

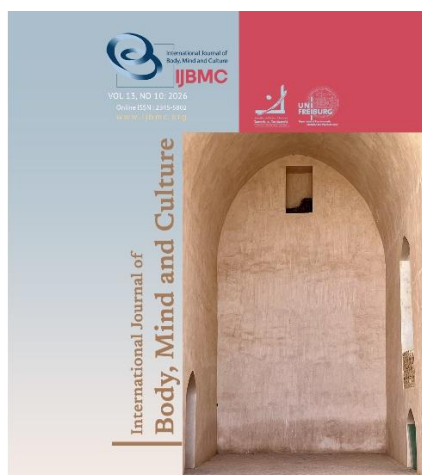
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The Effectiveness of Mode-Based Schema Therapy on Psychological Capital, Body Image, and Self-Esteem in Women with Symptoms of Histrionic Personality Disorder

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ABSTRACT

Objective: The present study was conducted to investigate the effectiveness of mode-based schema therapy on psychological capital, body image, and self-esteem in women seeking cosmetic surgery who exhibited symptoms of histrionic personality disorder.

Methods and Materials: This study used a quasi-experimental design with pre-test, post-test, and a two-month follow-up, along with a control group. The statistical population included women who attended cosmetic surgery clinics in the city of Isfahan during 2024–25. After screening and confirmation of eligibility, participants were assigned to two groups: the mode-based schema therapy group and the control group. Data were collected using the Psychological Capital Scale, the Body Image Questionnaire, and the Self-Esteem Scale, and were analyzed using mixed analysis of variance and Bonferroni post hoc tests.

Findings: Mode-based schema therapy significantly improved psychological capital, body image, and self-esteem over time. Significant time × group interaction effects were found for psychological capital ($F = 29.735$, $p < 0.001$, partial $\eta^2 = 0.482$), body image ($F = 26.120$, $p < 0.001$, partial $\eta^2 = 0.449$), and self-esteem ($F = 26.684$, $p < 0.001$, partial $\eta^2 = 0.471$). Bonferroni comparisons showed significant improvements from pretest to posttest and from pretest to follow-up in psychological capital ($p = 0.001$), body image ($p = 0.001$ and $p = 0.003$), and self-esteem ($p = 0.001$ and $p = 0.003$), with no significant decline from posttest to follow-up.

Conclusion: Mode-based schema therapy was effective in improving psychological capital, body image, and self-esteem among women seeking cosmetic surgery with histrionic personality symptoms.

Keywords: Mode-Based Schema Therapy, Psychological Capital, Body Image, Self-Esteem, Histrionic Personality Disorder, Cosmetic Surgery.

Introduction

Different cultures and civilizations throughout history have consistently placed great value on physical attractiveness. According to the evidence, individuals with an attractive appearance have benefited from this advantage and have resolved their problems by relying on their attractiveness (Michael et al., 2023). In recent years, there has been a considerable increase in the number of people who seek to modify specific parts of their bodies through cosmetic techniques and interventions (Sperk, 2024). According to surveys conducted by the International Society of Aesthetic Plastic Surgery, from 2020 to 2021, approximately a 20% increase in cosmetic procedures performed worldwide was observed, with liposuction being the most common surgical procedure and Botox injection being the most common nonsurgical procedure (Lazarescu & Vintila, 2023). It can also be seen that in 2021, as in 2020, breast augmentation was the most common surgical procedure among women, and blepharoplasty was the most common among men (International Society of Aesthetic Plastic Surgery, 2023). These statistics indicate the tendency of many individuals to improve their physical appearance in order to feel better about their bodies (Lazarescu & Vintila, 2023).

Social motivations and intrapersonal motives help explain the decision to seek cosmetic surgery, and the specialized literature in this field considers personality a determining factor in interest in such procedures (Amantaoui et al., 2024). Given the growing interest in cosmetic procedures, it is important to pay attention to the role of personality in determining the pursuit of such procedures, because more than 47 percent of individuals who choose cosmetic surgery are likely to meet the diagnostic criteria for a specific psychiatric condition or disorder (Sarwer et al., 2004; Hart & Hermes, 2007; Latham, 2010). In this regard, one of the disorders often associated with interest in cosmetic surgery is Histrionic Personality Disorder (commonly referred to in Persian as the equivalent of “dramatic” or “attention-seeking” personality disorder), which is characterized by unrealistic expectations, excessive emotions, and a need for attention (Gezizeh & Ghareh Daghi, 2013; Rashidi et al., 2022).

Histrionic Personality Disorder, which is commonly referred to as dramatic personality disorder, is a psychiatric disorder

distinguished by a pattern of exaggerated emotionality and attention-seeking behavior (Nelini & Panerselvam, 2018). Histrionic Personality Disorder is classified within Cluster B personality disorders. Cluster B personality disorders include conditions such as narcissistic personality disorder, borderline personality disorder, and antisocial personality disorder (Nelini & Panerselvam, 2018). These personality disorders are generally described as dramatic, irritable, temperamental, or unstable (Ruben, 2015). More specifically, individuals with Histrionic Personality Disorder are typically described as flirtatious, seductive, charming, manipulatively controlling, impulsive, and passionate (Semnic, 2022). Individuals with symptoms of Histrionic Personality Disorder may react whenever they notice even a minor defect in their bodies and may resort to such interventions, which are sometimes unnecessary (Nakamura & Koo, 2017). Individuals with Histrionic Personality Disorder often show a strong desire to be the center of attention, may experience rapidly changing emotions, and may use their physical appearance to draw attention to themselves (Lengel, 2020). Therefore, cosmetic surgery may sometimes serve as a means for individuals with Histrionic Personality Disorder to enhance their attractiveness and gain more attention (Castel et al., 2022). Likewise, individuals with dramatic or Histrionic Personality Disorder may turn to such interventions and cosmetic procedures, which are sometimes unnecessary, whenever they perceive a minor bodily defect (Alavi Hejazi et al., 2017; Nakamura & Ko, 2021).

In addition to the above, self-esteem is one of the constructs that, on the one hand, is associated with dramatic personality disorder (Wright et al., 2022) and, on the other hand, plays a prominent role among individuals seeking cosmetic surgery (Yooen & Kim, 2020). Self-esteem is defined as a positive or negative evaluation of oneself and the extent to which a person considers oneself valuable and worthy of respect (Oyoo-Tinuoyi, 2020). Self-esteem is confidence in one's worth, abilities, or morals. It includes beliefs about the self, such as “I am lovable” and “I am worthy,” as well as emotional states such as triumph, despair, pride, and shame (Klax, 2020). Smith and Mackie (2015) define self-esteem as positive or negative evaluations of the self and describe it as the feeling we have about ourselves. It is largely evident that successful cosmetic surgery leads to improvement in major psychological variables such as self-esteem, body image, and

mental health (Kazemi-Nia et al., 2023). This is because the construct of self-esteem in psychology has been shown to be associated with various positive outcomes such as happiness (Saloura et al., 2020). In fact, there is a strong correlation between the desire for cosmetic surgery and self-esteem, in which self-esteem increases or decreases depending on the situation (Figurova, 2003). This close relationship has also been demonstrated in domestic studies; for example, Farshidfar et al. (2013) showed that self-esteem, dissatisfaction with body image, and conformity are influential in the acceptance of cosmetic surgery.

The results of some other studies have also shown that self-esteem improves significantly after cosmetic surgery (Yen et al., 2016; Woon-Scott et al., 2009). Other research has shown that self-esteem can indirectly influence cosmetic surgery (Farshidfar et al., 2013). In some studies, psychological factors such as low self-esteem have been reported to be influential in the decision to undergo rhinoplasty (Soroush et al., 2020). In this regard, self-esteem related to body image has a substantial impact on the selection of the type and method of cosmetic surgery (Brogan, 2020). Satisfaction with physical appearance, especially among women, is strongly associated with self-esteem (Brogan, 2020). Therefore, it is expected that cosmetic surgery will enhance not only self-esteem but also body image overall (Brogan, 2020; Kazemi-Nia et al., 2023). Thus, it can be said that body image is another construct that plays a prominent role in individuals with a tendency toward cosmetic surgery (Kesmaei et al., 2020).

Body image is the mental picture individuals have of their own bodies, regardless of how their bodies actually appear (Shraka et al., 2019). Body image is a complex construct that includes thoughts, feelings, evaluations, and behaviors related to one's body (Sperriklesen et al., 2018). Satisfaction with body image among young people appears to require satisfaction with five bodily factors: physical fitness and attractive appearance, physical health, cleanliness, healthy and attractive skin, and the ability to control weight (Khanjani et al., 2012). Body misperception is common in the general population and is also a major component of several serious disorders, including body dysmorphic disorder, anorexia nervosa, and bulimia nervosa (Sadiblova et al., 2019). Having a realistic and pleasing body image is essential for enjoying a healthy and productive social life, and

if individuals feel good about their physical bodies, they are likely to have a positive body image as well (Irovini et al., 2019). Nevertheless, distortion in body image is unpleasant and can have tragic consequences (Hosseini et al., 2020). Dissatisfaction with body image can affect physical and mental health and lead to consequences such as anxiety, social isolation, psychological disorders, and reduced self-esteem and self-concept (Zamani & Fazilat-Pour, 2013).

In addition to what has been stated, the component of psychological capital is another construct associated both with dramatic personality disorder (Arketlo, 2020) and with the tendency toward cosmetic surgery (Khoshnevis et al., 2019). Psychological capital refers to a positive state of psychological development that includes hope, efficacy, resilience, and optimism (Serdehli et al., 2024). These internal resources of psychological capital are defined as follows: hope refers to an individual's tendency to plan for the future and strive toward goals (Kaf, 2023). Efficacy refers to belief in one's ability to manage tasks successfully (Witt, 2022). Resilience refers to the ability to "bounce back" after adversity or failure (Ilouz, 2020). Finally, optimism refers to having a positive outlook on the future (Marton et al., 2020). On the other hand, the tendency toward cosmetic surgery refers to the inclination or desire to undergo surgical procedures to improve beauty. The relationship between psychological capital and the desire for cosmetic surgery may be multidimensional and influenced by various factors. In this regard, components of psychological capital such as self-efficacy and optimism may affect an individual's perception of body image and self-esteem (Lovo et al., 2023). Higher levels of psychological capital may be associated with greater self-esteem and satisfaction with one's appearance and may potentially reduce the desire for cosmetic surgery (Boroujeni et al., 2020). In addition, personality traits, personal characteristics, and past experiences may also shape the relationship between psychological capital and the desire for cosmetic surgery. For example, individuals with a history of body dysmorphic disorder or perfectionism may still desire cosmetic procedures despite having high levels of psychological capital (Bonel, 2021).

According to the issues discussed above, women seeking cosmetic surgery face serious challenges in the components of psychological capital, body image, and self-esteem. Recently, two new treatments have been introduced in the

field of psychology that appear capable of exerting positive effects on these components. One of these interventions is mode-based schema therapy (Khodabandeh-Lou et al., 2018), which has previously demonstrated its applicability in this area (Boking et al., 2024; Karimpour et al., 2022; Bris et al., 2022; Abad et al., 2021; Staropoulos et al., 2020). The concept of schema therapy was developed by Jeffrey Young and was formulated as an extension of cognitive behavioral therapy through the integration of elements from different schools, such as experiential and psychodynamic therapies, attachment theory, and other developmental theories into a coherent model (Young et al., 2003). Schema therapy has developed very rapidly over the past 30 years. In fact, over the last three decades, schema therapy has become highly effective as a treatment for disorders involving chronic psychological trauma and has rapidly spread across many cultures worldwide (Arntz et al., 2022). The underlying theory of schema therapy, as originally formulated by Young and colleagues (Young et al., 2003), focused mainly on early maladaptive schemas, that is, dysfunctional mental representations that are assumed to develop during early development as a result of the interaction between temperamental factors in the child and adverse environmental factors such as abuse, neglect, or dysfunctional parenting. Young defined early maladaptive schemas as “a broad, pervasive theme or pattern, comprised of memories, emotions, cognitions, and bodily sensations, regarding oneself and one’s relationships with others, developed during childhood or adolescence, elaborated throughout one’s lifetime, and dysfunctional to a significant degree” (Young et al., 2003; Khajeh-Hassani-Rabari et al., 2024).

Over time, the second principal structure of schema therapy attracted greater attention, namely the concept of schema modes (Arntz & Gendren, 2020). Schema modes are a concept that reflects an individual’s momentary cognitive and emotional states; these modes are active at a specific point in time and also activate specific coping responses (Graska & Sterliski, 2023). Schema modes can shift from one to another (Lobstel, 2012), and they can also become dominant in a specific state (Young et al., 2003). Highly sensitive situations associated with generalized anxiety activate schema states in these individuals (Young et al., 2003). Schema modes become activated when individuals

attempt to cope with early maladaptive schemas (Jacob et al., 2015). In this regard, Young et al. (2003) defined 10 different schema modes in four categories: 1) child modes, 2) maladaptive coping modes, 3) maladaptive parent modes, and 4) the healthy adult mode. The schema mode approach appears to be more practical and useful than working with core schemas (Jacob et al., 2015). For example, individuals may find it somewhat easier to sense and identify which schema mode they are in. Therefore, working with emotions through this classification is often more direct and goal-oriented than working with schemas (Lobstel, 2012).

Given the issues discussed above and considering the increasing demand for cosmetic surgery among women with symptoms of Histrionic Personality Disorder (Lazarosus & Ventalia, 2023), there is a need for comprehensive psychological interventions tailored to the complex interplay of psychological factors affecting their decision-making and well-being. Despite increased recognition of the psychological dimensions associated with cosmetic surgery, a significant gap remains in the literature regarding the effectiveness of specific therapeutic approaches in reducing psychological distress and improving overall mental health outcomes in this population (Shoumi et al., 2023). In response to this gap, the present study seeks to investigate the effectiveness of mode-based schema therapy in improving psychological capital, body image, and self-esteem in women seeking cosmetic surgery who show symptoms of Histrionic Personality Disorder. By examining the distinct effects of this therapeutic intervention, this research aims to clarify its effectiveness in fostering psychological capital, increasing body image satisfaction, and strengthening self-esteem among women with symptoms of dramatic personality disorder who seek cosmetic surgery. Furthermore, by examining the subtle mechanisms through which this intervention operates, the study aims to provide valuable insights into appropriate therapeutic approaches for this specific population and to contribute to the advancement of evidence-based interventions in the psychology of cosmetic surgery.

Methods and Materials

In terms of purpose, this study was applied research and, in terms of the nature of the data, quantitative. It was conducted using a quasi-experimental design with pre-test, post-test,

and follow-up phases in two parallel groups. After initial screening through the Histrionic Personality Disorder diagnostic instrument (MCMI), participants were selected through convenience sampling and then randomly assigned to two groups: the first experimental group, which received mode-based schema therapy, and the control group, which received no intervention and remained on a waiting list. The therapeutic intervention was delivered in the form of 12 weekly 90-minute group sessions. The content of the treatment sessions was developed and implemented on the basis of validated protocols under the supervision of relevant specialists.

The participant evaluation process was carried out at three time points: 1) pre-test (T1), before the beginning of the interventions; 2) post-test (T2), immediately after the end of the treatment sessions; and 3) follow-up (T3), two months after the end of treatment, in order to assess the durability of change. The control group received no intervention during the treatment period. However, after the end of the intervention, in order to ensure fairness in access to beneficial treatment, the same effective protocols were also provided to the members of the control group in the form of an intensive workshop.

The statistical population of this study consisted of all women who attended five reputable cosmetic surgery clinics in the city of Isfahan during 2024–2025 for consultation or for undergoing cosmetic surgery. The clinics were selected on the basis of indicators such as number of clients, diversity of cosmetic services, professional credibility, and cooperation with psychology specialists. Among these clients, only those individuals entered the sampling process who, after receiving a full explanation of the aims, nature, and procedure of the study, provided informed consent for participation. In addition, the inclusion criteria for the study included the presence of symptoms of Histrionic Personality Disorder, based on initial screening with a valid psychometric instrument, willingness to undergo cosmetic surgery, and the ability to participate regularly in treatment sessions.

In the quantitative section of this study, the sample size was calculated using G*Power software. By considering a statistical power of 0.80, a significance level of 0.05, and a medium effect size of 0.30, the estimated sample size was 20 participants per group and 40 participants in total.

Considering the possibility of participant attrition during the intervention and follow-up process, the sample size was increased to 25 participants per group in order to provide a margin of confidence and prevent a reduction in the statistical power of the study. Accordingly, the final total sample size in this section was 50 participants.

The sampling method used in this section was convenience sampling from among eligible clients attending cosmetic clinics in the city of Isfahan. After the initial identification of individuals with symptoms of Histrionic Personality Disorder and confirmation of the inclusion criteria, participants were randomly divided into two groups: the intervention group and the control group. Random assignment was carried out in such a way that the names of the groups, experimental group and control group, were written equally on cards, and each participant, after signing the written consent form, selected one of the cards and handed it to the researcher. The researcher then assigned the participant to one of the two groups according to the group name written on the card. This procedure was designed and implemented to ensure impartiality in the allocation of participants to the groups.

The inclusion criteria consisted of being female and being between 20 and 45 years of age, attending one of the five cosmetic clinics in the city of Isfahan during 2024–2025 with the intention of undergoing cosmetic surgery, obtaining a high score on the Histrionic Personality Disorder screening scale, having at least a high school diploma, possessing reading and writing ability sufficient for completing the questionnaires and participating in the treatment sessions, willingness to cooperate fully in all phases of the study including pre-test, intervention, post-test, and follow-up, no simultaneous participation in other psychological treatments or use of stable psychiatric medication during the previous 3 months, and signing the informed consent form. The exclusion criteria included the emergence of acute psychiatric symptoms during the implementation of the study, such as suicidality, psychosis, or severe substance dependence; voluntary withdrawal from cooperation by the participant; absence from more than two consecutive treatment sessions; simultaneous receipt of parallel psychological or psychiatric treatments without coordination with the researcher; and failure to complete the pre-test, post-test, or follow-up forms.

Research Procedure and Implementation Process

First, after obtaining the required permissions and coordinating with the five selected cosmetic clinics in the city of Isfahan, the process of identifying and recruiting eligible participants began. The researcher, by being present in the treatment settings and in cooperation with the physicians or resident counselors, first explained the general aims of the study to the clients, and after obtaining informed consent, initial assessments were conducted to examine the inclusion and exclusion criteria.

At the next stage, individuals who met the eligibility criteria entered the psychological screening process. For this purpose, a questionnaire for identifying symptoms of Histrionic Personality Disorder, together with DSM-5-based criteria, was used, and participants were selected if they showed prominent symptoms of this disorder but did not have other severe psychiatric disorders, such as schizophrenia, bipolar disorder, or active addiction. Then, the pre-test was administered to all participants on three indicators: psychological capital, body image, and self-esteem.

After completion of the pre-test, participants were randomly assigned to one of two groups: mode-based schema therapy and control. For the intervention group, the treatment sessions were held weekly in 12 sessions of 90 minutes each and were conducted by a trained therapist. In these sessions, treatment content consistent with valid scientific protocols was implemented, and between-session exercises were followed up and evaluated. The control group remained on a waiting list and received no intervention during the treatment period.

At the end of the treatment period, the post-test was administered to both groups, and then, after 60 days, the follow-up phase was conducted in order to assess the stability of the treatment effects. All data were stored in coded and confidential form and were used only for statistical analysis. The treatment sessions were also conducted in a safe, confidential, and standardized environment in order to ensure compliance with the ethical principles of research. To ensure random assignment and to control researcher or participant bias, a standardized lottery method was used. In this method, eligible participants were first identified in the order of registration. Then, the name of each group,

experimental and control, was written on papers identical in size and color. Each participant randomly selected one of the papers and, in the presence of the research observer, handed it to the researcher. In this way, the distribution of individuals across the groups took place without the conscious involvement of the researcher. In addition, balance in the number of participants across the groups was maintained through continuous monitoring.

Research Data Collection Instruments

Millon Clinical Multiaxial Inventory (MCMI-III): This questionnaire was developed by Millon and consists of 175 short self-descriptive statements with yes/no responses. It assesses 14 personality patterns and 10 clinical syndromes; in the present study, Histrionic Personality Disorder was assessed (Millon, 1994). Millon (1994) reported the reliability of this questionnaire using the test-retest method as ranging from 0.82 to 0.90 and its alpha coefficient as ranging from 0.66 to 0.90. In domestic studies, this questionnaire was translated and standardized by Chegini and colleagues. In the study by Chegini et al. (2012), it was shown that the test-retest reliability of this questionnaire was 0.61 and 0.79 in the clinical group and 0.79 and 0.89 in the nonclinical group. They reported the positive predictive power of the personality scales as ranging from 0.13 to 0.47 and the clinical scales of this questionnaire as ranging from 0.64 to 0.78, while the negative predictive power of the test ranged from 0.91 to 0.99 and the overall diagnostic power of the questionnaire ranged from 0.77 to 0.97. Finally, Chegini et al. (2012) evaluated the validity and reliability of this questionnaire as positive and desirable.

Multidimensional Body-Self Relations Questionnaire (MBSRQ): This questionnaire is a 46-item instrument developed by Cash (2017) to assess multidimensional body-self relations. It was designed to evaluate body image. The respondent answers each item on a five-point Likert scale from 1 to 5, ranging from completely disagree to completely agree. This questionnaire actually contains three attitudinal subscales, including evaluation, orientation, and behavior. Its physical appearance evaluation subscale has been widely used in studies conducted in the field of body image. The behavioral and orientation subscales have also been combined in order to create an orientational background regarding body image, and subscales involving body

satisfaction and weight attitudes have also been added. The subscales of this measure are appearance evaluation, appearance orientation, fitness evaluation, fitness orientation, overweight preoccupation or subjective weight, and body areas satisfaction. In the study by the developers of this instrument (Cash, 2017), the reliability of these subscales, through internal consistency, was 0.88 for the appearance evaluation subscale and 0.77 for the body areas satisfaction subscale. In addition, the appearance evaluation subscale had a validity coefficient of 0.84, and the body areas satisfaction subscale had a validity coefficient of 0.86. In the Persian version of this questionnaire, which was translated and standardized by Pirzadeh et al. (2021), Cronbach's alpha coefficients for the items of each subscale were reported as 0.94, 0.79, 0.83, 0.88, 0.88, and 0.91, respectively, indicating good reliability of the questionnaire. The correlation coefficients between the scores of 67 individuals across two administrations with a two-week interval were obtained as 0.78 for appearance evaluation, 0.78 for appearance orientation, 0.74 for fitness evaluation, 0.69 for fitness orientation, 0.81 for subjective weight, and 0.89 for body satisfaction, indicating satisfactory test-retest reliability for this scale (Pirzadeh et al., 2021).

Rosenberg Self-Esteem Scale (RSAS): This scale was developed by Rosenberg (1965) and measures global and explicit self-esteem. It consists of 10 general statements that assess satisfaction with life and having good feelings about oneself. Five of the 10 items are positively worded and the other five are negatively worded. Originally, this scale was developed to provide a general picture of positive and negative attitudes toward the self (Rosenberg, 1965). The scoring and interpretation of this questionnaire are such that agreement with items 1 through 5 receives a positive score and disagreement with items 1 through 5 receives a negative score, whereas for items 6 through 10 this scoring is reversed. High scores indicate high explicit self-esteem and low scores

indicate low explicit self-esteem. The Rosenberg Self-Esteem Scale has stronger correlation coefficients than the Coopersmith Self-Esteem Questionnaire and has higher validity in measuring levels of self-esteem (Rosenberg, 1965). The developer of this instrument reported a one-week test-retest reliability coefficient of 0.82. In addition, the reliability of this scale through Cronbach's alpha was reported as 0.88. In Iran, this questionnaire was translated and standardized by Rajabi and Bohloul (2006), and the reliability and validity of this scale were examined. The reliability of this instrument, calculated through Cronbach's alpha, was found to be 0.81.

Luthans Psychological Capital Questionnaire (PCQ): To assess the components of psychological capital, the questionnaire developed by Luthans, Youssef, and Avolio (2007) was used. This questionnaire contains 24 items and measures four subscales: self-efficacy, items 1 to 6; resilience, items 7 to 12; hope, items 13 to 18; and optimism, items 19 to 24, based on a six-point Likert scale ranging from strongly disagree to strongly agree. In this questionnaire, standardized values that have been widely used to assess the constructs of hope, resilience, optimism, and self-efficacy are employed. To obtain the psychological capital score, the score of each subscale is first calculated separately, and then their sum is considered the total psychological capital score. The validity and reliability of these subscales have also been established. The developers of this scale reported Cronbach's alpha reliability coefficients for the subscales of hope, resilience, self-efficacy, and optimism, and finally for the total scale, as 0.72, 0.71, 0.75, 0.74, and 0.88, respectively. In recent domestic studies, for example Bakhshipour and Oladi (2022), the reliability of this questionnaire based on Cronbach's alpha was reported as 0.85 and was found to be satisfactory. The corresponding protocol or findings are presented in Table 1.

Table 1.**Content of the Mode-Based Schema Therapy Sessions (Arntz, 2021; 2022)**

Session	Goal	Educational Session Content
Session 1	Patient assessment, establishment of the therapeutic relationship, and introduction to the schema-focused approach	Empathy and acceptance to facilitate the patient's limited reparenting bond; psychoeducation on schema-focused therapy regarding the nature of Histrionic Personality Disorder and its relationship with the tendency toward cosmetic surgery.
Session 2	Identification of early maladaptive schemas; evaluation of the developmental roots of schemas; identification of the patient's coping styles	Continuous identification of early learning experiences and experiences related to current problems associated with psychological capital, body image, and self-esteem; implementation of experiential techniques to identify the developmental roots of schemas related to psychological capital, body image, and self-esteem.
Session 3	Teaching the importance of emotional needs and identifying different coping styles	Continuous identification of early learning experiences and experiences related to emotional needs; identification of the patient's repetitive patterns in relation to the variables of psychological capital, body image, and self-esteem.
Session 4	Conceptualization of the client's problem based on the mode-based schema therapy approach	Identification and labeling of schema modes, including the vulnerable child, angry child, enraged child, impulsive child, happy child, dysfunctional parent modes, maladaptive coping styles, and the healthy adult; continuous monitoring of these modes; discussion of the advantages and disadvantages of maladaptive modes and coping styles.
Session 5	Increasing the patient's awareness of emotional suffering and evaluating negative consequences	Using current complaints as leverage for continuation of treatment; encouraging the patient to continue treatment; emphasizing the negative consequences of deficiencies in the components of psychological capital, body image, and self-esteem in patients with Histrionic Personality Disorder.
Session 6	Familiarizing the patient with the "lonely child" mode and exploring the developmental roots of the modes	Use of imagery techniques; establishing a therapeutic connection with the "lonely child" mode and the vulnerable child mode; limited reparenting with appropriate boundaries in working with patients with Histrionic Personality Disorder.
Session 7	Teaching negotiation between modes	Use of cognitive techniques to weaken dominant schemas; use of the empty-chair technique; preparation of flashcards related to the patient's schemas; creating an atmosphere of unconditional positive regard while avoiding reinforcement of perfectionism, instability, norm violation, and the patient's sense of specialness in accordance with the nature of the disorder.
Session 8	Connecting with the vulnerable child mode and remaining with the lonely child mode	Continuous use of limited reparenting techniques in response to schemas of defectiveness, mistrust-abuse, and emotional deprivation.
Session 9	Connecting with the vulnerable child mode and remaining with the lonely child mode	Use of emotional techniques; reconstruction of distressing past images through imagery rescripting exercises as well as limited reparenting; soothing the lonely child mode and the vulnerable child mode with other emotion-focused techniques.
Session 10	Confronting the patient's challenging and boastful style	Use of an assertive approach; careful application of empathic confrontation techniques in response to entitlement, instability, and norm violation in the patient; expressing rights politely and assertively by the therapist.
Session 11	Helping the patient generalize treatment gains to the real environment and preventing relapse	Emphasis on the skills learned by the patient; encouraging participants to abandon maladaptive coping styles and to practice adaptive coping behaviors.
Session 12	Termination of sessions	Review of previous sessions, emphasis on the skills learned by the patient, and administration of the post-test.

Ethical Considerations

In line with the observance of research ethics principles, all stages of this study were designed and implemented in full compliance with ethical standards for research involving human participants. First, the necessary approval was obtained from the university research ethics committee and the corresponding ethics code was registered (Ethics ID: IR.IAU.TNB.REC.1404.446). Before data collection began, the general objective of the study, the method of implementation, the nature of the intervention, the confidentiality of information, and the right to withdraw at any stage were clearly explained to the participants in written form. Then, informed consent was obtained from all participants. In order to ensure confidentiality and protect privacy, identifying information of the participants was

removed and the data were analyzed in coded form. It was also emphasized that participation in the study was entirely voluntary and that individuals could refuse cooperation or withdraw from the study at any time without any negative consequences. In the case of the control group, after completion of the study and observation of the effectiveness of the interventions, a compensatory educational workshop containing the more effective intervention content was to be held for them so that fairness in access to the intervention could be observed. All therapeutic protocols were implemented with full respect for the dignity and human worth of the participants, and any form of pressure, coercion, or direct suggestion was avoided.

Data Analysis

In the quantitative section of the present study, which was conducted in the framework of a quasi-experimental design with two groups, intervention group and control group, data analysis was performed at three stages: pre-test, post-test, and follow-up. Statistical analysis was carried out using SPSS software, version 26. In the first step, descriptive statistics including mean, standard deviation, frequency, and percentage were used to describe the demographic characteristics of the participants and the scores of the study variables. To examine the statistical assumptions, including normality of data distribution using the Shapiro-Wilk test, homogeneity of variances using Levene's test, and homogeneity of covariance matrices using Box's test, appropriate analyses were performed. Then, to analyze differences between the groups across the three time points, pre-test, post-test, and follow-up, repeated-measures analysis of variance was used. In addition, the Bonferroni post hoc test was applied to analyze between-group differences at different levels. The significance level in all tests was considered to be 0.05.

Table 2.

Mean and Standard Deviation of the Study Variables by Group and Assessment Stage

Variable	Group	Pre-test (M)	Pre-test (SD)	Post-test (M)	Post-test (SD)	Follow-up (M)	Follow-up (SD)
Psychological Capital	Mode-Based Schema Therapy	104.82	13.94	116.35	12.11	114.90	12.76
	Control	103.05	13.70	106.92	13.55	106.48	13.81
Body Image	Mode-Based Schema Therapy	198.44	26.73	210.12	23.65	208.90	24.11
	Control	200.15	27.10	201.22	26.75	200.84	26.98
Self-Esteem	Mode-Based Schema Therapy	21.84	4.52	25.11	4.08	24.63	4.27
	Control	21.96	4.60	22.18	4.72	22.05	4.69

The results of the Shapiro-Wilk test at the pre-test stage showed that, for all study variables and in both groups, the significance level was greater than 0.05. Therefore, the assumption of normality of the data distribution was not rejected, and it can be concluded that the distribution of scores for psychological capital, body image, and self-esteem in the study groups had adequate normality. Accordingly, the use of parametric tests for data analysis was considered appropriate. Based on the results of Levene's test at the pre-test stage, the significance level for all three study variables was greater than 0.05; therefore, the assumption of equality of variances across the study groups was not rejected. As a

Findings and Results

The results indicate that the two study groups had a relatively similar distribution in terms of demographic variables. The mean age of the participants in both groups fell within the range of early to middle adulthood, and the sample was described as broadly similar across groups. In terms of marital status, the composition of single and married individuals was relatively balanced across the groups, and no noticeable difference was observed between them. This finding indicates a relatively uniform allocation of participants during the random assignment process. Regarding educational level, the highest frequency in both groups was related to the bachelor's degree level, followed by the associate degree and master's degree levels. The educational distribution in the groups showed a similar pattern, indicating the relative homogeneity of the sample in terms of educational background. With respect to employment status, the majority of individuals in both groups were employed, followed by homemakers and students. The corresponding protocol or findings are presented in [Table 2](#).

result, the assumption of homogeneity of variances required for parametric tests and repeated-measures analysis of variance was met. Based on the results of Box's M test, the significance level was greater than 0.05 ($p = 0.29$); therefore, the assumption of homogeneity of the variance-covariance matrices across the study groups was not rejected. This finding indicates that the correlation and dispersion structure of the dependent variables was similar across the groups and that the necessary assumption for conducting repeated-measures analysis of variance was satisfied. The corresponding protocol or findings are presented in [Table 3](#).

Table 3.

Results of Mixed Analysis of Variance (Effect of Time and Time × Group Interaction) for Examining the Effectiveness of Mode-Based Schema Therapy on Psychological Capital

Variable	Source of Effect	Sum of Squares (SS)	df	Mean Square (MS)	F	P	Partial η^2
Psychological Capital	Time	711.304	2	355.652	19.416	<0.001	0.233
	Error (Time)	2344.960	128	18.320			
	Time × Group	505.318	4	126.330	29.735	<0.001	0.482
	Interaction Error	543.616	128	4.247			

The results of the mixed repeated-measures analysis of variance showed that the main effect of time on psychological capital was significant ($F = 19.416$, $p < 0.001$). This finding indicates that the mean scores of psychological capital across the three stages of pre-test, post-test, and follow-up changed significantly regardless of group type. In other words, overall, the participants experienced changes in the level of psychological capital over time. The effect size for time (partial $\eta^2 = 0.233$) indicates that approximately 23% of the variance in changes in psychological capital can be attributed to the factor of time. Based on Cohen's criteria, this value falls within the relatively large effect range, indicating the practical significance of the changes over time. In addition, the high statistical power (0.99) indicates that the sample size was sufficient to detect this effect. More

importantly, the time × group interaction effect was also significant ($F = 29.735$, $p < 0.001$). This result shows that the pattern of changes in psychological capital over time was not the same across the study groups, and the groups followed different trajectories of change. In other words, the type of therapeutic intervention played a determining role in the process of change in psychological capital. The interaction effect size (partial $\eta^2 = 0.482$) indicates that approximately 48% of the variance in changes in psychological capital was due to the combination of time and group type. This effect is highly substantial and indicates a significant difference in the effectiveness of the therapeutic interventions compared with the control group. The high statistical power also indicates strong confidence in the stability of this finding. The corresponding protocol or findings are presented in [Table 4](#).

Table 4.

Results of Between-Group Analysis of Variance for Examining the Effect of Mode-Based Schema Therapy on Psychological Capital Compared with the Control Group

Variable	Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F	P	Partial η^2
Psychological Capital	Group	1284.760	2	642.380	4.912	0.011	0.133
	Error	8376.320	64	130.880			

The results of the between-group analysis of variance showed that the main effect of group on the variable of psychological capital was significant ($F(2, 64) = 4.912$, $p = 0.011$). This finding indicates that the mean scores of psychological capital differed significantly among groups as reported in the source analysis. In other words, regardless of the factor of time, the type of therapeutic intervention influenced the level of psychological capital in the participants. This significant difference indicates that at least one of the therapeutic groups experienced a different change in psychological capital compared with the other groups. The partial η^2 value of 0.133

indicates that approximately 13% of the variance in psychological capital can be attributed to differences between the groups. Based on common criteria for interpreting effect size, this value falls within the medium effect range, indicating the practical significance of the obtained results. In addition, the statistical power of 0.82 indicates that the study sample size was sufficient to detect the group effect and that the probability of detecting a true effect, if it exists in the population, was greater than 80%. This provides greater confidence in the stability of the findings. The corresponding protocol or findings are presented in [Table 5](#).

Table 5.

Results of Bonferroni Pairwise Comparisons for Comparing the Mean of Psychological Capital Across Three Stages (Pre-test, Post-test, and Follow-up) in the Mode-Based Schema Therapy Group

Variable	Stage (I)	Stage (J)	Mean Difference (I-J)	Standard Error	P
Psychological Capital	Pre-test	Post-test	11.53	2.48	0.001
	Pre-test	Follow-up	10.08	2.71	0.001
	Post-test	Follow-up	-1.45	1.96	0.412

In order to examine more precisely the changes in psychological capital across the three stages of pre-test, post-test, and follow-up in the group receiving mode-based schema therapy, pairwise comparisons with Bonferroni correction were used. The results showed that the difference in the mean scores of psychological capital between the pre-test and post-test stages was significant ($p < 0.001$). This finding indicates that after implementation of the intervention, the level of psychological capital in the participants increased significantly. The magnitude of the observed change indicates substantial improvement in indicators related to psychological capital, including hope, optimism, resilience, and self-efficacy. In addition, the mean difference between the pre-test and follow-up stages was also reported as significant ($p < 0.001$). This result indicates that the effect of the treatment not only appeared immediately

after the intervention but also persisted at the follow-up stage, and the level of psychological capital remained higher than at the pre-test stage. In contrast, the difference between the post-test and follow-up stages was not significant ($p > 0.05$). This indicates that although a slight change was observed between the two stages, this change was not statistically significant, and it can therefore be concluded that the improvement obtained after the intervention was maintained up to the follow-up stage. Overall, the pattern of results from the Bonferroni test indicates that mode-based schema therapy led to a significant increase in psychological capital among women seeking cosmetic surgery with symptoms of Histrionic Personality Disorder, and that this effect remained stable over time. The corresponding protocol or findings are presented in [Table 6](#).

Table 6.

Results of Mixed Analysis of Variance (Effect of Time and Time $\times$ Group Interaction) for Examining the Effectiveness of Mode-Based Schema Therapy on Body Image

Variable	Source of Effect	Sum of Squares (SS)	df	Mean Square (MS)	F	P	Partial η^2
Body Image	Time	980.500	2	490.250	19.610	<0.001	0.234
	Error (Time)	3200.000	128	25.000			
	Time $\times$ Group	620.400	4	155.100	26.120	<0.001	0.449
	Interaction Error	760.000	128	5.938			

The results of the mixed analysis of variance showed that the effect of time on the variable of body image was significant ($F(2,128) = 19.61$, $p < 0.001$, partial $\eta^2 = 0.234$). This finding indicates that body image scores changed significantly across the different measurement stages, namely pre-test, post-test, and follow-up. The effect size (0.234) indicates that approximately 23% of the variance in body image changes can be attributed to the factor of time, which represents a relatively strong effect size. In addition, the statistical power of 0.99 indicates adequate sample size and excellent test power in detecting this effect. Moreover, the time $\times$ group

interaction effect was also reported as significant ($F(4,128) = 26.12$, $p < 0.001$, partial $\eta^2 = 0.449$). This result indicates that the pattern of body image changes over time differed across the groups. In other words, the extent of improvement or change in body image in the group receiving mode-based schema therapy differed significantly from that in the control group. The interaction effect size (0.449) indicates that approximately 45% of the variance in change was related to the interaction between time and group, which is considered a very strong effect size. The corresponding protocol or findings are presented in [Table 7](#).

Table 7.

Results of Between-Group Analysis of Variance for Examining the Effect of Mode-Based Schema Therapy on Body Image Compared with the Control Group

Variable	Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F	P	Partial η^2
Body Image	Group	1500.000	2	750.000	5.333	0.007	0.143
	Error	9000.000	64	140.625			

The results of the between-group analysis of variance showed that the group effect on the body image variable was significant ($F(2,64) = 5.33$, $p = 0.007$, partial $\eta^2 = 0.143$). Given that the significance level was less than 0.05, it can be concluded that there was a significant difference between the groups in terms of body image scores. The effect size (partial $\eta^2 = 0.143$) indicates that approximately 14% of the variance in body image was related to group membership, namely experimental versus control. Based on common criteria, this

value indicates a moderate-to-high effect size, which also reflects the practical importance of the results. Furthermore, the statistical power of 0.85 indicates that the test had adequate power to detect a true effect, and therefore the probability of a Type II error was low. Overall, these findings indicate that mode-based schema therapy was able to create a significant difference in body image compared with the control group. The corresponding protocol or findings are presented in [Table 8](#).

Table 8.

Results of Bonferroni Pairwise Comparisons for Comparing the Mean of Body Image Across Three Stages (Pre-test, Post-test, and Follow-up) in the Mode-Based Schema Therapy Group

Variable	Stage (I)	Stage (J)	Mean Difference (I-J)	Standard Error	P
Body Image	Pre-test	Post-test	11.68	2.90	0.001
	Pre-test	Follow-up	10.46	3.10	0.003
	Post-test	Follow-up	-1.22	2.20	0.999

The results of the Bonferroni pairwise comparisons test showed that there was a significant difference between pre-test and post-test ($MD = 11.68$, $SE = 2.90$, $p = 0.001$). This finding indicates that after implementation of mode-based schema therapy, body image scores changed significantly compared with pre-test. Given the positive mean difference (I-J), it can be concluded that the mean at the post-test stage increased relative to the pre-test stage. If a higher score indicates improvement in body image, this change reflects a significant improvement. In addition, a significant difference was also observed between pre-test and follow-up ($MD = 10.46$, $SE = 3.10$, $p = 0.003$). This result shows that the treatment effect remained significant at the follow-up stage

relative to pre-test; therefore, the effect of the intervention had relative stability. In contrast, no significant difference was observed between post-test and follow-up ($MD = -1.22$, $SE = 2.20$, $p = 0.999$). This finding indicates that the change achieved at the post-test stage was maintained until the follow-up stage and that no significant decrease or increase occurred during this interval. Overall, the Bonferroni test results indicate that mode-based schema therapy led to a significant improvement in body image from pre-test to post-test, and that this improvement continued at the follow-up stage. The corresponding protocol or findings are presented in [Table 9](#).

Table 9.

Results of Mixed Analysis of Variance (Effect of Time and Time $\times$ Group Interaction) for Examining the Effectiveness of Mode-Based Schema Therapy on Self-Esteem

Variable	Source of Effect	Sum of Squares (SS)	df	Mean Square (MS)	F	P	Partial η^2	Statistical Power
Self-Esteem	Time	220.000	2	110.000	19.643	<0.001	0.235	0.98
	Error (Time)	717.000	128	5.602				
	Time $\times$ Group	160.000	4	40.000	26.684	<0.001	0.471	0.99
	Interaction Error	192.000	128	1.500				

The results of the mixed analysis of variance showed that the effect of time on the self-esteem variable was significant ($F(2,128) = 19.64$, $p < 0.001$, partial $\eta^2 = 0.235$). This finding indicates that self-esteem scores changed significantly across the three measurement stages, namely pre-test, post-test, and follow-up. The partial η^2 value indicates that approximately 23% of the variance in changes in self-esteem was related to the factor of time, which is considered a relatively strong effect size. The statistical power of 0.98 also indicates adequate sample size and very good test power. In addition, the time $\times$ group interaction effect was also reported as significant ($F(4,128) = 26.68$, $p < 0.001$, partial $\eta^2 = 0.471$). This result indicates that the pattern of self-esteem change

over time differed across the groups; in other words, the extent of self-esteem change in the group receiving mode-based schema therapy differed significantly from that in the control group. The interaction effect size (0.471) indicates that approximately 47% of the variance in change was related to the interaction between time and group, which is considered a very strong effect size. The statistical power of 0.99 also indicates the high power of the test in detecting this effect. Overall, the results show that mode-based schema therapy had a significant and substantial effect on improving self-esteem, and that these changes over time were also different from those in the control group. The corresponding protocol or findings are presented in [Table 10](#).

Table 10.

Results of Between-Group Analysis of Variance for Examining the Effect of Mode-Based Schema Therapy on Self-Esteem Compared with the Control Group

Variable	Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F	P	Partial η^2
Self-Esteem	Group	120.000	2	60.000	6.393	0.005	0.173
	Error	720.000	64	11.250			

The results of the between-group analysis of variance showed that the group effect on the self-esteem variable was significant ($F(2,64) = 6.39$, $p = 0.005$, partial $\eta^2 = 0.173$). Given that the significance level was less than 0.05, it can be concluded that there was a significant difference between the groups in terms of self-esteem. The reported effect size (partial $\eta^2 = 0.173$) indicates that approximately 17% of the variance in self-esteem was related to differences between the groups. Based on common criteria, this value indicates a moderate-to-strong effect size, which also reflects the

practical significance of the findings. In addition, the statistical power of 0.90 indicates that the test had sufficient power to detect a true effect and that the probability of a Type II error was low. Overall, these results indicate that mode-based schema therapy had a significant effect on self-esteem compared with the control group. To determine the exact differences between groups, follow-up tests are recommended in the case of more than two groups. The corresponding protocol or findings are presented in [Table 11](#).

Table 11.

Results of Bonferroni Pairwise Comparisons for Comparing the Mean of Self-Esteem Across Three Stages (Pre-test, Post-test, and Follow-up) in the Mode-Based Schema Therapy Group

Variable	Stage (I)	Stage (J)	Mean Difference (I-J)	Standard Error	P
Self-Esteem	Pre-test	Post-test	3.27	0.78	0.001
	Pre-test	Follow-up	2.79	0.83	0.003
	Post-test	Follow-up	-0.48	0.60	0.999

The results of the Bonferroni pairwise comparisons test showed that there was a significant difference between pre-test and post-test in the self-esteem variable ($MD = 3.27$, $SE = 0.78$, $p = 0.001$). This finding indicates that after implementation of mode-based schema therapy, the self-esteem of the participants changed significantly relative to pre-test. The positive mean difference (I-J) indicates that the

mean self-esteem score at the post-test stage increased relative to the pre-test stage. If a higher score indicates greater self-esteem, this change reflects improvement. A significant difference was also observed between pre-test and follow-up ($MD = 2.79$, $SE = 0.83$, $p = 0.003$). This result indicates that the effect of the intervention remained stable at the follow-up stage and that the level of self-esteem

remained significantly higher than at pre-test. In contrast, no significant difference was observed between post-test and follow-up ($MD = -0.48$, $SE = 0.60$, $p = 0.999$). This finding indicates that the change achieved at the post-test stage was maintained until follow-up and that no significant decrease or increase occurred during this interval. Overall, the Bonferroni test results indicate that mode-based schema therapy led to a significant increase in self-esteem from pre-test to post-test, and that this effect continued at the follow-up stage.

Discussion and Conclusion

The findings showed that mode-based schema therapy led to a significant increase in psychological capital among women seeking cosmetic surgery with symptoms of Histrionic Personality Disorder. This means that, after receiving the intervention, the overall pattern of participants' changes over time favored the treatment group, and this improvement, compared with both the baseline condition and the control group, demonstrated a clear, stable, and clinically reliable quality. Therefore, it can be stated that this intervention was able to enhance the positive psychological capacities required for adaptive coping with pressures, negative emotions, and social evaluations related to appearance and the body in this group. (Zahedyan & Rahnamazadeh, 2026).

The consistency of this finding with studies related to mode-based interventions is also noteworthy. Meta-analytic evidence has shown that mode-based interventions are effective in reducing symptoms of anxiety and depression and in improving emotion regulation and cognitive flexibility (Strauss et al., 2014; Teasdale et al., 1995). In the context of cosmetic surgery applicants, studies have shown that mode-based interventions can reduce rumination and vulnerability components while strengthening resilience and coping resources (Ashouri & Pourakhondi, 2021). This point is important because psychological capital is a construct composed of hope, optimism, self-efficacy, and resilience, and improvement in each of these components contributes to an increase in psychological capital (Luthans & Youssef, 2004; Newman et al., 2014). Therefore, when

schema therapy is integrated with mode-based components, it is expected that through the reduction of emotional reactivity, the modification of maladaptive coping styles, and the enhancement of nonjudgmental awareness, the conditions for the growth of psychological capital will be facilitated. The results of the present study are fully in line with this expectation.

To explain why this finding emerged, several complementary theoretical frameworks may be applied. First, from the perspective of psychological capital theory in positive psychology, psychological capital is considered a "developable resource" that increases through experiences of small successes, cognitive restructuring, realistic goal setting, and supportive feedback (Luthans & Youssef, 2004; Dawkins et al., 2013). Mode-based schema therapy usually helps the client identify enduring patterns of failure, worthlessness, shame, and excessive need for approval, and through corrective experiences and regular exercises, teaches new ways of dealing with emotionally activating situations (Jacob et al., 2015; van Genderen et al., 2012). These changes can naturally increase self-efficacy, because the individual experiences that they are capable of managing difficult thoughts and emotions and can exercise greater control in relationships and decisions. This is consistent with self-efficacy theory, which emphasizes the role of efficacy beliefs in goal regulation, persistence, and tolerance of frustration (Bandura & Locke, 2003; Stajkovic & Luthans, 1998). When the client, in the course of treatment, moves away from acting on emotional impulses and acquires the skills of pausing, observing, and choosing a response, the sense of "I can" is likely to be strengthened. This is the very core of self-efficacy.

The findings also showed that mode-based schema therapy led to a significant improvement in body image among women seeking cosmetic surgery with symptoms of Histrionic Personality Disorder. This means that, following the intervention, the participants' perceptions and evaluations of their bodies and appearance moved in a more adaptive direction, and these changes were observed in a clear and reliable manner both in comparison with the baseline condition and in comparison with the control

group. Therefore, the second hypothesis is also confirmed on the basis of the results of Chapter Four, and it can be stated that this treatment was able to modify the cognitive-emotional patterns underlying body dissatisfaction and sensitivity to social evaluations concerning appearance and, as a result, improve the quality of bodily experience and the individual's relationship with her body.

From the perspective of studies related to cosmetic surgery applicants, research has shown that attitudes toward surgery and body dissatisfaction are associated with cognitive-emotional factors such as appearance comparisons, anxiety about social judgment, appearance-related perfectionism, and sensitivity to rejection (Slevec & Tiggemann, 2010; Hossein et al., 2023; McComb & Mills, 2021; Abdollahi et al., 2023). Some studies have also addressed the psychological differences between applicants and non-applicants and have shown that body image problems and self-esteem difficulties are prominent in this group (Hosseini et al., 2010; Ghazizadeh & Ghareh-Daghi, 2013; Andishegar et al., 2020). At the level of outcomes, the research literature on cosmetic surgery indicates that surgery does not necessarily guarantee lasting improvement in body image, and in some individuals, especially those with deeper psychological vulnerabilities, body image problems or appearance-related concerns may persist or be reproduced in different forms (Castle et al., 2002; von Soest et al., 2009; Kazeminia et al., 2023). This point highlights the importance of psychological interventions: that is, lasting improvement in body image in this group depends less on mere physical change and more on change in underlying meanings, beliefs about self-worth, and methods of emotion regulation. The findings of the present study are precisely in line with this perspective. (Seyed Alitabar & Goli, 2024).

In the field of treatments related to body image, evidence shows that interventions addressing bodily experience and the cognitive-emotional processing of the body can reduce body image disturbance. For example, studies on body perception therapy and interventions related to bodily experience in reducing body image disturbance in eating disorders have supported the effectiveness of such approaches (Artoni et al., 2021; Portingale et al., 2024;

Hamamoto et al., 2024). Research has also shown that changes in neural and cognitive processing related to the social gaze and visual processing can be associated with reduced body image disturbance, and these findings indicate that body image is not merely a “verbal belief,” but rather a network of perceptual, emotional, and social processes that can be transformed by psychological interventions (Gaudio & Quattrocchi, 2012; Mohr et al., 2010; Brown et al., 2021). Within this framework, mode-based schema therapy, because of its simultaneous focus on the schema-related meaning of the body and on the way the body is experienced in the present moment, can influence body image through several complementary pathways. For this reason, the consistency of the present finding with this body of evidence is to be expected.

From the perspective of more direct consistency with the schema therapy literature, studies and clinical sources emphasize that early maladaptive schemas and schema modes can play an indirect or direct role in the formation of self-concept and bodily evaluation. This is especially true when schemas such as defectiveness and shame, unrelenting standards, approval-seeking, or abandonment and rejection become activated. Under such conditions, the body and appearance become the primary arena of valuation and judgment, and the individual resorts to strategies such as body checking, constant comparison, or avoidance in order to reduce psychological pain (Arntz & Jacob, 2017; van Genderen et al., 2012; Rafaeli et al., 2014). In addition, the schema mode approach helps the therapist understand how, at certain moments, the vulnerable child is activated with feelings of shame and being unlovable, and how compensatory modes then come into operation to cover this pain. In individuals with symptoms of Histrionic Personality Disorder, these compensatory modes may be accompanied by theatricality, intense efforts to be seen, and sensitivity to appearance-related feedback (Fassbinder et al., 2014; Lengel, 2020). Therefore, if treatment is able, on the one hand, to reduce core shame and defectiveness and, on the other hand, to modify compensatory strategies, it is expected that the individual's relationship with her body will become more

humane, calmer, and more realistic, and that body image will improve.

Moreover, studies related to mode-based awareness and body image show that mode-based awareness can contribute to improved body image through reducing self-objectification, decreasing appearance comparisons, and increasing body acceptance. Theoretical resources in the field of positive body image emphasize that improving body image is not limited merely to reducing dissatisfaction, but also includes increasing respect for the body, reducing mental preoccupation with appearance, and increasing flexibility in dealing with cultural standards (Tylka, 2018; Halliwell, 2015; Wood-Barcalow et al., 2024). In this process, mode-based awareness helps the individual observe comparative triggers and the emotions they evoke without immediate reaction and, instead of becoming fused with humiliating thoughts about the body, experience them as transient mental events. Such a process can reduce avoidance and body checking and promote a kinder attitude toward the body (Cook-Cottone, 2018; Strauss et al., 2014). The consistency of the present finding with this body of research, especially considering the nature of integrating mode-based awareness with deep schema work, is logical and explainable.

To explain why body image improved in this study, several theoretical-clinical pathways can be described in an integrated manner. First, from the perspective of cognitive-behavioral models of body image, body dissatisfaction becomes persistent when the individual considers appearance to be the core of self-worth, repeatedly engages in comparison and checking, and reacts with negative emotions to even the smallest sign of “not matching the standard,” and then resorts to safety behaviors such as avoiding social situations, concealment, or repeated checking in order to reduce these emotions. These behaviors cyclically reinforce negative beliefs and maintain body image disturbance (Cash & Deagle, 1997; Shafran et al., 2007; van den Berg et al., 2002). Mode-based schema therapy attacks this cycle with two key tools: one is the reconstruction of the underlying meanings of beliefs such as “I am valuable only if I am flawless” or “If I am not attractive, I will be rejected,”

and the other is increasing the ability to observe and pause before engaging in safety behaviors. From this perspective, when treatment helps the individual separate self-worth from appearance and at the same time increase emotion regulation skills and distress tolerance, the cycle of body dissatisfaction weakens and body image improves.

The findings also showed that mode-based schema therapy led to a significant increase in self-esteem among women seeking cosmetic surgery with symptoms of Histrionic Personality Disorder. This means that, after implementation of the intervention, the participants’ overall evaluation of their self-worth, self-acceptance, and sense of personal adequacy improved significantly in comparison with both the pre-treatment condition and the control group. Therefore, the third hypothesis is also confirmed, and it can be stated that this intervention was able to enhance one of the most fundamental constructs of self-concept, namely self-esteem, in this population. This improvement is also clinically important, because self-esteem plays a central role in many patterns of personality pathology and in the tendency toward extreme appearance-related changes.

At the level of consistency with research related to schema therapy, evidence has shown that this approach can lead to improvement in self-efficacy, self-esteem, and assertiveness, especially in individuals in whom defectiveness and shame, failure, dependence, or unrelenting standards schemas are active (Khodabandelou et al., 2018; Moradi & Moradi, 2023; Arntz & Jacob, 2017). Since self-esteem is defined in many theoretical models as the individual’s overall evaluation of self-worth (Rosenberg, 1965; Bednar et al., 1995), any intervention that can modify core beliefs such as “I am inadequate,” “I am not lovable,” or “I am valuable only if I am flawless” should logically lead to increased self-esteem. Schema therapy, by identifying and reconstructing these very core beliefs and creating corrective emotional experiences, provides the conditions for rewriting the individual’s internal narrative about the self (van Genderen et al., 2012; Rafaeli et al., 2014). The addition of mode-based awareness to this process makes it possible to observe self-critical thoughts nonjudgmentally and to distance oneself from identification with them, and this in turn can reduce

the intensity and frequency of negative self-evaluations, a process that ultimately strengthens self-esteem.

In explaining why this finding emerged, one may first point to the role of early maladaptive schemas in the formation of self-esteem. Theoretical studies in the field of personality development have shown that early experiences of rejection, emotional instability, excessive criticism, or conditional affection can lead to the formation of schemas that make a person's sense of worth conditional and fragile (Blatt & Levy, 2003; Tasca et al., 2012). In individuals with symptoms of Histrionic Personality Disorder, sensitivity to approval, need for attention, and emotional fluctuations may reflect attempts to compensate for these very basic feelings of defectiveness or insecurity (Lengel, 2020; Torrico et al., 2024). Under such conditions, self-esteem is often dependent on external feedback and unstable; that is, the individual feels worthy when receiving praise, but experiences a sharp decline in self-worth at the slightest sign of inattention or criticism. Mode-based schema therapy, by focusing on unmet childhood needs and the emotional reprocessing of these experiences, attempts to shift the source of worth from the outside to the inside; that is, the individual learns to perceive herself as worthy without excessive dependence on external approval. This shift is the core of lasting enhancement in self-esteem.

Finally, the findings of the present study are also important from an applied perspective, because they show that the increase in self-esteem in this population was achieved not through appearance-related changes, but through deep work on schemas, emotions, and cognitive patterns. This is consistent with evidence showing that an exclusive focus on changing the body, without attention to psychological mechanisms, may not lead to lasting improvement in self-worth (von Soest et al., 2009; Kazeminia et al., 2023). In contrast, an intervention that addresses the cores of shame, defectiveness, need for approval, and emotional fluctuation, while at the same time strengthening observation and acceptance skills, can enhance self-esteem in a deeper and more lasting way. On this basis, it may be concluded that mode-based schema therapy, by targeting the developmental and cognitive roots of self-worth and by providing corrective

emotional experiences in a safe context, was able to significantly increase the self-esteem of women seeking cosmetic surgery with symptoms of Histrionic Personality Disorder, and that this increase can be coherently explained within a theoretical, empirical, and clinical framework.

Limitations and Reporting Considerations

The findings require cautious interpretation because the manuscript reports different sample sizes across sections and contains degrees of freedom in several ANOVA tables that do not clearly match the stated two-group design. These figures cannot be reconciled without the original participant flow records and statistical output. In addition, assignment procedures, follow-up attrition, measurement scoring, and the absence of an active comparator limit causal and clinical interpretation. These reporting issues should be resolved before the estimates are used for definitive inference.

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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. Ethical considerations in this study were that participation was entirely optional.

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.

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Authors' Contributions

All authors equally contribute to this study.

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