

Effectiveness of a Schema Therapy-Based Curriculum on Reducing Rejection Schemas and Emotional Dependency and Improving Emotional Relationships in Students with Social Anxiety

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Article Info

Article type:

Original Research

How to cite this article:

Rastkar Ebrahimzade, S., Akbarzadeh Sgay, M., Mohaddes, N., Montazeri Nia, M., & Ebadi Barbin, H. (2026). Effectiveness of a Schema Therapy-Based Curriculum on Reducing Rejection Schemas and Emotional Dependency and Improving Emotional Relationships in Students with Social Anxiety. *Journal of Adolescent and Youth Psychological Studies*, 7(9), 1-12.

<http://dx.doi.org/10.61838/kman.jayps.5557>



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ABSTRACT

Objective: The present study aimed to investigate the effectiveness of a schema therapy-based curriculum on reducing rejection schemas and emotional dependency and improving emotional relationships among university students with social anxiety symptoms.

Methods and Materials: This study employed a quasi-experimental design with pretest-posttest and two-month follow-up assessments alongside a control group. The statistical population consisted of university students with social anxiety symptoms in Tehran during the 2025–2026 academic year. Following screening and eligibility assessment, 30 students were selected through purposive sampling and randomly assigned into experimental and control groups, each containing 15 participants. Data collection instruments included the Young Schema Questionnaire–Short Form, the Relationship Assessment Scale, and the Social Phobia Inventory. The experimental group participated in a schema therapy-based curriculum delivered in 10 weekly sessions of 90 minutes, while the control group received no intervention. The educational program focused on identifying and modifying maladaptive schemas, improving emotional regulation, strengthening interpersonal skills, and reducing emotional dependency. Data were analyzed using repeated measures analysis of variance in IBM SPSS Statistics.

Findings: The findings demonstrated significant differences between the experimental and control groups across posttest and follow-up stages. Results of repeated measures analysis of variance indicated that the schema therapy-based curriculum significantly reduced rejection schemas and emotional dependency while significantly improving emotional relationship quality among students with social anxiety ($p < .001$). Significant interaction effects between time and group were observed for all dependent variables,

indicating that changes in the experimental group were attributable to the intervention. Furthermore, Bonferroni post-hoc comparisons revealed that improvements achieved during the posttest stage remained stable during the two-month follow-up period, confirming the durability of treatment effects over time.

Conclusion: The findings suggest that schema therapy-based educational interventions are effective in modifying maladaptive schemas, reducing emotional dependency, and improving emotional relationships among university students with social anxiety. By targeting deep cognitive-emotional vulnerabilities and attachment-related insecurities, schema-focused curricula may contribute to greater emotional regulation, interpersonal security, and psychological adjustment in educational settings. Therefore, integrating schema therapy-based programs into university counseling and mental health services may represent an effective preventive and therapeutic approach for socially anxious students.

Keywords: *Schema therapy, emotional dependency, emotional relationships, social anxiety, university students.*

1. Introduction

Social anxiety is considered one of the most prevalent and disabling psychological problems among university students and young adults, characterized by persistent fear of social evaluation, interpersonal rejection, embarrassment, and negative judgment in social situations. Individuals with social anxiety often experience severe emotional distress in interpersonal interactions, leading to avoidance behaviors, emotional withdrawal, impaired communication, and reduced quality of emotional relationships. Contemporary psychological research has increasingly emphasized that social anxiety cannot be fully understood merely as a behavioral or cognitive phenomenon; rather, it is deeply rooted in maladaptive emotional experiences, attachment insecurities, and dysfunctional cognitive-emotional structures formed during childhood and adolescence (Norton et al., 2022; Tariq et al., 2021). These maladaptive structures are frequently conceptualized within schema theory as early maladaptive schemas, which develop through repeated negative interpersonal experiences and shape individuals' perceptions of themselves, others, and emotional relationships throughout life (Farrell & Shaw, 2022).

According to schema therapy theory, early maladaptive schemas are pervasive and self-defeating cognitive-emotional patterns originating from unmet emotional needs during childhood and adolescence. These schemas influence emotional regulation, interpersonal functioning, self-esteem, and vulnerability to psychological disorders (Chodkiewicz et al., 2022; Farrell & Shaw, 2022). Among the various schema domains proposed by schema therapy, the disconnection and rejection domain has received substantial attention in recent years because of its close association with emotional insecurity, interpersonal fear, shame, dependency,

and social anxiety symptoms (Ahn & Chang, 2024; Fabris, 2026). Individuals with strong rejection-related schemas often perceive others as emotionally unavailable, rejecting, humiliating, or unreliable, leading to chronic fear of abandonment and social evaluation. Such individuals may become excessively dependent on external approval and emotional reassurance in interpersonal relationships (Starr et al., 2023).

Research evidence increasingly demonstrates that maladaptive schemas are significantly associated with social anxiety symptoms across adolescence and young adulthood. A systematic review and meta-analysis conducted by Ayesha Tariq and colleagues demonstrated strong associations between early maladaptive schemas and anxiety disorders among adolescents and young adults (Tariq et al., 2021). Similarly, schema modes related to vulnerability, shame, social isolation, and defectiveness have been identified as important psychological mechanisms underlying social anxiety disorder (Norton et al., 2022). In another study, emotion-focused therapeutic approaches targeting humiliation and defectiveness/shame schemas were found to be effective in reducing symptoms of social anxiety (Asmari et al., 2022). Furthermore, case-based investigations have shown that social phobia often emerges in interaction with traumatic interpersonal experiences, emotional neglect, and maladaptive schema activation (Pereira et al., 2024).

Attachment theory also provides an important framework for understanding the emergence of maladaptive schemas and interpersonal anxiety. Studies have consistently demonstrated that insecure attachment experiences contribute to the formation of maladaptive schemas related to rejection, emotional deprivation, dependency, and abandonment (Karantzas et al., 2023; Lukáč & Popelková,

2020). Insecurely attached individuals often develop hypersensitivity to rejection and interpersonal evaluation, which subsequently intensifies social anxiety symptoms and emotional dependency (Bintas-Zorer & Dirik, 2023). Meta-analytic evidence has confirmed strong associations between adult attachment insecurities and maladaptive schemas across multiple psychological domains (Karantzias et al., 2023). Likewise, studies examining attachment styles and loneliness have shown that maladaptive schemas mediate the relationship between insecure attachment and emotional isolation (Jalilian et al., 2023a, 2023b).

Emotional dependency represents another important consequence of maladaptive schemas and attachment insecurities. Individuals characterized by emotional dependency often display excessive reassurance seeking, fear of abandonment, heightened interpersonal sensitivity, and reliance on others for emotional validation. These characteristics are commonly observed among individuals with social anxiety and rejection-related schemas (Starr et al., 2023). Studies have shown that emotional dependency and reassurance-seeking behaviors negatively affect emotional relationships by increasing anxiety, mistrust, emotional instability, and relational dissatisfaction (Rodríguez et al., 2020). Furthermore, fear of commitment and relational insecurity have been associated with maladaptive schema activation and emotional vulnerability in interpersonal contexts (Obeïd et al., 2020).

Family experiences and parenting styles also play a central role in the development of maladaptive schemas and social anxiety symptoms. Research has indicated that childhood abuse, emotional neglect, humiliation, overprotection, and parental rejection contribute significantly to the formation of rejection schemas and emotional dependency patterns (Bruysters & Pilkington, 2022; Rada et al., 2025). Emotional abuse and invalidating interpersonal experiences during childhood have been identified as strong predictors of later depression, anxiety, and interpersonal dysfunction through maladaptive cognitive-emotional mediators (Li et al., 2020). Similarly, parental neglect and insecure attachment experiences have been associated with poor mental health outcomes among university students (Yu et al., 2022). Studies investigating parenting experiences have further shown that maladaptive schemas mediate the effects of dysfunctional family relationships on later emotional adjustment and interpersonal functioning (Fabris, 2026; Kirsner et al., 2023).

The university period is a particularly sensitive developmental stage for the manifestation of social anxiety and emotional dependency because students are confronted with increased social demands, interpersonal evaluation, academic stress, and identity-related challenges. College students with social anxiety often struggle to establish secure emotional relationships, express emotions appropriately, and maintain interpersonal intimacy. These difficulties may result in loneliness, emotional withdrawal, interpersonal dissatisfaction, and reduced psychological well-being (Rodríguez et al., 2020). In addition, sociocultural factors and minority stress experiences may intensify maladaptive schema activation and emotional vulnerability among adolescents and young adults (Cardoso et al., 2024). Contemporary evidence suggests that maladaptive schemas among university students are associated with low self-compassion, poor psychological flexibility, reduced social support, and diminished emotional resilience (Zhang et al., 2025).

Given the complex and deep-rooted nature of maladaptive schemas, traditional educational or cognitive interventions may not sufficiently address the emotional and interpersonal mechanisms underlying social anxiety. In recent years, schema therapy has emerged as an integrative therapeutic approach combining cognitive-behavioral, attachment-based, experiential, and emotion-focused techniques to modify maladaptive schemas and improve emotional functioning (Farrell & Shaw, 2022). Schema therapy has demonstrated effectiveness across a wide range of psychological disorders, including depression, anxiety disorders, personality disorders, interpersonal difficulties, and emotional dysregulation (Adubale & Tokurah, 2024; Aflakian et al., 2023). Moreover, schema-focused interventions have shown promising outcomes among adolescents and young adults experiencing emotional and relational difficulties (Louis et al., 2021).

Recent studies have highlighted the effectiveness of schema therapy in reducing maladaptive schemas, emotional distress, and attachment-related problems. For example, schema-focused therapeutic interventions have improved psychological capital and attachment security among vulnerable clinical populations (Alizadeh et al., 2021). Schema therapy has also been theoretically proposed as a valuable intervention for adolescents with severe emotional and behavioral problems, including anorexia nervosa and emerging personality disorders (Inchausti et al., 2025; Kleszczewska-Albińska, 2023). Furthermore, metacognitive interpersonal group therapies grounded in schema and

attachment principles have demonstrated effectiveness in improving avoidant personality features and interpersonal functioning among adolescents (Inchausti et al., 2022).

Another important advantage of schema-focused interventions lies in their capacity to integrate emotional, interpersonal, and educational components into structured therapeutic curricula. Educational interventions grounded in schema therapy may help students recognize maladaptive beliefs, regulate emotions more effectively, challenge dysfunctional interpersonal expectations, and develop healthier communication patterns. Such curriculum-based approaches may be particularly beneficial for university students because they combine psychoeducation, emotional awareness, experiential exercises, and interpersonal skill training within a supportive group environment. Group-based schema interventions may additionally foster emotional validation, social connectedness, and corrective interpersonal experiences, which are essential for individuals with social anxiety and rejection sensitivity (Louis et al., 2021).

In addition to their relevance for emotional and interpersonal functioning, schema-based interventions may reduce vulnerability to broader forms of psychopathology. Previous studies have linked maladaptive schemas with depressive symptoms, self-harm behaviors, anxiety disorders, criminal behaviors, psychopathological symptoms among institutionalized children, and narcissistic vulnerability (Ahn & Chang, 2024; Chodkiewicz et al., 2022; Karabatak, 2023; Tsouvelas et al., 2023; Wheatley & Conway, 2023). These findings highlight the transdiagnostic nature of maladaptive schemas and underscore the importance of early preventive and educational interventions targeting schema modification during adolescence and young adulthood.

Furthermore, recent investigations have emphasized the importance of assessing maladaptive schemas through reliable psychometric tools capable of capturing complex emotional and interpersonal dimensions. Studies evaluating the psychometric properties of the Young Schema Questionnaire have confirmed its strong validity and reliability across diverse cultural contexts and populations (Cifuentes et al., 2024). These advances have facilitated more precise identification of maladaptive schema patterns among university students and clinical populations.

Despite growing international attention toward schema therapy and maladaptive schemas, relatively limited research has examined the effectiveness of schema therapy-based educational curricula specifically designed to reduce

rejection schemas, emotional dependency, and relational dysfunction among university students with social anxiety symptoms. Most previous studies have focused either on clinical therapeutic settings or isolated psychological symptoms, while fewer investigations have addressed integrated educational interventions targeting interpersonal and emotional functioning simultaneously. Moreover, emotional relationships among socially anxious students remain an underexplored area despite their critical role in psychological adjustment, social participation, and quality of life.

Considering the increasing prevalence of social anxiety among university students and the central role of maladaptive schemas in emotional and interpersonal dysfunction, the development of structured educational interventions based on schema therapy appears both theoretically and clinically necessary. Such interventions may contribute to improving students' emotional awareness, reducing rejection sensitivity, decreasing emotional dependency, and strengthening healthy interpersonal relationships. Therefore, the present study aimed to investigate the effectiveness of a schema therapy-based curriculum on reducing rejection schemas and emotional dependency and improving emotional relationships in students with social anxiety.

2. Methods and Materials

2.1. Study Design and Participants

This study was conducted using a quasi-experimental design with a pretest–posttest and two-month follow-up design including a control group. The statistical population consisted of university students with symptoms of social anxiety in Tehran during the 2025–2026 academic year. Participants were recruited through purposive sampling from university counseling centers and online student mental health screening announcements. Initially, 124 students were screened using the Social Phobia Inventory, and those who obtained scores above the clinical cutoff point and met the inclusion criteria were invited for further assessment. After a structured clinical interview and eligibility evaluation, 30 students were selected and randomly assigned into an experimental group (15 participants) and a control group (15 participants). The inclusion criteria included being between 18 and 30 years old, having elevated social anxiety symptoms, willingness to participate in all sessions, and absence of severe psychiatric disorders such as psychosis or bipolar disorder. The exclusion criteria included concurrent

participation in other psychological interventions, absence from more than two treatment sessions, and incomplete questionnaires. The experimental group received the schema therapy-based curriculum intervention, whereas the control group remained on a waiting list and received no intervention during the study period.

2.2. Measures

Young Schema Questionnaire–Short Form (YSQ-SF). Early maladaptive schemas were assessed using the Young Schema Questionnaire–Short Form developed by Jeffrey Young and colleagues in 1998. The questionnaire consists of 75 items designed to evaluate 15 early maladaptive schemas within five major schema domains, including disconnection and rejection, impaired autonomy and performance, impaired limits, other-directedness, and overvigilance/inhibition. In the present study, the rejection schema and dependency/incompetence schema subscales were specifically analyzed. Items are rated on a 6-point Likert scale ranging from 1 (completely untrue of me) to 6 (describes me perfectly), with higher scores indicating stronger maladaptive schemas. Previous studies have demonstrated satisfactory psychometric properties for the instrument, including strong internal consistency coefficients and acceptable construct validity in both clinical and non-clinical populations. Reliability and validity of the Persian version have also been confirmed in Iranian samples.

Relationship Assessment Scale (RAS). Emotional relationship quality was measured using the Relationship Assessment Scale developed by Susan Hendrick in 1988. The scale includes 7 items designed to assess general satisfaction and quality of emotional and interpersonal relationships. Responses are scored on a 5-point Likert scale, and higher scores reflect healthier and more satisfying emotional relationships. The instrument has demonstrated favorable psychometric characteristics in previous research, including adequate convergent validity and high internal consistency. Persian validation studies have similarly reported acceptable reliability coefficients and suitable construct validity among university students and young adults.

Social Phobia Inventory (SPIN). Social anxiety symptoms were screened using the Social Phobia Inventory developed by Jonathan Davidson and colleagues in 2000. This self-report instrument contains 17 items measuring fear, avoidance, and physiological discomfort associated with social anxiety disorder. Items are rated on a 5-point

Likert scale ranging from 0 (not at all) to 4 (extremely), with total scores ranging from 0 to 68. Higher scores indicate greater severity of social anxiety symptoms. Previous studies have shown that the SPIN possesses strong reliability, test–retest stability, and diagnostic sensitivity. The Persian version of the inventory has also demonstrated satisfactory psychometric properties in Iranian student populations.

2.3. Intervention

The schema therapy-based curriculum intervention was implemented in 10 weekly sessions of 90 minutes conducted in group format by a trained counseling psychologist familiar with schema therapy principles. The curriculum was designed based on the theoretical framework of schema therapy and educational–therapeutic approaches emphasizing emotional awareness, maladaptive schema identification, cognitive restructuring, emotional regulation, interpersonal skill development, and corrective emotional experiences. Initial sessions focused on psychoeducation regarding social anxiety and maladaptive schemas, followed by identification of rejection and dependency schemas and their developmental origins. Subsequent sessions addressed maladaptive coping styles, emotional dependency patterns, cognitive distortions, self-worth, assertiveness training, communication skills, emotional expression, and healthy relationship formation. Experiential techniques such as imagery rescripting, chair work, cognitive dialogue, behavioral rehearsal, and homework assignments were used throughout the intervention process to facilitate schema modification and emotional change.

2.4. Data Analysis

Data analysis was performed using IBM SPSS Statistics. Descriptive statistics including means and standard deviations were calculated for all study variables. Inferential analyses were conducted using repeated measures analysis of variance to examine differences between the experimental and control groups across pretest, posttest, and follow-up stages. Assumptions of normality, homogeneity of variances, and sphericity were evaluated prior to conducting the analyses. Effect sizes were calculated using partial eta squared, and the significance level for all statistical tests was considered to be $p < .05$.

3. Findings and Results

The demographic findings indicated that the mean age of participants in the experimental group was 23.46 years (SD = 2.91), while the mean age in the control group was 22.93 years (SD = 3.14). In the experimental group, 8 participants (53.33%) were female and 7 participants (46.67%) were male. In the control group, 9 participants (60.00%) were female and 6 participants (40.00%) were male. Regarding

educational level, most participants in both groups were undergraduate students, with smaller proportions enrolled in master's degree programs. Furthermore, the majority of participants were single. The demographic comparison between groups demonstrated no statistically significant differences in age, gender distribution, educational level, or marital status at baseline, indicating relative homogeneity between the experimental and control groups prior to the intervention.

Table 1

Descriptive Statistics of Research Variables in Experimental and Control Groups Across Measurement Stages

Variable	Group	Pretest Mean $\pm$ SD	Posttest Mean $\pm$ SD	Follow-Up Mean $\pm$ SD
Rejection Schema	Experimental	31.87 $\pm$ 4.62	21.46 $\pm$ 3.91	22.13 $\pm$ 4.08
Rejection Schema	Control	30.94 $\pm$ 4.75	30.26 $\pm$ 4.58	30.11 $\pm$ 4.63
Emotional Dependency	Experimental	34.21 $\pm$ 5.17	23.74 $\pm$ 4.26	24.18 $\pm$ 4.41
Emotional Dependency	Control	33.68 $\pm$ 5.04	33.11 $\pm$ 4.88	33.27 $\pm$ 4.95
Emotional Relationship Quality	Experimental	18.73 $\pm$ 3.84	29.34 $\pm$ 4.12	28.87 $\pm$ 4.03
Emotional Relationship Quality	Control	19.11 $\pm$ 3.69	19.53 $\pm$ 3.82	19.26 $\pm$ 3.76

The descriptive findings presented in Table 1 indicate that the experimental and control groups demonstrated relatively similar mean scores during the pretest stage across all study variables, suggesting baseline equivalence prior to the intervention. Following implementation of the schema therapy-based curriculum, noticeable changes were observed in the experimental group during the posttest and follow-up stages. Specifically, the mean scores of rejection schema and emotional dependency substantially decreased in the experimental group, whereas emotional relationship quality significantly increased after the intervention. These improvements were largely maintained during the two-month follow-up stage, indicating relative stability of treatment effects over time. In contrast, the control group exhibited only minimal fluctuations across the three assessment stages, and no meaningful changes were observed in maladaptive schemas, emotional dependency, or

relationship quality. Overall, the descriptive results provide preliminary evidence supporting the effectiveness of the schema therapy-based curriculum in reducing maladaptive cognitive-emotional patterns and improving interpersonal functioning among students with social anxiety symptoms.

Before conducting repeated measures analysis of variance, the statistical assumptions were examined. Results of the Shapiro–Wilk test indicated that the distribution of scores for all variables was normal across groups and measurement stages ($p > .05$). Levene's test demonstrated homogeneity of variances between groups, and Box's M test confirmed equality of covariance matrices. Mauchly's test of sphericity was non-significant for all dependent variables; therefore, the assumption of sphericity was satisfied. These findings indicated that the data met the assumptions required for repeated measures multivariate analysis of variance.

Table 2

Repeated Measures Analysis of Variance for Research Variables

Variable	Source	SS	df	MS	F	p	η^2
Rejection Schema	Time	924.18	2	462.09	39.74	.001	.59
	Group	681.27	1	681.27	28.31	.001	.50
	Time $\times$ Group	873.54	2	436.77	37.26	.001	.57
Emotional Dependency	Time	1018.42	2	509.21	42.83	.001	.61
	Group	744.36	1	744.36	31.15	.001	.53
	Time $\times$ Group	947.65	2	473.82	40.47	.001	.59
Emotional Relationship Quality	Time	1106.74	2	553.37	46.91	.001	.63
	Group	802.18	1	802.18	34.28	.001	.55
	Time $\times$ Group	1037.22	2	518.61	43.52	.001	.61

The findings presented in Table 2 revealed that the main effect of time was statistically significant for rejection schema, emotional dependency, and emotional relationship quality, indicating that participants' scores changed significantly across the pretest, posttest, and follow-up stages. In addition, the main effect of group was significant for all dependent variables, demonstrating overall differences between the experimental and control groups. More importantly, the interaction effect of time and group was statistically significant for all variables ($p < .001$),

indicating that the observed changes over time differed significantly between the two groups. Examination of effect sizes showed relatively large partial eta squared values, suggesting that the schema therapy-based curriculum had substantial effects on reducing maladaptive schemas and emotional dependency while simultaneously improving emotional relationship quality. The significant interaction effects demonstrated that improvements observed in the experimental group were attributable to the intervention rather than natural changes over time.

Table 3

Bonferroni Post-Hoc Comparisons for Pairwise Differences Across Measurement Stages in the Experimental Group

Variable	Comparison	Mean Difference	SE	p
Rejection Schema	Pretest–Posttest	10.41	1.24	.001
	Pretest–Follow-Up	9.74	1.31	.001
	Posttest–Follow-Up	-0.67	0.84	.612
Emotional Dependency	Pretest–Posttest	10.47	1.18	.001
	Pretest–Follow-Up	10.03	1.27	.001
	Posttest–Follow-Up	-0.44	0.79	.703
Emotional Relationship Quality	Pretest–Posttest	-10.61	1.33	.001
	Pretest–Follow-Up	-10.14	1.29	.001
	Posttest–Follow-Up	0.47	0.76	.648

The Bonferroni post-hoc comparisons shown in Table 3 demonstrated that significant differences existed between the pretest and posttest stages as well as between the pretest and follow-up stages for all study variables in the experimental group. Specifically, rejection schemas and emotional dependency significantly decreased after participation in the schema therapy-based curriculum, whereas emotional relationship quality significantly improved. However, no statistically significant differences were observed between the posttest and follow-up stages, indicating that the therapeutic gains achieved immediately after the intervention were maintained during the follow-up period. These findings suggest that the schema therapy-based curriculum not only produced immediate positive effects on maladaptive schemas and emotional functioning, but also contributed to the durability and maintenance of these improvements over time. The stability of outcomes during the follow-up stage further supports the long-term effectiveness of schema-focused educational and therapeutic interventions for university students experiencing social anxiety symptoms.

4. Discussion

The present study aimed to investigate the effectiveness of a schema therapy-based curriculum on reducing rejection schemas and emotional dependency and improving emotional relationships among university students with social anxiety. The findings demonstrated that participation in the schema therapy-based educational program significantly reduced rejection schemas and emotional dependency while simultaneously improving the quality of emotional relationships in the experimental group compared with the control group. Furthermore, the persistence of these improvements during the follow-up stage indicated the relative stability and durability of the intervention effects over time. Overall, the findings suggest that schema-focused educational interventions can effectively modify maladaptive cognitive-emotional structures and improve interpersonal functioning among socially anxious students.

One of the principal findings of the present study was the significant reduction in rejection schemas among participants who received the schema therapy-based curriculum. This finding is theoretically consistent with schema therapy principles, which propose that maladaptive schemas develop through repeated experiences of emotional

deprivation, rejection, humiliation, abandonment, and unmet emotional needs during childhood and adolescence (Farrell & Shaw, 2022). Individuals with social anxiety often internalize expectations of criticism, rejection, and inadequacy in interpersonal contexts, leading to chronic emotional vigilance and avoidance behaviors. The educational curriculum implemented in the present study specifically targeted these maladaptive cognitive-emotional patterns through psychoeducation, emotional awareness, experiential exercises, cognitive restructuring, and interpersonal skill development. As participants gradually identified and challenged dysfunctional beliefs regarding rejection and interpersonal worthlessness, their maladaptive schemas weakened significantly.

This finding is consistent with studies demonstrating strong associations between social anxiety and rejection-related schema domains (Ahn & Chang, 2024; Bintas-Zorer & Dirik, 2023). Previous research has shown that socially anxious individuals frequently display heightened sensitivity to rejection, shame, and emotional invalidation due to maladaptive schema activation (Asmari et al., 2022). The reduction of rejection schemas observed in the current study aligns with findings indicating that schema-focused interventions can effectively modify deeply rooted maladaptive beliefs associated with anxiety disorders and emotional dysfunction (Aduale & Tokurah, 2024; Aflakian et al., 2023). Moreover, the results support evidence suggesting that early maladaptive schemas are not fixed personality characteristics but rather modifiable psychological structures responsive to targeted therapeutic and educational interventions (Farrell & Shaw, 2022).

The findings can also be interpreted within the framework of attachment theory. Research has consistently shown that insecure attachment experiences contribute to the formation of maladaptive schemas associated with emotional deprivation, rejection, abandonment, and mistrust (Karantzas et al., 2023; Lukáč & Popelková, 2020). Individuals with social anxiety often perceive interpersonal relationships as unsafe and emotionally threatening, which reinforces avoidance and emotional withdrawal. Through group-based schema interventions, participants may have experienced corrective emotional interactions characterized by empathy, acceptance, validation, and emotional safety. Such experiences potentially weakened maladaptive attachment expectations and promoted more adaptive interpersonal representations. This interpretation is supported by findings emphasizing the mediating role of maladaptive schemas in the relationship between attachment

insecurities and emotional problems (Jalilian et al., 2023a, 2023b).

Another important finding of the present study was the significant reduction in emotional dependency among participants in the experimental group. Emotional dependency is characterized by excessive need for reassurance, fear of abandonment, emotional insecurity, and overreliance on others for self-worth and emotional stability. These characteristics are commonly observed among individuals with rejection schemas and social anxiety symptoms (Starr et al., 2023). The present findings suggest that schema therapy-based educational interventions may effectively reduce dependency-related cognitive and emotional patterns by enhancing self-awareness, emotional regulation, interpersonal competence, and self-acceptance.

This result is compatible with previous studies showing that maladaptive schemas related to abandonment, defectiveness, and emotional deprivation contribute significantly to emotional dependency and interpersonal insecurity (Obeid et al., 2020; Rodríguez et al., 2020). Individuals who fear rejection often engage in reassurance-seeking behaviors and become emotionally dependent on external validation because they perceive themselves as inadequate or unlovable. The intervention implemented in this study helped participants recognize these maladaptive relational patterns and replace them with healthier emotional responses and communication styles. As participants developed greater emotional autonomy and interpersonal confidence, their dependency on external reassurance decreased substantially.

The reduction in emotional dependency may also be explained by improvements in emotional regulation abilities. Research has shown that maladaptive schemas are strongly associated with difficulties in emotion regulation, self-compassion deficits, and emotional vulnerability (Ahn & Chang, 2024; Zhang et al., 2025). Schema therapy techniques such as imagery rescripting, emotional expression exercises, cognitive dialogues, and experiential restructuring likely enabled participants to process painful emotional experiences more adaptively. Consequently, participants may have become less emotionally reactive and less dependent on interpersonal approval to regulate their emotional states. Similar findings have been reported in studies demonstrating the effectiveness of schema-focused interventions in reducing anxiety, emotional dysregulation, and interpersonal maladjustment (Aduale & Tokurah, 2024; Aflakian et al., 2023).

The present study additionally demonstrated significant improvement in emotional relationship quality among students who participated in the schema therapy-based curriculum. This finding is particularly important because social anxiety often interferes with emotional intimacy, trust, emotional expression, and interpersonal satisfaction. Socially anxious individuals frequently avoid close relationships due to fear of humiliation, criticism, and rejection, resulting in emotional loneliness and relational dissatisfaction (Rodríguez et al., 2020). By modifying maladaptive schemas and improving emotional regulation capacities, the intervention likely enhanced participants' ability to engage in healthier and more secure emotional interactions.

This finding is consistent with studies emphasizing the role of maladaptive schemas and attachment insecurities in interpersonal dysfunction and relational dissatisfaction (Karantzas et al., 2023; Rodríguez et al., 2020). Individuals with rejection schemas often interpret interpersonal situations negatively, anticipate abandonment, and struggle with emotional trust. Through schema-focused educational activities, participants learned to identify distorted relational expectations and develop healthier communication and emotional expression patterns. The group format of the intervention may also have contributed to improved interpersonal confidence by providing opportunities for social interaction, emotional sharing, empathy development, and corrective interpersonal experiences.

The improvement in emotional relationships observed in the present study is further supported by research indicating that schema therapy and attachment-based interventions can enhance emotional functioning and interpersonal adjustment among adolescents and young adults (Diamond et al., 2026; Inchausti et al., 2025). Group-based interventions grounded in schema and interpersonal principles have previously demonstrated effectiveness in improving avoidant personality characteristics, emotional awareness, and relational functioning (Inchausti et al., 2022). Similarly, educational interventions emphasizing supportive interpersonal experiences and healthy emotional communication have been associated with reductions in maladaptive schema activation and improved psychological adjustment (Louis et al., 2021).

The durability of intervention effects during the follow-up stage represents another meaningful finding of the present study. The absence of significant differences between posttest and follow-up scores indicates that participants maintained their gains over time. This stability may be

attributed to the deep cognitive-emotional restructuring promoted by schema therapy approaches. Unlike purely symptom-focused interventions, schema-focused educational programs aim to modify underlying emotional beliefs, interpersonal expectations, and maladaptive coping patterns. As a result, participants may continue applying newly acquired emotional and interpersonal skills beyond the intervention period. Previous studies have similarly highlighted the long-term effectiveness of schema-focused interventions in reducing maladaptive schemas and emotional distress (Alizadeh et al., 2021; Farrell & Shaw, 2022).

The findings of the present study can also be interpreted from a developmental and sociocultural perspective. University students are exposed to numerous interpersonal and emotional challenges during emerging adulthood, including identity formation, academic pressures, relational transitions, and social evaluation. Students with unresolved maladaptive schemas may be particularly vulnerable to emotional insecurity and social anxiety during this period. Research has shown that sociocultural stressors, minority stress experiences, childhood neglect, and emotional invalidation contribute significantly to maladaptive schema formation and emotional difficulties among adolescents and young adults (Cardoso et al., 2024; Rada et al., 2025; Yu et al., 2022). Therefore, preventive and educational interventions addressing schema-related vulnerabilities may play an important role in promoting emotional resilience and interpersonal adjustment within university settings.

Furthermore, the present findings support transdiagnostic conceptualizations of maladaptive schemas. Contemporary studies have linked maladaptive schemas not only with social anxiety but also with depression, emotional dysregulation, self-harm behaviors, psychopathology, and interpersonal dysfunction (Chodkiewicz et al., 2022; Tsouvelas et al., 2023; Wheatley & Conway, 2023). This suggests that schema-focused educational interventions may possess broader psychological benefits extending beyond the specific variables examined in the present study. By targeting fundamental cognitive-emotional vulnerabilities, schema therapy-based curricula may contribute to overall psychological well-being, interpersonal competence, and emotional adaptability among university students.

5. Conclusion

The current findings highlight the importance of integrating therapeutic principles into educational

environments. Traditional university mental health programs often focus primarily on crisis management or symptom reduction, whereas schema-focused curricula emphasize deeper emotional learning, interpersonal awareness, and self-reflection. Such approaches may be particularly beneficial for socially anxious students because they address both emotional vulnerabilities and relational functioning simultaneously. The structured and experiential nature of schema-focused educational interventions may facilitate greater emotional engagement and behavioral change compared with purely didactic psychoeducational approaches.

6. Limitations & Suggestions

Despite the significant findings of the present study, several limitations should be acknowledged. The study sample was limited to university students in Tehran, which may restrict the generalizability of findings to other populations, cultural settings, or age groups. The relatively small sample size also limits broader statistical generalization. Additionally, the study relied primarily on self-report questionnaires, which may be influenced by social desirability bias or subjective response tendencies. Another limitation was the relatively short follow-up period, which prevented examination of long-term intervention effects over extended periods. Furthermore, variables such as family dynamics, personality characteristics, socioeconomic conditions, and severity of social anxiety symptoms were not controlled comprehensively.

Future research is recommended to examine the effectiveness of schema therapy-based curricula among larger and more diverse populations, including adolescents, clinical samples, and individuals from different cultural and educational contexts. Future studies may also compare schema-focused educational interventions with other therapeutic or psychoeducational approaches to determine relative effectiveness. Longitudinal studies with extended follow-up periods are needed to evaluate the long-term stability of schema modification and interpersonal improvements. Additionally, future investigations could examine mediating variables such as emotional regulation, self-compassion, attachment security, and psychological flexibility to better understand the mechanisms underlying intervention outcomes.

From a practical perspective, the findings of the present study suggest that schema therapy-based educational programs can be effectively incorporated into university

counseling centers and student mental health services. Educational institutions may benefit from implementing preventive emotional skills programs focused on maladaptive schemas, emotional regulation, and interpersonal communication. Mental health professionals working with socially anxious students may also integrate schema-focused strategies into counseling and psychoeducational interventions to enhance emotional resilience and relationship quality. Furthermore, training workshops for students aimed at improving self-awareness, reducing rejection sensitivity, and strengthening healthy emotional relationships may contribute significantly to psychological well-being and social adjustment in university environments.

Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

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

Transparency of Data

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

Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

Authors' Contributions

All authors equally contributed to this article.

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