excessive enmeshment. Previous psychometric evaluations have supported the reliability, construct validity, and usefulness of the measure for assessing systemic family functioning. In the present study, item parcels were created to provide indicators of the latent family-cohesion construct while maintaining an adequate indicator-to-sample-size ratio for structural equation modeling. Cronbach's alpha for balanced family cohesion was .89.

Youth Self-Report. Adolescent externalizing problems were measured using the Externalizing Problems broadband scale of the Youth Self-Report developed within the Achenbach System of Empirically Based Assessment. The Youth Self-Report is designed for adolescents approximately 11 to 18 years of age and assesses a broad range of emotional and behavioral problems experienced during the preceding six months. The Externalizing Problems broadband construct is primarily derived from the Rule-Breaking Behavior and Aggressive Behavior syndrome scales. Items assess behaviors such as arguing, disobedience, aggression, impulsive rule violation,

threatening behavior, destructiveness, and other outwardly directed difficulties. Responses are scored on a three-point scale ranging from 0, indicating that the statement is not true, to 2, indicating that it is very true or often true. Higher scores indicate greater externalizing difficulty. The instrument has extensive international evidence supporting its reliability, criterion validity, convergent validity, and factorial structure among adolescent populations. The Rule-Breaking Behavior and Aggressive Behavior scores were incorporated into the measurement model as indicators of the externalizing-problems construct together with balanced item parcels created from the relevant items. Cronbach's alpha for the externalizing scale was .92 in the present sample.

2.3. Data Analysis

Data were analyzed using IBM SPSS Statistics 29 and AMOS 29. Preliminary screening included examination of missing values, univariate outliers, skewness, kurtosis, and multicollinearity. Missing responses represented less than 1.4% of item-level observations and were handled using full-information maximum likelihood estimation in the structural models. Absolute values of skewness below 2 and kurtosis below 7 were considered compatible with acceptable univariate normality. Multicollinearity was evaluated using tolerance and variance inflation factor statistics, and no problematic collinearity was identified. Means, standard deviations, internal-consistency coefficients, and Pearson correlation coefficients were calculated for the principal study variables. The measurement model was subsequently tested through confirmatory factor analysis using maximum-likelihood estimation. Model adequacy was evaluated using the chi-square statistic, the chi-square-to-degrees-of-freedom ratio, Comparative Fit Index, Tucker–Lewis Index, Root Mean Square Error of Approximation with its 90% confidence interval, and Standardized Root Mean Square Residual. Values of CFI and TLI of approximately .90 or higher, RMSEA below .08, and SRMR below .08 were interpreted as indicating acceptable model fit, with more stringent values indicating good fit. Before comparing structural coefficients between boys and girls, multi-group measurement invariance was examined sequentially at the configural, metric, scalar, and strict levels. Invariance was evaluated primarily using changes in CFI, RMSEA, and SRMR because the chi-square difference statistic is highly sensitive to sample size. Changes in CFI not exceeding .010, accompanied by changes in RMSEA not exceeding .015 and acceptable changes in SRMR, were interpreted as supporting invariance. After adequate measurement invariance was established, the structural model was estimated separately for boys and girls. Equality constraints were imposed sequentially on individual paths, and between-group differences were examined using critical ratios for differences between parameters and chi-square difference testing. Standardized direct, indirect, and total effects were reported. Indirect effects were tested using bias-corrected bootstrapping with 5,000 resamples and 95% confidence intervals. An effect was considered statistically significant when the confidence interval did not include zero. Statistical significance for conventional tests was set at $p < .05$.

3. Findings and Results

The final sample consisted of 684 adolescents, including 332 boys (48.5%) and 352 girls (51.5%). Participants ranged in age from 13 to 18 years, with an overall mean age of 15.41 years (SD = 1.28). Regarding school grade, 101 participants (14.8%) were in Grade 8, 137 (20.0%) were in Grade 9, 151 (22.1%) were in Grade 10, 162 (23.7%) were in Grade 11, and 133 (19.4%) were in Grade 12. Regarding family structure, 421 adolescents (61.5%) were living with two biological or adoptive parents, 118 (17.3%) were living primarily in single-parent households, 93 (13.6%) were living in blended or stepfamilies, and 52 (7.6%) reported other caregiving arrangements. The mean age of boys was 15.46 years (SD = 1.31), whereas the mean age of girls was 15.37 years (SD = 1.25), and this difference was not statistically significant, $t(682) = 0.92$, $p = .358$. Boys and girls also did not differ significantly in grade distribution, $\chi^2(4) = 4.18$, $p = .382$, indicating adequate comparability of the two groups on basic demographic characteristics.

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Table 1

Descriptive statistics, internal consistency, and correlations among the study variables

Variable	M	SD	Skewness	Kurtosis	α	1	2	3	4	5
1. Interparental conflict	2.64	0.61	0.38	-0.31	.90	1				
2. Emotional insecurity	2.49	0.58	0.44	-0.18	.88	.52**	1			
3. Parent–adolescent attachment	3.71	0.62	-0.41	-0.26	.91	-.43**	-.39**	1		
4. Family cohesion	3.58	0.59	-0.32	-0.39	.89	-.46**	-.42**	.55**	1	
5. Externalizing problems	12.84	7.15	0.71	0.46	.92	.41**	.48**	-.43**	-.39**	1

As presented in Table 1, all measures demonstrated satisfactory internal consistency, with Cronbach's alpha coefficients ranging from .88 for emotional insecurity to .92 for externalizing problems. Skewness and kurtosis values were within acceptable limits, providing support for the use of maximum-likelihood estimation. Interparental conflict was positively and significantly correlated with emotional insecurity ($r = .52$, $p < .01$) and externalizing problems ($r = .41$, $p < .01$) and negatively correlated with parent–adolescent attachment ($r = -.43$, $p < .01$) and family cohesion ($r = -.46$, $p < .01$). Emotional insecurity showed the strongest bivariate association with externalizing problems ($r = .48$, $p < .01$). In contrast, parent–adolescent attachment ($r = -.43$, $p < .01$) and family cohesion ($r = -.39$, $p < .01$) were negatively associated with externalizing problems. Attachment and family cohesion were moderately positively correlated ($r = .55$, $p < .01$), but the magnitude of this association remained below levels typically associated with construct redundancy. Variance inflation factors ranged from 1.39 to 1.78 and tolerance values ranged from .56 to .72, indicating that multicollinearity was not problematic.

Table 2

Confirmatory factor analysis and measurement invariance across boys and girls

Model	χ^2	df	χ^2/df	CFI	TLI	RMSEA	90% CI RMSEA	SRMR	ΔCFI	ΔRMSEA
Overall measurement model	987.36	530	1.86	.954	.949	.036	.032–.040	.041	—	—
Configural invariance	1492.18	1058	1.41	.951	.946	.035	.031–.039	.047	—	—
Metric invariance	1524.76	1082	1.41	.950	.946	.035	.031–.039	.049	-.001	.000
Scalar invariance	1564.31	1106	1.41	.948	.945	.036	.032–.040	.052	-.002	.001
Strict invariance	1601.22	1130	1.42	.946	.943	.036	.032–.040	.056	-.002	.000

Table 2 demonstrates that the hypothesized five-factor measurement model provided a good fit to the total sample data, $\chi^2(530) = 987.36$, $\chi^2/df = 1.86$, CFI = .954, TLI = .949, RMSEA = .036, 90% CI [.032, .040], and SRMR = .041. All standardized factor loadings were statistically significant at $p < .001$ and ranged from .61 to .88, indicating that the observed indicators adequately represented their respective latent constructs. Multi-group confirmatory factor analysis also supported measurement equivalence between boys and girls. The configural model demonstrated good fit, indicating that the same pattern of latent constructs and indicators was applicable to both groups. Constraining factor loadings to equality produced a change in CFI of only -.001 and no increase in RMSEA, supporting metric invariance. Additional equality constraints on intercepts resulted in ΔCFI = -.002 and ΔRMSEA = .001, supporting scalar invariance. Finally, strict invariance was also acceptable, with ΔCFI = -.002 and no increase in RMSEA. Because all changes remained substantially below conventional non-invariance thresholds, comparisons of latent structural relationships across boys and girls were considered appropriate.

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Table 3

Standardized structural path coefficients and multi-group comparisons

Structural path	Boys β	p	Girls β	p	Critical ratio for difference	p for group difference
Interparental conflict → Emotional insecurity	.43	<.001	.55	<.001	-2.12	.034
Interparental conflict → Parent–adolescent attachment	-.39	<.001	-.44	<.001	0.86	.389
Interparental conflict → Family cohesion	-.47	<.001	-.41	<.001	-1.01	.312
Interparental conflict → Externalizing problems	.25	<.001	.12	.018	2.23	.026
Emotional insecurity → Externalizing problems	.23	<.001	.36	<.001	-2.06	.039
Parent–adolescent attachment → Externalizing problems	-.24	<.001	-.27	<.001	0.54	.589
Family cohesion → Externalizing problems	-.18	.002	-.14	.009	-0.71	.478

The structural model demonstrated good overall fit, $\chi^2(548) = 1012.74$, $\chi^2/df = 1.85$, CFI = .952, TLI = .947, RMSEA = .035, 90% CI [.031, .039], and SRMR = .044. As shown in Table 3, interparental conflict significantly predicted greater emotional insecurity, poorer parent–adolescent attachment, lower family cohesion, and greater externalizing problems in both groups. Emotional insecurity positively predicted externalizing problems, whereas parent–adolescent attachment and family cohesion negatively predicted externalizing problems among both boys and girls. Multi-group comparisons nevertheless identified two notable gender differences in the pathways to externalizing behavior and one difference in the family-conflict pathway. The direct association between interparental conflict and externalizing problems was significantly stronger for boys (β = .25, p < .001) than for girls (β = .12, p = .018), with a significant critical ratio for the between-group difference of 2.23 (p = .026). In contrast, the association between emotional insecurity and externalizing problems was significantly stronger among girls (β = .36, p < .001) than boys (β = .23, p < .001), CR = -2.06, p = .039. Interparental conflict also predicted emotional insecurity more strongly among girls (β = .55) than boys (β = .43), CR = -2.12, p = .034. Differences between boys and girls in the pathways involving attachment and cohesion did not reach statistical significance. The model accounted for 48% of the variance in externalizing problems among boys and 53% among girls.

Table 4

Bootstrapped indirect and total effects of interparental conflict on externalizing problems

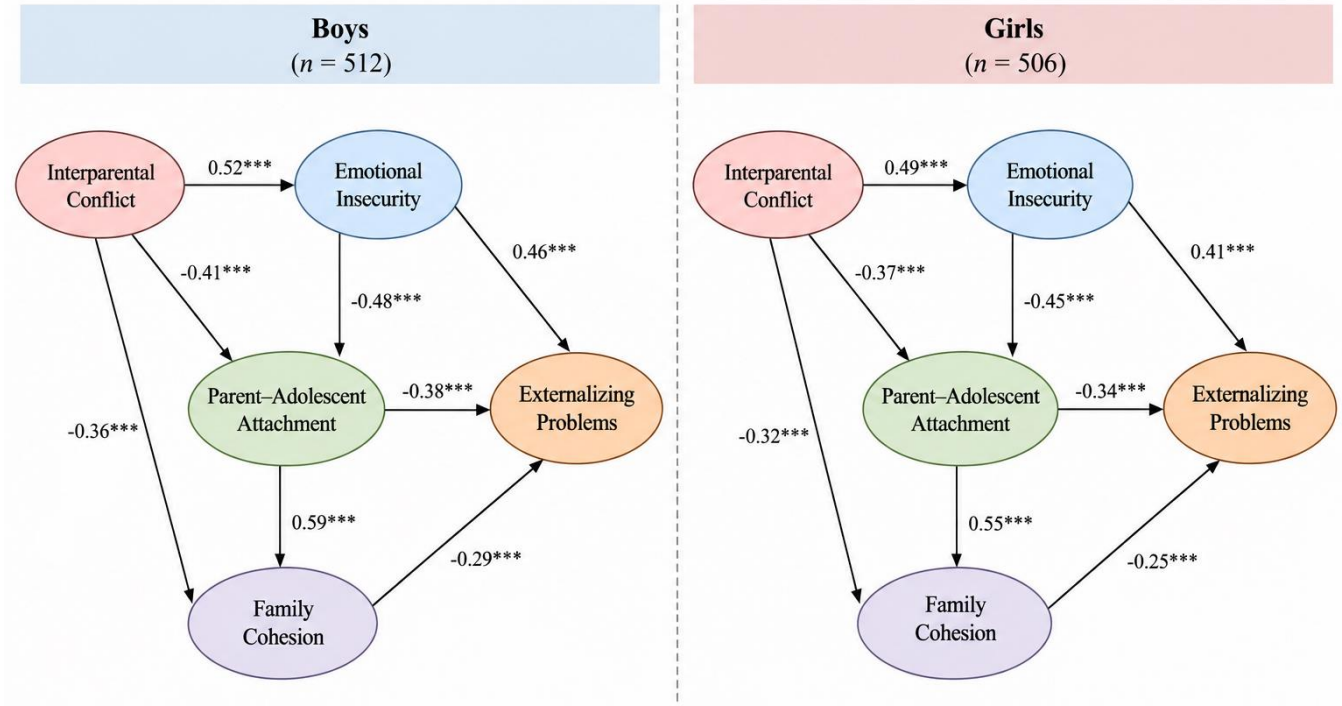
Effect	Boys β	95% CI	Girls β	95% CI	Between-group interpretation
IPC → Emotional insecurity → Externalizing problems	.10	[.061, .143]	.20	[.148, .257]	Stronger in girls
IPC → Attachment → Externalizing problems	.09	[.052, .139]	.12	[.074, .169]	No significant difference
IPC → Cohesion → Externalizing problems	.08	[.039, .126]	.06	[.025, .101]	No significant difference
Total indirect effect	.27	[.203, .342]	.38	[.297, .454]	Stronger in girls
Direct effect	.25	[.173, .322]	.12	[.021, .211]	Stronger in boys
Total effect	.52	[.439, .594]	.50	[.416, .577]	Similar across groups

The bootstrapping analysis presented in Table 4 demonstrated that all three indirect pathways from interparental conflict to externalizing problems were statistically significant because none of the 95% confidence intervals included zero. Among boys, interparental conflict showed an indirect effect of β = .10 through emotional insecurity, β = .09 through parent–adolescent attachment, and β = .08 through family cohesion, producing a total indirect effect of β = .27. Among girls, the corresponding indirect effects were β = .20 through emotional insecurity, β = .12 through attachment, and β = .06 through cohesion, producing a larger total indirect effect of β = .38. The emotional-insecurity pathway was therefore approximately twice as large among girls as among boys. Conversely, the direct effect of interparental conflict on externalizing problems was stronger among boys. Despite these differences in the organization of the pathways, the total effects of interparental conflict on externalizing problems were highly similar across groups, β = .52 for boys and β = .50 for girls. Thus, gender differences were evident primarily in how the influence of interparental conflict was transmitted rather than in the overall magnitude of its association with externalizing behavior.

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Figure 1

Multi-group structural model of interparental conflict, emotional insecurity, parent–adolescent attachment, family cohesion, and adolescent externalizing problems among boys and girls.



The final multi-group model illustrated in Figure 1 indicated that interparental conflict functioned as a central family risk factor with both direct and relational pathways to adolescent externalizing problems. Across both groups, higher conflict was associated with heightened emotional insecurity and deterioration in attachment and family cohesion, all of which were independently related to externalizing behavior. The most prominent group-specific pattern involved a stronger direct conflict-to-externalizing pathway among boys and stronger conflict-to-insecurity and insecurity-to-externalizing pathways among girls. The protective associations of parent–adolescent attachment and family cohesion were comparatively stable across gender, suggesting that these relational resources may have broadly protective implications for adolescent behavioral adjustment.

4. Discussion

The present study examined adolescent externalizing problems through a multi-group structural equation model incorporating interparental conflict, emotional insecurity, parent–adolescent attachment, and family cohesion. The findings supported the proposed integrated family-process model and demonstrated that interparental conflict was related to adolescent externalizing problems both directly and indirectly through changes in emotional and relational functioning. Interparental conflict predicted greater emotional insecurity, weaker parent–adolescent attachment, and lower family cohesion, and each of these constructs was independently associated with externalizing problems. The model explained 48% of the variance in externalizing problems among boys and 53% among girls, indicating that the selected family variables collectively accounted for a substantial proportion of differences in adolescents' behavioral adjustment. Measurement invariance was supported through the strict level, strengthening confidence that observed gender differences reflected structural differences rather than measurement nonequivalence.

The positive association between interparental conflict and adolescent externalizing problems is consistent with a substantial body of family and developmental research. Conflict characterized by hostility, aggression, instability, or poor resolution can create an environment in which maladaptive behavioral responses become more probable. Adolescents may learn aggressive interpersonal strategies through observation, respond to family stress with oppositional behavior, or experience diminished parental

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monitoring and behavioral regulation when parental resources are consumed by marital difficulties. Research examining adolescent responses to parental conflict has demonstrated complex connections between conflict characteristics, adolescents' behavioral responses, and adjustment difficulties (Jia et al., 2026). Similarly, interparental conflict has been associated with externalizing behaviors sufficiently pronounced to respond to targeted self-empowerment interventions (Joseph & Canlas, 2024). The present results extend these findings by demonstrating that parental conflict remained significantly associated with externalizing problems even after emotional insecurity, attachment, and family cohesion were simultaneously considered.

The finding is also compatible with research on adolescent aggression and delinquency. Family economic strain has been shown to predict aggression partly through interparental and parent–child conflict (Wang et al., 2022), while exposure to domestic violence has been associated with juvenile delinquency (Hong & Han, 2025). These patterns indicate that family conflict can influence both conventional externalizing symptoms and more severe forms of behavioral maladjustment. The finding that interparental conflict was associated with externalizing behavior is additionally consistent with evidence connecting family conflict with online forms of aggression. Zeng and colleagues demonstrated that interparental conflict was associated with adolescent online flaming through psychological stress and online disinhibition (Zeng et al., 2026). Although online flaming and conventional externalizing problems are not identical, both involve behavioral dysregulation and potentially aggressive responding, supporting the broader proposition that destructive parental conflict can create behavioral vulnerability across settings.

A particularly important finding was that emotional insecurity constituted a significant pathway connecting interparental conflict with externalizing problems. This result provides strong support for Emotional Security Theory. According to this perspective, repeated exposure to destructive parental conflict threatens adolescents' confidence in the stability and safety of the family system. Adolescents may become vigilant for signs of conflict, experience heightened emotional arousal, worry about family dissolution, or become behaviorally involved in parental disagreements. These reactions can consume regulatory resources and increase the likelihood that emotional distress will be expressed through aggression, defiance, or impulsive behavior. Previous research has shown that emotional security represents an important mechanism connecting interparental conflict with adolescent adjustment across different family structures (O'Hara et al., 2023). The present finding also aligns with evidence that risky involvement in parental conflict contributes to subsequent maladjustment (Thompson et al., 2021).

The emotional-insecurity result is particularly persuasive when considered alongside preventive-intervention evidence. Changes in family functioning following intervention have been associated with sustained reductions in multiple components of adolescents' emotional insecurity (Dennis et al., 2024). Other randomized family-prevention research has demonstrated improvements in both emotional insecurity and father–adolescent attachment (Dennis et al., 2023). Because intervention studies provide stronger evidence concerning change processes than purely cross-sectional associations, their results support interpreting emotional security as a potentially modifiable mechanism rather than merely a correlate of family dysfunction. The present findings therefore imply that reducing adolescents' sense of threat within the family may be an important component of interventions designed to reduce externalizing behavior.

Interparental conflict also predicted poorer parent–adolescent attachment, which in turn predicted fewer externalizing problems when attachment quality was higher. This finding is consistent with the spillover hypothesis, according to which tension and negative affect originating in the interparental subsystem can transfer to the parent–child subsystem. Parents who are repeatedly involved in destructive conflict may become less emotionally available, more irritable, inconsistent in discipline, or less responsive to adolescents' needs. Adolescents may consequently experience reduced trust and communication and greater emotional distance. Evidence has previously demonstrated that the parent–adolescent relationship mediates the association between interparental conflict and adolescent problematic online gaming (Wang, 2021). Similarly, research directly examining destructive interparental conflict has identified parent–child attachment and emotional insecurity as parallel indirect pathways to children's emotional and behavioral problems (Yang et al., 2022). The current results replicate this general relational pattern while focusing specifically on adolescent externalizing behavior.

The protective association of parent–adolescent attachment with externalizing problems can be interpreted

through the regulatory functions of secure relationships. Adolescents who trust their parents and perceive them as emotionally available are more likely to seek support during distress, communicate about interpersonal difficulties, and internalize parental expectations. Secure attachment may also reduce the need to respond to family instability through oppositional or aggressive behavior. Longitudinal research has found that parent–teen relationships during adolescence predict interpersonal and intrapersonal emotion regulation in young adulthood (Wilson et al., 2024). Evidence also indicates that the overall quality of parent–adolescent relationships shapes the context within which everyday relational processes influence adolescent mood (Chen et al., 2026). Thus, the protective effect observed in the present study may partly reflect the role of attachment in maintaining effective emotion regulation and supportive communication under conditions of family stress.

The present findings further demonstrated that interparental conflict was negatively associated with family cohesion and that greater cohesion independently predicted fewer externalizing problems. This result supports the family-systems proposition that conflict within the interparental dyad can affect the organization and emotional climate of the entire family. High levels of unresolved conflict may reduce shared activities, increase alliances and divisions, weaken family communication, and create emotional distance among family members. Conversely, cohesive families may maintain support and a sense of belonging even when disagreements arise. Research indicates that adolescents evaluate their family environment through multiple interconnected relational dimensions (Fatmasari et al., 2026), while person-centered studies show that particular profiles of family dynamics are differentially associated with child adjustment (Bi, 2025). The current findings extend these observations by demonstrating that cohesion contributes uniquely to externalizing problems even after the quality of parent–adolescent attachment is statistically controlled.

The distinction between attachment and cohesion is important. Although the two constructs were moderately correlated, both independently predicted externalizing problems. This finding suggests that a supportive relationship with a parent and a sense of connection to the family as a whole provide overlapping but nonredundant protective resources. Such an interpretation is consistent with evidence that processes in different family subsystems are interconnected but retain distinct developmental significance. A meta-analysis of interparental and sibling relationships, for example, demonstrated systematic associations across family subsystems (Zemp et al., 2021). Research examining broader psychosocial family environments has similarly connected supportive family characteristics with adolescent psychological resources and lower symptoms (Liu et al., 2022). Accordingly, interventions focused exclusively on the adolescent's relationship with one caregiver may overlook whole-family relational processes relevant to behavioral adjustment.

Another important aspect of the results was the significant indirect effect of interparental conflict through family cohesion. Destructive conflict may progressively reorganize family relationships so that adolescents experience reduced unity, weaker communication, and declining emotional support. Such changes can remove protective resources precisely when adolescents are experiencing increased stress from parental discord. Related studies have shown that interparental conflict can involve adolescents in triangulated family processes (Wang et al., 2023) and interact with father–adolescent characteristics in predicting harsh discipline (Platts et al., 2022). Research examining wider attachment networks has likewise demonstrated that parental conflict and family attachment processes jointly contribute to behavioral problems (Bcherraoui et al., 2026). The present results therefore reinforce the need to conceptualize externalizing behavior within a network of family relationships rather than as a simple reaction to witnessing parental disagreements.

Multi-group analysis revealed that the direct pathway from interparental conflict to externalizing problems was significantly stronger among boys than girls. This finding suggests that boys may be more likely to translate exposure to parental conflict directly into outwardly directed behavioral responses. Potential mechanisms include greater social acceptance of overt aggression among boys, increased behavioral modeling of hostile conflict, lower use of relational coping strategies, or gendered differences in expressing distress. Research on domestic violence and juvenile delinquency has similarly identified gender differences in pathways from family violence to problematic behavior (Hong & Han, 2025). The current findings do not imply that boys are uniformly more vulnerable to interparental conflict, because the total impact of conflict was almost identical across groups. Rather, they indicate that the form through which vulnerability is expressed may differ.

In contrast, interparental conflict predicted emotional insecurity more strongly among girls, and emotional

insecurity in turn demonstrated a stronger association with externalizing problems among girls. This pattern suggests that girls' externalizing behavior may be more strongly embedded in their emotional appraisal of family threat. Girls may show increased sensitivity to interpersonal disruption, relational instability, and perceived threats to family cohesion, and behavioral difficulties may emerge when these emotional-security concerns become sufficiently intense. The finding is compatible with evidence that gender moderates relationships between parental marital conflict and adolescent psychological symptoms (Yan et al., 2026). It is also consistent with comparative evidence demonstrating heterogeneity in emotional awareness, protective factors, and symptom patterns among children exposed to interparental violence (Jiménez et al., 2025). Importantly, the present results indicate that externalizing behavior in girls should not be interpreted as purely behavioral; it may be closely linked with underlying insecurity and relational threat.

The indirect pathway through emotional insecurity was approximately twice as large for girls as for boys, whereas the direct conflict-to-externalizing pathway was larger for boys. Nevertheless, the total effect of interparental conflict was highly similar, at $\beta = .52$ among boys and $\beta = .50$ among girls. This is one of the most informative findings of the study because it demonstrates that similar overall levels of risk can conceal different developmental mechanisms. A pooled analysis might have concluded simply that interparental conflict strongly predicts externalizing problems. Multi-group analysis revealed instead that the organization of this risk differed by gender. Such findings illustrate the value of examining structural heterogeneity rather than assuming that average associations describe all adolescents equally.

In contrast to the gender-specific pathways involving emotional insecurity, the protective relationships of parent–adolescent attachment and family cohesion with externalizing behavior did not differ significantly between boys and girls. This suggests that secure parental attachment and cohesive family functioning may constitute broadly applicable protective resources. The finding is consistent with research showing enduring associations between family relationships and later interpersonal functioning (Allen et al., 2024). It also corresponds with systematic evidence suggesting that experiences of interparental conflict can influence later close relationships across development (Singh & Thomas, 2022). The relative invariance of these protective pathways implies that improving communication, trust, emotional availability, and whole-family connectedness may benefit adolescents regardless of gender.

The observed associations also have implications beyond conventional externalizing symptoms. Previous studies have linked interparental conflict and family relationship problems with internet addiction (Tao et al., 2022), problematic gaming (Wang, 2021), academic difficulties (Liu & He, 2025), and other forms of psychosocial maladjustment. Self-regulatory capacity has likewise been emphasized as relevant to adolescent behavioral addictions (Zhu, 2023). These findings suggest that externalizing behavior may form part of a broader pattern in which family stress compromises adolescents' regulatory resources. Strengthening relational security may therefore influence not only aggression and rule-breaking but also other behaviors characterized by impaired regulation.

The present findings are additionally compatible with developmental perspectives emphasizing the lasting consequences of conflictual family environments. The adaptation of children following family disruption is strongly influenced by pre- and post-separation conflict trajectories (Cao et al., 2022), indicating that the quality of family processes may be more developmentally consequential than family structure itself. Research on parental relationships similarly emphasizes their importance for children's broader psychological growth (Zhao, 2021). Moreover, adolescents' relationships with fathers and peers have been associated with aggression in later adult romantic relationships (Allen et al., 2024). These findings reinforce the possibility that reducing externalizing behavior during adolescence may also interrupt longer-term transmission of maladaptive interpersonal patterns.

Overall, the results support an integrated interpretation drawing on Emotional Security Theory, attachment theory, and family-systems theory. Interparental conflict appears to function as a broad family stressor that simultaneously increases perceived interpersonal threat, erodes secure parent–adolescent relationships, and weakens whole-family cohesion. These changes create multiple pathways toward externalizing problems. The gender analyses further indicate that emotional-security mechanisms may be especially salient among girls, whereas a more direct behavioral pathway from conflict exposure to externalizing behavior may be more prominent among boys. At the same time, attachment and cohesion appear to provide cross-gender protective resources. This combination of common and group-specific pathways offers a more nuanced account of

adolescent adjustment than models based on any single family variable.

5. Conclusion

The present study demonstrated that adolescent externalizing problems are embedded within an interconnected system of family relationships rather than being attributable to a single risk factor. Interparental conflict was associated with higher externalizing problems both directly and indirectly through greater emotional insecurity, weaker parent–adolescent attachment, and lower family cohesion. The model explained substantial variance in externalizing behavior among both boys and girls, while multi-group analysis revealed meaningful differences in the organization of these pathways. The direct relationship between interparental conflict and externalizing problems was stronger among boys, whereas the pathways from interparental conflict to emotional insecurity and from emotional insecurity to externalizing problems were stronger among girls. In contrast, secure parent–adolescent attachment and family cohesion operated as comparable protective factors across gender. These findings highlight the importance of assessing both interparental processes and the broader emotional and relational organization of the family when attempting to understand adolescent behavioral problems.

6. Limitations & Suggestions

The study has several limitations. First, the cross-sectional design prevents definitive causal conclusions or determination of the temporal ordering among interparental conflict, emotional insecurity, attachment, cohesion, and externalizing problems. Although the proposed structural pathways were theoretically grounded, reciprocal influences are plausible; for example, adolescent externalizing problems may themselves increase parent–adolescent conflict and strain the broader family environment. Second, all principal variables were measured using adolescent self-report, creating the possibility of shared-method variance and perceptual bias. Third, the sample was recruited from public secondary schools in Toronto, and generalization to adolescents from rural regions, other Canadian provinces, clinical populations, adolescents not attending school, and culturally distinct family contexts should therefore be undertaken cautiously. Fourth, gender was analyzed using two groups because these categories yielded sufficient sample sizes for multi-group estimation, and the study did not examine potentially important variation among gender-diverse adolescents. Finally, potentially relevant variables such as parenting style, parental psychopathology, socioeconomic adversity, peer deviance, temperament, and exposure to community violence were not included in the model.

Future research should employ longitudinal and prospective designs to establish the temporal sequence of family conflict, emotional insecurity, relational functioning, and externalizing problems and to examine reciprocal developmental influences. Studies using repeated measurements across early, middle, and late adolescence could determine whether the strength of specific pathways changes with developmental stage. Multi-informant designs incorporating adolescent, parent, teacher, and observational assessments would reduce common-method bias and permit more comprehensive evaluation of family interaction patterns. Future studies should also replicate the model across provinces, cultural groups, family structures, and clinical samples and examine whether additional contextual resources, including school connectedness, peer support, parental monitoring, and community resources, moderate the identified pathways. Greater representation of gender-diverse adolescents would permit analysis beyond binary comparisons. Finally, intervention studies could test whether experimentally reducing destructive interparental conflict or increasing emotional security, attachment quality, and cohesion produces corresponding reductions in externalizing behavior.

From a practical perspective, assessment of adolescent externalizing problems should include systematic evaluation of the family relational environment rather than focusing exclusively on the adolescent's behavior. Family practitioners, school psychologists, counselors, and mental-health professionals should assess the frequency and intensity of interparental conflict, adolescents' perceived threat and insecurity, quality of communication and trust with caregivers, and the degree of emotional connectedness within the family. Interventions may be strengthened by combining behavioral work with adolescents with parent-focused conflict-management training and family sessions designed to improve emotional safety, communication, consistency, and cohesion. The gender-specific results further suggest that clinicians should consider the mechanism through which family conflict affects individual adolescents: interventions with girls displaying externalizing behavior may benefit from particularly careful assessment of underlying emotional insecurity and perceived family threat,

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whereas work with boys may require greater attention to behavioral modeling, aggression regulation, and direct responses to exposure to destructive conflict. Across both groups, strengthening secure parent–adolescent relationships and balanced family cohesion should represent central preventive and therapeutic objectives.

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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 have equally contributed to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

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