

A Process Model of Behavioral Problems in Elementary School Children: The Mediating Role of Child Emotion Management and the Moderating Role of Maternal Neuroticism in the Association Between Maternal Sense of Coherence and Child Behavioral Adjustment

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ABSTRACT

Purpose: The present study aimed to test a process model examining the mediating role of child emotion management in the relationship between maternal sense of coherence and behavioral problems among elementary school children, while considering the moderating role of maternal neuroticism.

Methods and Materials: This study employed a descriptive-correlational design using a structural equation modeling approach. The statistical population consisted of elementary school students aged 7–12 years in Kermanshah during the 2024–2025 academic year, of whom 389 were selected through random multistage cluster sampling. Data were collected using Antonovsky's Sense of Coherence Scale, the Achenbach Child Behavior Checklist, the Children's Emotion Management Scales, and the Neuroticism dimension of the Five-Factor Personality Questionnaire. Data were analyzed using SPSS 26 and AMOS 26.

Findings: The proposed model demonstrated an acceptable fit ($\chi^2/df = 2.58$, RMSEA = 0.064, CFI = 0.95). Maternal sense of coherence had significant direct negative effects on children's maladaptive emotion management ($\beta = -0.43$, $p < .001$) and child behavioral problems ($\beta = -0.16$, $p = .033$), whereas maladaptive emotion management had a significant direct positive effect on behavioral problems ($\beta = 0.65$, $p < .001$). Moreover, the indirect effect of maternal sense of coherence on behavioral problems through child emotion management was significant ($\beta = -0.28$, $p < .001$). In addition, maternal neuroticism weakened the protective effect of sense of coherence.

Conclusion: The findings indicated that maternal sense of coherence plays an important protective role in reducing behavioral problems by promoting children's emotion management and that this pathway is influenced by maternal neuroticism. By simultaneously explaining the roles of maternal psychological resources, children's emotional processes, and parental personality characteristics, the present findings provide evidence for designing family-centered interventions aimed at preventing and reducing behavioral problems in children.

Keywords: sense of coherence, maternal neuroticism, child emotion management, structural equation modeling, behavioral problems

1. Introduction

Behavioral and emotional problems in childhood constitute a major concern in developmental psychology, clinical psychology, and child mental health because they are associated with impairments in academic functioning, peer relationships, family interactions, emotional development, and later psychological adjustment. Childhood and early adolescence are periods in which regulatory capacities, social competencies, and behavioral patterns undergo rapid development, while vulnerability to internalizing and externalizing difficulties may also become increasingly evident. Contemporary developmental psychopathology emphasizes that child mental health problems should not be understood solely as isolated symptoms within the child; rather, they emerge from dynamic interactions among individual vulnerabilities, emotional processes, family characteristics, parenting behaviors, and broader developmental contexts (McGorry et al., 2024; Thapar et al., 2023). Longitudinal evidence further indicates that emotional and behavioral dysregulation can follow distinct developmental trajectories from early childhood through adolescence, with early regulatory difficulties potentially forecasting subsequent maladjustment and psychopathology (Zhai et al., 2026). Accordingly, identifying family-based and child-level processes that contribute to behavioral adjustment is essential for the development of theoretically informed prevention and intervention programs.

Behavioral problems in children are commonly conceptualized within the broad dimensions of internalizing and externalizing difficulties. Internalizing problems include emotional symptoms that are primarily directed inward, such as anxiety, depressed mood, withdrawal, and somatic complaints, whereas externalizing problems typically involve outwardly directed manifestations such as aggression, oppositionality, impulsive behavior, and rule-breaking. Although these dimensions are conceptually distinct, they frequently co-occur and may reflect shared difficulties in emotional and behavioral self-regulation. Epidemiological and developmental research has shown that emotional and behavioral disorders are relatively common in school-age children and that the presence of such problems may interfere with multiple domains of developmental functioning (Abdollahzadeh Rafi, 2023). The school years are particularly important because children are required to adapt simultaneously to increasing academic demands, structured behavioral expectations, peer-group norms, and

growing expectations for independent regulation. Deficits in managing emotional arousal during this period may therefore become visible through both emotional distress and disruptive behavior.

Recent evidence has also highlighted the persistence and developmental sensitivity of childhood behavioral problems in response to environmental stressors. Emotional and behavioral difficulties may fluctuate over time, but some children display persistent or worsening trajectories when individual vulnerabilities are combined with family stress or inadequate regulatory support. Longitudinal research on young children has shown that emotional and behavioral problems can evolve through heterogeneous trajectories and that contextual stress can influence the course of these problems (Landolt et al., 2025). Similarly, developmental studies suggest that early patterns of emotional and behavioral dysregulation can extend into adolescence and become associated with adverse developmental outcomes (Zhai et al., 2026). These findings reinforce the need to investigate not only direct risk factors but also the psychological mechanisms through which family resources and parental characteristics are translated into child adjustment outcomes.

One family-level construct that may be especially relevant to child behavioral adjustment is maternal sense of coherence. Sense of coherence refers broadly to an individual's enduring orientation toward perceiving life experiences as comprehensible, manageable, and meaningful. From a salutogenic perspective, individuals with a stronger sense of coherence are more likely to interpret stressors in an organized manner, perceive available internal and external resources as sufficient for coping, and maintain a sense of purpose when confronting adversity. Within the family context, a mother with a stronger sense of coherence may be better able to regulate her reactions to child-related stress, organize family demands, maintain predictable caregiving behavior, and respond to the child's emotional needs in a more stable and adaptive manner. Such capacities may be especially important during the elementary school years, when children continue to rely substantially on parents for emotional co-regulation even as their own independent regulatory capacities are developing.

The potential significance of maternal sense of coherence can also be understood within contemporary resilience frameworks. Developmental resilience is not viewed as a fixed individual trait but as the product of dynamic adaptive systems that allow individuals to function competently in the

context of stress and adversity ([Masten, 2021](#); [Masten & Cicchetti, 2016](#)). Family relationships, caregiver functioning, and parental psychological resources represent central components of these adaptive systems. From this perspective, maternal sense of coherence may function as a protective psychological resource that enhances the mother's capacity to provide structured, emotionally supportive, and developmentally appropriate responses to her child. Such maternal resources may help organize the child's developmental environment in ways that promote adaptive regulation and reduce the likelihood that emotional distress will be expressed through internalizing or externalizing symptoms.

The association between parental functioning and child adjustment is supported by a substantial body of developmental research. Parenting effects are not uniform across children or contexts, and the specificity principle suggests that developmental outcomes depend on the particular characteristics of the parent, child, developmental period, and social environment involved ([Bornstein, 2021](#)). Thus, the influence of maternal sense of coherence on child behavioral problems may not occur in a simple, direct manner. Instead, its impact may be transmitted through specific developmental processes, including the child's capacity to manage emotions. Research has shown that supportive parenting in early childhood can contribute to improved adjustment during the school years, and that supportive maternal and paternal behaviors may have compensatory effects on children's subsequent psychosocial functioning ([Feldman et al., 2023](#)). Similarly, evidence from Iranian samples indicates that the quality of maternal care may mediate the relationship between maternal psychological characteristics and children's emotional and behavioral disorders ([Shabani & Nemat Tavousi Mohtaram, 2021](#)). These findings suggest that maternal psychological resources are likely to influence children through relational and regulatory pathways rather than exclusively through direct effects.

Emotion management represents one of the most plausible mechanisms in this developmental pathway. Emotion regulation broadly refers to the processes through which individuals influence which emotions they experience, when they experience them, and how those emotions are expressed and modulated ([Gross, 2015](#)). In childhood, emotion management includes adaptive and maladaptive strategies for handling anger, sadness, worry, frustration, and other emotionally salient experiences. Adaptive strategies may involve effective coping, emotional

communication, problem solving, and flexible modulation of arousal, whereas maladaptive emotion management may include excessive inhibition, dysregulated expression, avoidance, or poorly controlled emotional responses. Because children's regulatory capacities remain under development, the family environment plays a central role in shaping how emotions are understood, expressed, and managed.

Developmental research has demonstrated that coping and emotion regulation undergo substantial changes from childhood into adolescence and are closely connected to developmental adaptation and psychopathology ([Compas et al., 2022](#)). Difficulties in emotion regulation may increase vulnerability to both internalizing and externalizing symptoms because children who cannot effectively modulate distress may either direct emotional difficulty inward through anxiety, withdrawal, or depressive symptoms or outward through aggression, impulsivity, and oppositional behavior. Educational research has likewise indicated that interventions designed to strengthen emotion control may reduce internalizing problems among elementary school children ([Mahdavi Nasab & Mahdavi Nasab, 2025](#)). Thus, child emotion management is not only an important developmental competency but also a plausible mediator linking family psychological resources to child behavioral outcomes.

The development of emotion management is strongly influenced by parental emotion socialization. Children learn how to interpret and respond to emotional experiences partly through observing parental reactions, receiving direct coaching or discouragement, and experiencing patterns of emotional interaction within the family. Parental emotions and parental emotion regulation have therefore been identified as important targets in research and intervention focused on children's emotional development ([Hajal & Paley, 2020](#)). When parents respond to child distress in a regulated, validating, and predictable manner, they may facilitate the development of adaptive emotion-management strategies. Conversely, highly reactive, inconsistent, or emotionally dysregulated parental responses may contribute to maladaptive emotional expression or inhibition. A meta-analytic review has shown that parental emotion regulation is meaningfully associated with parenting behavior and child adjustment, further supporting the proposition that parental psychological functioning contributes to children's outcomes partly through emotion-related family processes ([Zimmer-Gembeck et al., 2022](#)).

A systematic review of emotion regulation, parenting, and psychopathology similarly indicates that these constructs are closely interrelated and that parental regulatory difficulties may shape both parenting behaviors and child psychological outcomes (Zitzmann et al., 2024). These findings support a transactional model in which parental psychological resources affect the emotional climate of the family, which in turn influences the child's developing regulatory capacities and behavioral adjustment. Within such a model, maternal sense of coherence may promote a more organized and manageable interpretation of daily parenting stressors, allowing the mother to respond more consistently to the child's emotional needs. Through repeated interactions, the child may acquire more adaptive methods of coping with frustration and emotional arousal, thereby lowering the probability of behavioral problems. Conversely, when maternal psychological organization is weaker, the child may receive less consistent emotional guidance, potentially contributing to maladaptive emotion-management patterns.

Nevertheless, the effects of maternal sense of coherence may vary according to maternal personality characteristics. Neuroticism is particularly relevant because it reflects a broad tendency toward negative affectivity, emotional instability, worry, sensitivity to stress, and heightened reactivity to perceived threat. Neuroticism is considered a fundamental personality domain with substantial implications for psychological functioning and public health (Widiger & Oltmanns, 2017). Individuals high in neuroticism may experience greater emotional distress in response to daily demands and may find it more difficult to maintain calm and consistent behavioral responses under stress. In the parenting context, high neuroticism may therefore reduce the extent to which otherwise protective psychological resources are translated into effective emotional support and adaptive parenting behavior.

Emerging evidence supports the role of maladaptive personality traits in shaping parenting behavior. Pathological personality traits have been shown to predict early parenting behaviors, suggesting that parental personality characteristics may contribute directly to variations in caregiving quality (Ballinger et al., 2026). Although neuroticism does not necessarily imply pathology, higher levels of neuroticism may increase emotional reactivity, negative interpretation of child behavior, and inconsistency in responses to stressful interactions. Iranian research has also demonstrated meaningful associations between personality traits and behavioral or interpersonal

functioning, highlighting the broader relevance of personality dimensions to self-regulation and communication processes (Daneshzadeh et al., 2022). Accordingly, maternal neuroticism may act as a moderating factor that alters the protective effect of maternal sense of coherence on child emotional and behavioral functioning.

This moderating role is theoretically important because a mother may possess a generally strong sense of coherence while simultaneously experiencing high levels of negative emotional reactivity. Under such circumstances, the cognitive perception that stressors are understandable and manageable may not always be translated into emotionally regulated responses during difficult parent-child interactions. High neuroticism could therefore attenuate the beneficial impact of sense of coherence, whereas lower neuroticism may allow maternal psychological resources to operate more effectively. In other words, the same level of sense of coherence may have different implications for child adjustment depending on the mother's personality-related vulnerability to emotional instability. Such a proposition is consistent with conditional process perspectives, which emphasize that psychological relationships may operate through mediating mechanisms while simultaneously depending on moderating variables (Hayes, 2022).

Examining mediation and moderation within a single process model may therefore provide a more realistic account of the development of child behavioral problems than testing isolated bivariate relationships. A mediational perspective addresses the mechanism through which maternal sense of coherence may influence child behavioral adjustment, with child emotion management serving as a potential explanatory pathway. A moderation perspective, in turn, addresses the conditions under which this protective effect may become stronger or weaker, with maternal neuroticism representing a theoretically relevant individual-difference factor. The integration of these two perspectives allows for examination of a conditional developmental process in which maternal psychological resources influence child outcomes partly through child emotion-management processes, while maternal personality shapes the strength of this association.

Such an integrated framework is particularly consistent with contemporary developmental psychopathology and resilience approaches, which emphasize multilevel, transactional, and process-oriented explanations of adaptation and maladaptation (Masten, 2021; Thapar et al., 2023). Behavioral problems are unlikely to result from a single isolated cause. Rather, they develop through the

accumulation and interaction of risk and protective processes operating within children, parents, and family relationships. Maternal sense of coherence may represent a protective resource, maladaptive emotion management may represent a proximal developmental mechanism, and neuroticism may represent a vulnerability that constrains the effectiveness of maternal resources. By studying these variables simultaneously, it becomes possible to move beyond simple prediction toward a more precise explanation of how and under what conditions maternal psychological functioning is associated with behavioral adjustment in school-age children.

The clinical and preventive implications of such a model are also noteworthy. If maladaptive child emotion management mediates the association between maternal sense of coherence and behavioral problems, interventions could target both maternal and child processes rather than focusing exclusively on symptom reduction. Parent-focused interventions might strengthen parents' ability to interpret family stressors coherently, improve emotional responses to children's negative affect, and increase consistency in emotion socialization. Child-focused components could simultaneously teach adaptive coping, emotional awareness, and regulation skills. Moreover, if maternal neuroticism weakens the protective influence of sense of coherence, interventions may need to include additional emotion-regulation and stress-management components for mothers with greater emotional reactivity. Such an approach would be consistent with research emphasizing parental emotion regulation as a critical intervention target for improving child emotion socialization and adjustment (Hajal & Paley, 2020; Zimmer-Gembeck et al., 2022).

Despite the growing literature on parenting, emotion regulation, and child psychopathology, important gaps remain. Much existing research has examined parenting behavior, parental emotion regulation, child emotion regulation, or personality traits separately, while fewer studies have integrated maternal psychological resources, child emotional mechanisms, and maternal personality within a unified structural model. Furthermore, evidence from Iranian school-age populations remains comparatively limited, although cultural and family contexts may influence parenting processes, emotional expression, and behavioral adjustment. Findings showing associations between maternal responses to children's negative emotions and child emotional-behavioral disorders underscore the importance of studying these processes within Iranian families (Abdollahzadeh Rafi, 2023). Similarly, research on maternal

care quality and children's emotional and behavioral disorders suggests that family-level mechanisms warrant closer investigation in culturally specific contexts (Shabani & Nemat Tavousi Mohtaram, 2021). A process-oriented model may therefore contribute both theoretically and practically by clarifying the psychological pathways through which maternal and child variables jointly shape behavioral adjustment.

Accordingly, the present study aimed to test a process model of behavioral problems in elementary school children by examining the mediating role of child emotion management in the relationship between maternal sense of coherence and child behavioral problems and the moderating role of maternal neuroticism in this relationship.

2. Methods and Materials

2.1. Study Design and Participants

The present study was applied in terms of purpose and employed a descriptive-correlational design using structural equation modeling (SEM). Structural equation modeling was selected because of the multiple-path nature of the study's conceptual model and its capacity to simultaneously examine direct, indirect, and interaction effects among the variables. The statistical population consisted of all elementary school students aged 7–12 years in Kermanshah during the 2024–2025 academic year. Considering methodological recommendations regarding structural equation modeling, which emphasize the necessity of an adequate sample size to obtain stable parameter estimates, an initial sample size of 400 participants was considered. Moreover, to compensate for the possible exclusion of incomplete or unusable data, the recruited sample exceeded the recommended minimum sample size.

Participants were selected using random multistage cluster sampling. For this purpose, one of the three educational districts of Kermanshah was first selected randomly. Subsequently, five elementary schools were randomly selected from the list of schools within that district, and in the next stage, three classes from each school were randomly included in the study. Following the necessary coordination with school administrators, the questionnaires were provided to the mothers of eligible students so that they could respond based on their knowledge of their children's emotional and behavioral functioning. Following an initial examination of the data, incomplete questionnaires, patterned responses, and cases containing

outlier data were excluded. Ultimately, data from 389 participants were included in the final analysis.

The inclusion criteria were as follows: the child being between 7 and 12 years of age; provision of informed consent by the mother to participate in the study; the mother's ability to read and write; the child living in a two-parent family with both parents continuously present at home; and no history of parental divorce. The exclusion criteria included reports of a severe psychological disorder or major clinical diagnosis in either the child or mother; severe and persistent family conflict during the preceding 12 months based on parental report; a substantial proportion of incomplete questionnaire responses; and lack of cooperation or withdrawal by the participant at any stage of the study.

The present study was conducted in accordance with the ethical principles governing research involving human participants. Before implementation of the study, the mothers were informed about the purpose of the research, the implementation procedure, confidentiality of information, and the voluntary nature of participation. After receiving the necessary information, participants provided informed consent to participate in the study. Participants were assured that their personal information would remain confidential and that the results would be reported only in aggregate form and within the framework of the scientific objectives of the study. Participants were also informed that they could withdraw from the study at any stage.

To comply with ethical considerations, the title and research procedures were explained to the participants, and they were assured of the confidentiality of their information. Ultimately, after damaged and incomplete questionnaires were excluded, 389 questionnaires were analyzed. The inclusion criteria consisted of informed consent, a chronological age of 7–12 years for the child, parental literacy, absence of parental divorce, and the continuous presence of both parents in the home. The exclusion criteria consisted of an Axis I diagnosis in the child or parent, acute or chronic family conflict during the previous year, and incomplete responses to questionnaire items. Path analysis was conducted using SPSS 26 and AMOS 26 for data analysis.

2.2. Measures

Antonovsky Sense of Coherence Questionnaire—Short Form: The Sense of Coherence Questionnaire was developed by Antonovsky (1987). This 13-item self-report scale consists of three subscales: comprehensibility (5

items), manageability (4 items), and meaningfulness (4 items). Items are scored on a 7-point Likert scale ranging from “never” to “very much.” Items 1, 2, 3, 5, and 7 are reverse-scored. Total scores range from 13 to 91. Scores above 64 indicate a higher sense of coherence.

Child Behavior Checklist (CBCL)—Parent Version:

This 113-item checklist was developed by Achenbach and Rescorla (2001) to assess behavioral problems among children from preschool age through 18 years. It assesses child and adolescent problems in two broad domains of internalizing and externalizing problems across eight factors or dimensions: anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior, and aggressive behavior. Rule-breaking behavior and aggressive behavior constitute the second-order factor of externalizing problems. The checklist should be completed by a parent or another caregiver who is thoroughly familiar with the child. Based on the child's functioning during the preceding 6 months, the respondent rates each item from 0 to 2 (0 = not true, 1 = somewhat or sometimes true, and 2 = very true or often true). Total scores on the checklist range from 0 to 226. Glaser (2011) reported test–retest reliability and internal consistency coefficients of .94 and .97 for the total problems scale, .92 and .94 for internalizing behavioral problems, and .91 and .90 for externalizing behavioral problems, respectively. In Iran, the checklist was standardized by Minaei (2006). Using Cronbach's alpha, Minaei reported internal consistency coefficients ranging from .63 to .95 and temporal stability coefficients, assessed through a test–retest procedure over an interval of 5–8 weeks, ranging from .32 to .67. To assess the validity of the checklist, Minaei administered the Children's Symptom Inventory. The results demonstrated satisfactory reliability and validity of the instrument in the study sample (Shabani & Nemat Tavousi, 2021).

Children's Emotion Management Scales (CEMS):

The Children's Emotion Management Scales were developed by Zeman et al. (2001). The questionnaire consists of 38 items scored on a three-point Likert scale (rarely = 1, sometimes = 2, and often = 3). It consists of three subscales: inhibition, dysregulated expression, and coping, and assesses the ways in which children manage feelings of anger, sadness, and worry. Zeman et al. (2001) reported Cronbach's alpha coefficients ranging from .62 to .76 for the three subscales and test–retest reliability coefficients ranging from .61 to .80. The psychometric properties of the instrument in Iran were examined by Pourganabadi (2011),

who reported Cronbach's alpha coefficients ranging from .62 to .77 and test-retest reliability coefficients ranging from .73 to .80 across the subscales (Mahdavi Nasab & Mahdavi Nasab, 2025).

Five-Factor Personality Questionnaire (FPQ): This questionnaire was developed by McCrae and Costa (2004) and consists of 60 items assessing five components: neuroticism, extraversion, openness, agreeableness, and conscientiousness. Items are scored on a five-point Likert scale ranging from 1 to 5. The minimum and maximum questionnaire scores are 60 and 360, respectively, with a cutoff score of 180. A higher score indicates a higher level of the corresponding personality trait among respondents. McCrae and Costa (2004) reported internal consistency coefficients above .80 for all subscales and Cronbach's alpha coefficients of .86 for neuroticism, .73 for extraversion, .56 for openness, .68 for agreeableness, and .87 for conscientiousness (McCrae & Costa, 2004). Furthermore, Shams et al. (2022) reported satisfactory face validity for the questionnaire based on evaluations by several experts and calculated Cronbach's alpha coefficients of .77 for neuroticism, .68 for extraversion, .69 for openness, .74 for agreeableness, and .71 for conscientiousness (Daneshzadeh

et al., 2022). In the present study, only the items pertaining to neuroticism were used.

2.3. Data Analysis

The collected data were analyzed using descriptive statistics (mean and standard deviation) in SPSS version 26 and structural equation modeling in AMOS version 26 to evaluate model fit. Prior to inferential analysis, assumptions related to normality, multicollinearity, and missing data were examined.

3. Findings and Results

A total of 389 students participated in the study, including 197 boys (50.6%) and 192 girls (49.4%). The mean age of the children was 9.48 ± 1.66 years, and the mean age of the mothers was 37.83 ± 6.21 years. Seventy-five percent of the mothers had educational attainment ranging from a high school diploma to a bachelor's degree, and 65.3% were homemakers. Descriptive indices, including the mean, standard deviation, skewness, and kurtosis of the study variables, are presented in Table 1.

Table 1

Descriptive Statistics and Normality Indices of the Study Variables

Variables	Mean	Standard Deviation	Skewness	Kurtosis
Sense of coherence	54.17	11.04	0.363	0.227
Child emotion management	15.87	3.74	0.445	-0.084
Internalizing behavioral problems	11.71	7.25	0.745	0.535
Externalizing behavioral problems	11.73	8.30	0.861	0.452
Total child behavioral problems score	23.44	13.99	0.672	0.038

Examination of skewness and kurtosis values indicated that all values fell within the range of -2 to +2, indicating that the data distributions were normal. Another assumption of structural equation modeling is the independence of errors. The Durbin-Watson statistic was within the range of 1.5 to 2.5; therefore, the assumption of error independence was considered satisfied. The multicollinearity assumption

was also examined, and none of the tolerance values were below the acceptable threshold of .10, nor were any variance inflation factor values above the acceptable threshold of 10. Therefore, the assumption of the absence of multicollinearity was also satisfied. Table 2 presents the correlation matrix among the study variables.

Table 2

Correlation Matrix Among the Study Variables

Study Variables	1	2	3	4	5
1. Maternal sense of coherence	1				
2. Child maladaptive emotion management (factor score)	-0.22**	1			
3. Internalizing behavioral problems	-0.29**	0.31**	1		
4. Externalizing behavioral problems	-0.29**	0.48**	0.62**	1	
5. Total child behavioral problems score	-0.33**	0.45**	0.88**	0.91**	1

The results presented in Table 2 indicated a significant negative relationship between maternal sense of coherence and children's maladaptive emotion management. Maternal sense of coherence was also significantly and negatively associated with child behavioral problems. In contrast, a

significant positive relationship was found between children's maladaptive emotion management and child behavioral problems ($p < .01$). Table 3 presents the model fit indices.

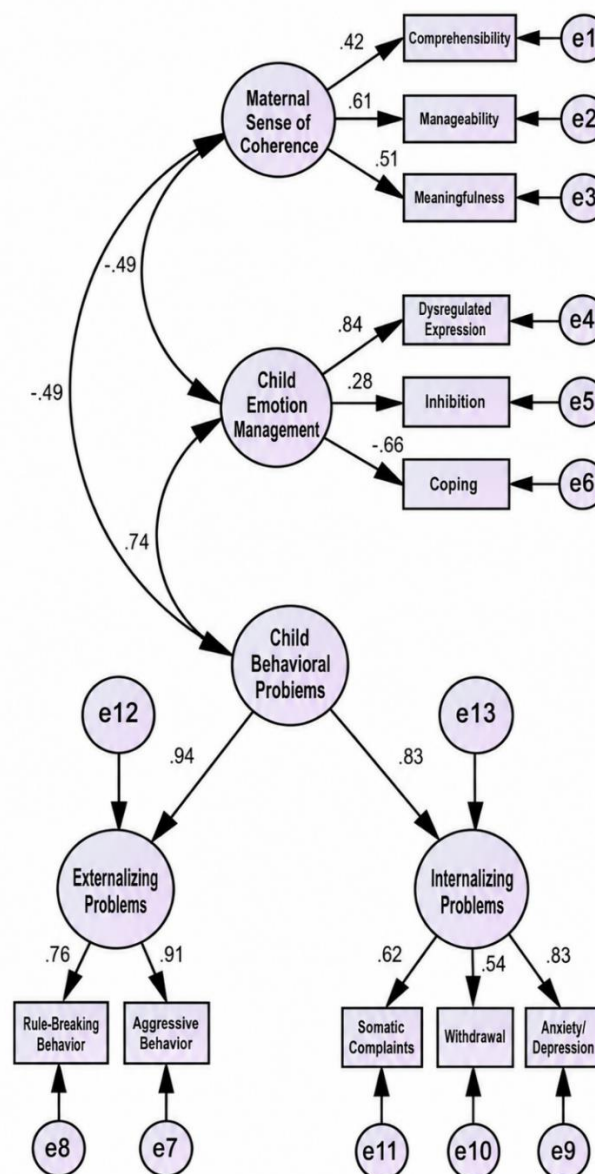
Table 3

Model Fit Indices

RMSEA	χ^2	df	χ^2/df	p	GFI	CFI	NFI	IFI	TLI
0.064	100.40	39	2.58	.001	0.95	0.95	0.92	0.92	0.92

Figure 1

Final Model of the Study



The results of the causal-structural model indicated that the theoretical model demonstrated an acceptable fit to the measured model because all model fit indices were within the desirable range. Specifically, the root mean square error of approximation (RMSEA) was within the desirable range (less than .05). The χ^2/df ratio was also within the acceptable range (equal to or less than 5), and the goodness-of-fit index (GFI), comparative fit index (CFI), normed fit index (NFI), incremental fit index (IFI), and Tucker–Lewis index (TLI)

were all within the desirable fit range of .90 or higher. Therefore, it can be inferred that maternal sense of coherence can significantly explain behavioral problems in children through maladaptive emotion management. Accordingly, the main hypothesis of the study was supported. The final fitted model of the study is presented in Figure 1.

To examine the direct effects, bootstrapping was employed, as presented in Table 4.

Table 4

Direct and Standardized Coefficients for the Relationships of Maternal Sense of Coherence With Maladaptive Emotion Management and Child Behavioral Problems

Direct Path	Beta Coefficient (β)	b Coefficient	T	p	Hypothesis Test
Maternal sense of coherence → Child maladaptive emotion management	-0.43	-0.47	-4.18	.001	Supported
Maternal sense of coherence → Child behavioral problems	-0.16	-0.28	-2.09	.033	Supported
Child maladaptive emotion management → Child behavioral problems	0.65	1.02	7.36	.001	Supported

Based on the findings presented in Table 4, the direct effects of maternal sense of coherence ($\beta = -0.16$, $p = .03$) and children's maladaptive emotion management ($\beta = 0.65$, $p = .001$) on child behavioral problems were significant. The direct effect of maternal sense of coherence on children's

maladaptive emotion management was also negative and significant ($\beta = -0.43$, $p = .001$). Table 5 presents the bootstrap results for the indirect effect of maternal sense of coherence on child behavioral problems through maladaptive emotion management.

Table 5

Bootstrap Results for Subjective Affectivity and Maternal Sense of Coherence in Relation to Child Behavioral Problems Through Maladaptive Emotion Management

Indirect Path	Standardized Indirect Effect	Lower Bound	Upper Bound	p	Hypothesis Test
Maternal sense of coherence → Child maladaptive emotion management → Child behavioral problems	-0.280	-0.395	-0.190	.001	Supported

The results presented in Table 5 indicate that the indirect effect of maternal sense of coherence on child behavioral problems through children's maladaptive emotion management was statistically significant ($p = .001$). Therefore, it can be concluded that children's maladaptive emotion management significantly mediates the relationship between maternal sense of coherence and child behavioral problems.

4. Discussion and Conclusion

The present study aimed to test a process model of behavioral problems in elementary school children by examining the mediating role of child emotion management in the relationship between maternal sense of coherence and child behavioral problems, while also considering the

moderating role of maternal neuroticism. The findings supported the proposed model and indicated that maternal sense of coherence was negatively associated with children's maladaptive emotion management and behavioral problems. Specifically, maternal sense of coherence exerted a significant negative direct effect on maladaptive emotion management ($\beta = -0.43$, $p < .001$) and a significant negative direct effect on child behavioral problems ($\beta = -0.16$, $p = .033$). In addition, maladaptive emotion management had a strong positive direct effect on behavioral problems ($\beta = 0.65$, $p < .001$). The indirect effect of maternal sense of coherence on behavioral problems through maladaptive emotion management was also statistically significant ($\beta = -0.28$, $p < .001$), demonstrating a mediating mechanism. Moreover, maternal neuroticism weakened the protective

effect of maternal sense of coherence, indicating that the beneficial association between maternal sense of coherence and child behavioral adjustment depended partly on the mother's personality characteristics. Taken together, these results support a process-oriented account in which maternal psychological resources contribute to child adjustment both directly and indirectly through children's emotional regulation processes, while maternal neuroticism modifies the strength of this protective pathway.

The significant negative association between maternal sense of coherence and child behavioral problems is consistent with developmental systems and resilience perspectives emphasizing the importance of parental psychological resources in children's adaptation. A strong sense of coherence may enable mothers to perceive stressful family situations as more understandable, manageable, and meaningful, thereby supporting more stable and adaptive responses to everyday parenting challenges. In this regard, resilience is increasingly understood not as an isolated personal characteristic but as the outcome of interacting adaptive systems, including caregiving relationships, family organization, and access to psychological resources (Masten, 2021; Masten & Cicchetti, 2016). Mothers with a stronger sense of coherence may be better able to maintain predictable routines, respond constructively to children's distress, and reduce emotionally chaotic interactions. These qualities may protect children against both internalizing and externalizing behavioral difficulties. The present findings are also compatible with the specificity principle in parenting, according to which the effects of parental characteristics on child development depend on specific combinations of parental attributes, child characteristics, developmental stages, and environmental conditions (Bornstein, 2021). Thus, maternal sense of coherence appears to constitute one psychologically meaningful parental resource within the broader ecology of child behavioral adjustment.

The direct protective effect of maternal sense of coherence can also be interpreted in light of evidence demonstrating that supportive and psychologically organized parenting contributes to better school-age adjustment. Feldman et al. showed that supportive parenting during early childhood is associated with subsequent child adjustment and that maternal and paternal support can have compensatory effects across developmental contexts (Feldman et al., 2023). Similarly, Shabani and Nemat Tavousi Mohtaram demonstrated that the quality of maternal care serves as an important explanatory mechanism linking

maternal psychological characteristics to children's emotional and behavioral disorders (Shabani & Nemat Tavousi Mohtaram, 2021). These studies align with the current finding that the psychological organization of the mother is relevant to behavioral outcomes in children. A mother who experiences greater coherence in dealing with stress may be more likely to provide emotionally available and consistent caregiving, whereas low coherence may contribute to confusion, unpredictability, or a reduced capacity to respond constructively to child-related challenges. This interpretation is especially important in elementary school children because the transition to increasing academic, social, and behavioral demands requires continued support from parents despite the child's growing autonomy.

A central finding of the study was that maternal sense of coherence negatively predicted maladaptive emotion management in children. This finding suggests that maternal psychological functioning may influence how children learn to understand, express, and regulate emotional states. Emotion regulation is a multidimensional process involving the monitoring, modification, and expression of emotional experiences in ways that are sensitive to individual goals and situational demands (Gross, 2015). During childhood, these regulatory capacities are shaped in part through repeated interpersonal experiences with caregivers. Mothers who approach difficult events with greater comprehensibility and manageability may model more effective coping and provide more organized responses to their children's anger, sadness, anxiety, or frustration. In contrast, when mothers experience stressful situations as chaotic or unmanageable, emotional interactions may become less predictable, potentially increasing children's reliance on inhibition, dysregulated expression, or other maladaptive strategies. The present result is therefore consistent with conceptual models in which parental psychological regulation functions as an important antecedent of children's emerging self-regulatory abilities.

This explanation is strongly supported by the literature on parental emotion socialization. Hajal and Paley emphasized that parental emotions and parental emotion regulation are central targets for understanding how children develop their own patterns of emotional regulation (Hajal & Paley, 2020). Parents contribute to children's emotion regulation through modeling, direct instruction, responses to children's emotional expressions, and the emotional climate they create within the family. Similarly, the meta-analytic findings of Zimmer-Gembeck et al. indicate that parental emotion

regulation is associated with both parenting behavior and child adjustment (Zimmer-Gembeck et al., 2022). A systematic review by Zitzmann et al. further demonstrated interconnected relationships among parental emotion regulation, parenting processes, and child psychopathology (Zitzmann et al., 2024). Accordingly, the current negative path from maternal sense of coherence to maladaptive child emotion management can be interpreted as evidence that maternal psychological resources may become translated into children's emotional competencies through everyday patterns of interaction, co-regulation, modeling, and emotion socialization.

The finding that maladaptive emotion management had a strong positive effect on child behavioral problems was also theoretically and empirically expected. Difficulties in emotion regulation may be expressed in multiple behavioral forms, depending on temperament, social context, and learned coping patterns. Some children may direct poorly regulated negative affect inward, resulting in anxiety, withdrawal, depressed mood, or somatic complaints, whereas others may externalize distress through aggression, impulsivity, defiance, or rule-breaking behavior. Compas et al. emphasized that coping and emotion regulation develop substantially throughout childhood and adolescence and are deeply implicated in both adaptation and psychopathology (Compas et al., 2022). Developmental evidence further indicates that emotional and behavioral dysregulation may follow relatively enduring developmental trajectories and can predict later psychosocial difficulties (Zhai et al., 2026). The strong standardized path observed in the present study therefore suggests that maladaptive emotion management is not merely a correlate of behavioral problems but may constitute a proximal psychological process through which children become more vulnerable to internalizing and externalizing manifestations.

The present finding is additionally consistent with studies demonstrating the clinical relevance of emotion-management abilities among school-age children. Mahdavi Nasab and Mahdavi Nasab reported that educational interventions aimed at improving emotion control were associated with reductions in internalizing problems among elementary school students (Mahdavi Nasab & Mahdavi Nasab, 2025). Abdollahzadeh Rafi also highlighted the relationship between maternal reactions to children's negative emotions and the occurrence of emotional-behavioral disorders among young children (Abdollahzadeh Rafi, 2023). These findings support the proposition that the way negative emotional experiences are managed within

both the child and the family is closely connected to behavioral adaptation. The current study extends this literature by placing child emotion management within a broader structural pathway and demonstrating that it is simultaneously related to maternal psychological resources and child behavioral outcomes.

Perhaps the most important result of the study was the significant indirect effect of maternal sense of coherence on child behavioral problems through maladaptive emotion management. This result indicates that part of the protective role of maternal sense of coherence operates through its association with children's emotional regulation. In other words, mothers with a stronger sense of coherence may contribute to a relational environment in which children develop more adaptive ways of handling emotionally difficult situations, thereby reducing their vulnerability to behavioral problems. This finding is compatible with conditional process and mediation approaches, which emphasize that distal psychological characteristics often influence outcomes through more proximal mechanisms (Hayes, 2022). Maternal sense of coherence can therefore be conceptualized as a relatively distal family resource, whereas child emotion management represents a more proximal developmental process that directly shapes behavioral adjustment.

The mediational finding also corresponds closely with developmental psychopathology models that reject single-cause explanations of child mental health problems. Emotional and behavioral disorders emerge through multiple interacting pathways involving biological dispositions, personality characteristics, family processes, environmental exposures, and regulatory abilities (McGorry et al., 2024; Thapar et al., 2023). From this perspective, maternal sense of coherence may not reduce child behavioral problems solely through direct parental influence. Rather, it may shape the emotional learning environment in which children develop their own regulatory skills. Once these skills become established, they may partly determine whether emotional arousal is processed adaptively or transformed into persistent internalizing and externalizing symptoms. Such an interpretation also accords with longitudinal evidence showing that emotional and behavioral problems may follow varying trajectories depending on the presence or absence of protective developmental resources (Landolt et al., 2025). Thus, enhancing child emotion management may represent one mechanism through which family resilience resources interrupt maladaptive developmental trajectories.

The moderating effect of maternal neuroticism adds an important layer to this process model. The finding that neuroticism weakened the protective influence of maternal sense of coherence suggests that maternal psychological resources do not operate independently of personality. Neuroticism is characterized by heightened negative affectivity, emotional instability, vulnerability to stress, worry, and greater sensitivity to perceived threat, and it has broad implications for psychological and interpersonal functioning (Widiger & Oltmanns, 2017). A mother may cognitively perceive family circumstances as relatively understandable and manageable yet still respond with considerable emotional reactivity if she has a high level of neuroticism. Consequently, the behavioral benefits ordinarily associated with a strong sense of coherence may be less consistently expressed during emotionally demanding interactions with the child. This finding illustrates why the examination of personality as a moderator can provide information that would be missed in models based exclusively on direct effects.

The moderating role of maternal neuroticism is also compatible with emerging evidence regarding personality traits and parenting behavior. Ballinger et al. found that pathological personality traits predict early parenting behavior, underscoring the relevance of parental dispositional characteristics for caregiving processes (Ballinger et al., 2026). Although normative neuroticism and pathological personality traits are not equivalent constructs, both perspectives suggest that stable patterns of emotional reactivity may shape how parents respond to caregiving demands. Daneshzadeh et al. likewise demonstrated that personality traits are associated with patterns of behavioral and interpersonal functioning, partly through communication-related processes (Daneshzadeh et al., 2022). In the present context, elevated maternal neuroticism may interfere with calm communication, consistent emotional responses, or effective co-regulation, thereby attenuating the positive influence of maternal sense of coherence on the child. Conversely, when neuroticism is lower, maternal coherence may be more readily translated into stable and supportive parenting behavior.

The results can therefore be interpreted within an integrated model of risk, protection, and regulation. Maternal sense of coherence appears to function as a protective resource, child maladaptive emotion management as a mediating mechanism of risk transmission, and maternal neuroticism as a vulnerability factor that modifies the strength of the protective pathway. Such a formulation is

compatible with contemporary resilience theory, which emphasizes that adaptation results from dynamic interactions among promotive and disruptive processes rather than the operation of isolated variables (Masten, 2021). It is also consistent with the view that developmental outcomes depend on specific configurations of characteristics within parents, children, and relational contexts (Bornstein, 2021). Importantly, the findings suggest that behavioral problems should not be conceptualized solely as deficits within the child. Rather, they may partly reflect the interaction between children's regulatory capacities and the psychological resources and vulnerabilities present in the family system.

The findings have particular relevance for prevention because childhood behavioral problems can become increasingly stable if regulatory difficulties remain unaddressed. Contemporary child and youth mental health frameworks emphasize early identification and intervention before patterns of psychopathology become entrenched (McGorry et al., 2024). Likewise, evidence regarding developmental trajectories suggests that early emotional-behavioral dysregulation can be associated with adverse outcomes across later developmental stages (Zhai et al., 2026). By identifying both maternal sense of coherence and child emotion management as potentially modifiable targets, the present model provides a framework for interventions that extend beyond symptom management. Interventions that strengthen maternal coping resources while simultaneously improving child emotion-management capacities may be more effective than approaches that focus exclusively on reducing aggressive, anxious, withdrawn, or rule-breaking behavior after these problems have become established.

The findings of the present study should be interpreted in light of several limitations. First, the correlational and cross-sectional nature of the design limits causal interpretation, even though structural equation modeling allowed theoretically specified direct and indirect pathways to be tested. Second, the participants were drawn from elementary school students in one geographic region, which may restrict the generalizability of the findings to children from other cultural, socioeconomic, educational, or family contexts. Third, several variables were assessed through maternal reports, potentially increasing the influence of shared-method variance, social desirability, and parental perceptions of child behavior. Fourth, restricting participation to children living in two-parent families may have increased sample homogeneity but limits the

applicability of the findings to single-parent, divorced, blended, or other family structures. Fifth, although maternal neuroticism was considered, other potentially influential parental characteristics, such as paternal personality, parental psychological distress, parenting style, socioeconomic stress, and marital relationship quality, were not incorporated into the model. Finally, the study focused on general behavioral problems and did not examine whether the proposed pathways differed systematically for specific internalizing and externalizing syndromes.

Future studies are recommended to replicate the proposed model using longitudinal and prospective designs so that temporal relationships among maternal sense of coherence, children's emotion management, maternal neuroticism, and behavioral problems can be examined more precisely. Research involving multiple informants, including fathers, teachers, and children themselves, would reduce dependence on maternal reports and provide a more comprehensive assessment of children's functioning across contexts. Future investigations could also test the model separately for internalizing and externalizing problems and examine whether different dimensions of emotion management have distinct mediating roles. Including paternal sense of coherence, paternal personality traits, parenting practices, family socioeconomic status, marital functioning, and stressful life events could further clarify family-level mechanisms. Replication across different cities, age groups, socioeconomic strata, and family structures would enhance generalizability. Experimental and intervention studies are also needed to determine whether strengthening parental sense of coherence or improving children's emotion-management skills produces subsequent reductions in behavioral problems and whether intervention effects vary as a function of parental neuroticism.

The findings suggest that prevention and intervention programs for childhood behavioral problems should adopt a family-centered approach that addresses both parental and child-level mechanisms. School psychologists, counselors, and mental health professionals can assess children's maladaptive emotion-management patterns alongside maternal psychological resources rather than treating behavioral symptoms in isolation. Parent-training programs may include components designed to strengthen mothers' capacity to interpret stressful situations as manageable, organize coping resources, establish predictable family routines, and respond consistently to children's negative emotions. At the child level, interventions can incorporate emotional awareness, identification and labeling of

emotions, adaptive expression, coping strategies, problem solving, frustration tolerance, and regulation of anger, sadness, and anxiety. Mothers with elevated neuroticism may benefit from additional support focused on stress management, reduction of emotional reactivity, and more consistent responses during parent-child interactions. Coordinated programs involving families, schools, and child mental health services may therefore provide the most effective framework for preventing escalation of behavioral difficulties and promoting healthier emotional and behavioral adjustment.

Authors' Contributions

All authors significantly contributed to this study.

Declaration

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

Transparency Statement

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the study and participated in the research with informed consent.

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