



The Role of Early Maladaptive Schemas in Predicting Perfectionism and Social Anxiety in Adults: Emphasizing the Mediating Role of Shame and Emotional Deprivation

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ARTICLE INFO	ABSTRACT
Article History: Received 2 January 2024 Received in revised form 10 March 2025 Accepted 17 May 2025 Available online 20 June 2025 Keywords: Early Maladaptive Schemas; Perfectionism; Social Anxiety; Internalized Shame; Emotional Deprivation; Schema Therapy; Abandonment/Instability; Defectiveness/Shame.	Introduction: Early maladaptive schemas (EMSs) are pervasive cognitive–emotional patterns that develop in childhood and increase vulnerability to psychopathology. This study examined the associations of three EMSs (abandonment/instability, emotional deprivation and defectiveness/shame) with perfectionism and social anxiety, and the mediating roles of internalized shame and emotional deprivation. Method: In this cross-sectional study, 300 adults aged 20–45 years attending psychological counseling centers in Tehran in 2025–2026 were recruited by convenience sampling. Participants completed the Young Schema Questionnaire–Short Form 3 (YSQ-S3), the Hewitt and Flett Multidimensional Perfectionism Scale, the Liebowitz Social Anxiety Scale and the Internalized Shame Scale. Data were analyzed with structural equation modeling using SPSS 26 and AMOS. Results: The model showed an acceptable fit ($\chi^2/df = 2.10$, RMSEA = 0.059, CFI = 0.94, TLI = 0.91, SRMR = 0.045). Abandonment/instability was positively associated with social anxiety ($\beta = 0.34$, $p < 0.001$), defectiveness/shame with perfectionism ($\beta = 0.41$, $p < 0.001$), and emotional deprivation with both perfectionism ($\beta = 0.28$, $p < 0.01$) and social anxiety ($\beta = 0.25$, $p < 0.01$). Bootstrapping with 5,000 resamples showed a significant indirect effect of defectiveness/shame on perfectionism through internalized shame ($\beta = 0.17$, 95% CI [0.09, 0.26]) and of abandonment/instability on social anxiety through emotional deprivation ($\beta = 0.14$, 95% CI [0.07, 0.21]). Conclusion: Internalized shame and emotional deprivation appear to be important mechanisms linking early maladaptive schemas to perfectionism and social anxiety, which may inform schema-based case formulation and interventions. Given the cross-sectional design, the paths should not be interpreted as causal.

1. INTRODUCTION

Over recent decades, developmental and clinical psychology have devoted increasing attention to childhood experiences and the ways in which their enduring effects shape psychological functioning in adulthood. One of the major theoretical frameworks in this area is Jeffrey Young's schema theory. Early maladaptive schemas (EMSs) are

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deep-seated, pervasive, and relatively enduring cognitive-emotional patterns that primarily develop during childhood and adolescence, persist across the lifespan, and may influence individuals' perceptions of themselves, others, and interpersonal relationships [1].

These schemas can be conceptualized as cognitive-emotional frameworks through which individuals interpret life events and interpersonal experiences. When activated by schema-relevant situations, maladaptive schemas may give rise to dysfunctional thoughts, emotions, and behaviors. Previous research has also documented associations between early maladaptive schemas and psychological difficulties such as social anxiety [2].

Social anxiety is characterized by marked fear of situations in which individuals anticipate being observed, evaluated, or judged by others. Concerns about negative evaluation, humiliation, embarrassment, or rejection may lead individuals either to avoid social situations or to endure them with intense anxiety [3].

Perfectionism, by contrast, is a multidimensional construct that, in its maladaptive forms, may involve excessively high standards, harsh self-evaluation, heightened sensitivity to mistakes, and concerns about others' approval [4]. Perfectionism is not inherently pathological in all its forms; however, when an individual's sense of self-worth becomes contingent on meeting excessively demanding standards, it may be associated with psychological difficulties.

The relationship between perfectionism and early maladaptive schemas has also received considerable research attention. Some findings suggest that deeply rooted beliefs concerning defectiveness, worthlessness, or conditional acceptance may be associated with the development of perfectionistic patterns [5].

Within this framework, shame represents an important self-conscious emotion. Shame may involve a pervasive negative evaluation of the self, whereby individuals perceive not merely a particular behavior or performance, but the self as a whole, as defective, inadequate, or unworthy [6]. Such experiences may be associated with heightened sensitivity to social evaluation, self-criticism, and attempts to conceal perceived shortcomings.

Emotional deprivation is another core schema in Young's model and refers to the persistent expectation that one's normal needs for affection, empathy, attention, support, and emotional guidance will not be adequately met by others [1]. This expectation may influence the quality of interpersonal relationships, feelings of security, and individuals' responses to social situations.

Accordingly, examining abandonment/instability, defectiveness/shame, and emotional deprivation schemas alongside internalized shame, perfectionism, and social anxiety may provide a more nuanced understanding of the cognitive and emotional mechanisms underlying these psychological difficulties.

1.1. Statement of the Problem and Significance of the Study

The central issue addressed in the present study is how early experiences, organized into early maladaptive schemas, are associated with the development of perfectionistic patterns and anxiety in social interactions during adulthood.

Some individuals may adopt excessively high personal standards in an attempt to cope with underlying feelings of defectiveness, inadequacy, or worthlessness, using the pursuit of flawlessness as a strategy to minimize the perceived likelihood of criticism, failure, or rejection. Previous research has similarly examined the association between early maladaptive schemas and perfectionism [5].

However, severe perfectionism may itself become a source of increased psychological distress, as individuals may remain persistently concerned about their ability to maintain the standards they have set and, consequently, about the possibility of failure or negative evaluation by others.

Within this context, shame and emotional deprivation warrant particular attention. Shame is a painful self-conscious emotion that may arise from a global negative evaluation of the self [6]. Individuals who perceive themselves at a fundamental level as defective or unworthy may become more sensitive to negative evaluation by others and may adopt increasingly stringent personal standards in an attempt to compensate for these feelings.

In Young's model, the defectiveness/shame schema refers to the belief that one is fundamentally defective, undesirable, bad, inferior, or unlovable [1]. From this perspective, the defectiveness/shame schema is theoretically closely related to the emotional experience of shame. Nevertheless, these constructs should remain conceptually and psychometrically distinct.

Emotional deprivation, similarly, refers to the belief that one's emotional needs will not be adequately met by others [1]. A persistent expectation of not receiving sufficient affection, support, and empathy may contribute to feelings of loneliness and relational insecurity and may heighten sensitivity to social rejection.

Clarifying the relationships among schemas, shame, perfectionism, and social anxiety may therefore contribute to more comprehensive clinical case formulations and inform the development of schema therapy-based interventions.

At the same time, because the present study employs a cross-sectional correlational design, terms such as effect, path, and mediation are used in the statistical sense within the structural model and should not be interpreted as establishing definitive causal relationships.

1.2. Literature Review

1.2.1. Iranian Studies

In Iran, research attention to early maladaptive schemas and their associations with psychological difficulties has increased in recent years.

Fathi, Rostamoghli, and Nemati examined the roles of shame and guilt in predicting perfectionism and social anxiety among university students, highlighting the importance of self-conscious emotions in relation to perfectionism and social difficulties [7].

Hamidpour, Dolatshahi, Pourshahbaz, and Dadkhah compared early maladaptive schemas between patients with social anxiety disorder and healthy individuals, providing evidence for an association between early maladaptive schemas and social anxiety [8].

Besharat also investigated perfectionism and psychological problems, drawing attention to the association between maladaptive dimensions of perfectionism and psychological difficulties [9].

More recent Iranian studies have further explored the relationships among early maladaptive schemas, perfectionism, and social anxiety. Alibakhshi and Solgi used structural modeling to examine social anxiety symptoms in adolescents based on early maladaptive schemas, anxiety sensitivity, and perfectionism [10].

Mahdavi et al. likewise investigated a structural model of the relationship between early maladaptive schemas and perfectionism among gifted adolescents, taking several potential mediating variables into account [11].

Moghadam et al. examined the associations among perfectionism, early maladaptive schemas, attachment styles, and body-image concerns among individuals seeking cosmetic surgery [12].

Taken together, these studies indicate meaningful associations among early maladaptive schemas, perfectionism, and social anxiety in Iranian samples. However, the nature and pathways of these relationships, particularly the role of potentially mediating emotional variables, warrant further investigation.

1.2.2. International Studies

Within the theoretical framework of schema therapy, Young, Klosko, and Weishaar proposed that early maladaptive schemas may develop in response to unmet core emotional needs and persist into adulthood through various coping styles [1].

In a longitudinal study, Calvete, Orue, and Hankin found that early maladaptive schemas were associated with social anxiety and that anxious automatic thoughts may partially mediate this relationship [2].

Hewitt, Flett, and Mikail conceptualized perfectionism within a multidimensional and interpersonal framework, demonstrating that its maladaptive dimensions may be associated with psychological difficulties and interpersonal problems [4].

Hawary and El-Serafy examined the association between early maladaptive schemas and social anxiety among university students [13].

Within a compassion-focused framework, Gilbert emphasized the roles of shame, self-criticism, and the threat system in psychopathology [14]. From this perspective, excessive efforts to gain approval or avoid failure may, for some individuals, be understood in relation to fear of negative evaluation and shame.

Toroslu and Çirakoğlu also investigated the roles of perfectionism and intolerance of uncertainty in the relationship between early maladaptive schemas and certain obsessive-compulsive symptoms [15].

More recent review studies have demonstrated that early maladaptive schemas are observed across a broad range of psychological problems and clinical disorders. In a systematic review, Bär et al. examined early maladaptive schemas and schema modes across clinical disorders [16]. Maher et al., in another systematic review, investigated the role of early maladaptive schemas in eating disorders [17].

Collectively, these findings underscore the relevance of schemas beyond any single disorder and support further investigation of mechanisms that may account for the associations between maladaptive schemas and diverse psychological outcomes.

1.3. Research Gap

Despite the existing literature, several important research gaps remain.

First, the lack of an integrative model. A substantial proportion of previous research has examined relationships between two or more variables separately. Relatively few studies have simultaneously incorporated specific schemas, internalized shame, perfectionism, and social anxiety within a single structural model.

Second, cultural differences. The experience of shame, perceptions of others' evaluations, and perfectionistic standards may be influenced by cultural context. Examining these relationships among Iranian adults may therefore contribute to the further development and contextualization of the existing evidence base.

Third, the role of mediating emotional processes. Although numerous studies have examined associations between early maladaptive schemas and psychological difficulties, the emotional mechanisms that may account for these relationships remain insufficiently understood.

Fourth, the conceptual status of emotional deprivation. In Young's model, emotional deprivation is itself an early maladaptive schema [1]. In the initial model proposed in the present study, emotional deprivation is specified both as a predictor schema and, along certain pathways, as a mediating variable. Methodologically, if both variables were assessed using the same YSQ-S3 items, treating them as two distinct constructs would require separate theoretical and measurement justification. Findings concerning this pathway should therefore be interpreted with caution.

1.4. Rationale and Objectives of the Study

The present study is significant from both theoretical and applied perspectives. Theoretically, it may contribute to the schema therapy literature by providing a more detailed understanding of the relationships among early maladaptive schemas, self-conscious emotions, perfectionism, and social anxiety.

From an applied perspective, the findings may assist psychologists and counselors in considering not only overt behavioral and cognitive symptoms when assessing clients presenting with social anxiety and perfectionism, but also the underlying schemas and experiences of shame that may contribute to these difficulties.

The primary objective of this study is to propose and test a structural model examining the direct and indirect relationships among early maladaptive schemas, shame, emotional deprivation, perfectionism, and social anxiety.

The specific objectives are to:

1. examine the association between the abandonment/instability schema and social anxiety;
2. examine the association between the defectiveness/shame schema and perfectionism;
3. examine the association between emotional deprivation and perfectionism;
4. examine the association between emotional deprivation and social anxiety;
5. examine the statistical mediating role of shame in the relationship between the defectiveness/shame schema and psychological outcomes;
6. examine the reported indirect pathways through emotional deprivation;
7. determine the proportion of variance in perfectionism and social anxiety explained by the proposed model; and
8. examine the pattern of relationships within the model across women and men.

2. METHOD

2.1. Research Design

The present study was applied in purpose and employed a cross-sectional, descriptive-correlational design using structural equation modeling (SEM).

A quantitative approach was used to examine the direct and indirect pathways among early maladaptive schemas, shame, emotional deprivation, perfectionism, and social anxiety.

Given the cross-sectional nature of the data, the proposed model should be interpreted as a structural/predictive model rather than as evidence establishing causal relationships.

2.2. Study Population and Sample

The study population consisted of adults aged 20–45 years who attended counseling centers and psychological clinics in Tehran in 2025–2026.

Given the nature of the study and the use of SEM, sample size was determined with reference to methodological recommendations for structural equation modeling [18]. To enhance the precision of parameter estimates, a total of 300 participants were recruited using convenience sampling.

The inclusion criteria were age between 20 and 45 years, a minimum educational attainment of a high school diploma, no known diagnosis of a severe psychiatric disorder such as schizophrenia or bipolar disorder in an acute phase based on the available information, and voluntary willingness to participate in the study.

Participants who submitted incomplete questionnaires or exhibited invalid response patterns, such as repetitive or invariant responding, were excluded from the final analysis.

2.3. Research Instruments

2.3.1. *Young Schema Questionnaire–Short Form, Third Edition (YSQ-S3)*

The Young Schema Questionnaire–Short Form, Third Edition (YSQ-S3) was developed to assess early maladaptive schemas based on Young's theoretical model [1]. The YSQ-S3 comprises 90 items assessing 18 early maladaptive schemas.

The present study focused on three schemas: abandonment/instability, emotional deprivation, and defectiveness/shame.

In the initial version of the manuscript, the response format of this instrument was described as a five-point scale. However, given the standard scoring procedure for the YSQ-S3, this information should be verified against the exact version of the questionnaire administered in the present study. If the standard YSQ-S3 was used, responses are rated on a six-point scale.

2.3.2. *Hewitt and Flett Multidimensional Perfectionism Scale*

The Hewitt and Flett Multidimensional Perfectionism Scale comprises 45 items assessing three dimensions of perfectionism: self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism [19].

In the initial version of the study, the summed score was used as an overall index of perfectionism. Given the multidimensional nature of the instrument, however, the use of a total score should be justified in the final manuscript with reference to the factorial structure of the specific version administered.

2.3.3. *Liebowitz Social Anxiety Scale (LSAS)*

The Liebowitz Social Anxiety Scale (LSAS) comprises 24 social and performance situations and assesses the degree of fear/anxiety and avoidance associated with these situations [20]. Higher scores indicate greater severity of social anxiety.

2.3.4. *Internalized Shame Scale (ISS)*

The Internalized Shame Scale (ISS) consists of 30 items addressing shame-related thoughts and feelings and is used to assess internalized shame [21].

2.3.5. *Assessment of Emotional Deprivation*

Emotional deprivation was assessed using the items corresponding to the emotional deprivation schema in the Young Schema Questionnaire [1].

Because emotional deprivation was included in the study model both as a predictor schema and, in some preliminary analyses, as a mediating variable, the final manuscript should clarify whether the proposed mediator was operationalized using an instrument or definition distinct from the YSQ-S3 emotional deprivation subscale.

If the same set of items was used to represent emotional deprivation in both roles, interpretation of a self-mediated pathway would be subject to a serious methodological limitation.

2.4. Procedure and Ethical Considerations

Following receipt of the necessary approvals and coordination with the participating counseling centers, questionnaires were administered to eligible individuals. The purpose of the study was explained to participants, and participation was entirely voluntary.

Participants were assured of the confidentiality of their information, the exclusive use of the data for research purposes, and their right to withdraw from the study at any stage.

2.5. Data Analysis

Data were analyzed using SPSS version 26. Descriptive statistics, including the mean, standard deviation, skewness, and kurtosis, were calculated.

The initial manuscript referred to “AMOS or SmartPLS.” However, because the reported results explicitly refer to AMOS and include model-fit indices conventionally associated with covariance-based SEM, AMOS was retained as the structural modeling software in the present version.

Prior to structural model analysis, the distributions of the study variables were examined using skewness and kurtosis indices.

Cronbach’s alpha coefficients were also calculated to assess the internal consistency of the instruments. The initial manuscript reported that all questionnaires yielded alpha coefficients greater than 0.80. Nevertheless, the exact Cronbach’s alpha coefficient for each scale and subscale should be reported separately in the final manuscript.

Convergent and discriminant validity were subsequently evaluated within the measurement model. If average variance extracted (AVE) was used, the exact AVE values and other relevant indicators of construct validity should be reported in the final manuscript.

Model fit was evaluated using the χ^2/df ratio, comparative fit index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). These indices were interpreted according to commonly accepted SEM fit criteria reported in the methodological literature [22].

Indirect effects were examined using bootstrapping with 5,000 resamples and 95% confidence intervals.

3. RESULTS

3.1. Descriptive Findings

Descriptive analyses indicated that early maladaptive schema scores were relatively pronounced in the study sample. This finding should be considered in light of the fact that participants were recruited from individuals attending counseling centers. The initial manuscript also reported that mean perfectionism and social anxiety scores were in the moderate-to-high range. However, a precise interpretation of the levels of these variables requires reporting the mean, standard deviation, score range, and, where applicable, established instrument cutoffs in the descriptive statistics table. Examination of skewness and kurtosis indicated that the distributions of the study variables were within acceptable ranges, supporting the suitability of the data for structural equation modeling.

3.2. Correlations Among the Study Variables

The reported results indicated significant positive associations between the defectiveness/shame, emotional deprivation, and abandonment/instability schemas and the emotional variables examined in the study. For some of these associations, the reported correlation coefficients ranged from 0.45 to 0.62 ($p < 0.01$). A significant positive correlation was also observed between internalized shame and perfectionism:

$$r = 0.43, p < 0.01.$$

The original manuscript reported the association between social anxiety and emotional deprivation as follows:

$$r = 0.49, p < 0.01.$$

This finding indicates that higher levels of emotional deprivation were associated with higher levels of social anxiety.

3.3. Structural Model Fit

Path analysis and structural equation modeling were conducted in AMOS to test the study hypotheses. The overall fit of the structural model was evaluated using multiple fit indices. The reported values are presented in Table 1.

Table 1. Fit Indices for the Structural Model

Fit Index	Reported Value
χ^2/df	2.10
RMSEA	0.059
CFI	0.94
TLI	0.91
SRMR	0.045

Taken together, these indices indicate that the proposed model demonstrated an acceptable fit to the reported data [22].

3.4. Direct Effects in the Structural Model

Path analysis indicated that the abandonment/instability schema had a significant positive direct effect on social anxiety:

$$\beta = 0.34, p < 0.001.$$

The defectiveness/shame schema also significantly and positively predicted perfectionism:

$$\beta = 0.41, p < 0.001.$$

A significant direct path was also observed from emotional deprivation to perfectionism:

$$\beta = 0.28, p < 0.01.$$

Similarly, the direct path from emotional deprivation to social anxiety was statistically significant:

$$\beta = 0.25, p < 0.01.$$

The caption accompanying Figure 1 in the original file reported two additional paths: a path from defectiveness/shame to social anxiety with an approximate coefficient of $\beta \approx 0.22$, and a path from abandonment/instability to perfectionism with an approximate coefficient of $\beta \approx 0.10$. Because neither p values nor confidence intervals for these two paths were reported in the original text, their statistical significance cannot be determined conclusively without examining the AMOS output.

Table 2. Direct Path Coefficients in the Structural Model

Path	β	Statistical Significance
Abandonment/Instability → Social Anxiety	0.34	$p < 0.001$
Defectiveness/Shame → Perfectionism	0.41	$p < 0.001$
Emotional Deprivation → Perfectionism	0.28	$p < 0.01$
Emotional Deprivation → Social Anxiety	0.25	$p < 0.01$
Defectiveness/Shame → Social Anxiety	≈ 0.22	Requires verification against AMOS output
Abandonment/Instability → Perfectionism	≈ 0.10	Requires verification against AMOS output

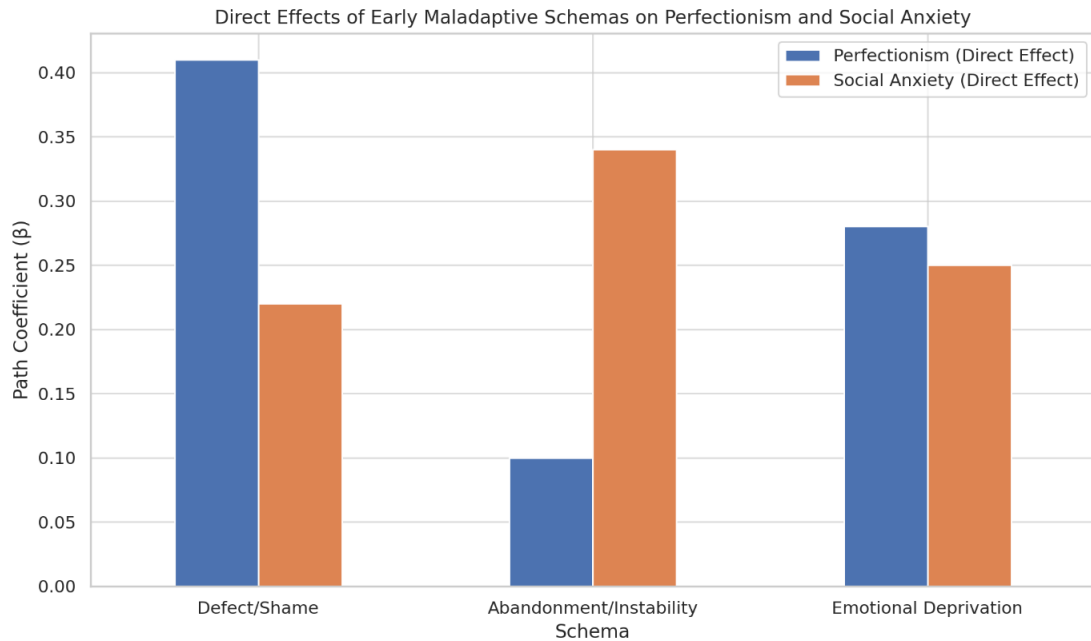


Fig. 1. Direct Effects of Three Early Maladaptive Schemas on Perfectionism and Social Anxiety

Figure 1 illustrates the direct effects of three early maladaptive schemas on the two psychological outcomes of perfectionism and social anxiety. Based on the reported coefficients, the defectiveness/shame schema showed its strongest direct path to perfectionism ($\beta \approx 0.41$), whereas its path coefficient to social anxiety was approximately 0.22. In contrast, the abandonment/instability schema showed its strongest direct path to social anxiety ($\beta \approx 0.34$), while its path coefficient to perfectionism was smaller, at approximately 0.10. The emotional deprivation schema also showed direct paths to both outcomes, with a path coefficient of $\beta \approx 0.28$ for perfectionism and $\beta \approx 0.25$ for social anxiety. Overall, this pattern suggests that different early maladaptive schemas may show distinct patterns of association with the psychological outcomes examined in the present study.

3.5. Indirect and Mediating Effects

In the next stage of the analysis, indirect effects through the proposed mediating variables were examined. Bootstrapping with 5,000 resamples indicated a statistically significant indirect effect of the defectiveness/shame schema on perfectionism through internalized shame:

$$\beta = 0.17, 95\% \text{ CI } [0.09, 0.26].$$

In the initial model reported in the manuscript, an indirect effect of abandonment/instability on social anxiety through emotional deprivation was also reported:

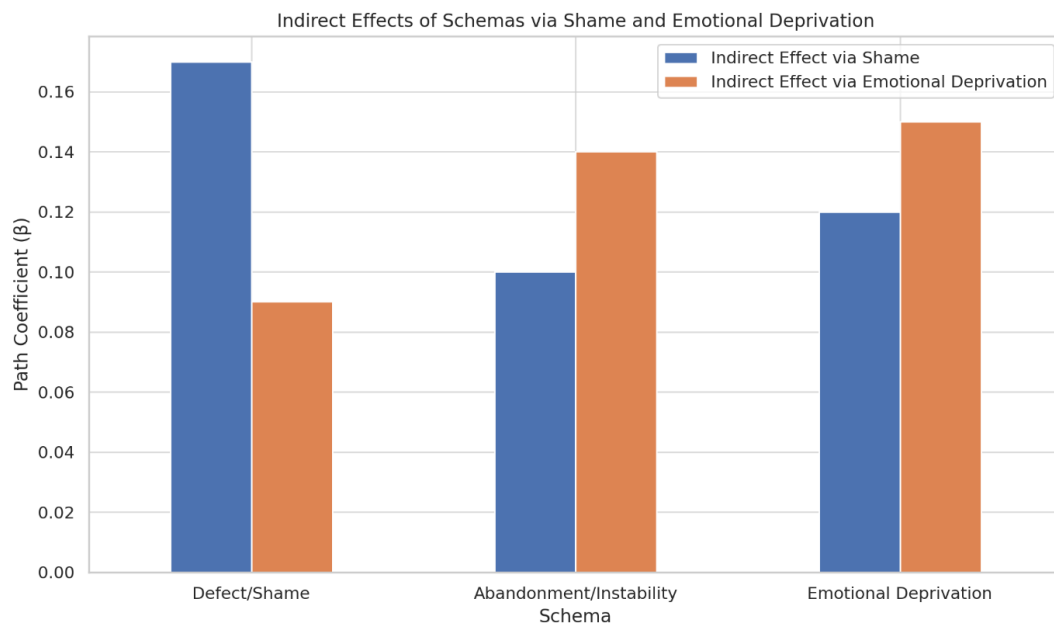
$$\beta = 0.14, 95\% \text{ CI } [0.07, 0.21].$$

The description accompanying Figure 2 additionally reported an indirect effect of the emotional deprivation schema through shame, with an approximate coefficient of $\beta \approx 0.12$, as well as another indirect effect through emotional deprivation, with an approximate coefficient of $\beta \approx 0.15$.

Table 3. Reported Indirect Effects in the Structural Model

Indirect Path	β	95% CI	Status
Defectiveness/Shame → Internalized Shame → Perfectionism	0.17	[0.09, 0.26]	Statistically significant
Abandonment/Instability → Emotional Deprivation → Social Anxiety	0.14	[0.07, 0.21]	Reported in the initial model
Emotional Deprivation → Shame → Psychological Outcome	$\approx$ 0.12	Not reported	Requires verification against the model output
Emotional Deprivation → Emotional Deprivation → Outcome	$\approx$ 0.15	Not reported	Conceptual/measurement concern

Methodological Note. The final pathway can be meaningfully interpreted as mediation only if predictor emotional deprivation and the proposed mediating experience of emotional deprivation represent theoretically and operationally distinct constructs assessed using different indicators. If both were derived from the same YSQ-S3 emotional deprivation subscale, this pathway should not be interpreted as mediation through an independent construct.

**Fig. 2.** Indirect Effects of Early Maladaptive Schemas Through Mediating Variables

Based on the reported findings, the defectiveness/shame schema showed the strongest confirmed indirect effect through internalized shame ($\beta \approx 0.17$). This finding highlights the potential importance of internalized shame in the association between core beliefs concerning personal defectiveness and perfectionism. In the initial model, the abandonment/instability schema was also reported to have an indirect effect through emotional deprivation, with a coefficient of $\beta \approx 0.14$. In addition, the original Figure 2 reported indirect-effect coefficients of $\beta \approx 0.12$ for emotional deprivation through shame and $\beta \approx 0.15$ through emotional deprivation. However, the latter pathway requires further examination of the measurement model because of the potential overlap between the predictor and mediator constructs.

3.6. Heatmap of Correlations

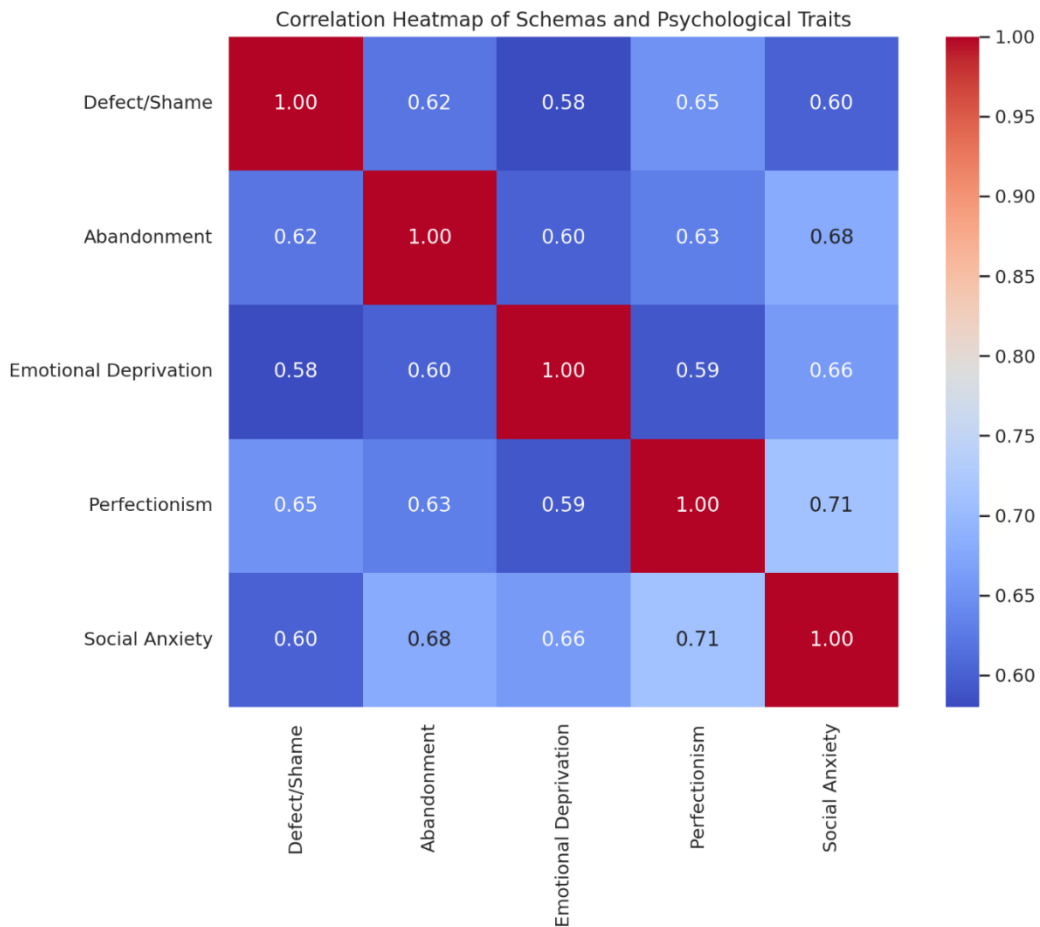


Fig. 3. Heatmap of Correlations Between Early Maladaptive Schemas and Psychological Variables

The heatmap presents the correlation matrix between early maladaptive schemas and the psychological variables examined in the study. In the original description of the figure, emotional deprivation showed notable correlations with both dependent variables:

Perfectionism: $r = 0.59$, **Social Anxiety:** $r = 0.66$

This pattern of correlations highlights the relevance of emotional deprivation to both psychological outcomes examined in the study.

However, as noted previously, the correlation between emotional deprivation and social anxiety is reported as $r = 0.49$ in the Results section but as $r = 0.66$ in the description of Figure 3. The correct value should therefore be verified against the original SPSS output and reported consistently in both sections before finalizing the manuscript. Until such verification is performed, neither value should be substituted for the other arbitrarily.

3.7. Multigroup Analysis by Gender

The gender-based multigroup analysis reported in the initial version of the study indicated that the overall pattern of relationships among the variables was similar across women and men, although some path coefficients differed

numerically between the two groups. Specifically, the path coefficient from the defectiveness/shame schema to perfectionism was:

$\beta = 0.45$ for women

and

$\beta = 0.35$ for men.

The initial manuscript also stated that the mediating role of shame in relation to social anxiety was stronger among women.

Table 4. Comparison of Model Path Coefficients Between Women and Men

Path	Women β	Men β	Between-Group Difference Test
Defectiveness/Shame $\rightarrow$ Perfectionism	0.45	0.35	Not reported
Other paths	Requires AMOS output	Requires AMOS output	Formal testing required

A numerical difference in β coefficients between the two groups is not sufficient to establish a statistically significant gender difference. Such a conclusion requires formal testing of between-group differences in path coefficients and, preferably, the appropriate stages of multigroup analysis and measurement invariance testing. Accordingly, the present findings should be interpreted as descriptive differences in path coefficients rather than evidence of statistically significant differences between women and men.

3.8. Explanatory Power of the Model

In the final analysis, the overall model explained:

46% of the variance in perfectionism

and

42% of the variance in social anxiety.

Table 5. Variance Explained in the Dependent Variables

Dependent Variable	R ²
Perfectionism	0.46
Social Anxiety	0.42

These findings indicate that the variables included in the model collectively accounted for a substantial proportion of the variability in perfectionism and social anxiety within the study sample. Nevertheless, R² represents the proportion of variance explained within the statistical model and, by itself, does not establish causal relationships.

4. DISCUSSION

The findings of the present study indicated that early maladaptive schemas were associated with perfectionism and social anxiety and that some of these associations may be statistically accounted for by emotional mechanisms such as internalized shame.

First, the results revealed a significant positive association between the defectiveness/shame schema and perfectionism, with a reported path coefficient of $\beta = 0.41$. This finding can be interpreted within the theoretical framework of schema therapy [1]. Individuals characterized by a defectiveness/shame schema may hold a fundamental perception of themselves as defective, undesirable, or unworthy. Under such circumstances, striving to meet exceptionally high standards may function as a compensatory strategy aimed at reducing the likelihood of criticism or exposure of perceived personal shortcomings.

This finding is consistent with previous studies reporting associations between early maladaptive schemas and perfectionism [5,11,12,15].

Second, the abandonment/instability schema was significantly and positively associated with social anxiety ($\beta = 0.34$). Individuals characterized by this schema may perceive important relationships as unstable or unreliable and may consequently exhibit heightened sensitivity to cues of interpersonal distancing, rejection, or nonacceptance.

This finding is consistent with previous evidence demonstrating associations between early maladaptive schemas and social anxiety [2,8,10,13].

Calvete et al. similarly demonstrated that certain early maladaptive schemas are associated with anxious thoughts and symptoms of social anxiety [2]. Such evidence suggests that deeply rooted cognitive patterns may be related to how individuals interpret social situations and anticipate negative evaluation.

Third, emotional deprivation showed significant direct associations with both perfectionism and social anxiety. According to Young's model, individuals characterized by the emotional deprivation schema expect that their needs for affection, empathy, attention, and support will not be adequately met by others [1].

Such expectations may heighten interpersonal sensitivity and reduce individuals' sense of security in social interactions. In addition, some individuals may evaluate their own performance against more stringent standards in an effort to obtain acceptance and approval.

Another important finding was the statistical mediating role of internalized shame in the relationship between defectiveness/shame and perfectionism. The reported indirect effect was $\beta = 0.17$, 95% CI [0.09, 0.26].

This finding is theoretically noteworthy. The defectiveness/shame schema involves a fundamental belief that the self is flawed or deficient [1], whereas shame involves a global negative evaluation of the self [6]. It is therefore plausible that activation of defectiveness-related beliefs may be accompanied by greater experiences of shame, which in turn may be associated with perfectionistic attitudes or behaviors.

This interpretation is also consistent with Gilbert's theoretical account of the roles of shame and self-criticism in psychological vulnerability [14].

In the initial model, emotional deprivation was also proposed as a mediator of several pathways. This component of the model is theoretically relevant because inadequate emotional support and responsiveness may have important implications for individuals' subsequent interpersonal relationships. However, if predictor and mediator emotional deprivation were both operationalized using the same YSQ-S3 items, this finding cannot be fully supported at the measurement-model level and would require either reanalysis or a distinct operational definition of the mediator.

The multigroup analysis also revealed numerical differences in some path coefficients between women and men. For example, the defectiveness/shame-to-perfectionism path coefficient was 0.45 among women and 0.35 among men. However, without a formal test of between-group differences, these numerical differences cannot be interpreted as statistically significant gender differences.

Overall, the present findings are broadly consistent with the schema therapy literature and with more recent studies examining the role of early maladaptive schemas across clinical problems [16,17].

4.1. Practical Implications

In clinical settings, assessment of the defectiveness/shame, abandonment/instability, and emotional deprivation schemas may complement the assessment of symptoms related to perfectionism and social anxiety. For clients whose perfectionism is accompanied by pronounced self-criticism and feelings of worthlessness, assessment of internalized shame may contribute to a more comprehensive and precise clinical case formulation. Among clients presenting with social anxiety, examining beliefs concerning rejection, instability of interpersonal relationships, and inadequate emotional support may provide additional information relevant to treatment planning. These findings may also inform the development of schema therapy-based interventions and therapeutic approaches targeting shame and self-criticism.

4.2. Limitations and Recommendations for Future Research

Several limitations should be considered when interpreting the findings of the present study.

First, the study employed a cross-sectional design. Consequently, the temporal ordering of the variables cannot be established, precluding definitive causal inferences regarding the observed relationships.

Second, participants were recruited through convenience sampling from individuals attending counseling centers and psychological clinics in Tehran. The generalizability of the findings to the broader Iranian adult population should therefore be approached with caution.

Third, the measures used in the study were predominantly self-report instruments. Responses may therefore have been influenced by social desirability, response styles, and common method variance.

Fourth, perfectionism is inherently a multidimensional construct [19]. Reliance on a single overall score may obscure potentially meaningful differences among self-oriented, other-oriented, and socially prescribed perfectionism.

Fifth, emotional deprivation was specified in the initial model both as a predictor schema and, along certain pathways, as a mediating variable. If the same measurement was used to operationalize both roles, the validity of treating them as distinct constructs is limited.

Sixth, some values reported across different sections of the initial manuscript are not fully consistent. Most notably, the correlation between emotional deprivation and social anxiety was reported as $r = 0.49$ in the Results section and $r = 0.66$ in Figure 3. The correct value should be verified against the original statistical output.

Seventh, reporting separate path coefficients for women and men is insufficient to establish gender differences. Formal multigroup model comparisons are required to determine whether the path coefficients differ significantly between groups.

Future studies should employ longitudinal designs to clarify the temporal ordering of early maladaptive schemas, shame, perfectionism, and social anxiety. Larger and more diverse samples in terms of age, geographical location, and clinical status would also improve the generalizability of the findings. Future structural models should examine the different dimensions of perfectionism separately rather than relying exclusively on an overall perfectionism score. Additional variables including self-criticism, fear of negative evaluation, self-compassion, emotion regulation, attachment styles, and coping strategies may also be incorporated into future models. If emotional deprivation is investigated as a mediator, it should be theoretically and operationally distinguished from the predictor emotional deprivation schema and assessed using an independent measure. Gender-based multigroup analyses

should also incorporate measurement invariance testing and formal statistical tests of differences in structural path coefficients.

5. CONCLUSION

The findings of the present study indicate that early maladaptive schemas, particularly defectiveness/shame, abandonment/instability, and emotional deprivation, are associated with important psychological characteristics, including perfectionism and social anxiety.

The defectiveness/shame schema showed the largest reported direct path coefficient to perfectionism, whereas abandonment/instability showed the largest direct path coefficient to social anxiety. Emotional deprivation was also significantly associated with both outcomes.

Furthermore, the statistical mediating role of internalized shame in the pathway from defectiveness/shame to perfectionism was supported. This finding highlights the potential importance of deeply rooted self-conscious emotions and negative self-evaluation in accounting for the association between core schema-related beliefs and perfectionistic tendencies.

Additional indirect pathways through emotional deprivation were reported in the initial model. These findings have been retained in the present manuscript to preserve the original study content; however, because of the potential overlap between emotional deprivation as a predictor and as a mediator, their interpretation requires confirmation of the measurement model.

The proposed model explained 46% of the variance in perfectionism and 42% of the variance in social anxiety, while the reported fit indices indicated an acceptable overall model fit.

From an applied perspective, the findings suggest that when working with clients presenting with excessive perfectionism, pronounced self-criticism, social avoidance, or performance-related anxiety, clinicians may consider underlying schemas and experiences of shame alongside overt symptoms in their clinical case formulation.

Attending to the underlying cognitive and emotional processes in addition to more readily observable behavioral symptoms may therefore contribute to a more comprehensive understanding of clients' psychological difficulties.

Nevertheless, given the cross-sectional nature of the study, these findings represent statistical and structural associations and should not be interpreted as evidence of causal relationships.

Authors' Contributions

All authors read and approved the final manuscript.

Declaration of Generative AI Use

During the preparation of this work, the authors used AI to improve the language and readability of the manuscript. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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Declaration of Competing Interests

The authors declare no conflict of interest.

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Ethical Considerations

Participation was voluntary, and all participants were informed of the aims of the study, provided informed consent and were free to withdraw at any time without any effect on the counseling services they received. Permission to collect data was obtained from the participating counseling centers. The questionnaires were completed anonymously, the confidentiality of the data was maintained, and the results were reported only in aggregate form.

REFERENCES

- [1] Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy: A practitioner's guide*. Guilford Press.
- [2] Calvete, E., Orue, I., & Hankin, B. L. (2013). Early maladaptive schemas and social anxiety in adolescents: The mediating role of anxious automatic thoughts. *Journal of Anxiety Disorders*, 27(3), 278–288. <https://doi.org/10.1016/j.janxdis.2013.02.011>
- [3] American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). <https://doi.org/10.1176/appi.books.9780890425596>
- [4] Hewitt, P. L., Flett, G. L., & Mikail, S. F. (2017). *Perfectionism: A relational approach to conceptualization, assessment, and treatment*. Guilford Press.
- [5] Bharucha, V. (2018). The relationship between early maladaptive schemas and perfectionism. *International Journal of Indian Psychology*, 6(2), 112–120.
- [6] Tangney, J. P., & Dearing, R. L. (2002). *Shame and guilt*. Guilford Press.
- [7] Fathi, A., Rostamoghli, Z., & Nemati, S. (2017). The role of shame and guilt in predicting perfectionism and social anxiety among university students. *Journal of Learning Disabilities*, 7(2), 45–62. [In Persian].
- [8] Hamidpour, H., Dolatshahi, B., Pourshahbaz, A., & Dadkhah, A. (2011). Comparison of early maladaptive schemas in patients with social anxiety disorder and healthy individuals. *Journal of Clinical Psychology and Personality*, 19(5), 1–14. [In Persian].
- [9] Besharat, M. A. (2005). Perfectionism and psychological problems. *Journal of Psychology and Educational Sciences, University of Tehran*, 35(2), 1–22. [In Persian].
- [10] Alibakhshi, Z., & Solgi, Z. (2022). Structural equation modeling relationship between symptoms of social anxiety disorder based on early maladaptive schemas, anxiety sensitivity components, and perfectionism in adolescents. *International Journal of Behavioral Sciences*, 16(1), 9–16. <https://doi.org/10.30491/ijbs.2022.306568.1658>
- [11] Mahdavi, A., Afrooz, G. A., Lavasani, M., & Naghsh, Z. (2022). Structural model of the relationship between early maladaptive schemas and perfectionism in gifted teenagers: The mediating role of metacognitive beliefs and parental variables. *Journal of Applied Psychological Research*, 13(1), 65–81. <https://doi.org/10.22059/japr.2022.318235.643744>
- [12] Moghadam, F., Ebrahimi Moghadam, H., & Jahangir, P. (2021). The relationship between perfectionism, early

maladaptive schemas, attachment styles, and body image concern by the mediating role of self-esteem in cosmetic surgery applicants. *Journal of Client-Centered Nursing Care*, 7(1), 27–42. <https://doi.org/10.32598/JCCNC.7.1.351.1>

- [13] Hawary, A. A., & El-Serafy, M. M. (2020). Early maladaptive schemas as predictors of social anxiety among university students. *International Journal of Psycho-Educational Sciences*, 9(2), 84–95.
- [14] Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology*, 53(1), 6–41. <https://doi.org/10.1111/bjc.12043>
- [15] Toroslu, B., & Çırakoğlu, O. C. (2023). Do perfectionism and intolerance of uncertainty mediate the relationship between early maladaptive schemas and relationship and partner-related obsessive-compulsive symptoms? *Current Psychology*, 42(22), 19037–19053. <https://doi.org/10.1007/s12144-022-03050-w>
- [16] Bär, A., Bär, H. E., Rijkeboer, M. M., & Lobbestael, J. (2023). Early maladaptive schemas and schema modes in clinical disorders: A systematic review. *Psychology and Psychotherapy: Theory, Research and Practice*, 96(3), 716–747. <https://doi.org/10.1111/papt.12465>
- [17] Maher, A., Cason, L., Huckstepp, T., Stallman, H., Kannis-Dymand, L., Milliar, P., Mason, J., Wood, A., & Allen, A. (2022). Early maladaptive schemas in eating disorders: A systematic review. *European Eating Disorders Review*, 30(1), 3–22. <https://doi.org/10.1002/erv.2866>
- [18] Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). Guilford Press.
- [19] Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, 60(3), 456–470. <https://doi.org/10.1037/0022-3514.60.3.456>
- [20] Liebowitz, M. R. (1987). Social phobia. *Modern Problems of Pharmacopsychiatry*, 22, 141–173. <https://doi.org/10.1159/000414022>
- [21] Cook, D. R. (1994). *Internalized Shame Scale: Professional manual*. Channel Press.
- [21] Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>