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The Effectiveness of Schema Therapy on Body Image, Suicidal Ideation, and Psychological Distress in Individuals Seeking Cosmetic Surgery: A Quasi-Experimental Study

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A B S T R A C T

This study aimed to determine the effectiveness of schema therapy on body image, suicidal ideation, and psychological distress among individuals applying for cosmetic surgery. This quasi-experimental study used a pretest–posttest design with a control group. The statistical population included individuals applying for cosmetic surgery who referred to Afra Counseling Center in Isfahan, Iran, in 2024. Thirty eligible participants were selected through convenience sampling and randomly assigned to an experimental group and a control group, with 15 participants in each group. The experimental group received schema therapy in twelve 90-minute sessions, while the control group received no intervention during the study period. Data were collected using the Body Image Concern Inventory, the Beck Scale for Suicide Ideation, and the Psychological Distress Questionnaire. Data were analyzed using multivariate and univariate analysis of covariance. The results of multivariate analysis of covariance showed a significant overall effect of group on the combined dependent variables after controlling for pretest scores, Pillai's trace = .902, $F(3, 23) = 70.92$, $p < .001$, $\eta^2 = .902$. The results of univariate analysis of covariance indicated significant differences between the experimental and control groups in body image concerns, $F(1, 27) = 144.24$, $p < .001$, $\eta^2 = .842$; suicidal ideation, $F(1, 27) = 51.69$, $p < .001$, $\eta^2 = .657$; and psychological distress, $F(1, 27) = 150.43$, $p < .001$, $\eta^2 = .848$. These findings demonstrated that schema therapy significantly reduced body image concerns, suicidal ideation, and psychological distress in the experimental group compared with the control group. Schema therapy appears to be an effective psychological intervention for improving body image and reducing suicidal ideation and psychological distress among individuals applying for cosmetic surgery. These findings support the use of schema-based interventions as part of psychological assessment and counseling programs for cosmetic surgery applicants.

Keywords: *body image, psychological distress, cosmetic surgery, schema therapy, suicidal ideation.*

1. Introduction

The growing demand for cosmetic surgery has increasingly transformed aesthetic procedures from merely surgical or dermatological practices into phenomena with complex psychological, social, and clinical dimensions. Individuals who seek cosmetic surgery often do so with the expectation that changing physical appearance will improve self-confidence, interpersonal functioning, emotional well-being, and overall life satisfaction. However, psychological research has consistently shown that the desire for cosmetic surgery cannot be understood only as a preference for physical enhancement; rather, it is frequently embedded in deeper concerns about body image, self-worth, emotional distress, interpersonal comparison, and perceived social acceptance. In this regard, cosmetic surgery applicants represent a clinically important population because some of them may present with elevated body image concerns, dissatisfaction with appearance, psychological distress, and even self-destructive cognitions. Psychological assessment before cosmetic surgery is therefore essential, not only to identify unrealistic expectations but also to recognize underlying vulnerabilities that may reduce postoperative satisfaction or intensify psychological problems after surgery (Honigman et al., 2024; Sarwer et al., 2023).

Body image is one of the most central psychological constructs in understanding the motivation for cosmetic surgery. Body image refers to the cognitive, emotional, perceptual, and behavioral attitudes that individuals hold toward their own bodies and appearance. When body image becomes negative, rigid, or excessively evaluative, individuals may experience persistent dissatisfaction, shame, preoccupation with perceived defects, avoidance of social situations, repeated appearance checking, and reliance on external modification as a means of emotional relief. The development of the Body Image Concern Inventory provided an important tool for assessing excessive concern with appearance and fear of negative consequences related to perceived bodily flaws, emphasizing that body image concern is not limited to simple dissatisfaction but may include functional impairment and distress (Littleton et al., 2005). In populations seeking cosmetic procedures, body image concern may become particularly salient because the body is experienced not merely as a physical object but as a symbolic representation of adequacy, desirability, social value, and personal identity.

Recent literature has highlighted that body image dissatisfaction is closely associated with mental health problems, including depressive symptoms, anxiety, emotional dysregulation, social withdrawal, and impaired self-esteem. Body image difficulties can operate as both a source and consequence of psychological distress, creating a reciprocal cycle in which dissatisfaction with appearance increases negative affect, while negative affect intensifies selective attention to perceived bodily imperfections. Systematic evidence has shown that body image dissatisfaction and psychological distress are strongly interconnected, suggesting that interventions targeting maladaptive body-related beliefs may also reduce broader psychological symptoms (Dakanalis et al., 2023). Similarly, contemporary psychiatric research has emphasized body image as a significant determinant of mental health, arguing that disturbances in body-related self-evaluation may affect emotional stability, interpersonal functioning, and vulnerability to psychopathology (Griffiths et al., 2023). This issue is especially relevant for individuals applying for cosmetic surgery, because surgical modification alone may not resolve psychological distress if the underlying cognitive-emotional schemas related to defectiveness, shame, failure, or unworthiness remain unchanged.

In addition to psychological distress, suicidal ideation is an important clinical concern among individuals with severe appearance dissatisfaction and body-related shame. Although cosmetic surgery applicants are not a homogeneous clinical group, some individuals may approach cosmetic procedures while experiencing intense self-criticism, hopelessness, interpersonal rejection sensitivity, or feelings of burdensomeness. The interpersonal theory of suicide emphasizes that suicidal ideation is likely to emerge when individuals experience perceived burdensomeness and thwarted belongingness, particularly when these experiences are accompanied by hopelessness about change (Chu et al., 2023). Body image disturbance may contribute to these interpersonal and self-evaluative states by increasing shame, social avoidance, perceived rejection, and the belief that one is unacceptable to others. Moreover, meta-analytic evidence has shown that low self-esteem is meaningfully associated with suicidal ideation, suggesting that negative self-evaluation is an important psychological pathway through which body dissatisfaction and emotional suffering may become linked to suicidal thoughts (Ribeiro et al., 2023). Therefore, in cosmetic surgery applicants, suicidal ideation should be assessed not as an isolated symptom but as part of a broader psychological network involving body image, self-worth, affect regulation, and interpersonal functioning.

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The relationship between body image and self-evaluation has also been examined in empirical studies. A structural model of sexual satisfaction and body-image concern among women and men showed that self-esteem plays a mediating role in the association between body-related concerns and psychosocial outcomes, indicating that dissatisfaction with body image may influence psychological functioning through internalized self-worth processes (Moradi et al., 2024). These findings are important for cosmetic surgery applicants because the decision to modify appearance may be partly driven by the belief that physical change will repair negative self-perception or improve relational acceptance. However, when appearance dissatisfaction is rooted in deeper schemas of defectiveness, emotional deprivation, abandonment, or social isolation, cosmetic surgery may not fully address the psychological mechanisms maintaining distress. Consequently, psychological interventions that target the underlying cognitive, emotional, and relational structures of body image concern may be especially valuable in this population.

Schema therapy provides a comprehensive framework for understanding the deep psychological patterns that may underlie body image concerns, suicidal ideation, and psychological distress. Developed as an integrative psychotherapy model, schema therapy combines cognitive-behavioral, attachment, psychodynamic, experiential, and emotion-focused techniques to identify and modify early maladaptive schemas, maladaptive coping styles, and schema modes. Early maladaptive schemas are broad, pervasive cognitive-emotional patterns that develop when core emotional needs are not adequately met during childhood or adolescence. These schemas may involve themes such as defectiveness/shame, abandonment, emotional deprivation, social isolation, failure, vulnerability, dependence, or unrelenting standards. When activated, schemas shape how individuals interpret themselves, others, and life events, often leading to emotional pain, dysfunctional coping responses, and repetitive interpersonal difficulties (Rafaeli et al., 2024; Young et al., 2023).

From a schema therapy perspective, individuals with body image concerns may experience their appearance through the lens of schemas such as defectiveness/shame, social isolation, failure, or approval-seeking. For example, a person may not merely believe that a body feature is unattractive but may interpret it as evidence of being fundamentally flawed, unlovable, or inferior. Such schema-driven interpretations can produce intense shame, avoidance, reassurance-seeking, excessive comparison, compulsive checking, and dependence on external validation. In cosmetic surgery applicants, these schemas may intensify the expectation that surgical change will lead to psychological relief, social acceptance, or a reconstructed sense of identity. However, if the schema remains intact, dissatisfaction may shift to another body part, psychological distress may continue, or the individual may remain emotionally vulnerable despite objective aesthetic improvement. Therefore, schema therapy may be particularly relevant because it does not only challenge surface-level negative thoughts but also works with the emotional origins, coping styles, and experiential meaning of self-perceived defects (Bach et al., 2024).

The clinical value of schema therapy has been increasingly supported by contemporary evidence. A systematic review of schema therapy outcomes indicated that schema-based interventions can be effective across a range of psychological problems, particularly those characterized by chronic maladaptive patterns, emotional dysregulation, interpersonal difficulties, and entrenched negative self-beliefs (Masley et al., 2023). Recent theoretical and clinical updates have also emphasized that schema therapy is not restricted to personality pathology but can be applied to diverse psychological conditions in which maladaptive schemas and modes maintain distress (Bach et al., 2024). These developments are relevant to cosmetic surgery applicants because their psychological problems may not always fit a single diagnostic category but may involve overlapping features of body dissatisfaction, emotional suffering, low self-esteem, interpersonal insecurity, and maladaptive coping. Schema therapy offers a structured yet flexible approach for addressing these overlapping psychological dimensions.

Several recent empirical studies further support the usefulness of schema-based interventions for improving psychological outcomes. In individuals with major depressive disorder, emotional schema therapy and acceptance and commitment therapy were shown to improve distress tolerance and emotion regulation difficulties, highlighting the importance of modifying maladaptive emotional beliefs and responses in psychologically distressed populations (Bayat et al., 2025). Schema therapy has also been found effective in improving distress tolerance, resilience, emotion regulation, and parenting-related variables among mothers of children with attention-deficit/hyperactivity disorder, suggesting that schema-focused work can strengthen adaptive psychological functioning even in populations exposed to chronic stress

(Rajaeizadeh & Khayatan, 2025). In couples experiencing marital conflict, schema therapy was reported to reduce psychological distress and improve life engagement, further supporting the role of schema modification in reducing emotional suffering and enhancing adaptive functioning (Zerang et al., 2025). Together, these findings suggest that schema therapy may be an appropriate intervention for individuals whose distress is maintained by deep maladaptive cognitive-emotional patterns.

Schema-based mechanisms are also relevant to self-harm and suicide-related vulnerabilities. Research on adolescents with non-suicidal self-injury and addictive features has shown that maladaptive cognitive schemas can predict profiles and transitions of self-injurious behaviors, indicating that schemas may contribute to the persistence or escalation of harmful coping patterns (Zhou et al., 2025). Although non-suicidal self-injury and suicidal ideation are distinct phenomena, both may emerge in contexts of emotional dysregulation, negative self-beliefs, and inadequate coping resources. In individuals applying for cosmetic surgery, intense dissatisfaction with appearance may function as a schema-triggering experience that activates shame, hopelessness, or self-punitive thoughts. Earlier intervention research has also shown that psychological treatments such as cognitive-behavioral therapy and mindfulness can reduce suicidal thoughts and improve distress tolerance among adolescents with suicidal ideation, indicating that suicide-related cognitions are responsive to structured psychological interventions (Babaei et al., 2021). These findings support the rationale for examining whether schema therapy can reduce suicidal ideation in a population characterized by body-related distress and negative self-evaluation.

The use of schema therapy for body image-related problems is also supported by recent intervention evidence. An integrative intervention combining schema therapy and acceptance and commitment therapy was found effective in improving subjective well-being and reducing body image concern among women with breast cancer, a population in which changes in body image are closely tied to identity, femininity, self-worth, and psychological adjustment (Karami Mohajeri et al., 2026). Although breast cancer patients and cosmetic surgery applicants differ in important clinical and contextual ways, both groups may experience body image concern as a central psychological challenge. This evidence suggests that schema-focused interventions may help individuals reinterpret body-related distress, reduce maladaptive self-criticism, and develop healthier emotional responses to bodily concerns. For cosmetic surgery applicants, such intervention may be particularly beneficial because it can help distinguish realistic aesthetic preferences from schema-driven dissatisfaction and reduce reliance on appearance modification as the primary route to emotional relief.

Despite the growing literature on psychological aspects of cosmetic surgery and the expanding evidence base for schema therapy, there remains a need for focused experimental research on the effectiveness of schema therapy among individuals applying for cosmetic surgery. Much of the existing literature has emphasized psychological assessment, risk factors, or postoperative outcomes, while fewer studies have directly examined structured psychological interventions before or around the decision to pursue surgery (Honigman et al., 2024; Sarwer et al., 2023). Moreover, body image concern, suicidal ideation, and psychological distress are often studied separately, whereas in cosmetic surgery applicants these variables may be clinically interconnected through shared mechanisms such as shame, defectiveness schemas, low self-esteem, emotional dysregulation, and interpersonal insecurity. Investigating these variables together can provide a more integrated understanding of psychological vulnerability in this population and clarify whether schema therapy can simultaneously improve appearance-related and broader mental health outcomes.

Accordingly, the present study aimed to examine the effectiveness of schema therapy on body image, suicidal ideation, and psychological distress among individuals applying for cosmetic surgery.

2. Methods and Materials

2.1. Study Design and Participants

The present study was conducted as a quasi-experimental research with a pretest–posttest design and a control group. The statistical population consisted of all individuals applying for cosmetic surgery who referred to Afra Counseling Center in Isfahan, Iran, in 2024. Based on the recommendation of Barbara et al. (2013), in experimental and quasi-experimental studies, 15 participants may be selected for each experimental and control group. Accordingly, 30 eligible participants were selected through convenience sampling, considering the possibility of attrition, and were then randomly assigned to the experimental group and the control group, with 15 participants in each group. The inclusion criteria were

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informed consent to participate in the study, complete attendance in the therapeutic sessions, complete responses to the questionnaires at the pretest and posttest stages, and not receiving any other psychological treatment simultaneously with the intervention. The exclusion criteria included inability to attend more than two sessions, unwillingness to continue participation in the study, and simultaneous participation in other counseling or psychotherapy programs. After obtaining approval from the university ethics committee, the researcher coordinated with Afra Counseling Center in Isfahan. Following screening based on the inclusion and exclusion criteria, the selected participants completed the body image, suicidal ideation, and psychological distress questionnaires as the pretest. The experimental group then received schema therapy, while the control group did not participate in any intervention during this period. After the completion of the intervention sessions, both groups completed the same questionnaires again as the posttest. Ethical principles observed in this study included explaining the objectives of the research to participants, maintaining confidentiality, ensuring anonymity, obtaining informed consent, emphasizing the voluntary nature of participation, allowing participants the right to withdraw from the study, answering participants' questions, and providing the results to participants upon request.

2.2. Measures

The Body Image Concern Inventory developed by Littleton et al. (2005) was used to assess the level of concern about body image. This questionnaire consists of 19 items and includes two components: dissatisfaction with appearance and fear of poor personal functioning. The items are scored on a five-point Likert scale, and total scores range from 19 to 75, with higher scores indicating greater concern about body image. The reliability of this questionnaire has been examined using internal consistency, and Cronbach's alpha coefficient was reported to be .93. The correlation coefficient of each item with the total score ranged from .32 to .72, with a mean of .62. In addition, Cronbach's alpha coefficients for the first and second factors were reported as .92 and .76, respectively, and the correlation between the two factors was reported as .69. The validity coefficient of this questionnaire, obtained through its correlation with a self-report scale of body dysmorphic disorder, was reported as .83 (Littleton et al., 2005). In the study by Moradi et al. (2024), the reliability of this instrument was reported as .911 using Cronbach's alpha. In the present study, the reliability of this questionnaire was calculated using Cronbach's alpha and was found to be .836.

The Beck Scale for Suicide Ideation developed by Beck et al. (1979) was used to assess participants' tendency toward suicidal thoughts. This instrument was designed to measure the extent to which an individual is prone to suicide and consists of 19 items. The severity of symptoms is scored based on groups of statements using a three-point Likert scale ranging from 0 to 2, with higher scores indicating greater suicidal ideation (Beck et al., 1979). Beck et al. reported a Cronbach's alpha coefficient of .96 for this instrument. They also reported correlations between this scale and the Beck Depression Inventory of .62 and .53 among outpatient and inpatient samples, respectively, as well as correlations with the Beck Hopelessness Scale of .75 and .64 among outpatient and inpatient samples, respectively (Beck et al., 1988). Esfahani et al. (2015) reported a Cronbach's alpha coefficient of .82 for this instrument and found correlations of .57 and .50 between this scale and the depression subscale of the Symptom Checklist-90-Revised in samples of 535 and 51 participants, respectively. In the study by Babaei et al. (2021), Cronbach's alpha coefficient for this instrument was reported as .89. In the present study, the reliability of this questionnaire was calculated using Cronbach's alpha and was found to be .921.

The Psychological Distress Questionnaire developed by Ronald et al. (2002) was used to assess psychological distress and mental health problems. This questionnaire was validated in Iran by Yaghubi (2015). The instrument consists of 10 items and is scored on a four-point Likert scale. The items assess psychological distress through questions such as, "During the past month, how often did you feel tired without a convincing reason?" The total score of this questionnaire ranges from 0 to 40, with higher scores indicating a higher level of psychological distress and lower scores indicating a lower level of psychological distress. In the study by Yaghubi (2015), the content, face, and criterion validity of this questionnaire were evaluated as satisfactory. The Cronbach's alpha coefficient reported by Yaghubi (2015) for this questionnaire was .93. In the present study, the reliability of this questionnaire was calculated using Cronbach's alpha and was found to be .925.

2.3. Intervention

The intervention was implemented using a schema therapy protocol based on Young et al. (2023). The program consisted of 12 sessions, each lasting 90 minutes, and was

conducted for the experimental group. The content of the sessions progressed from introductory and motivational components to assessment, conceptual training, and cognitive, experiential, and behavioral change strategies. In the first session, participants became familiar with the researcher, the objectives of the study were explained, motivation for treatment was enhanced, and the pretest was administered. The second session introduced the basic concepts of schema therapy, including maladaptive schemas, their mechanisms of action, developmental origins, and basic emotional needs. The third session continued the psychoeducation process by explaining coping styles and schema modes through examples from everyday life and preparing participants for schema assessment and change. In the fourth session, participants' schemas were assessed, individuals were familiarized with their own schemas, imagery techniques related to the assessment phase were practiced, and the effects of schemas on participants' lives were discussed. The fifth session initiated the schema change process by increasing readiness for change, introducing cognitive, emotional, and behavioral strategies, and establishing a therapeutic alliance against schemas at cognitive, emotional, and behavioral levels. In the sixth and seventh sessions, cognitive strategies were applied through schema validity testing, examination of confirming and disconfirming evidence, evaluation of the advantages and disadvantages of schemas and coping styles, dialogue between the healthy and schema-driven aspects of the self, preparation and use of educational cards, and completion of schema registration forms. In the eighth and ninth sessions, experiential strategies were introduced and practiced, including imagery-based dialogue, strengthening the healthy adult mode, identifying unmet emotional needs, expressing blocked emotions, and applying limited reparenting. The tenth and eleventh sessions focused on behavioral strategies, including re-examining coping styles, identifying specific behaviors that maintain schemas, prioritizing behavioral targets, practicing healthy behaviors through imagery, and using educational cards for behavioral pattern-breaking. In the final session, participants discussed the effects of schema change, the intervention was summarized, conclusions were drawn, and the posttest was administered. The control group received no psychological intervention during the study period; however, after completion of the research process, the therapeutic package was provided to them for ethical considerations.

2.4. Data Analysis

The collected data were analyzed using multivariate analysis of covariance to examine the effectiveness of schema therapy on body image, suicidal ideation, and psychological distress while controlling for pretest scores. Before conducting the main analysis, the required statistical assumptions were examined, including normality of data distribution, homogeneity of variances, homogeneity of covariance matrices, and the linear relationship between pretest and posttest scores. Descriptive statistics, including mean and standard deviation, were used to describe the research variables in the experimental and control groups at the pretest and posttest stages. Inferential analysis was then performed to determine whether there were significant differences between the experimental and control groups in the posttest scores of body image, suicidal ideation, and psychological distress after adjusting for the corresponding pretest scores. The level of statistical significance was set at .05.

3. Findings and Results

The demographic findings indicated that the experimental and control groups were homogeneous in terms of demographic characteristics. The distribution of gender did not differ significantly between the experimental and control groups, $\chi^2 = 0.536$, $p = .464$; 46.7% of participants in the experimental group and 60.0% of participants in the control group were women, while 53.3% and 40.0% were men, respectively. In terms of age, the highest frequency in the experimental group belonged to the 40–50-year age range, whereas in the control group the highest frequencies were observed in the 30–40 and 40–50-year age ranges; however, the difference between the groups was not significant, $\chi^2 = 0.833$, $p = .841$. Regarding educational level, the highest frequency in both groups was related to participants with a bachelor's degree, and no significant difference was observed between the groups, $\chi^2 = 1.34$, $p = .719$. In terms of marital status, most participants in both groups were married, and the two groups did not differ significantly, $\chi^2 = 0.667$, $p = .881$. Similarly, regarding number of children, the highest frequency in both groups was related to having one child, and no significant difference was found between the groups, $\chi^2 = 0.400$, $p = .819$. Overall, these findings showed that the two groups were comparable in terms of demographic variables.

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Table 1

Descriptive statistics of the research variables in the experimental and control groups

Variable	Group	Pretest Mean	Pretest SD	Posttest Mean	Posttest SD
Body image concerns	Experimental	58.80	12.25	33.26	6.56
Body image concerns	Control	57.53	16.58	59.80	10.08
Appearance dissatisfaction	Experimental	32.33	6.86	19.80	4.21
Appearance dissatisfaction	Control	33.26	9.62	33.13	5.85
Fear of poor personal functioning	Experimental	22.20	4.66	14.80	3.94
Fear of poor personal functioning	Control	24.26	7.10	24.80	5.40
Suicidal ideation	Experimental	17.13	7.38	8.20	3.02
Suicidal ideation	Control	18.73	8.99	20.93	5.78
Psychological distress	Experimental	22.46	6.35	14.13	3.94
Psychological distress	Control	21.93	7.42	23.60	7.25

As shown in Table 1, the pretest mean scores of the research variables were relatively similar in the experimental and control groups. However, at the posttest stage, the experimental group showed a substantial decrease in body image concerns and its components, including appearance dissatisfaction and fear of poor personal functioning. The experimental group also showed lower posttest scores in suicidal ideation and psychological distress. In contrast, the control group showed no meaningful reduction in these variables, and in some outcomes, the posttest mean scores increased slightly compared with the pretest. This descriptive pattern suggests that schema therapy was associated with reduced body image concerns, suicidal ideation, and psychological distress among individuals applying for cosmetic surgery.

Before conducting the analysis of covariance, the relevant statistical assumptions were examined. The results of the Shapiro–Wilk test indicated that the distribution of the scores for all research variables did not significantly deviate from normality, $p > .05$. Levene's test was also non-significant for all variables, indicating homogeneity of variances between the experimental and control groups. In addition, the variance inflation factor values for all variables were below 5, suggesting the absence of multicollinearity among the variables. At the multivariate level, Box's M test was non-significant, $p > .05$, confirming the equality of covariance matrices. Therefore, the assumptions required for conducting multivariate analysis of covariance were adequately met. The multivariate results also showed a significant overall group effect on the combined dependent variables after controlling for pretest scores, Pillai's trace = .902, $F(3, 23) = 70.92$, $p < .001$, $\eta^2 = .902$, observed power = 1.000.

Table 2

Results of univariate analysis of covariance for the research variables

Dependent variable	Source	Sum of Squares	df	Mean Square	F	p	Partial Eta Squared	Observed Power
Body image concerns	Pretest	2335.526	1	2335.526	50.29	< .001	.691	1.000
Body image concerns	Group	5586.940	1	5586.940	144.24	< .001	.842	1.000
Body image concerns	Error	1045.808	27	38.730				
Suicidal ideation	Pretest	420.760	1	420.760	20.41	< .001	.431	.992
Suicidal ideation	Group	1065.568	1	1065.568	51.69	< .001	.657	1.000
Suicidal ideation	Error	556.570	27	20.610				
Psychological distress	Pretest	631.380	1	631.380	131.18	< .001	.829	1.000
Psychological distress	Group	724.036	1	724.036	150.43	< .001	.848	1.000
Psychological distress	Error	129.950	27	4.810				

The results of the univariate analysis of covariance presented in Table 2 showed that, after controlling for pretest scores, there were significant differences between the experimental and control groups in all three dependent variables. The group effect was significant for body image concerns, $F(1, 27) = 144.24$, $p < .001$, $\eta^2 = .842$, indicating a strong effect of schema therapy on reducing body image concerns. The group effect was also significant for suicidal

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ideation, $F(1, 27) = 51.69$, $p < .001$, $\eta^2 = .657$, showing that the intervention had a considerable effect on reducing suicidal ideation. In addition, the group effect was significant for psychological distress, $F(1, 27) = 150.43$, $p < .001$, $\eta^2 = .848$, indicating a very strong effect of schema therapy on reducing psychological distress. The significant effects of the pretest scores also confirmed the necessity of controlling baseline differences in the analysis.

Table 3

Adjusted posttest means of the research variables in the experimental and control groups

Variable	Group	Adjusted Mean	Standard Error	95% CI Lower Bound	95% CI Upper Bound
Body image concerns	Experimental	32.87	1.608	29.57	36.17
Body image concerns	Control	60.19	1.608	56.89	63.49
Suicidal ideation	Experimental	8.57	1.170	6.16	10.98
Suicidal ideation	Control	20.55	1.170	18.14	22.96
Psychological distress	Experimental	13.95	0.567	12.78	15.11
Psychological distress	Control	23.78	0.567	22.62	24.95

As shown in Table 3, after adjusting for pretest scores, the experimental group obtained lower adjusted posttest means than the control group in all outcome variables. The adjusted mean score of body image concerns was 32.87 in the experimental group and 60.19 in the control group, indicating a substantially lower level of body image concern among participants who received schema therapy. The adjusted mean score of suicidal ideation was 8.57 in the experimental group and 20.55 in the control group, showing a marked reduction in suicidal ideation following the intervention. Similarly, the adjusted mean score of psychological distress was 13.95 in the experimental group and 23.78 in the control group, indicating lower psychological distress in the experimental group after the intervention. Since the confidence intervals of the adjusted means confirmed the stability of the estimated values, these findings further support the effectiveness of schema therapy in improving psychological outcomes among individuals applying for cosmetic surgery.

4. Discussion

The present study was conducted to examine the effectiveness of schema therapy on body image, suicidal ideation, and psychological distress among individuals applying for cosmetic surgery. The findings showed that, after controlling for pretest scores, schema therapy had a significant effect on the combined set of dependent variables. The multivariate analysis of covariance indicated a strong overall group effect, suggesting that the intervention produced meaningful psychological change in the experimental group compared with the control group. At the univariate level, schema therapy significantly reduced body image concerns, suicidal ideation, and psychological distress. The adjusted posttest means further confirmed that participants who received schema therapy reported substantially lower body image concerns, suicidal ideation, and psychological distress than participants in the control group. These results indicate that schema therapy can be considered an effective psychological intervention for modifying maladaptive self-evaluations and reducing emotional suffering in individuals who seek cosmetic surgery.

The first finding of the study showed that schema therapy significantly reduced body image concerns in individuals applying for cosmetic surgery. This finding is theoretically meaningful because body image concern is not merely a perceptual dissatisfaction with physical appearance; rather, it often reflects deeper cognitive-emotional meanings attached to the body, self-worth, desirability, and interpersonal acceptance. The Body Image Concern Inventory conceptualizes body image concern as a multidimensional construct involving dissatisfaction with appearance and fear of negative personal or functional consequences related to perceived physical defects (Littleton et al., 2005). Therefore, the significant reduction in body image concerns after schema therapy suggests that the intervention may have helped participants move beyond rigid and schema-driven interpretations of their appearance. By identifying maladaptive schemas such as defectiveness/shame, social isolation, failure, approval-seeking, and emotional deprivation, participants may have been able to reinterpret bodily dissatisfaction as a psychological pattern rather than as objective evidence of personal inadequacy.

This result is consistent with previous studies emphasizing the close relationship between body image

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dissatisfaction and psychological vulnerability. Systematic evidence has shown that body image dissatisfaction is strongly associated with psychological distress and affective symptoms, indicating that negative body-related beliefs are embedded within broader emotional and cognitive difficulties (Dakanalis et al., 2023). Similarly, contemporary psychiatric literature has argued that body image is a core mental health domain and that disturbances in body-related self-evaluation can contribute to anxiety, depression, social avoidance, and impaired interpersonal functioning (Griffiths et al., 2023). In the present study, the reduction of body image concerns in the experimental group may be explained by the capacity of schema therapy to target the emotional roots of body dissatisfaction. Rather than focusing only on surface-level appearance-related thoughts, schema therapy works with the historical and emotional origins of maladaptive self-perceptions, thereby helping individuals understand how unmet emotional needs and early relational experiences may shape current attitudes toward the body (Rafaeli et al., 2024; Young et al., 2023).

The finding also aligns with research on cosmetic surgery applicants, which indicates that psychological factors play a decisive role in motivations for surgery and postoperative satisfaction. Individuals seeking cosmetic surgery may expect that changing appearance will improve self-esteem, social confidence, and emotional well-being; however, psychological reviews have emphasized that cosmetic surgery does not automatically resolve underlying distress when dissatisfaction is maintained by deeper self-schemas, unrealistic expectations, or body-related preoccupation (Honigman et al., 2024; Sarwer et al., 2023). From this perspective, the effectiveness of schema therapy in reducing body image concerns can be attributed to its focus on the psychological meanings attached to appearance. The intervention likely helped participants distinguish between realistic appearance preferences and schema-driven beliefs such as “I am defective,” “I am unacceptable,” or “I will only be valued if I change my body.” This mechanism is supported by recent evidence showing that interventions integrating schema therapy can reduce body image concern and improve subjective well-being in populations experiencing body-related psychological vulnerability (Karami Mohajeri et al., 2026).

The second finding of the study showed that schema therapy significantly reduced suicidal ideation. This result is clinically important because suicidal ideation among cosmetic surgery applicants may reflect a combination of body dissatisfaction, shame, hopelessness, interpersonal distress, and negative self-evaluation. The interpersonal theory of suicide emphasizes that suicidal ideation is intensified when individuals experience perceived burdensomeness, thwarted belongingness, and hopelessness about the possibility of change (Chu et al., 2023). In individuals with severe body image concerns, perceived physical flaws may become connected to beliefs of being unwanted, unacceptable, or socially rejected. Schema therapy may reduce suicidal ideation by weakening these core maladaptive meanings and strengthening the healthy adult mode, which allows individuals to respond to distress with greater self-compassion, emotional regulation, and problem-solving rather than self-punitive or hopeless interpretations.

This finding is also consistent with evidence showing that self-esteem is closely associated with suicidal ideation. Meta-analytic findings suggest that lower self-esteem is a significant psychological correlate of suicidal thoughts, indicating that negative self-evaluation can serve as a pathway toward suicide-related cognition (Ribeiro et al., 2023). In the present study, schema therapy may have reduced suicidal ideation by modifying schemas related to defectiveness, failure, abandonment, and emotional deprivation, all of which can undermine self-worth and increase vulnerability to hopelessness. As participants learned to identify schema activation, challenge maladaptive interpretations, and use experiential techniques to meet unmet emotional needs, they may have developed a more stable and less punitive relationship with themselves. This explanation is consistent with research showing that psychological interventions such as cognitive-behavioral therapy and mindfulness can reduce suicidal thoughts by improving distress tolerance and reducing maladaptive cognitive-emotional patterns (Babaei et al., 2021).

The reduction in suicidal ideation may also be understood in relation to schema-based models of self-harm vulnerability. Research on adolescents with non-suicidal self-injury and addictive features has shown that maladaptive cognitive schemas can predict patterns and transitions of self-injurious behavior, suggesting that schemas may play an important role in the persistence of harmful coping patterns (Zhou et al., 2025). Although suicidal ideation and non-suicidal self-injury are distinct clinical phenomena, both may be influenced by emotional dysregulation, shame, self-criticism, and rigid negative beliefs about the self. Schema therapy directly targets these patterns by helping individuals recognize the vulnerable child mode, punitive parent mode, and maladaptive coping

modes. Through cognitive, experiential, and behavioral techniques, participants may have learned to reduce the dominance of punitive self-talk and increase healthier self-protective responses. Therefore, the significant reduction in suicidal ideation in the experimental group can be interpreted as evidence that schema therapy may reduce suicide-related vulnerability by restructuring core self-beliefs and improving emotional coping.

The third finding of the study showed that schema therapy significantly reduced psychological distress. This finding is consistent with the general evidence base supporting schema therapy as an effective intervention for chronic and complex psychological difficulties. Schema therapy has been recognized as a comprehensive approach for modifying early maladaptive schemas, coping styles, and schema modes that maintain emotional distress, interpersonal problems, and dysfunctional behavior patterns (Bach et al., 2024; Young et al., 2023). A systematic review of schema therapy outcomes also reported that schema-based interventions are effective across diverse clinical problems, particularly when symptoms are maintained by entrenched negative self-beliefs and maladaptive emotional responses (Masley et al., 2023). In the present study, psychological distress likely decreased because schema therapy addressed not only participants' current symptoms but also the cognitive-emotional patterns that made them vulnerable to persistent distress.

The present result is aligned with recent empirical studies demonstrating the effectiveness of schema-based interventions in reducing distress and improving psychological functioning. For example, schema therapy has been shown to reduce psychological distress and improve life engagement among couples experiencing marital conflict, supporting its role in decreasing emotional suffering in relationally stressful contexts (Zerang et al., 2025). Similarly, schema therapy has been found effective in improving distress tolerance, resilience, emotion regulation, and related psychological capacities among mothers of children with attention-deficit/hyperactivity disorder (Rajaeizadeh & Khayatan, 2025). Moreover, emotional schema therapy has demonstrated effectiveness in improving distress tolerance and reducing emotion regulation difficulties in individuals with major depressive disorder (Bayat et al., 2025). These findings converge with the present study by showing that schema-focused interventions can reduce psychological distress through mechanisms such as improved emotion regulation, increased tolerance of negative affect, modification of maladaptive beliefs, and strengthening of adaptive coping patterns.

The effectiveness of schema therapy in reducing psychological distress among cosmetic surgery applicants may be explained by the intervention's integrative structure. In the cognitive phase, participants examined the evidence for and against their schemas, evaluated the advantages and disadvantages of coping styles, and learned to challenge rigid self-defeating beliefs. In the experiential phase, imagery and chair-work techniques may have helped participants access unmet emotional needs, express blocked emotions, and develop a healthier internal response to shame and vulnerability. In the behavioral phase, participants identified schema-maintaining behaviors and practiced healthier alternatives. These components are consistent with the distinctive features of schema therapy, which emphasize limited reparenting, empathic confrontation, mode work, emotional processing, and behavioral pattern-breaking (Rafaeli et al., 2024). Therefore, the reduction in psychological distress observed in this study likely resulted from the combined effect of cognitive restructuring, emotional corrective experiences, and behavioral change.

The results of the present study also highlight the clinical importance of addressing body image concern, suicidal ideation, and psychological distress as interconnected outcomes rather than separate psychological problems. In cosmetic surgery applicants, dissatisfaction with appearance may activate maladaptive schemas, which in turn can increase psychological distress, lower self-esteem, intensify social withdrawal, and contribute to hopeless or suicidal thoughts. Previous research has shown that body image concern is associated with self-esteem and broader psychological functioning, with self-esteem playing an important mediating role in the relationship between body-related concerns and psychosocial outcomes (Moradi et al., 2024). This suggests that improvements in body image after schema therapy may also contribute to reductions in suicidal ideation and psychological distress by improving participants' self-evaluation. Therefore, the simultaneous improvement in all three outcomes in the present study supports the theoretical assumption that schema therapy may influence a shared underlying psychological structure rather than only reducing isolated symptoms.

5. Conclusion

Overall, the findings of the present study are consistent with the broader clinical literature on schema therapy and

psychological functioning. The high effect sizes observed in the study suggest that schema therapy produced strong changes in the target variables. This may be because the intervention directly addressed the core psychological themes that are highly relevant to individuals applying for cosmetic surgery, including shame, defectiveness, approval-seeking, emotional deprivation, and maladaptive coping. The findings also support the view that cosmetic surgery applicants may benefit from psychological interventions that help them examine the emotional meanings of body dissatisfaction before relying exclusively on surgical change. In this regard, schema therapy appears to be a promising intervention for improving body-related self-perception, reducing suicide-related cognitions, and decreasing psychological distress among individuals seeking cosmetic surgery.

One limitation of the present study was its quasi-experimental design and relatively small sample size, which may limit the generalizability of the findings. The participants were selected through convenience sampling from one counseling center in Isfahan, and therefore the sample may not represent all individuals applying for cosmetic surgery in different cultural, socioeconomic, or clinical contexts. Another limitation was the reliance on self-report questionnaires, which may be affected by social desirability, response bias, or participants' temporary emotional states. In addition, the study used a pretest–posttest design without a long-term follow-up assessment, making it impossible to determine whether the effects of schema therapy remained stable over time. The control group also did not receive an active comparison intervention, so it is not possible to determine whether the observed effects were specific to schema therapy or partly related to nonspecific therapeutic factors such as therapist attention, group support, or expectation of improvement.

Future research should replicate this study with larger samples, multi-center recruitment, and randomized controlled trial designs to strengthen the external and internal validity of the findings. It is recommended that future studies include long-term follow-up assessments to examine the durability of treatment effects on body image concerns, suicidal ideation, and psychological distress. Future research may also compare schema therapy with other evidence-based interventions, such as cognitive-behavioral therapy, acceptance and commitment therapy, mindfulness-based interventions, or emotion-focused therapy, to identify the most effective treatment approaches for cosmetic surgery applicants. In addition, future studies could examine mediating variables such as self-esteem, emotion regulation, distress tolerance, shame, maladaptive schemas, and schema modes to clarify the mechanisms through which schema therapy produces psychological change. Qualitative research may also be useful for exploring participants' lived experiences of body dissatisfaction and their perceived changes after schema therapy.

From a practical perspective, the findings suggest that psychological screening and schema-based intervention may be useful components of preoperative assessment and counseling for individuals applying for cosmetic surgery. Counseling centers, cosmetic surgery clinics, and mental health professionals should pay attention not only to the applicant's aesthetic concerns but also to underlying psychological factors such as body image disturbance, emotional distress, suicidal ideation, shame, and unrealistic expectations. Schema therapy can be used to help applicants identify maladaptive patterns, understand the emotional roots of body dissatisfaction, and develop healthier ways of responding to self-critical thoughts and appearance-related distress. Implementing structured psychological interventions before surgery may improve decision-making, reduce psychological vulnerability, and help individuals pursue cosmetic procedures with more realistic expectations and greater emotional stability.

Authors' Contributions

Authors equally contributed to this article.

Declaration

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

Transparency Statement

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Ethical Considerations

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

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