

Structural Model of Fear of Negative Evaluation in Children with Learning Disabilities Based on Maternal Defectiveness/Shame Schema with the Mediating Role of Parental Mentalization

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ABSTRACT

Children with Specific Learning Disabilities (SLD) are highly vulnerable to social anxiety and fear of negative evaluation (FNE); however, the familial mechanisms underlying this vulnerability remain underexplored. This study investigated the mediating role of parental mentalization in the relationship between maternal defectiveness/shame schemas and FNE in children with SLD. Employing a cross-sectional design, the sample consisted of 312 mother-child dyads (children aged 8-12 years). Path analysis was conducted to evaluate the hypothesized structural model, controlling for child's age and mother's education. The structural model demonstrated an excellent fit to the empirical data ($\chi^2/df = 1.87$, CFI = 0.98, RMSEA = 0.053). The findings revealed that maternal defectiveness/shame schema significantly and negatively predicted parental mentalization ($\beta = -0.52$, $p < 0.001$) and directly positively predicted child FNE ($\beta = 0.31$, $p < 0.001$). Furthermore, parental mentalization negatively predicted child FNE ($\beta = -0.28$, $p < 0.001$). Bootstrapping analysis confirmed that parental mentalization partially mediated the relationship between maternal defectiveness schema and child FNE (standardized indirect effect = 0.15, unstandardized B = 0.30, $p < 0.01$). These findings highlight that maternal internalized shame impairs the capacity for reflective functioning, which subsequently exacerbates evaluative fears in children with SLD. Clinical interventions should incorporate family-based approaches, explicitly targeting maternal maladaptive schemas and enhancing parental mentalization to mitigate social anxiety in this clinical population.

Keywords: Fear of negative evaluation, specific learning disabilities, parental mentalization, defectiveness/shame.

1. Introduction

Specific learning disabilities (SLD) constitute a group of neurodevelopmental difficulties that interfere with the acquisition and effective use of fundamental academic skills such as reading, written expression, and mathematics. Although these difficulties are primarily identified through persistent problems in academic performance, their consequences extend well beyond scholastic achievement. Children with learning disabilities repeatedly encounter situations in which their performance is observed, compared, corrected, and evaluated by teachers, parents, and peers, making school a particularly salient interpersonal environment for the development of self-perceptions and evaluative concerns. From an educational perspective, ensuring equitable opportunities for students requires attention not only to access to instruction but also to the psychological and relational conditions that enable students with diverse educational needs to participate effectively in learning environments (Shariati et al., 2024). Accordingly, the psychosocial experiences of children with SLD should be considered alongside their academic difficulties, particularly because recurrent experiences of failure, correction, comparison, and perceived inadequacy may progressively influence how these children anticipate and interpret the judgments of others. The manuscript on which the present study is based consequently conceptualizes fear of negative evaluation as an important psychosocial difficulty among children with SLD and examines it within a family-based structural framework.

Fear of negative evaluation (FNE) refers to apprehension about being judged unfavorably, concern regarding others' evaluations, and sensitivity to situations in which one's personal qualities or performance may be scrutinized. During childhood and early adolescence, such concerns can become particularly influential because increasing participation in peer groups, classroom activities, competitive educational tasks, and social comparison creates frequent opportunities for evaluation. FNE is also closely associated with social anxiety, avoidance, self-consciousness, and heightened monitoring of interpersonal feedback. Longitudinal research has demonstrated that fears concerning evaluation are prospectively related to social anxiety symptoms in adolescence, indicating that evaluative fears are not merely transient reactions but may contribute to the development and maintenance of broader social-emotional difficulties (Fredrick & Luebbe, 2022). Subsequent work emphasizing the prospective relationships

among negative evaluation, positive evaluation, and adolescent social anxiety similarly underscores the developmental importance of sensitivity to interpersonal judgment (Fredrick & Luebbe, 2024). For children with SLD, this process may be intensified because academic performance itself frequently becomes a visible source of difference from classmates. Repeated correction, lower achievement, special educational support, or perceived failure can provide children with recurring experiences in which their competence appears to be publicly evaluated, potentially strengthening expectations of criticism or rejection.

The emotional vulnerability of children with SLD is increasingly understood as emerging from interactions between individual difficulties and the wider family environment. Studies of children with learning disabilities have identified important associations between parental psychological functioning and children's emotional problems. In particular, maternal depression has been linked to depressive and anxiety symptoms in children with special learning disorders, with parenting stress serving as a significant explanatory mechanism (Abbasi & Gheirati, 2022). This finding is important because it indicates that the psychological impact of learning disabilities is not confined to the child; rather, the demands associated with the condition may affect parental emotional functioning, which can subsequently shape the child's adjustment. Research examining maternal acceptance and rejection in families of children with specific learning disabilities likewise indicates that parental responses are associated with multiple psychological and contextual factors, highlighting the complexity of caregiving within this population (Ayar et al., 2024). Thus, understanding FNE among children with SLD requires a framework that incorporates not only the child's academic experiences but also the psychological structures through which parents perceive themselves, interpret their children's difficulties, and respond to children's emotional needs.

Among the parental psychological characteristics potentially relevant to this process are early maladaptive schemas. Schema-based perspectives propose that enduring cognitive-emotional patterns formed through adverse or unmet developmental experiences can influence how individuals interpret themselves, interpersonal relationships, and emotionally demanding situations. Contemporary evidence continues to demonstrate the relevance of parental schemas for both adult functioning and intergenerational processes. Research examining adverse childhood

experiences and parental schema modes suggests that patterns of maladaptive schema functioning vary meaningfully within parenting contexts and that parental gender may also influence the manner in which adverse developmental experiences are expressed through schema modes (Nematzadeh et al., 2026). Similarly, findings from juvenile populations have demonstrated relationships between parental attachment experiences and early maladaptive schemas, reinforcing the proposition that interpersonal experiences within the family contribute to enduring cognitive-emotional patterns with consequences for later adjustment (Karatoprak et al., 2025). These findings support the conceptualization of schemas as relationally embedded structures capable of influencing both the individual's emotional functioning and the emotional climate created for children.

The defectiveness/shame schema is particularly relevant to evaluative processes. Individuals characterized by this schema tend to experience themselves as inadequate, flawed, inferior, undesirable, or potentially unacceptable if their perceived deficiencies are exposed. Because shame is inherently linked to anticipated interpersonal judgment, activation of defectiveness/shame may increase sensitivity to situations involving criticism, comparison, or perceived failure. Recent evidence illustrates the broader psychological significance of rejection- and defectiveness-related schema processes. For example, parental rejection has been associated with psychological risk in adolescents through disconnection and rejection-related early maladaptive schemas, demonstrating how experiences within close relationships can become organized into enduring internal representations of deficiency and rejection (Fabris, 2026). When such schema processes are present in mothers, parenting situations that involve children's academic difficulties may become particularly activating. A child's repeated educational struggles may be interpreted not solely as the child's developmental challenge but, consciously or implicitly, as evidence of maternal inadequacy, failure, or anticipated social judgment.

This possibility is especially important in families of children with SLD because parenting such children may entail persistent educational concerns, communication with teachers and specialists, worries about future achievement, and exposure to social comparisons with typically achieving children. Under these conditions, a maternal defectiveness/shame schema may shape both emotional responses and parenting behavior. Schema activation can increase self-focused distress, defensive responding,

excessive control, criticism, withdrawal, or attempts to prevent experiences that could expose perceived inadequacy. Evidence supporting the relevance of schema-oriented approaches to parenting has accumulated across different populations. Schema-based parenting training has been shown to influence parenting stress and burnout, suggesting that modification of dysfunctional parental cognitive-emotional patterns can produce meaningful changes in the parenting experience (Valipour et al., 2025). Parent-focused schema coaching has likewise been developed to increase parents' emotional responsiveness and empowerment in families confronting significant child psychological difficulties (Seifi et al., 2025). A systematic review of schema therapy for children and adolescents further indicates expanding use of schema concepts in individual, group, and parent-based interventions, supporting the clinical importance of addressing maladaptive schema processes within developmental and family contexts (Uysal et al., 2026).

Research comparing parenting interventions also provides evidence that schema-informed parenting may affect children's psychosocial functioning rather than only parental symptoms. A schema-based parenting package incorporating transactional analysis has demonstrated effects on children's social competence when compared with acceptance-based parenting approaches (Jokar et al., 2025). Related work comparing schema-based parenting integrated with transactional analysis and acceptance and commitment therapy-based parenting has extended this line of inquiry to children's behavioral problems and assertiveness (Jokar et al., 2026). Collectively, these studies strengthen the proposition that parental schemas are clinically meaningful because they may shape interpersonal processes through which children's emotional and social development occurs. Nevertheless, the mechanism through which a maternal defectiveness/shame schema could become associated specifically with a child's FNE remains insufficiently clarified. Direct transmission cannot fully explain how a mother's internal sense of inadequacy becomes translated into a child's expectation of negative social judgment. A relational psychological process is therefore needed to explain this connection.

Parental mentalization represents one theoretically compelling mechanism. Mentalization refers broadly to the capacity to understand one's own and others' behavior in relation to underlying mental states, including emotions, thoughts, intentions, desires, expectations, and beliefs. In parenting, mentalization involves recognizing that a child's

observable behavior reflects an internal subjective experience that may differ from the parent's own interpretation. A mentalizing parent can remain curious about the child's emotional state, tolerate uncertainty about the child's motives, distinguish the child's experience from the parent's own concerns, and respond in ways that help the child organize and regulate emotions. Mentalization is therefore particularly relevant in middle childhood, a period during which increasingly complex social cognition, theory of mind, and socioemotional capacities become central to interpersonal adjustment. Evidence indicates that mentalization and theory-of-mind abilities are closely intertwined with socioemotional development during middle childhood (Locati et al., 2025).

The significance of mentalization becomes even clearer when considered in relation to emotion regulation and attachment. A recent scoping review examining adolescent attachment found that mentalization and emotion regulation constitute closely connected processes that help explain individual differences in socioemotional functioning (Salavou et al., 2026). Mentalization may enable parents to interpret children's distress accurately rather than reacting primarily to the surface behavior or through the lens of their own emotional vulnerabilities. Conversely, compromised mentalizing can lead to rigid assumptions about the child's motives, excessive certainty regarding internal states, misinterpretation of distress, or parent-centered reactions to child behavior. Research among parents of school-aged children further indicates meaningful interrelationships between mentalizing capacity, parental depression and anxiety symptoms, and coparenting processes, supporting the view that parental mentalization is embedded within the broader emotional and relational functioning of the family (Palma et al., 2026). Thus, mentalization provides a plausible bridge between parents' internal psychological structures and children's emotional experiences.

This mechanism may be especially consequential for children with SLD. When a child struggles with reading, writing, mathematics, classroom participation, or repeated corrective feedback, the child may experience embarrassment, frustration, discouragement, anger, or fear of failure. A parent with stronger mentalizing capacity may recognize these behaviors as expressions of distress and respond with validation, curiosity, and developmentally appropriate support. In contrast, a mother whose defectiveness/shame schema is strongly activated may interpret the same situation through her own fears of inadequacy and judgment. In such circumstances, the ability

to distinguish the child's feelings from her own shame-related concerns may be weakened. As a result, parenting responses may become critical, defensive, intrusive, excessively corrective, or emotionally unavailable. Repeated exposure to such interactions could teach the child that mistakes and weaknesses are threatening because they invite criticism, disappointment, or rejection, thereby intensifying FNE.

Clinical evidence also supports the modifiability of mentalization and its relevance to childhood psychopathology. Short-term mentalization-based therapy has been investigated for common childhood mental disorders, with pilot controlled findings indicating that mentalization-focused treatment is feasible and potentially beneficial for children's psychological functioning (Thorén et al., 2025). Such findings are clinically important because they suggest that mentalization is not merely a descriptive parental characteristic but a potentially actionable treatment target. If impaired parental mentalization constitutes a pathway between maternal schemas and children's evaluative fears, interventions could be directed toward strengthening reflective functioning while simultaneously addressing schema-based maternal vulnerabilities.

The importance of family involvement is also evident in the broader intervention literature on SLD. A systematic review of parent-involved interventions for children with specific learning disabilities indicates that parental participation represents an important component of interventions targeting children's functioning and adaptation (Guo & Keles, 2025). Parent-child therapeutic approaches have also shown potential benefits extending into academic domains. Parent-child play therapy, for example, has been investigated in relation to reading performance among children with learning disabilities, illustrating how relational interventions may influence outcomes traditionally viewed primarily as educational (Xu, 2025). These findings challenge exclusively child-focused models of SLD intervention and suggest that the quality of the parent-child relational environment may contribute to both educational and psychosocial outcomes.

At the same time, contemporary research cautions against relying on a single informant when assessing emotional difficulties in children with SLD. Parent and child reports of internalizing problems may differ substantially, indicating that parents' perceptions do not always fully correspond to children's subjective emotional experiences (Gentile et al., 2026). Such discrepancies are particularly relevant when parental schemas and mentalization are under investigation

because a parent's own cognitive-emotional functioning may affect how child distress is perceived and reported. Examining children's FNE alongside maternal schema functioning and parental mentalization can therefore provide a more differentiated account of the relational processes involved in children's internalizing vulnerability.

Taken together, the literature suggests several converging lines of evidence: children with SLD are exposed to recurrent evaluative experiences; FNE is developmentally associated with social anxiety; parental psychological distress and acceptance-rejection processes are related to emotional problems among children with learning disabilities; early maladaptive schemas can organize parenting responses; and parental mentalization contributes to children's emotional and socioemotional development. However, these strands have largely developed in parallel. Parent-involved interventions have received increasing attention, schema-focused approaches have demonstrated relevance to parenting, and mentalization-based models have expanded within child and family treatment, yet the specific structural relationship among maternal defectiveness/shame, parental mentalization, and children's FNE remains insufficiently investigated. This gap is particularly important in SLD, where children face repeated academic and interpersonal evaluations and may therefore be especially susceptible to family processes that amplify shame, criticism sensitivity, and apprehension about judgment.

Theoretically integrating schema and mentalization perspectives may therefore provide a more precise account of how maternal vulnerability is associated with children's evaluative fears. Maternal defectiveness/shame may exert a direct influence by shaping critical, anxious, or rejection-sensitive aspects of the parenting environment, while also exerting an indirect influence by impairing the mother's capacity to represent the child's behavior in terms of independent mental states. Reduced parental mentalization may then deprive the child of the emotional validation and reflective scaffolding needed to reinterpret academic difficulties without globalizing them into beliefs about personal inadequacy. In this way, a child's learning difficulty may become psychologically transformed from a circumscribed academic challenge into a broader expectation that mistakes reveal personal defects and invite negative judgment. Examining this indirect pathway is therefore theoretically relevant to developmental psychopathology and clinically relevant to designing family-

based interventions that address both maternal schema vulnerability and reflective parenting capacity.

Accordingly, the aim of the present study was to test a structural model of fear of negative evaluation in children with specific learning disabilities based on maternal defectiveness/shame schema, with parental mentalization examined as a mediating variable.

2. Methods and Materials

2.1. Study Design and Participants

The present study utilized a descriptive-correlational research design, specifically structural equation modeling (SEM) and path analysis, to investigate the complex structural relationships among maternal defectiveness/shame schema, parental mentalization, and fear of negative evaluation (FNE) in children with specific learning disabilities (SLD). The target population consisted of all elementary school students formally diagnosed with SLD (grades 3 to 6) and their mothers, residing in Tehran, Iran, during the 2025-2026 academic year.

To ensure a representative sample and adequate statistical power for path analysis, a multi-stage cluster sampling technique was employed. Initially, from the 19 educational districts of Tehran, three districts (North, Central, and South) were randomly selected to account for socioeconomic diversity. Within each selected district, four primary schools equipped with specialized learning disability resource rooms were randomly chosen. Based on standard SEM guidelines suggesting a minimum of 10-20 participants per observed variable for robust parameter estimation (Kline, 2023), and anticipating potential attrition, an initial sample of 350 mother-child dyads was recruited.

The inclusion criteria for children were: (a) formal diagnosis of SLD according to DSM-5-TR criteria by a qualified clinical psychologist or educational specialist; (b) currently enrolled in grades 3 through 6; and (c) absence of comorbid severe neurological or neurodevelopmental disorders (e.g., severe Autism Spectrum Disorder, intellectual disability) as confirmed by school records. Inclusion criteria for mothers included: (a) being the primary caregiver; and (b) providing informed written consent. Exclusion criteria were incomplete questionnaires or withdrawal of consent during the study. After data cleaning and removing significant outliers, the final sample consisted of 312 mother-child dyads, yielding a robust retention rate of 89.1%.

Following the acquisition of formal ethical approval from the Institutional Review Board (IRB) and requisite permissions from the Tehran Department of Education, the research team contacted the principals and special education coordinators of the selected schools. Initial briefing sessions were held to elucidate the study's objectives and protocols. Subsequently, eligible mothers were invited to participate. Mothers who provided written informed consent completed the self-report measures assessing their schemas and mentalization capacities. Simultaneously, the children's FNE was assessed under the supervision of the researcher and a school counselor to ensure comprehension of the items, given their reading difficulties. Data collection sessions were conducted in a quiet environment within the schools to minimize distractions.

2.2. Measures

Fear of Negative Evaluation Scale for Children (BFNE-C). The child's apprehension regarding negative judgments was assessed using the Brief Fear of Negative Evaluation Scale for Children (BFNE-C), originally developed by Garcia-Lopez et al. (2015). This developmentally adapted instrument consists of 12 items rated on a 5-point Likert scale ranging from 1 (Not at all characteristic of me) to 5 (Extremely characteristic of me). Higher scores indicate elevated levels of FNE. The BFNE-C has demonstrated robust psychometric properties across various pediatric populations. In the Iranian context, the Persian version of the BFNE-C was validated by Zargar et al. (2021), reporting excellent internal consistency (Cronbach's $\alpha = 0.88$) and strong convergent validity with measures of social anxiety. In the present study, the Cronbach's α coefficient for this scale was .86.

Young Schema Questionnaire - Short Form 3 (YSQ-S3) – Defectiveness/Shame Subscale. Maternal early maladaptive schemas were measured using the Young Schema Questionnaire - Short Form 3 (YSQ-S3; Young, 2005). The YSQ-S3 is a 90-item self-report inventory assessing 18 core schemas. For the specific purpose of this study, only the Defectiveness/Shame subscale, comprising 5 items, was utilized. Mothers rated each item on a 6-point scale ranging from 1 (Completely untrue of me) to 6 (Describes me perfectly). The Persian validation of the YSQ-S3 by Ahi et al. (2020) confirmed its structural validity in the Iranian population, demonstrating strong internal consistency across subscales. The Cronbach's α for the

Defectiveness/Shame subscale in the current sample was robust (0.82).

Parental Reflective Functioning Questionnaire (PRFQ). Maternal mentalization capacity was evaluated using the Parental Reflective Functioning Questionnaire (PRFQ), a prominent 18-item measure developed by Luyten et al. (2017). The PRFQ assesses three core dimensions of parental mentalization: Pre-Mentalizing Modes (PM), Certainty about Mental States (CMS), and Interest and Curiosity in Mental States (IC). Items are scored on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). The Persian version of the PRFQ, validated by Habibi et al. (2022), exhibits excellent psychometric properties, including construct validity and temporal stability. To obtain a global index of parental mentalization for the path analysis, a composite score was computed, with higher scores reflecting superior reflective functioning. The overall internal consistency for the PRFQ in this study was 0.84.

2.3. Data Analysis

Preliminary data screening and descriptive statistics, including means, standard deviations, and zero-order Pearson correlations, were conducted using SPSS version 29. Prior to the main analysis, the foundational assumptions of multivariate statistics—including univariate and multivariate normality (assessed via skewness, kurtosis, and Mardia's coefficient), linearity, and absence of multicollinearity (evaluated via Tolerance and VIF values)—were rigorously evaluated and confirmed. The primary hypothesis testing and evaluation of the structural model were executed using Path Analysis via structural equation modeling within the AMOS version 24 software environment. The adequacy of the proposed structural model was assessed using multiple fit indices: the Chi-square ratio ($\chi^2/df < 3$), the Comparative Fit Index (CFI > 0.90), the Tucker-Lewis Index (TLI > 0.90), the Goodness of Fit Index (GFI > 0.90), and the Root Mean Square Error of Approximation (RMSEA < 0.08), as recommended by Hu and Bentler (2020). Finally, to robustly test the significance of the indirect (mediating) effect of parental mentalization, the bootstrapping method (with 5000 resamples and 95% bias-corrected confidence intervals) was employed within the AMOS framework.

3. Findings and Results

The final sample consisted of 312 mother-child dyads. The children's mean age was 10.24 years (SD = 1.15, range

= 8-12), comprising 171 boys (54.8%) and 141 girls (45.2%). All children were formally diagnosed with a Specific Learning Disability (SLD) and were enrolled in grades 3 to 6. The participating mothers had a mean age of 38.50 years (SD = 4.32, range = 28-51). Regarding mothers'

educational attainment, 15.4% (n = 48) had below a high school diploma, 41.0% (n = 128) held a high school diploma, 33.3% (n = 104) had a Bachelor's degree, and 10.3% (n = 32) held a Master's degree or higher. Table 1 summarizes the demographic characteristics of the sample.

Table 1

Demographic Characteristics of the Sample (N = 312)

Variable	Category	Frequency (n)	Percentage (%)
Child Gender	Boy	171	54.8%
	Girl	141	45.2%
Mother's Education	< High School	48	15.4%
	High School	128	41.0%
	Bachelor's	104	33.3%
	Master's+	32	10.3%

Prior to conducting the path analysis, the underlying statistical assumptions were tested. Univariate normality was confirmed as the skewness and kurtosis values for all study variables fell strictly within the acceptable range of ± 1.5 (Kline, 2023). Multicollinearity was evaluated using Tolerance and Variance Inflation Factor (VIF) indices. The lowest Tolerance value was 0.72 and the highest VIF was 1.38, confirming that multicollinearity was not a confounding factor in the dataset. Descriptive statistics,

including means, standard deviations, and zero-order Pearson correlation coefficients, are presented in Table 2. As hypothesized, maternal Defectiveness/Shame schema was significantly and negatively correlated with parental mentalization ($r = -0.52, p < 0.01$) and positively correlated with the child's Fear of Negative Evaluation (FNE) ($r = 0.48, p < 0.01$). Furthermore, parental mentalization showed a significant negative association with child FNE ($r = -0.45, p < 0.01$).

Table 2

Descriptive Statistics

Variable	M	SD	Skewness	Kurtosis
Maternal Defectiveness/Shame	14.52	4.18	0.65	-0.32
Parental Mentalization	4.81	0.93	-0.41	0.15
Child FNE	38.24	8.56	0.22	-0.58

Table 3

Pearson correlations among the main variables.

	Maternal Defectiveness/Shame	Parental Mentalization	Child FNE
Maternal Defectiveness/Shame	—		
Parental Mentalization	-.52**	—	
Child FNE	0.48**	-0.45**	—

To evaluate the hypothesized mediation model, path analysis with maximum likelihood (ML) estimation was conducted using AMOS 24. To ensure appropriate degrees of freedom and robust model testing, child's age and mother's education were entered as covariates. The structural model demonstrated an excellent fit to the empirical data: $\chi^2(df = 2, N = 312) = 3.74, p = 0.154$; $\chi^2(df = 1.87$; Comparative Fit Index (CFI) = .98; Tucker-Lewis Index

(TLI) = 0.97; Goodness of Fit Index (GFI) = .98; and Root Mean Square Error of Approximation (RMSEA) = 0.053 (90% CI [0.00, 0.11]).

Analysis of the direct paths revealed that maternal Defectiveness/Shame schema significantly and negatively predicted parental mentalization ($\beta = -0.52, B = -0.11, SE = 0.01, p < 0.001$). Moreover, the Defectiveness/Shame schema had a significant direct positive effect on child FNE

($\beta = 0.31$, $B = 0.63$, $SE = 0.11$, $p < 0.001$). Parental mentalization significantly and negatively predicted child

FNE ($\beta = -0.28$, $B = -2.57$, $SE = 0.51$, $p < 0.001$). The structural parameters are detailed in Table 4.

Table 4

Standardized and Unstandardized Path Coefficients for the Structural Model

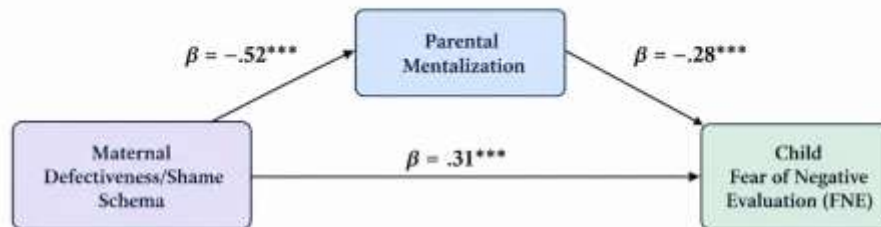
Path	B	B	SE	CR (t)	p	95% CI (Bootstrapped)
Direct Effects						
Defectiveness/Shame → Mentalization	-0.11	-0.52	0.01	-10.74	<0.001	[-0.14, -0.09]
Defectiveness/Shame → Child FNE	0.63	0.31	0.11	5.68	<0.001	[0.42, 0.85]
Mentalization → Child FNE	-2.57	-0.28	0.51	-5.01	<0.001	[-3.57, -1.58]
Indirect Effect						
Defectiveness/Shame → Mentalization → FNE	0.30	0.15	0.06	-	<0.01	[0.19, 0.44]

To test the significance of the indirect effect (mediation), a bootstrapping procedure with 5,000 resamples and 95% bias-corrected confidence intervals (BC-CI) was employed. The results confirmed that parental mentalization significantly mediated the relationship between maternal Defectiveness/Shame schema and child FNE (Standardized

indirect effect = .15, unstandardized $B = 0.30$, 95% CI [0.19, 0.44], $p < .01$). Since the direct effect of the schema on FNE remained significant after accounting for the mediator, parental mentalization operates as a partial mediator in this model. The final structural model with standardized path coefficients is illustrated in Figure 1.

Figure 1

Structural model with standardized path coefficients



Note. Standardized path coefficients are presented. ** $p < .01$, *** $p < .001$. The indirect effect of Maternal Defectiveness/Shame Schema on Child FNE through Parental Mentalization was significant ($\beta = .15$, 95% CI [.19, .44], $p < .01$), indicating partial mediation.

4. Discussion

The present study examined the structural relationships among maternal defectiveness/shame schema, parental mentalization, and fear of negative evaluation (FNE) in children with specific learning disabilities (SLD). The proposed model demonstrated excellent fit to the empirical data, with $\chi^2/df = 1.87$, CFI = .98, TLI = .97, GFI = .98, and RMSEA = .053, indicating that the hypothesized pattern of

relationships provided an adequate representation of the observed data. The results showed that maternal defectiveness/shame schema significantly and negatively predicted parental mentalization ($\beta = -.52$, $p < .001$), while it significantly and positively predicted children's FNE ($\beta = .31$, $p < .001$). Parental mentalization also significantly and negatively predicted children's FNE ($\beta = -.28$, $p < .001$). Moreover, the bootstrapped indirect effect was significant (standardized indirect effect = .15, $B = .30$, 95% CI [.19,

.44], $p < .01$), indicating that parental mentalization partially mediated the relationship between maternal defectiveness/shame schema and children's FNE. Because the direct path from maternal defectiveness/shame schema to FNE remained significant after the mediator was introduced, the findings support a partial rather than full mediation model.

The first major finding was the significant negative association between maternal defectiveness/shame schema and parental mentalization. In other words, mothers who experienced stronger beliefs of personal inadequacy, defectiveness, unworthiness, or shame tended to demonstrate a lower capacity to understand their children's behavior in terms of underlying thoughts, emotions, intentions, and needs. This finding is theoretically consistent with schema-based models suggesting that early maladaptive schemas organize emotional processing and influence interpersonal interpretations, particularly under stressful conditions. When defectiveness/shame is activated, attention may become disproportionately directed toward one's perceived shortcomings and the possibility of criticism or rejection. This self-focused emotional processing can reduce the cognitive and emotional space necessary for reflective understanding of another person's internal experience. Contemporary evidence similarly suggests that parental schema functioning is related to adverse developmental experiences and can vary systematically across parents, reinforcing the relevance of maladaptive schemas to parenting processes (Nematzadeh et al., 2026). Findings concerning parental attachment and early maladaptive schemas also support the broader proposition that maladaptive internal representations may shape the way individuals interpret relational experiences and respond to interpersonal stress (Karatoprak et al., 2025).

This association can also be understood from the perspective of emotional overload. Mothers of children with SLD frequently encounter situations involving academic frustration, repeated school contact, concern about progress, and comparison with other children. When a mother already possesses a strong defectiveness/shame schema, these situations may be experienced not simply as challenges affecting the child, but as implicit evidence of maternal failure or inadequacy. Such schema activation can make it more difficult to distinguish the child's emotional experience from the mother's own shame-related reactions. Instead of asking what the child is feeling or intending, the mother may become preoccupied with what the child's difficulty means about herself as a parent. The resulting reduction in

reflective functioning is compatible with recent work demonstrating that mentalization is closely linked to emotional regulation, attachment, and the capacity to maintain nuanced representations of self and others under emotionally challenging circumstances (Salavou et al., 2026). Research among parents of school-aged children has likewise shown interrelationships among mentalizing capacity, parental anxiety and depression, and family relational processes, indicating that reflective functioning is particularly vulnerable when parents themselves are emotionally distressed (Palma et al., 2026).

The second major finding was that maternal defectiveness/shame schema directly and positively predicted children's FNE. Thus, beyond its association with reduced mentalization, maternal shame-related cognition appeared to have an independent relationship with children's sensitivity to negative judgment. This result is consistent with the broader literature indicating that parental psychological difficulties may be associated with internalizing symptoms among children with learning disorders. Abbasi and Gheirati reported that maternal depression was related to children's depressive and anxiety symptoms, with parenting stress functioning as an important mediating mechanism (Abbasi & Gheirati, 2022). Similarly, research on maternal acceptance and rejection in families of children with specific learning disabilities has demonstrated that mothers' emotional and relational responses are associated with several child and family characteristics (Ayar et al., 2024). These findings support the assumption that maternal psychological functioning may contribute to the emotional context within which children with SLD interpret criticism, failure, and interpersonal evaluation.

A possible explanation for this direct relationship is that mothers with an activated defectiveness/shame schema may unintentionally communicate heightened sensitivity to mistakes, performance, and external judgment. They may become excessively critical, controlling, protective, perfectionistic, or emotionally withdrawn when the child's difficulties evoke their own feelings of inadequacy. Through repeated interactions, the child may gradually learn that mistakes are not neutral learning experiences but rather events carrying the risk of disappointment, criticism, embarrassment, or rejection. This process may be especially important for children with SLD because they are exposed more frequently than many peers to corrective feedback, academic comparison, and situations in which their performance is visibly weaker. Fear of negative evaluation may therefore become reinforced simultaneously in the

school and family environments. The prospective association between evaluative fears and social anxiety during adolescence reported by Fredrick and Luebbe supports the developmental importance of these processes (Fredrick & Luebbe, 2022). Their subsequent work similarly emphasizes the relevance of both negative and positive evaluation concerns to the course of social anxiety symptoms (Fredrick & Luebbe, 2024). In this context, the current findings suggest that maternal shame-based cognitive organization may constitute one family-level source of heightened evaluative sensitivity.

The direct effect of maternal defectiveness/shame can also be interpreted through intergenerational schema transmission. A parent who experiences herself as fundamentally flawed may communicate, explicitly or implicitly, assumptions that personal value depends on avoiding mistakes and meeting external standards. Children may internalize these assumptions through modeling, feedback, emotional contagion, and repeated relational experiences. Recent findings concerning parental rejection and disconnection/rejection-related schemas provide support for this broader developmental pathway. Fabris found that parental rejection was associated with maladaptive psychological outcomes through rejection-related early maladaptive schemas, illustrating how relational experiences can become internalized as enduring beliefs about the self (Fabris, 2026). Although that study focused on adolescents and a different outcome, it supports the principle that relational experiences marked by rejection or shame can contribute to self-evaluative vulnerability. In children with SLD, this process may be intensified because academic difficulties repeatedly create opportunities for perceived inadequacy to be activated.

The third major finding was the significant negative effect of parental mentalization on children's FNE. Mothers with greater capacity to understand and reflect on their children's mental states tended to have children with lower levels of fear of negative evaluation. This finding is compatible with contemporary developmental perspectives in which mentalization supports children's socioemotional development by allowing parents to respond to distress with curiosity, validation, and psychological containment. Mentalization and theory of mind have been shown to play important roles in children's socioemotional development during middle childhood (Locati et al., 2025). Furthermore, research on attachment, mentalization, and emotion regulation demonstrates that the capacity to understand internal states is closely connected to more adaptive

emotional functioning (Salavou et al., 2026). Consequently, a mentalizing mother may help the child understand that frustration, embarrassment, or fear following academic difficulty reflects a temporary emotional state rather than evidence of global personal inadequacy.

This protective role may be especially important in SLD. A child who struggles in academic tasks may interpret correction from teachers or peers as confirmation of inferiority. A parent with strong reflective functioning can help differentiate performance from identity by recognizing the child's emotional reaction, naming it accurately, and contextualizing it without amplifying shame. In contrast, a less mentalizing response may misinterpret avoidance as laziness, frustration as defiance, or emotional withdrawal as lack of effort. Such misattunement may strengthen the child's belief that others misunderstand and judge them negatively. Evidence from mentalization-based intervention research supports the clinical relevance of reflective functioning. Short-term mentalization-based therapy has shown promise for common childhood psychological disorders, indicating that mentalizing processes can be therapeutically targeted (Thorén et al., 2025). In addition, the association between parental mentalizing capacity and broader family psychological functioning reported by Palma et al. suggests that mentalization may operate as an important relational resource within families of school-aged children (Palma et al., 2026).

The most important contribution of the present study was the finding that parental mentalization significantly mediated the relationship between maternal defectiveness/shame schema and children's FNE. This result provides a more specific mechanism for understanding how a mother's internal cognitive-emotional vulnerability may become associated with the child's social-evaluative fear. The indirect pathway suggests that maternal shame does not influence the child only through overt parenting behaviors or direct transmission of anxiety. Rather, one mechanism appears to involve the mother's reduced ability to represent the child's internal world accurately. When defectiveness/shame is strongly activated, the mother may interpret the child's behavior through a self-referential framework of inadequacy and judgment. This weakens reflective functioning, which in turn reduces the child's opportunities to receive validation, emotional labeling, and assistance in interpreting difficult social and academic experiences. Over time, this relational pattern may increase vigilance toward criticism and strengthen FNE.

The partial nature of the mediation is also theoretically meaningful. Parental mentalization explained part, but not all, of the association between maternal defectiveness/shame and children's FNE. Therefore, other mechanisms are likely involved, including parenting stress, rejection, criticism, overcontrol, emotion socialization, attachment insecurity, parental anxiety, or modeling of social-evaluative fear. The findings of Abbasi and Gheirati concerning the mediating role of parenting stress in the association between maternal depression and children's emotional symptoms are particularly relevant in this respect (Abbasi & Gheirati, 2022). Likewise, evidence concerning maternal acceptance-rejection among children with specific learning disabilities indicates that the broader quality of the parent-child relationship may contribute to emotional adjustment (Ayar et al., 2024). These studies suggest that future models may benefit from incorporating multiple relational mediators rather than assuming a single transmission pathway.

The findings also converge with the emerging literature on schema-focused parenting interventions. Schema-based parenting training has demonstrated effectiveness in reducing parenting burnout and parenting stress, suggesting that maladaptive schema-related processes can be modified and that such changes may improve parental functioning (Valipour et al., 2025). Parent-focused schema coaching has similarly been used to promote emotional resonance and empowerment among parents facing substantial caregiving challenges (Seifi et al., 2025). A systematic review of schema therapy in child and adolescent populations further indicates increasing use of parent-based schema interventions and supports the relevance of integrating parents into schema-oriented treatment (Uysal et al., 2026). In addition, schema-based parenting programs have shown favorable effects on children's social competence (Jokar et al., 2025), behavioral problems, and assertiveness (Jokar et al., 2026). These findings align with the present results by suggesting that changes in parents' maladaptive cognitive-emotional patterns may have downstream implications for children's socioemotional adjustment.

The current findings are also consistent with the broader movement toward parent-involved interventions for children with SLD. A systematic review by Guo and Keles indicates that parent participation represents a meaningful component of interventions for children with specific learning disabilities (Guo & Keles, 2025). Similarly, parent-child play therapy has been associated with improvements in reading performance among children with learning disabilities, suggesting that relational intervention can

influence outcomes even in domains commonly conceptualized as primarily academic (Xu, 2025). These findings reinforce the argument that the family environment should not be treated as peripheral to SLD intervention. Rather, parental cognitive, emotional, and reflective capacities may influence both psychosocial adaptation and children's engagement with learning-related challenges.

At the same time, research showing discrepancies between parent and child reports of internalizing problems in SLD highlights the need for caution when interpreting family processes (Gentile et al., 2026). Parents may underestimate, overestimate, or differently conceptualize children's emotional experiences, particularly when their own psychological vulnerabilities influence perception. This makes parental mentalization especially relevant, because the construct concerns the parent's ability to recognize the child's mind as separate and partially opaque rather than assuming complete certainty about the child's internal state. The present findings therefore contribute to this literature by identifying reflective functioning as a potentially protective mechanism that may reduce the impact of maternal maladaptive schemas on children's evaluative fears.

5. Conclusion

Overall, the findings support an integrative family-developmental interpretation of FNE among children with SLD. Educational inclusion and equity require more than providing access to instructional resources; they also require attention to the psychosocial conditions that enable children to participate without excessive fear of failure or judgment (Shariati et al., 2024). Children with SLD may already be vulnerable to experiences of difference and perceived inadequacy in educational settings. When these experiences occur within a family context characterized by maternal shame and reduced reflective functioning, the child's fear of negative evaluation may become more strongly consolidated. Conversely, a reflective parent may buffer the psychological impact of academic difficulty by helping the child interpret failure as situational, manageable, and unrelated to personal worth. The structural model tested in the present study therefore extends existing research by linking maternal schema functioning, parental mentalization, and child evaluative fear within a single explanatory framework.

Several limitations should be considered when interpreting the findings. First, the cross-sectional design prevents definitive conclusions regarding temporal ordering

or causality among maternal defectiveness/shame schema, parental mentalization, and children's FNE. Although the tested model was theoretically grounded and demonstrated strong statistical fit, reciprocal relationships remain possible. Second, the study relied substantially on self-report measures, creating the possibility of shared method variance, social desirability, and response bias, particularly for constructs such as shame and parental reflective functioning. Third, the sample was limited to mothers and their children, and therefore paternal schemas, paternal mentalization, coparenting dynamics, and other family members were not represented. Fourth, the sample was drawn from elementary-school children with SLD in Tehran, which may limit generalizability to children from other age groups, cultural settings, socioeconomic contexts, or clinical populations. Finally, other potentially relevant mechanisms, including parenting stress, attachment security, parental criticism, rejection, overprotection, child temperament, comorbid anxiety symptoms, and severity or subtype of learning disability, were not incorporated into the structural model.

Future studies should employ longitudinal and prospective designs to establish the temporal sequence among parental schemas, mentalization, and children's evaluative fears and to determine whether changes in parental mentalization predict subsequent changes in FNE. Multi-informant and multimethod designs are also recommended, incorporating reports from children, mothers, fathers, teachers, and clinicians alongside observational assessments of parent-child interaction and reflective functioning. Future structural models could simultaneously examine additional mediators such as parenting stress, rejection, criticism, attachment insecurity, emotion regulation, and parental anxiety in order to determine whether mentalization remains a significant mechanism after these variables are controlled. Researchers should also examine whether the model differs according to child gender, age, type and severity of SLD, parental education, socioeconomic status, or comorbid emotional difficulties. Comparative studies involving children without learning disabilities would clarify whether the identified pathway is specific to SLD or represents a more general developmental mechanism. Finally, intervention and experimental studies should test whether targeted reduction of maternal defectiveness/shame and enhancement of parental mentalization produce measurable reductions in children's FNE over time.

The findings indicate that assessment and intervention for children with SLD should extend beyond academic

remediation and include systematic attention to family psychological processes. Clinicians and school psychologists should consider screening parents for maladaptive shame-related beliefs, parenting distress, and difficulties in reflective functioning when children present with pronounced evaluative fears or social anxiety. Parent-focused interventions can be designed to help mothers recognize when their own experiences of inadequacy are activated by the child's academic difficulties and to distinguish those reactions from the child's actual emotional needs. Mentalization-oriented techniques may be used to strengthen curiosity about the child's internal experience, reduce rigid interpretations of behavior, and improve emotional validation during academic setbacks. Schema-focused work may also help parents identify and modify deeply rooted beliefs concerning defectiveness, failure, and anticipated judgment. Schools can support these efforts by facilitating collaborative communication among teachers, counselors, parents, and learning-disability specialists so that academic correction is delivered without reinforcing shame. An integrated intervention model combining educational support, child-focused anxiety management, schema-informed parent work, and enhancement of parental reflective functioning may therefore provide the most comprehensive approach to reducing FNE among children with SLD.

Authors' Contributions

Authors equally contributed to this article.

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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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