




The Effectiveness of Self-Compassion Training on Body Image Concern and Difficulties in Emotion Regulation in Women with Overweight

Zohre. Safari¹, Seyedeh Fatemeh. Dinparast², Mahdieh. Salari^{3*}

¹ Department of General Psychology, Khorramshahr-Persian Gulf International Branch, Islamic Azad University, Khorramshahr, Iran

² Department of Clinical Psychology, To.C., Islamic Azad University, Tonekabon, Iran

³ Department of Clinical Psychology, Ya.C., Islamic Azad University, Yazd, Iran

* Corresponding author email address: m.salari8681@iau.ir

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ABSTRACT

Objective: The present study was conducted to determine the effectiveness of self-compassion training on body image concern and difficulties in emotion regulation in women with overweight.

Materials and Methods: This was a quasi-experimental study with a pretest–posttest design and a two-month follow-up including a control group. The statistical population consisted of women with overweight in Tehran in 2026. Overweight was defined based on a body mass index (BMI) ranging from 25 to 29.9. Following the initial screening, volunteer participants completed the Body Image Concern Questionnaire and the Difficulties in Emotion Regulation Scale. The mean score of the initial sample was 54.30 on the Body Image Concern Questionnaire and 106.40 on the Difficulties in Emotion Regulation Scale. Therefore, women who obtained scores above the mean on these two instruments were considered eligible for the intervention phase. Subsequently, 30 participants were selected through purposive sampling and randomly assigned to two groups: an experimental group and a control group, with 15 participants in each group. The experimental group received self-compassion training in eight 60-minute sessions, whereas the control group received no intervention during this period. Data were analyzed using the independent samples t-test, Fisher’s exact test, and two-way repeated measures analysis of variance in IBM SPSS Statistics.

Findings: The results indicated that the experimental and control groups did not differ significantly in terms of demographic characteristics. Furthermore, the results of the two-way repeated measures analysis of variance demonstrated that the interaction effect of group and time on body image concern and difficulties in emotion regulation was significant. Based on mean comparisons, the scores of body image concern and difficulties in emotion regulation in the experimental group decreased from the pretest to the posttest stage, and this reduction remained largely stable at the two-month follow-up stage, whereas no substantial changes were observed in the control group.

Conclusion: Based on the findings of the study, self-compassion training can reduce body image concern and difficulties in emotion regulation among women with overweight. Therefore, the application of this training in counseling centers, nutrition clinics, and psychological programs related to body image may be beneficial for improving women's relationship with their bodies and enhancing their ability to manage difficult emotions.

Keywords: *Self-compassion training, body image concern, difficulties in emotion regulation, overweight.*

1. Introduction

Overweight and obesity have become major public health concerns across the world and are associated not only with physical complications but also with substantial psychological difficulties. Among women, concerns related to body weight and physical appearance are often intensified by sociocultural pressures, media ideals, and internalized standards of attractiveness, leading to heightened vulnerability to psychological distress (Rodgers et al., 2023; Segal & Gunturu, 2024). Body image concern is considered one of the most prominent psychological issues experienced by women with overweight, as dissatisfaction with body shape and appearance may negatively affect self-esteem, interpersonal relationships, emotional functioning, and overall quality of life (Abdoli et al., 2025; Rodgers et al., 2023). Individuals who experience persistent body image concern often engage in excessive self-monitoring, social comparison, self-criticism, and avoidance behaviors, all of which contribute to psychological maladjustment and emotional suffering (Gilbert & Irons, 2009; Segal & Gunturu, 2024).

Body image concern refers to persistent preoccupation with perceived defects or dissatisfaction regarding physical appearance and body shape. Women with overweight are particularly vulnerable to experiencing shame, fear of negative evaluation, and internalized stigma associated with body weight and appearance (Haley et al., 2025; Rodgers et al., 2023). Psychological research has demonstrated that body dissatisfaction is associated with depression, anxiety, low self-worth, social withdrawal, emotional eating, and disordered eating behaviors (Abdoli et al., 2025; Segal & Gunturu, 2024). The systematic review conducted by Abdoli and colleagues highlighted that body image disturbance is strongly linked with emotion dysregulation, reduced self-esteem, and eating pathology in adults, indicating that body-related concerns should not be viewed merely as appearance-related problems but rather as multidimensional psychological phenomena with broad emotional and behavioral consequences (Abdoli et al., 2025). Moreover,

women with overweight frequently encounter social discrimination and weight bias, which further exacerbate negative self-perceptions and emotional vulnerability (Haley et al., 2025; Rodgers et al., 2023).

One of the major psychological mechanisms associated with body image concern is difficulty in emotion regulation. Emotion regulation refers to the processes through which individuals identify, manage, modify, and respond adaptively to emotional experiences. Deficits in emotion regulation are associated with impulsive behaviors, emotional instability, maladaptive coping strategies, and various forms of psychopathology (Ranjouri et al., 2025; Zafar et al., 2021). Individuals with poor emotion regulation abilities often struggle to tolerate distressing emotions such as shame, sadness, anxiety, or anger and may resort to maladaptive strategies including emotional suppression, avoidance, rumination, binge eating, or self-criticism (Gilbert & Irons, 2009; Zafar et al., 2021). Research has consistently shown that women who experience dissatisfaction with their bodies are more likely to demonstrate emotional dysregulation, particularly when confronted with appearance-related stressors and social evaluation (Abdoli et al., 2025; Woodfin et al., 2021).

Emotion regulation difficulties are especially important among women with overweight because emotional distress is frequently linked to unhealthy eating patterns and impaired psychological functioning. Emotional eating, body shame, and avoidance behaviors often emerge as attempts to cope with difficult emotional states (Segal & Gunturu, 2024). According to Zafar and colleagues, deficits in emotion regulation are significantly associated with various forms of psychopathology, indicating that ineffective emotional coping strategies contribute substantially to psychological maladjustment (Zafar et al., 2021). Similarly, Ranjouri and colleagues reported that adaptive emotion regulation strategies and self-compassion components are important predictors of psychological well-being and reduced distress, emphasizing the importance of interventions that target emotional processes and self-related cognitions (Ranjouri et al., 2025).

In recent years, self-compassion has attracted growing attention as a protective psychological construct that may help individuals cope more effectively with distress, shame, and self-criticism. Self-compassion involves treating oneself with kindness, understanding, and acceptance during times of suffering or perceived inadequacy rather than responding with harsh self-judgment (Gilbert & Irons, 2009). The concept of self-compassion encompasses three major components: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus overidentification with negative experiences (Gilbert & Irons, 2009). Individuals with higher levels of self-compassion are more likely to respond to failures, emotional pain, and body dissatisfaction in supportive and adaptive ways rather than through self-criticism and avoidance (Albertson et al., 2015; Ranjouri et al., 2025).

Theoretical perspectives suggest that self-compassion may reduce psychological distress by weakening maladaptive shame-based processes and increasing emotional resilience (Gilbert & Irons, 2009). Gilbert and Irons proposed that self-compassion activates the soothing and affiliative emotional regulation system, thereby reducing threat-based emotional responses such as shame, anxiety, and self-criticism (Gilbert & Irons, 2009). Since women with overweight frequently experience body-related shame and internalized criticism, self-compassion may serve as an important therapeutic approach for improving body image and emotional adjustment. Instead of evaluating themselves according to rigid appearance standards, individuals who practice self-compassion learn to approach their bodies and emotions with greater acceptance and care (Albertson et al., 2015; de Wet et al., 2020).

Empirical evidence supports the effectiveness of self-compassion interventions in improving body image and emotional functioning. Albertson and colleagues demonstrated that a brief self-compassion meditation intervention significantly reduced body dissatisfaction and body shame among women (Albertson et al., 2015). Similarly, de Wet and colleagues found that self-compassion meditations improved women's body image and reduced negative appearance-related emotions (de Wet et al., 2020). These findings suggest that cultivating self-compassion may alter the way individuals perceive and emotionally respond to their bodies, thereby reducing maladaptive appearance-related cognitions and emotional distress.

Additional research has shown that self-compassion interventions can improve broader aspects of psychological functioning, including anxiety, depression, perfectionism,

and emotion regulation (Woodfin et al., 2021). Woodfin and colleagues reported that a brief self-compassion intervention led to improvements in body image while simultaneously reducing anxiety and depressive symptoms, highlighting the transdiagnostic value of self-compassion-based approaches (Woodfin et al., 2021). Likewise, Jafari and Kiani demonstrated that self-compassion training improved emotion regulation and cognitive flexibility among adolescent girls with self-harming behaviors, indicating that self-compassion interventions may strengthen adaptive emotional processing capacities (Jafari & Kiani, 2024). These findings are particularly relevant for women with overweight because body dissatisfaction is often intertwined with maladaptive emotional regulation patterns and self-critical thinking.

Recent systematic reviews have further emphasized the growing evidence base supporting self-compassion interventions. Randhawa and Vella-Brodrick reviewed randomized controlled trials of online self-compassion interventions and concluded that such interventions consistently improve psychological well-being and emotional adjustment outcomes (Randhawa & Vella-Brodrick, 2025). Similarly, Haley and colleagues found that a brief self-compassion intervention significantly reduced internalized weight bias among women with higher body weight (Haley et al., 2025). Internalized weight bias is considered a central psychological factor contributing to body dissatisfaction, shame, emotional distress, and impaired mental health among women with overweight (Haley et al., 2025; Rodgers et al., 2023). Therefore, interventions that directly target self-criticism and body-related shame may be especially beneficial in this population.

Despite the growing literature on self-compassion and body image, several gaps remain in the existing body of research. First, many previous studies have focused primarily on general body dissatisfaction rather than specifically examining body image concern in women with overweight. Second, although emotion regulation difficulties have been identified as important correlates of body dissatisfaction, relatively few intervention studies have simultaneously investigated the effects of self-compassion training on both body image concern and emotion regulation difficulties. Third, much of the available evidence has been generated in Western societies, whereas cultural factors may significantly influence body ideals, emotional expression, and self-related attitudes. Consequently, examining the effectiveness of self-compassion interventions in different

sociocultural contexts is necessary to expand the generalizability of findings and inform culturally relevant psychological interventions (Rodgers et al., 2023; Segal & Gunturu, 2024).

Given the psychological vulnerability of women with overweight, the close relationship between body image concern and emotion regulation difficulties, and the increasing evidence supporting self-compassion-based interventions, investigating the effectiveness of self-compassion training in this population appears essential. Self-compassion training may help women replace self-criticism and shame with acceptance, emotional awareness, and supportive self-relating, thereby improving both body image and emotional functioning (Albertson et al., 2015; Haley et al., 2025; Ranjouri et al., 2025). Furthermore, since self-compassion promotes adaptive coping and emotional resilience, it may contribute to more stable and enduring psychological improvements over time (Randhawa & Vella-Brodrick, 2025; Woodfin et al., 2021).

Accordingly, the present study aimed to investigate the effectiveness of self-compassion training on body image concern and difficulties in emotion regulation among women with overweight.

2. Methods and Materials

2.1. Study design and Participant

The present study was applied in terms of purpose and quasi-experimental in terms of methodology, using a pretest–posttest design with a two-month follow-up and a control group. The statistical population included all women with overweight in Tehran in 2026. To recruit participants, after obtaining the necessary permissions and coordinating with counseling centers, nutrition clinics, sports clubs, and selected psychological service centers in Tehran, a public call for participation in the study was disseminated. Volunteer participants were initially screened according to the study inclusion criteria. Overweight status was determined based on body mass index (BMI), such that women with a BMI ranging from 25 to 29.9 were identified as individuals with overweight. After this stage, the screened participants completed the Body Image Concern Inventory and the Difficulties in Emotion Regulation Scale. In the present study, the mean score of the initial sample on the Body Image Concern Inventory was 54.30, and the mean score on the Difficulties in Emotion Regulation Scale was 106.40. Therefore, women who obtained scores higher than 54 on the Body Image Concern Inventory and higher than

106 on the Difficulties in Emotion Regulation Scale were considered eligible for the intervention phase.

Following the initial screening, 30 eligible women were selected through purposive sampling and then randomly assigned by lottery method into experimental and control groups, with 15 participants in each group. The sample size was determined based on the quasi-experimental nature of the study, a 95% confidence level, a medium effect size, and a statistical power of 0.83. Accordingly, the minimum required sample size for each group was estimated to be 12 participants; however, considering the possibility of participant attrition during the intervention process, 15 individuals were assigned to each group, resulting in a total final sample of 30 participants. The inclusion criteria included being female, residing in Tehran, having a BMI within the overweight range, obtaining scores above the mean of the initial sample on the Body Image Concern Inventory and the Difficulties in Emotion Regulation Scale, providing informed consent to participate in the study, ability to attend the training sessions regularly, possessing at least basic literacy skills to complete the questionnaires, not receiving simultaneous similar psychological interventions, and absence of severe psychiatric disorders or debilitating physical illnesses affecting the research process. The exclusion criteria included absence from more than two training sessions, withdrawal from the study, simultaneous participation in other similar psychological programs or interventions, incomplete completion of the questionnaires, emergence of acute physical or psychological conditions during the study, and lack of cooperation in completing the training assignments.

2.2. Measures

The Body Image Concern Inventory (BICI), developed by Littleton and colleagues in 2005, was used to assess participants' preoccupation and dissatisfaction with their physical appearance. The inventory consists of 19 items rated on a five-point Likert scale ranging from "never" to "always." The total score ranges from 19 to 95, with higher scores indicating greater body image concern and dissatisfaction with physical appearance. The questionnaire comprises two primary dimensions: the first dimension evaluates shame, dissatisfaction, and preoccupation with the body, whereas the second dimension assesses the impact of body image concerns on social functioning and interpersonal situations. The original developers reported a Cronbach's alpha coefficient of 0.93, indicating excellent internal

consistency. In Iran, the psychometric properties of the instrument were examined by Basak-Nejad and Ghaffari (2007), who reported satisfactory concurrent validity through significant correlations with measures of fear of negative appearance evaluation and general fear of negative evaluation. They also reported a Cronbach's alpha coefficient of 0.84 and a split-half reliability coefficient of 0.66, supporting the reliability and validity of the Persian version of the instrument. Subsequent studies conducted among adolescent female populations further confirmed the applicability and psychometric adequacy of the inventory in Iranian samples.

The Difficulties in Emotion Regulation Scale (DERS), developed by Gratz and Roemer in 2004, was employed to evaluate deficits in emotion regulation. The scale consists of 36 items rated on a five-point Likert scale ranging from 1 ("almost never") to 5 ("almost always"). The DERS assesses difficulties in six domains, including nonacceptance of emotional responses, difficulties engaging in goal-directed behaviors when distressed, impulse control difficulties during emotional distress, limited access to effective emotion regulation strategies, lack of emotional awareness, and lack of emotional clarity. A total score is obtained by summing the scores of all six subscales, with higher scores reflecting greater difficulties in emotion regulation. Previous international studies have confirmed the scale's psychometric properties, including internal consistency, test-retest reliability, construct validity, and predictive validity in both clinical and non-clinical populations. The Persian version of the DERS has also demonstrated satisfactory psychometric characteristics in Iranian clinical and non-clinical samples, as reported by Besharat (2007) and Besharat and Bazzazian (2014).

2.3. Intervention

After participant selection and random assignment into experimental and control groups, the pretest phase was administered to both groups, during which participants completed the Body Image Concern Inventory and the Difficulties in Emotion Regulation Scale. Subsequently, the experimental group participated in an eight-session self-compassion training program based on the self-compassion protocol proposed by Paul Gilbert (2009). The intervention was delivered in weekly sessions lasting 60 minutes each. The initial sessions focused on establishing a safe and nonjudgmental therapeutic environment, introducing the concept of self-compassion, and discussing the relationship

between overweight, body image concern, self-criticism, body shame, and emotional distress. The following sessions emphasized identifying self-critical thoughts related to body image and appearance, developing self-kindness instead of self-blame, and understanding common humanity as a means of reducing feelings of isolation and inadequacy associated with body dissatisfaction. Additional sessions addressed mindfulness toward bodily sensations and difficult emotions, compassionate responses to negative emotional experiences, and the relationship between body image concern and emotion regulation difficulties such as emotional eating, social avoidance, and emotional suppression. The final sessions focused on fostering a caring and respectful relationship with the body, reducing body-related hostility, encouraging health-oriented self-care behaviors, and consolidating acquired skills through the development of individualized maintenance plans. Homework assignments were provided throughout the intervention to facilitate the application of self-compassion techniques in daily life situations. The control group received no psychological or educational intervention during the study period and only participated in the assessment phases. Following completion of the intervention, posttest assessments were conducted for both groups, and a follow-up assessment was performed two months after the conclusion of the intervention.

2.4. Data Analysis

Data analysis was conducted using IBM SPSS Statistics. Descriptive statistics, including means, standard deviations, frequencies, and percentages, were calculated to summarize the data. Independent samples t-tests and Fisher's exact tests were used to examine the homogeneity of the experimental and control groups regarding demographic characteristics. Prior to conducting the main statistical analyses, assumptions of normality, homogeneity of variances, and sphericity were assessed using the Kolmogorov-Smirnov test, Levene's test, and Mauchly's test, respectively. To evaluate the effectiveness of self-compassion training on body image concern and difficulties in emotion regulation across the pretest, posttest, and follow-up stages, a two-way repeated measures analysis of variance was employed. The significance level for all statistical tests was set at 0.05.

3. Findings and Results

The mean and standard deviation of age in the experimental and control groups were 34.80 ± 5.42 and

35.26 ± 5.17 years, respectively. The results of the independent samples t-test indicated that there was no significant difference between the two groups in terms of age ($P > 0.05$). In addition, the results of Fisher's exact test regarding marital status, educational level, and employment

status demonstrated that there were no statistically significant differences between the experimental and control groups with respect to demographic characteristics ($P > 0.05$). Therefore, the two groups were homogeneous in terms of demographic characteristics.

Table 1

Demographic Characteristics of the Participants

Variables	Components	Experimental (n = 15) Frequency (%)	Control (n = 15) Frequency (%)	P-value
Marital status	Single	5 (33.33)	4 (26.67)	0.705
	Married	10 (66.67)	11 (73.33)	
Educational level	Diploma	4 (26.67)	3 (20.00)	0.684
	Bachelor's degree	8 (53.33)	9 (60.00)	
	Master's degree and above	3 (20.00)	3 (20.00)	
Employment status	Employed	7 (46.67)	8 (53.33)	0.713
	Homemaker	8 (53.33)	7 (46.67)	

According to Table 2, the descriptive indices of body image concern and difficulties in emotion regulation in the experimental and control groups across the pretest, posttest, and follow-up stages are presented. As can be observed, the mean scores of body image concern in the experimental group decreased from the pretest to the posttest stage, and this reduction was largely maintained during the follow-up stage. Similarly, the mean scores of difficulties in emotion

regulation in the experimental group declined from the pretest to the posttest stage, and this reduction remained relatively stable during the follow-up stage. In contrast, the mean scores of the control group in both variables did not demonstrate substantial changes. Therefore, the pattern of descriptive changes indicates that self-compassion training reduced body image concern and difficulties in emotion regulation among women with overweight.

Table 2

Descriptive Indices of Body Image Concern and Difficulties in Emotion Regulation in the Experimental and Control Groups

Variables	Group	Pretest Mean ± SD	Posttest Mean ± SD	Follow-up Mean ± SD	Minimum	Maximum
Body image concern	Experimental	63.46 ± 6.31	48.20 ± 5.84	49.13 ± 5.96	42	72
	Control	62.80 ± 6.18	61.93 ± 6.42	62.26 ± 6.27	52	73
Difficulties in emotion regulation	Experimental	114.73 ± 8.92	91.40 ± 8.35	92.06 ± 8.48	82	128
	Control	113.86 ± 8.74	112.93 ± 8.96	113.20 ± 8.83	98	130

To examine the effectiveness of self-compassion training on body image concern and difficulties in emotion regulation, a two-way repeated measures analysis of variance was conducted. Prior to performing the main analysis, statistical assumptions were examined. The results of the Kolmogorov-Smirnov test indicated that the distribution of the study variables at the pretest, posttest, and follow-up stages did not significantly deviate from normality ($P > 0.05$). Furthermore, the results of Levene's test demonstrated that the assumption of homogeneity of variances was satisfied for the study variables ($P > 0.05$). The results of Mauchly's test also confirmed that the assumption of sphericity was met for body image concern and difficulties in emotion regulation; therefore, the within-

subjects effects were reported based on the assumption of sphericity.

The results of the two-way repeated measures analysis of variance presented in Table 3 indicated that the main effect of group on body image concern was significant, suggesting that the mean scores of body image concern differed significantly between the experimental and control groups. In addition, the main effect of time was significant, indicating that the mean scores of body image concern changed significantly across the pretest, posttest, and follow-up stages. Moreover, the interaction effect of group and time was also significant; therefore, the pattern of changes in body image concern differed between the two groups, and the observed reduction in the experimental group compared

with the control group was attributable to the implementation of self-compassion training.

The findings also demonstrated that the main effect of group on difficulties in emotion regulation was significant. In other words, there was a significant difference between the experimental and control groups regarding the mean scores of difficulties in emotion regulation. The main effect of time was likewise significant, indicating that the scores of

difficulties in emotion regulation changed across the measurement stages. Furthermore, the interaction effect of group and time was significant, suggesting that self-compassion training led to a significant reduction in difficulties in emotion regulation in the experimental group, and this change was largely maintained during the follow-up stage.

Table 3

Results of Two-Way Repeated Measures Analysis of Variance Examining the Effect of Self-Compassion Training on Body Image Concern and Difficulties in Emotion Regulation

Variable	Source of Variation	Sum of Squares	df	Mean Square	F	P-value	Effect Size
Body image concern	Group	1684.42	1	1684.42	17.84	<0.001	0.389
	Time	2478.36	2	1239.18	39.62	<0.001	0.586
	Group × Time	2196.74	2	1098.37	34.91	<0.001	0.555
Difficulties in emotion regulation	Group	2864.18	1	2864.18	18.73	<0.001	0.401
	Time	3746.52	2	1873.26	41.48	<0.001	0.597
	Group × Time	3184.64	2	1592.32	36.85	<0.001	0.568

Based on Table 3, the interaction effect of group and time for body image concern was significant ($F = 34.91$, $P < 0.001$). This finding indicates that the changes in body image concern scores across the three measurement stages differed significantly between the experimental and control groups. Considering the means presented in Table 2, it can be concluded that self-compassion training reduced body image concern in the experimental group. The effect size of the interaction between group and time for body image concern was 0.555, indicating a substantial impact of the intervention on this variable.

Similarly, the interaction effect of group and time for difficulties in emotion regulation was significant ($F = 36.85$, $P < 0.001$). This result suggests that the pattern of changes in difficulties in emotion regulation differed between the experimental and control groups. Given the reduction in the mean scores of difficulties in emotion regulation in the experimental group from the pretest to the posttest stage and the relative maintenance of this reduction during follow-up, it can be concluded that self-compassion training reduced difficulties in emotion regulation among women with overweight. The effect size of the interaction between group and time for difficulties in emotion regulation was 0.568, indicating a considerable effect of the intervention on this variable.

Overall, the findings of the study demonstrated that self-compassion training, compared with the control group, significantly reduced body image concern and difficulties in

emotion regulation among women with overweight. Furthermore, the relative stability of scores during the follow-up stage indicates that the effects of the intervention were largely maintained after the completion of the training sessions. Therefore, the study hypothesis regarding the effectiveness of self-compassion training on body image concern and difficulties in emotion regulation in women with overweight was confirmed.

4. Discussion

The present study aimed to investigate the effectiveness of self-compassion training on body image concern and difficulties in emotion regulation among women with overweight. The findings demonstrated that self-compassion training significantly reduced body image concern and difficulties in emotion regulation in the experimental group compared with the control group. Furthermore, the persistence of these changes during the two-month follow-up period indicated the relative stability of the intervention effects over time. These findings suggest that self-compassion training can be considered an effective psychological intervention for improving emotional functioning and reducing maladaptive appearance-related concerns among women with overweight.

One of the major findings of the present study was the significant reduction in body image concern among participants who received self-compassion training. This finding is consistent with previous studies showing that self-

compassion interventions improve body image and reduce body dissatisfaction in women (Albertson et al., 2015; de Wet et al., 2020; Haley et al., 2025). Albertson and colleagues reported that self-compassion meditation significantly reduced body dissatisfaction and body shame in women by promoting acceptance and reducing harsh self-judgment (Albertson et al., 2015). Similarly, de Wet and colleagues found that self-compassion practices improved women's perceptions of their bodies and reduced appearance-related distress (de Wet et al., 2020). The consistency between the present findings and prior evidence suggests that self-compassion may directly influence maladaptive cognitive and emotional processes underlying body image concern.

The effectiveness of self-compassion training in reducing body image concern may be explained through several psychological mechanisms. Women with overweight frequently experience self-criticism, shame, and fear of negative social evaluation due to societal standards emphasizing thinness and physical attractiveness (Rodgers et al., 2023; Segal & Gunturu, 2024). These individuals often internalize negative societal messages regarding body weight, which contributes to chronic dissatisfaction with appearance and heightened emotional distress. Self-compassion training encourages individuals to respond to perceived inadequacies with kindness, understanding, and acceptance rather than criticism and hostility (Gilbert & Irons, 2009). Through repeated practice of self-kindness and mindfulness, participants may gradually shift from self-condemnation to a more supportive and balanced perception of themselves and their bodies.

Another possible explanation for the reduction in body image concern is that self-compassion decreases maladaptive social comparison and feelings of isolation. According to Gilbert and Irons, self-compassion activates a soothing emotional regulation system that reduces threat-based emotional responses such as shame and self-criticism (Gilbert & Irons, 2009). In the present intervention, participants learned that body dissatisfaction and emotional suffering are common human experiences rather than personal failures. This perspective may have reduced feelings of inadequacy and social isolation associated with overweight and body image concerns. As a result, participants may have become less preoccupied with external appearance standards and more focused on self-care and emotional well-being.

The findings of the present study are also in line with the results reported by Haley and colleagues, who demonstrated

that self-compassion interventions reduce internalized weight bias among women with higher body weight (Haley et al., 2025). Internalized weight bias is considered one of the primary contributors to body dissatisfaction, shame, and psychological distress among individuals with overweight. When women repeatedly judge themselves according to unrealistic appearance ideals, they may develop persistent beliefs of inadequacy and worthlessness. Self-compassion training may weaken these maladaptive beliefs by promoting unconditional self-acceptance and emotional support. Consequently, participants become less likely to define their personal worth solely based on body weight or physical appearance.

The present study also demonstrated that self-compassion training significantly reduced difficulties in emotion regulation among women with overweight. This finding is consistent with previous research indicating that self-compassion is positively associated with adaptive emotional functioning and negatively associated with emotional dysregulation (Jafari & Kiani, 2024; Ranjouri et al., 2025). Jafari and Kiani found that self-compassion training improved emotion regulation abilities among adolescent girls with self-harming behaviors, suggesting that self-compassion interventions strengthen individuals' capacity to manage distressing emotions effectively (Jafari & Kiani, 2024). Likewise, Ranjouri and colleagues reported that self-compassion components significantly predict adaptive emotion regulation strategies and psychological well-being (Ranjouri et al., 2025). The current findings extend these results by demonstrating that self-compassion training is also beneficial for women with overweight who experience emotional difficulties related to body dissatisfaction and weight-related distress.

The reduction in emotion regulation difficulties may be explained by the mindfulness component of self-compassion training. Individuals with poor emotion regulation abilities often attempt to suppress, avoid, or overidentify with negative emotions, which intensifies emotional distress over time (Zafar et al., 2021). In contrast, self-compassion training teaches individuals to observe their emotions nonjudgmentally and respond to emotional pain with acceptance and care rather than avoidance or impulsive reactions (Gilbert & Irons, 2009). During the intervention sessions, participants learned to identify and acknowledge difficult emotions such as shame, sadness, anxiety, and frustration without excessive self-criticism. This process may have increased emotional awareness and reduced

maladaptive emotional responses, thereby improving emotion regulation capacities.

Another important mechanism may involve the reduction of shame and self-criticism. Previous studies have emphasized that self-criticism is strongly associated with emotional dysregulation, anxiety, depression, and body dissatisfaction (Gilbert & Irons, 2009; Woodfin et al., 2021). Women with overweight often experience repeated cycles of self-blame and emotional distress related to eating behaviors, appearance concerns, and social judgment. Self-compassion training interrupts this cycle by replacing punitive self-evaluations with supportive internal dialogue and compassionate coping strategies. As participants learn to respond more gently to perceived failures and emotional distress, they may experience greater emotional stability and improved ability to regulate difficult feelings.

The present findings are also compatible with the results of Woodfin and colleagues, who demonstrated that self-compassion interventions improve body image while simultaneously reducing anxiety and depressive symptoms (Woodfin et al., 2021). Since anxiety and depression are closely linked with emotional dysregulation, improvements in emotional functioning may contribute indirectly to better body image outcomes. Women who become more capable of regulating distressing emotions may experience less emotional eating, reduced social avoidance, and fewer negative appearance-related thoughts. Consequently, improvements in emotion regulation may reinforce improvements in body image concern and psychological well-being.

The maintenance of intervention effects during the follow-up stage is another important finding of the present study. The relative stability of improvements in body image concern and emotion regulation difficulties suggests that self-compassion training may produce enduring psychological changes rather than temporary symptom reduction. This finding is consistent with systematic reviews indicating that self-compassion interventions often yield sustainable improvements in well-being and emotional adjustment (Randhawa & Vella-Brodick, 2025). One possible explanation is that self-compassion training provides participants with practical cognitive and emotional skills that can continue to be applied after the intervention has ended. Techniques such as mindful awareness, compassionate self-talk, emotional acceptance, and reduction of self-judgment may become integrated into participants' daily coping patterns over time.

The findings of the present study are particularly important given the increasing prevalence of overweight and obesity and the psychological burden associated with these conditions (Segal & Gunturu, 2024). Women with overweight frequently experience stigmatization, discrimination, and emotional suffering that negatively affect mental health and quality of life (Rodgers et al., 2023). Traditional weight-focused interventions often emphasize dietary control and behavioral modification while neglecting the emotional and psychological dimensions of overweight. The present findings suggest that interventions targeting self-compassion and emotional functioning may complement physical health approaches by addressing the underlying psychological processes contributing to body dissatisfaction and emotional distress.

Moreover, the results support the theoretical framework proposed by Gilbert and Irons regarding the role of compassion in emotional regulation and psychological resilience (Gilbert & Irons, 2009). According to this perspective, self-compassion promotes emotional safety and decreases activation of threat-based emotional systems associated with shame and self-criticism. In women with overweight, who often experience chronic appearance-related threat and social evaluation concerns, strengthening compassionate self-relating may be especially beneficial. By reducing internal hostility and increasing emotional acceptance, self-compassion training may help individuals establish a healthier and more caring relationship with their bodies and emotions.

5. Conclusion

Overall, the findings of the present study indicate that self-compassion training is an effective intervention for reducing body image concern and improving emotion regulation among women with overweight. The intervention appears to influence both cognitive-emotional processes related to body dissatisfaction and broader emotional regulation capacities. Therefore, self-compassion-based interventions may represent a valuable psychological approach for improving mental health and emotional well-being in this population.

6. Limitations and Suggestions

One of the limitations of the present study was the relatively small sample size and the restriction of participants to women with overweight in Tehran, which may limit the generalizability of the findings to other

populations, including men, adolescents, or individuals from different cultural and socioeconomic backgrounds. In addition, the study relied exclusively on self-report questionnaires, which may be influenced by response biases such as social desirability and subjective interpretation. Another limitation was the relatively short follow-up period of two months, which restricted the evaluation of long-term intervention effectiveness. Furthermore, variables such as severity of body dissatisfaction, eating behaviors, previous psychological treatment history, and social support were not controlled and may have influenced the study outcomes.

Future research is recommended to examine the effectiveness of self-compassion interventions in larger and more diverse populations, including different age groups, genders, and clinical populations. Longitudinal studies with longer follow-up periods would be valuable for assessing the long-term stability of intervention effects. It is also suggested that future studies compare self-compassion training with other therapeutic approaches such as cognitive behavioral therapy, acceptance and commitment therapy, or mindfulness-based interventions. Additionally, investigating mediating variables such as self-esteem, body shame, emotional eating, and internalized weight bias may provide a more comprehensive understanding of the mechanisms underlying the effectiveness of self-compassion interventions.

From a practical perspective, the findings of the present study suggest that self-compassion training can be incorporated into counseling centers, nutrition clinics, obesity treatment programs, and mental health services for women with overweight. Psychologists, counselors, and healthcare providers may benefit from integrating self-compassion techniques into interventions targeting body dissatisfaction and emotional difficulties. Educational workshops focused on self-kindness, emotional awareness, mindfulness, and reduction of self-criticism may help women develop healthier emotional coping strategies and more positive relationships with their bodies. Furthermore, incorporating self-compassion principles into public health and preventive mental health programs may contribute to reducing the psychological burden associated with overweight and body-related stigma.

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

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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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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