

# Self-Compassion Therapy as a Transformative Intervention for Adolescent Girls' Body Image

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## Abstract

**Background:** Adolescent girls often struggle with negative body image, leading to rumination and distress. The objective of this investigation was to examine the potential of self-compassion therapy (SCT) to mitigate rumination and bolster distress tolerance in adolescent girls experiencing body image concerns.

**Methods:** This experimental study comprised all adolescent girls in Ahvaz, Iran, who reported body image concerns in 2023. A sample of 30 adolescent girls was drawn using multi-stage cluster sampling and then randomly allocated to either an experimental (n=15) or a control (n=15) group. Data collection was facilitated using the Ruminative Response Scale and Distress Tolerance Scale. The experimental group participated in a ten-week structured self-compassion training (SCT) program, with one 60-minute session per week. The control group received no intervention. Analysis of covariance (ANCOVA) was employed to assess the impact of SCT on the dependent variables, using SPSS version 25.

**Results:** At pre-test, both groups reported similar levels of rumination (SCT group: M=64.53, SD=7.59; control group: M=68.26, SD=9.46) and distress tolerance (SCT group: M=31.06, SD=6.86; control group: M=32.06, SD=5.23). After the 10-week SCT intervention, the experimental group showed a significant reduction in rumination (M=36.26, SD=5.57) and a significant increase in distress tolerance (M=66.60, SD=5.02) compared with the control group (P<0.001). SCT was found to be effective in significantly reducing rumination and increasing distress tolerance in adolescent girls with body image concerns (P<0.001).

**Conclusion:** SCT has demonstrated its efficacy in mitigating rumination and enhancing distress tolerance among adolescent girls confronting body image challenges. The study findings underscored the potential of SCT as a promising intervention for this vulnerable population.

**Keywords:** Self-compassion, Rumination, Distress, Adolescent, Women

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## 1. Introduction

Adolescence, a period of significant physical and psychological change, is a time of heightened vulnerability to body image concerns (1). Media and cultural pressures often promote unrealistic beauty standards, leading adolescent girls to internalize these ideals and compare themselves unfavorably to idealized images (2). Such comparisons may contribute to negative body image, defined by dissatisfaction with one's physical appearance (3).

Body image, a multifaceted construct encompassing perceptions of body shape, size, and overall appearance, exerts a significant influence on self-esteem and general well-being (4, 5). Negative body image is associated with various psychological and behavioral difficulties, including diminished self-esteem, anxiety, depression, disordered eating patterns, and substance misuse (6, 7). In an attempt

to align with prevailing societal beauty standards, individuals experiencing negative body image may adopt detrimental behaviors such as restrictive dieting, excessive exercise, or pursue cosmetic interventions (8, 9).

Body dysmorphic disorder, characterized by excessive preoccupation with perceived physical defects, is frequently associated with substantial distress across multiple life domains. Intrusive and unwanted thoughts about their appearance can lead to a diminished quality of life and impaired daily functioning (10). One type of intrusive thought is rumination, defined as repetitive, negative thoughts that tend to persist. Research consistently supported the role of rumination and intrusive thoughts in perpetuating and exacerbating anxiety (11). Rumination is characterized by persistent and repetitive focus on a specific thought or theme, encompassing a range of conscious cognitions

centered on that theme. These recurrent thoughts intrude into awareness involuntarily, diverting attention and goals (12). As an avoidant coping strategy, rumination may serve as a means of escaping from unwanted situations, reinforcing negative mood states. Over time, rumination can contribute to psychological distress and maladaptive behaviors, playing a significant role in the maintenance of psychopathology (13). When individuals experience psychological distress, they may respond in various ways, including denying their feelings, avoiding thoughts about their emotions, rapidly changing their environment or mood, or engaging in rumination (14).

The association between distress tolerance and body dysmorphic disorder is of particular relevance, given that individuals with the disorder often demonstrate markedly low distress tolerance. As a key aspect of adolescent development, distress tolerance reflects an individual's capacity to withstand negative experiences and manage emotional pressures. This multidimensional construct encompasses several components, including the ability to endure distressing states, appraise one's capacity to accept emotional experiences, and use effective emotion regulation strategies (15). Adolescents with lower levels of distress tolerance tend to find emotional distress to be overwhelming and intolerable. They often engage in avoidance behaviors as a means of escaping painful experiences and seeking temporary relief. However, they frequently struggle to focus on anything other than their distress (16). Individuals with low distress tolerance often view negative emotions as unacceptable aspects of themselves, leading to feelings of shame and a constant drive to avoid or suppress these emotions (17). This avoidance behavior can hinder their ability to develop effective coping mechanisms and may contribute to the development of various psychological difficulties (18). Empirical evidence indicated that distress tolerance is a significant factor in individuals' appraisal of and responses to stress (19, 20).

Self-compassion has been identified as a protective factor against the negative impact of sociocultural pressures to conform to beauty ideals on women's positive body image (21). Specifically, the core component of self-compassion—responding to oneself with kindness and understanding rather than judgment and self-criticism—may buffer women from the

detrimental effects of cultural influences, fostering a more flexible and accepting relationship with their bodies (22). Self-compassion therapy (SCT), alongside other emerging third-wave psychological approaches, has been developed with the aim of alleviating suffering, distress, and worry. Gilbert (23) defined compassion as sensitivity to suffering in oneself and others, combined with a motivation to alleviate the suffering.

Compassion has also been defined as the capacity to experience and be affected by the suffering of others, in a way that makes one's own problems and hardships more bearable. Self-compassion arises when an individual recognizes that certain personal behaviors, emotions, and thoughts are influenced by environmental factors such as the behaviors and expectations of others. Understanding this helps individuals to be less judgmental and less prone to negative self-talk about their mistakes and shortcomings. Consequently, one of the prominent approaches in treating individuals with negative self-views is compassion-focused therapy. Therefore, this study aimed to examine the efficacy of SCT in reducing rumination and improving distress tolerance in adolescent females experiencing body image concerns.

## 2. Methods

### 2.1. Design

A pre-test, post-test control group design was employed in this experimental study to evaluate the efficacy of an intervention targeting body image concerns in adolescent girls.

### 2.2. Participants

The study population consisted of all female adolescents in Ahvaz, Iran, during 2023. A multi-stage cluster random sampling method was employed to select a sample of 30 participants from two randomly chosen high schools in Ahvaz, Iran. To ensure unbiased assignment to the experimental and control groups, a random number generator was used. The study participants were assigned unique identification numbers, which were then randomly ordered. The first 15 participants in the randomized sequence were assigned to the experimental group, and the remaining 15 to the control group. A priori power analysis conducted using G\*Power determined that a sample size of 30

would provide sufficient statistical power (0.95) to detect a significant difference at an alpha level of 0.05. While a smaller sample size of 3 per group might be technically sufficient based on the power analysis, a larger sample size of 15 per group was chosen to increase the generalizability of the findings and to account for potential dropout rates. Additionally, a larger sample size can provide more precise estimates of the treatment effect and reduce the margin of error in the analysis. Post-intervention analysis revealed a significant reduction in rumination among participants in the SCT group ( $M=36.26$ ,  $SD=5.57$ ) compared with the control group ( $M=64.33$ ,  $SD=7.88$ ) (24). Girls who scored above the mean on a body image concern questionnaire were included in the study. The participants were required to be between 15 and 18 years old, provide informed consent, not participate in other concurrent interventions, and possess the physical and mental capacity to participate in the study. The exclusion criteria were: missing therapy sessions, failing to complete questionnaires, or expressing a desire to discontinue therapy.

### 2.3. Procedure

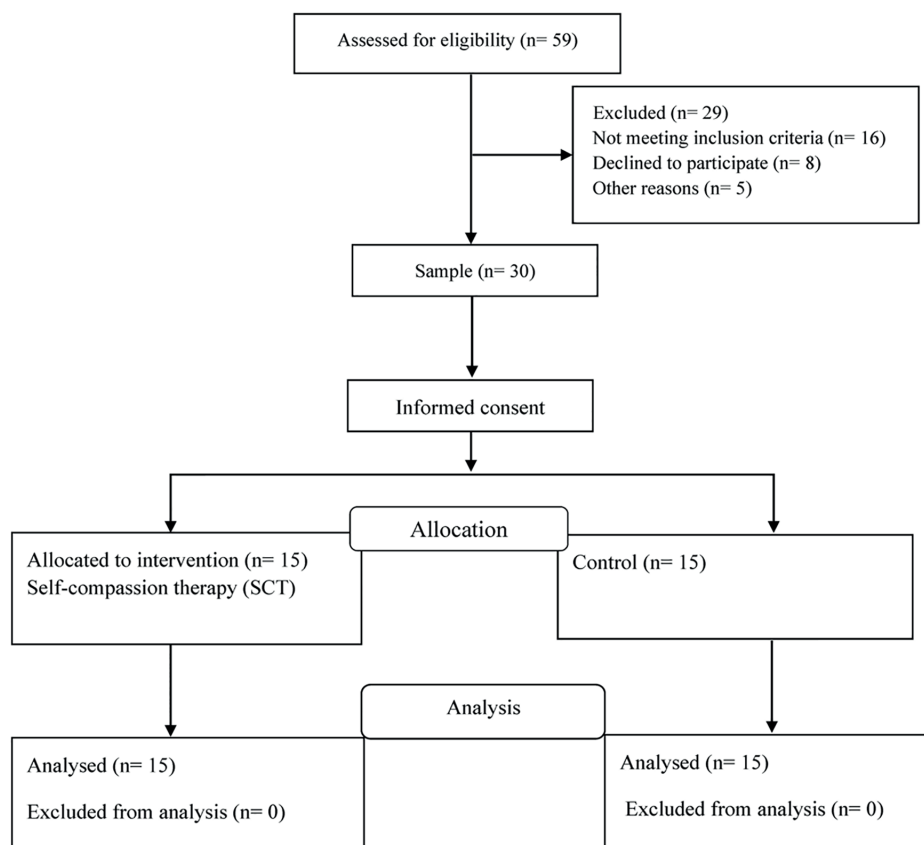
Following the acquisition of necessary research

permits, the researcher obtained a list of all girls' high schools in Ahvaz, Iran, and randomly selected two schools. With the cooperation of school administrators, the Body Image Concern questionnaire was administered to all students, and those scoring below the mean were included in the study. The participants were randomly allocated to either an experimental ( $n=15$ ) or a control ( $n=15$ ) group (Figure 1). Prior to the intervention, both groups completed pre-test assessments using the Rumination Response Scale and the Distress Tolerance Scale. The experimental group then participated in a 10-week SCT intervention, consisting of weekly 60-minute sessions (summarized in Table 1) (25), while the control group received no intervention. The first author, who had received specialized training in SCT, facilitated the sessions at a counseling center in Ahvaz, Iran. Post-test assessments were administered to both groups following the intervention, and pre- and post-test data were collected and analyzed.

### 2.4. Research Tools

#### 2.4.1. The Ruminative Response Scale (RRS)

RRS, a 22-item self-report measure developed



**Figure 1:** The figure shows the CONSORT flow diagram of the research.

**Table 1:** Summary of self-compassion therapy (SCT) sessions

Sessions	Content
1	Administration of the pre-test, introduction of research participants to each other, and discussion of the importance of self-compassion and its application in daily life.
2	Definition of self-compassion, explanation of the process of self-compassion, and discussion of its impact on daily functioning. Homework assignment: Participants were asked to write about a compassionate experience they had and share it in the next session.
3	Teaching strategies to increase positive experiences, mindfulness training for positive experiences, and visualization techniques to create positive experiences.
4	Teaching ways to cultivate self-compassion, mindfulness training for negative experiences, and strategies for taking control of one's life, including proper nutrition, exercise, and self-care.
5	Identifying and challenging negative self-evaluations, learning strategies to modify behavioral and physiological responses to emotions.
6	Assessing and expressing self-compassion, learning behavioral modification techniques using environmental reinforcers, education, relaxation, and opposite action.
7	Mindful attention to self-compassion, full attention to positive and negative behaviors without judgment, and appropriate expression of emotions.
8	Re-evaluating and expressing self-compassion, learning to assess and attend to the consequences of actions, and striving for appropriate and inappropriate expressions of self-compassion.
9	Learning to modify negative self-compassion through actions that contradict the experienced self-compassion.
10	Summary of the previous sessions and administration of the post-test.

by Nolen-Hoeksema and colleagues (26), assesses individual responses to dysphoric mood. Comprising two subscales, reflective pondering and brooding, RRS uses a four-point Likert scale (1="never" to 4="often"), yielding total scores ranging from 22 to 88. Aghebati and co-workers (27) reported high internal consistency (Cronbach's  $\alpha=0.90$ ) and excellent content validity (Content Validity Index [CVI]=0.99; Content Validity Ratio [CVR]=0.97) for RRS. In the present study, the scale demonstrated strong internal consistency reliability (Cronbach's  $\alpha=0.83$ ).

#### 2.4.2. The Distress Tolerance Scale (DTS)

DTS, a 15-item self-report instrument developed by Simons and Gaher (28), measures individual distress tolerance. DTS comprises four subscales: tolerance of distressing emotions, absorption in negative emotions, appraisal of capacity and distress experienced, and regulation of emotions. Items are rated on a five-point Likert scale (1="totally agree" to 5="totally disagree"), yielding total scores ranging from 15 to 75, with higher scores indicating greater distress tolerance. Acceptable internal consistency (Cronbach's  $\alpha=0.77$ ) has been reported for DTS (29). Moreover, Mousavi and co-workers (15) demonstrated good construct validity, reporting a CVI of 0.96 and a CVR of 0.93. In the present study, DTS exhibited good reliability (Cronbach's  $\alpha=0.79$ ).

#### 2.5. Statistical Analyses

Data were analyzed using SPSS version 25. Descriptive statistics (mean and standard deviation) were calculated to summarize sample characteristics. The normality of data was assessed using the Kolmogorov-Smirnov test, and homogeneity of variance was evaluated using Levene's test. Inferential statistical analyses were conducted to test the research hypotheses. Chi-square tests were used for comparisons of demographic variables. Analysis of covariance (ANCOVA) was employed to assess the effect of SCT on the dependent variables (rumination and distress tolerance), controlling for potential confounding variables. Paired t-tests were used to compare pre- and post-test scores within each group.

### 3. Results

The study included 30 adolescent girls aged 15-18 experiencing body image concerns. The mean age of adolescent in the experimental and control groups was 16.77 ( $\pm 2.21$ ) and 17.21 ( $\pm 1.75$ ) years, respectively (0.550). The experimental group consisted of 4 tenth-graders (26.67%), 5 eleventh-graders (33.33%), and 6 twelfth-graders (40.00%). The control group included 3 tenth-graders (20.0%), 5 eleventh-graders (33.33%), and 7 twelfth-graders (46.67%) ( $P=0.896$ ). There were no statistically significant differences between the experimental and control groups with respect to demographic variables.



**Table 2:** Mean and standard deviation (SD) of rumination and distress tolerance

Variable	Phase	SCT group		Control group		P (between group)
		Mean	SD	Mean	SD	
Rumination	Pre-test	64.53	7.59	68.26	9.46	0.244
	Post-test	36.26	5.57	64.33	7.88	0.001
	P (within group)	0.001		0.227		-
Distress tolerance	Pre-test	31.06	6.86	32.06	5.23	0.657
	Post-test	66.60	5.02	29.73	4.60	0.001
	P (within group)	0.001		0.206		-

SCT: Self-compassion Therapy; SD: Standard Deviation

Table 2 displays the descriptive statistics for pre- and post-test rumination and distress tolerance scores for both the experimental and control groups. A significant between-groups difference emerged ( $P < 0.001$ ). Specifically, the experimental group demonstrated significantly lower post-test rumination scores ( $M = 36.26$ ,  $SD = 5.57$ ) and significantly higher post-test distress tolerance scores ( $M = 66.60$ ,  $SD = 5.02$ ) compared with the control group (rumination:  $M = 64.33$ ,  $SD = 7.88$ ; distress tolerance:  $M = 29.73$ ,  $SD = 4.60$ ).

There were no statistically significant changes in rumination or distress tolerance observed in the control group. Pre-test scores for rumination and distress tolerance were  $M = 68.26$  ( $SD = 9.46$ ) and  $M = 32.06$  ( $SD = 5.23$ ), respectively. Post-intervention, these scores were  $M = 64.33$  ( $SD = 7.88$ ) for rumination and  $M = 29.73$  ( $SD = 4.60$ ) for distress tolerance. In contrast, the SCT group demonstrated significant improvements. The pre-test mean score for rumination was  $64.53$  ( $SD = 7.59$ ), which decreased significantly to  $36.26$  ( $SD = 5.57$ ) post-intervention ( $P < 0.001$ ). Similarly, the pre-test mean score for distress tolerance was  $31.06$  ( $SD = 6.86$ ), which increased significantly to  $66.60$  ( $SD = 5.02$ ) following the SCT intervention ( $P < 0.001$ ).

#### 4. Discussion

This study examined the efficacy of SCT in mitigating rumination and augmenting distress tolerance among adolescent females grappling with body image concerns. Findings revealed that SCT effectively reduced rumination in this population, corroborating previous (30, 31). These findings aligned with the established inverse relationship between self-compassion and rumination. Specifically, individuals with higher levels of self-compassion tend to ruminate less, and vice versa. The present study demonstrated that SCT intervention resulted in a decrease in rumination

and negative self-thoughts within the experimental group. In fact, SCT can help individuals develop more balanced emotional responses to negative events (31). Furthermore, this therapy can reduce sadness and anxiety and decrease the maladaptive coping strategy of rumination, thereby enhancing individuals' ability to cope with challenging situations. Elevated self-compassion may facilitate the adoption of more adaptive coping mechanisms, including acceptance and self-understanding, thereby diminishing reliance on rumination. This shift in coping strategies can subsequently contribute to a reduction in negative emotional states such as anxiety and depression. Consequently, SCT can be considered an effective method for reducing rumination, and the present study supports this view (30). Consistent with the existing literature, this study confirmed the efficacy of SCT in reducing rumination among adolescent girls.

Moreover, the study findings indicated that SCT effectively enhanced distress tolerance in the target population. This outcome aligned with previous research (15, 32). These findings support the established positive association between self-compassion and distress tolerance. Specifically, individuals with higher levels of self-compassion tend to exhibit greater distress tolerance, and a decline in self-compassion is typically accompanied by a decrease in distress tolerance. As the study findings indicated, the experimental group demonstrated increased distress tolerance after receiving SCT. As previous studies have shown, self-compassion therapy, due to its close relationship with psychological well-being, can foster optimism and a more adaptive approach to challenges (15, 32). These studies have demonstrated that individuals who exhibit greater kindness towards themselves display higher levels of psychological health compared with lower self-compassion ones (23). Therefore, it can be concluded that self-compassion can enhance individuals' psychological

well-being, enabling them to employ more effective coping strategies in stressful situations. This study investigated the influence of SCT on distress tolerance among adolescent girls experiencing body image concerns. The findings supported the conclusion that cultivating self-compassion can enhance their capacity to tolerate distress. This outcome aligned with existing scholarly evidence demonstrating a positive association between self-compassion and distress tolerance (16, 33).

#### 4.1. Limitations

The present study only focused on Ahvaz, Iran, that may limit the generalizability of its findings to other populations. Factors such as cultural norms, societal expectations, and access to healthcare resources can significantly influence the prevalence of body image concerns and the effectiveness of intervention strategies. Therefore, caution should be exercised when generalizing these results to diverse cultural and geographical contexts. Additionally, the implementation of the SCT intervention was conducted in a specific counseling center setting, which may not be representative of all potential delivery methods (e.g., online, group-based). Future research should explore the applicability of SCT to diverse populations and delivery modalities.

## 5. Conclusions

This study provides evidence for the efficacy of SCT in mitigating rumination and enhancing distress tolerance among adolescent girls experiencing body image concerns. These findings highlighted the potential of SCT as a valuable intervention for this vulnerable population. Future research should investigate the long-term impact of SCT and its applicability across diverse cultural and socioeconomic settings. Furthermore, elucidating specific mechanisms through which SCT exerts its beneficial effects would enhance our understanding of its therapeutic potential.

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## Authors' Contribution

Fatemeh Masoudizadeh: Contributed substantially to the conception and design of the study and the interpretation of data, drafted the manuscript and critically reviewed it for important intellectual content. Fariba Hafezi: Contributed substantially to the methodology development and data analysis, critically reviewed the manuscript for important intellectual content. Sahar Safarzadeh: Contributed substantially to data collection, management, and analysis, with substantial input on the statistical analysis, critically reviewed the manuscript. Zahra Dasht Bozorgi: Provided substantial clinical insight and expertise during the design of the study and contributed substantially to the interpretation of data and the discussion section, critically reviewed and edited the manuscript for clarity and coherence. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work, such that the questions related to the accuracy or integrity of any part of the work.

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**Conflict of interest:** None declared.

## Ethical Approval

This study was approved by the Ethics Committee of Islamic Azad University- Ahvaz Branch, Iran with the code of IR.IAU.AHVAZ.REC.1403.297. Also, written informed consent was obtained from the participants.

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