



A Comparison of the Effectiveness of Positive Psychotherapy and Acceptance and Commitment Therapy on the Self-Esteem of Female Students with a History of Attempted Suicide in Bafgh

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Abstract

Background: Suicide is a devastating event for individuals, families, and society at large. Accordingly, youth suicide represents one of the most tragic phenomena, necessitating urgent attention from all stakeholders to address the underlying issues that render life unbearable for these individuals. Accordingly, the present study aimed to assess the effectiveness of two psychotherapeutic approaches, positive psychotherapy (PPT) and acceptance and commitment therapy (ACT), on the self-esteem of female students with a history of attempted suicide in Bafgh, Kerman Province, Iran in 2023.

Methods: This study employed a quasi-experimental design with a pre-test–post-test structure, including experimental (positive psychotherapy), comparison (acceptance and commitment therapy), and control groups, with a follow-up phase. The research population consisted of all female students in Bafgh who had attempted suicide between 2020 and 2023. Using convenience sampling, 45 eligible students were selected and randomly assigned to three experimental (PPT), comparison (ACT), and control groups (15 in each). The students in the experimental and comparison groups attended 12 weekly therapy sessions, while the participants in the control group were placed on a waiting list. Self-esteem for the students in the three groups was assessed at three stages—pre-test, post-test, and follow-up—using the Rosenberg Self-Esteem Scale (1965).

Results: The results indicated that the post-intervention mean self-esteem scores in both the PPT group (3.47 ± 5.87) and the ACT group (3.67 ± 3.94) were significantly higher than those of the students in the control group (-1.34 ± 3.52). However, when comparing the magnitude of the interventions' effects, PPT showed an effect size of 31.9%, and ACT showed an effect size of 31.3% ($P < 0.01$). These findings suggested that positive psychotherapy and acceptance and commitment therapy had approximately equal effectiveness in enhancing the self-esteem of female students with a history of attempted suicide.

Conclusion: Both acceptance and commitment therapy and positive psychotherapy can be considered effective approaches for improving self-esteem.

Keywords: Psychotherapy, Acceptance and commitment therapy, Self-esteem, Self concept, Attempted suicide, Suicide

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Introduction

The prevalence of self-injurious behaviors is notably higher during adolescence than at any other stage of life. A study estimated that the highest prevalence of such behaviors occurs among females aged 16 to 24 years, with reported rates increasing from 6% in 2002 to 19% in 2014 within this age group. Prolonged engagement in self-injury has been shown to elevate the risk of attempted suicide or completed suicide (1).

A growing body of research identifies self-esteem as a critical factor associated with suicidal ideation among students. Elevated levels of self-esteem have been linked to increased happiness (2), enhanced social functioning (3),

and a lower prevalence of psychological disorders such as anxiety (4). In contrast, low self-esteem is associated with impaired psychological adjustment and a broad spectrum of mental health issues, including depression, anxiety, substance abuse, eating disorders, difficulties in forming and maintaining stable interpersonal relationships, poor stress management, psychological distress, and suicidality (5). Self-esteem has been described as a “cultural shield” that buffers against anxiety and stress (6), serving as a reflection of one’s self-worth and self-acceptance (7). Female adolescents, in particular, are more likely to report lower levels of self-esteem. These findings underscore the urgency of developing and implementing targeted



interventions for female students who have experienced attempted suicide. Prompt and effective psychological intervention can prevent further self-injurious behaviors and support reintegration into academic and social life (8).

Acceptance and commitment therapy (ACT) is a form of behavioral therapy that integrates mindfulness practices, cognitive defusion, and acceptance strategies to foster psychological flexibility. Psychological flexibility refers to an individual's capacity to remain in contact with the present moment and to choose actions that are consistent with their values, even in the presence of difficult thoughts or emotions (6). Studies have confirmed the efficacy of ACT in treating various psychological conditions, including depression (9) and psychosis (10). For instance, a study by Farahzadi et al demonstrated that ACT-based group therapy effectively enhanced self-esteem among women with negative body image perceptions (11). Similarly, Shi et al reported significant improvements in self-esteem and psychological flexibility among patients with schizophrenia following ACT interventions (12). In addition, a study on adolescents with histories of childhood trauma found that ACT contributed to increased self-esteem and resilience (13).

Acceptance and commitment therapy (ACT) is categorized within the "third wave" of cognitive-behavioral therapies (14). A core principle of ACT involves guiding clients to live in the present moment and to accept their emotional experiences rather than attempting to suppress, avoid, or eliminate them. This therapeutic model emphasizes engagement with the here and now, rather than ruminating on the past or worrying about the future. Besides, ACT encourages individuals to pursue a meaningful life through purposeful and value-driven actions (15).

The second intervention addressed in this study was positive psychotherapy (PPT). In contrast to traditional approaches that primarily focus on deficits and dysfunctions, PPT emphasizes individual strengths, such as the capacity for joy, resilience, problem-solving, and optimism (16). Positive thinking supports the development of constructive attitudes, behaviors, and actions in everyday life (17). A study by Thomas and McPherson found that teaching positive psychology through team-based learning promoted the internalization and practice of values such as openness, kindness, honesty, and cooperation (18). Similarly, Lyubomirsky and Layous demonstrated that positive psychotherapy was effective in reducing depressive symptoms while simultaneously increasing happiness and psychological well-being (19). A study by Reiter and Wilz further confirmed that PPT significantly reduced depressive moods and enhanced positive affect and overall well-being among adolescents (20). Bolier et al also reported that PPT contributes to both physical and psychological well-being and reduces symptoms of depression (21). Moreover, Baños et al found

that positive psychotherapy effectively elevated positive mood states (22). In line with these findings, Sedaghatfar and Tavana reported that PPT significantly improved self-esteem and resilience among women experiencing infertility (23).

The innovative contribution of the present study lies in its comparative investigation of the effectiveness of ACT and PPT. Although the clinical efficacy of PPT has been documented in student populations, no previous study has specifically compared these two therapeutic approaches in adolescents with a history of attempted suicide. This study, therefore, offers a novel contribution to the theoretical literature on adolescent mental health interventions. Accordingly, the primary aim of the present study was to compare the effectiveness of acceptance and commitment therapy (ACT) and positive psychotherapy (PPT) in enhancing the self-esteem of female students who attempted suicide.

Methods

This study employed a quasi-experimental design with pre-test, post-test, and follow-up phases. The research population comprised all female high school students in Bafgh, Iran, who had attempted suicide from 2020 to 2023 and had been referred to the Baqer Al-Olum Student Counseling Center. Considering the population size and based on methodological recommendations for experimental studies, a minimum of 15 participants per group was deemed sufficient to ensure statistical validity (24). Accordingly, 45 eligible students were selected through convenience sampling and were randomly assigned by drawing lots to two intervention groups and one control group, with 15 participants in each. The participants in the acceptance and commitment therapy (ACT) group attended 12 weekly sessions, each lasting 45 minutes. An identical schedule was implemented for the members of the positive psychotherapy (PPT) group, who also attended 12 weekly 45-minute sessions. All intervention sessions were conducted in person at the Baqer Al-Olum Student Counseling Center in Bafgh. Before the administration of the pre-test, the objectives of the study were clearly explained to all participants. In alignment with ethical standards, written consent was obtained from the participants in the three groups. The participants were assured that all personal data would remain strictly confidential and that their participation was entirely voluntary. They were further informed of their right to withdraw from the study at any stage without facing any negative consequences. Data were collected through the following instruments:

Rosenberg Self-Esteem Scale (RSES)

The Rosenberg Self-Esteem Scale (RSES), developed in 1965, is a widely used instrument for assessing global self-esteem and personal worth (25). Research has

demonstrated that the RSES has greater validity than the Coopersmith Self-Esteem Inventory (CSEI) in measuring self-esteem levels. The scale comprises 10 items, with respondents indicating their level of agreement or disagreement with each statement. Total scores range from -10 to +10, with higher scores indicating greater self-esteem. The first five items (Items 1–5) are positively worded, while the remaining five (Items 6–10) are negatively worded. Scoring is structured as follows: agreement with items 1–5 yields a score of +1 per item, while disagreement yields -1; for items 6–10, agreement scores -1 and disagreement scores +1 (26). In terms of psychometric properties, Mohammadi evaluated the scale's reliability in a student sample using Cronbach's alpha, test-retest, and split-half methods, which produced reliability coefficients of 0.69, 0.78, and 0.68, respectively. Concurrent validity with the Coopersmith Self-Esteem Inventory was reported as 0.61 (27).

Positive Psychotherapy Intervention Content

The positive psychotherapy intervention was structured according to the protocol developed by Seligman et al (2006) and comprised 12 weekly sessions, each lasting 45 minutes. A summary of the session content is provided in Table 1 (28).

Acceptance and Commitment Therapy (ACT) Intervention Content

The ACT sessions were conducted based on the manual developed by Hayes, Strosahl, and Wilson (2012) and followed a similar structure of 12 weekly 45-minute sessions. An overview of the session content is provided in Table 2 (29).

To ensure the content validity of both therapeutic interventions, four experts in the field of psychology reviewed the treatment protocols. They evaluated the clarity of the content, the logical sequence of therapeutic techniques, and the fluency of the language used. Their evaluations confirmed that both treatment plans demonstrated satisfactory content validity.

The collected data were analyzed using repeated measures analysis of variance (ANOVA) via SPSS-27

software. A significance level of 0.05 was considered for all statistical procedures.

Results

The mean age of the students in the positive psychotherapy (PPT) group was 17.00 years, in the acceptance and commitment therapy (ACT) group was 16.67 years, and in the control group was 17.27 years. There was no statistically significant difference in mean age among the three groups ($P > 0.05$) (Table 3).

Table 4 presents the descriptive statistics for self-esteem in the three PPT, ACT, and control groups across the three measurement phases (pre-test, post-test, and follow-up). A comparison of the mean self-esteem scores indicates that both the PPT and ACT groups showed an increase in mean scores in the post-test and follow-up phases compared to the pre-test phase.

The data in Table 4 demonstrate that both the positive psychotherapy (PPT) and acceptance and commitment therapy (ACT) groups showed improvements in post-test and follow-up self-esteem scores compared to the control group. To assess whether these differences were statistically significant, the repeated measures analysis of variance (ANOVA) was conducted, contingent on meeting several statistical assumptions. First, the assumption of normality was evaluated using the Shapiro-Wilk test. The results indicated non-significance at the 0.05 level, confirming that the distribution of self-esteem scores was approximately normal across the sample. The one-way ANOVA performed on pre-test scores revealed no statistically significant differences among the three groups ($F_{2, 42} = 0.325$; $P = 0.724$), indicating that baseline levels of self-esteem were comparable. This finding eliminated the need to statistically control for pre-test differences in subsequent analyses. Furthermore, the assumption of homogeneity of covariance matrices for the self-esteem scores was assessed using Box's M test, which yielded a non-significant result (Box's $M = 13.458$; $P = 0.053$), thereby satisfying the assumption. However, Mauchly's test of sphericity was significant ($\chi^2 = 33.678$; $P = 0.001$), indicating a violation of the sphericity assumption. As a result, the Greenhouse-Geisser correction was applied to

Table 1. Content of Positive Psychotherapy (PPT) Sessions

Sessions	Session Content
1	Orientation, goal-setting, and pre-test. Introduction and group acquaintance; explanation of course structure and rules; clarification of objectives; completion of initial questionnaires
2 & 3	Identifying personal strengths and generating positive emotions. Practicing gratitude by focusing on blessings, enjoying the present moment, and positive experiences; discussing how to apply personal strengths in daily life
4 & 5	Gratitude technique. Writing a letter of appreciation to someone who has made a positive impact
6 & 7	Enhancing happiness and hope by reducing stress. Exploring the connection between hope, happiness, and anxiety; sharing personal stories related to hope and reinterpreting past experiences with a positive outlook
8 & 9	Communication style and building positive relationships. Encouraging constructive and active interactions with oneself, others, and nature; promoting positive engagement with family, friends, and classmates
10 & 11	Fostering hope, happiness, and optimism. Presenting real-life examples of individuals whose lives were enriched by these qualities; discussing and writing about similar personal experiences; reframing life perspectives, and finding meaning
12th	Final session and post-test. Summary of previous sessions, emotional expression, and reflective discussion on personal growth

Table 2. Content of acceptance and commitment therapy (ACT) sessions

Session	Session content
1	Initial introduction to the participants and establishment of a therapeutic relationship aimed at accurately completing questionnaires and building trust; administration of the demographic questionnaire and pre-test
2	Introduction to ACT and its goals and principles; establishing session rules; psychoeducation about ACT; and assigning homework
3 & 4	Reviewing previous experiences and feedback from participants; discussing and evaluating experiences; assessing motivation for change; exploring expectations and introducing the concept of "creative hopelessness"; session summary and homework
5 & 6	Review and feedback; identifying ineffective control strategies and their futility; explaining acceptance, commitment, and experiential avoidance; defining coping and distinguishing between effective and ineffective strategies; addressing self-efficacy and control; assigning homework
7 & 8	Review and feedback; behavioral commitment exercises; introducing and clarifying the concepts of cognitive fusion, self-as-content, and defusion through metaphors; reducing entanglement with thoughts and emotions; assigning homework
9	Review and feedback, illustrating the separation between self, inner experiences, and behavior; observing the self as context; using metaphors; and assigning homework
10	Review and feedback; identifying core life values and clarifying them; emphasizing the power of choice; introducing mindfulness techniques focused on the present moment; and assigning homework
11	Review and feedback; deeper exploration of individual values; discussing internal and external barriers to pursuing values; assigning homework
12	Understanding willingness and commitment (training in committed action); identifying behavior plans aligned with personal values and committing to them; addressing relapse and preparing for its management; summarizing the sessions, expressing appreciation to participants, and conducting the post-test

Table 3. The participants' demographic characteristics in the three groups

Group Variable	PPT		ACT		Control		T	P value
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age	17.00	0.65	16.67	0.72	17.27	0.70	2.809	0.072

Table 4. The descriptive statistics for self-esteem in the three groups

Variable	Groups	Pre-test (Mean ± SD)	Post-test (Mean ± SD)	Follow-up (Mean ± SD)
Self-esteem	PPT	-1.87 ± 5.36	3.47 ± 5.87	3.23 ± 6.22
	ACT	-2.21 ± 3.81	3.67 ± 3.94	2.47 ± 4.78
	Control	-1.47 ± 5.21	-1.34 ± 3.52	-1.33 ± 3.23

adjust the degrees of freedom for the repeated measures ANOVA.

As shown in Table 5, the repeated measures ANOVA revealed a significant main effect of time ($F = 18.307$, $P < 0.05$, $\eta^2 = 0.304$), indicating a significant change in self-esteem scores across the three time points (pre-test, post-test, and follow-up). Moreover, the interaction effect between group and time was not statistically significant ($F = 2.494$, $P > 0.05$), suggesting that changes in self-esteem over time did not differ significantly across the three groups. Consequently, between-subject effects were examined to assess the overall impact of group membership on self-esteem. The main effect of group was statistically significant ($F = 3.061$; $P = 0.001$, $\eta^2 = 0.127$), indicating that mean self-esteem scores differed significantly across the PPT, ACT, and control groups.

Regarding effect sizes, PPT accounted for 13.9% of the variance in self-esteem scores, while ACT accounted for 13.3%. These findings suggested that both therapeutic interventions had a comparably significant and positive effect on enhancing self-esteem among female students with a history of unsuccessful suicide attempts.

Discussion

The present study compared the effectiveness of positive

psychotherapy (PPT) and acceptance and commitment therapy (ACT) on self-esteem among female students with a history of attempted suicide. The findings revealed that both interventions significantly improved self-esteem, with comparable effect sizes. These findings were consistent with the results reported in previous studies conducted by Sedaghatfar and Tavana (23), Farahzadi et al (11), Shi et al (12), Noh and Son (14), Mirmohammadi et al (30), Beygi et al (31), and Aslanifar et al (32).

Positive psychotherapy, addressed in this study, is grounded in the belief that emphasizing adolescents' strengths and abilities not only fosters positive emotions but also provides resilience against psychological challenges and problems. It may, therefore, act as a crucial component in psychological recovery (33). Techniques used in PPT are designed to increase positive emotions, cognitive processes, and behaviors, thereby reducing the influence of negative mental states. These interventions have been shown to decrease depressive symptoms and promote overall mental well-being and health by empowering individuals to recognize their capacities and achieve personal growth. According to Lyubomirsky and Layous (19), PPT interventions contribute to the development of emotions, thoughts, and behaviors that fulfill fundamental human needs, such as autonomy, love,

Table 5. Results of repeated measures ANOVA for self-esteem based on group (PPT, ACT, and control)

Source of changes		Sum of squares	df	Mean square	F	P value	Partial eta squared
Intragroup	Time (Factor 1)	218.133	1.282	170.164	18.307	0.001	0.313
	Time × Group	59.438	2.564	23.182	2.494	0.078	0.333
	Error	500.444	53.840	9.295	–	–	–
Intergroup	Group	416.178	2	208.089	3.061	0.047	0.127

belonging, and connectedness, resulting in decreased depression and enhanced psychological well-being. Unlike traditional models that emphasize deficits and dysfunctions, positive psychology focuses on nurturing human strengths and virtues such as courage, gratitude, optimism, and self-control (5,34), aiming to enhance life satisfaction and psychological resilience. Within this framework, self-esteem and happiness are regarded as natural byproducts of functional behavior and a healthy self-concept. In adolescence, self-esteem is closely linked to physical self-image and perceived social value. Secondary factors include academic achievement, athletic performance, and special skills. Through its strength-based approach, positive psychotherapy successfully addressed these developmental needs, leading to improvements in students' self-esteem.

ACT, on the other hand, conceptualizes personal success in terms of behavioral consistency with personal values. After identifying participants' values, ACT sessions guided them through experiential exercises and committed action plans, both during therapy and as homework. These practices promoted alignment between behavior and personal values, fostering a sense of self-efficacy and achievement. Given that self-esteem is fundamentally rooted in perceptions of competence and value (35), ACT effectively supported improvements in self-esteem by reinforcing value-consistent behavior. A key feature of ACT is the cultivation of the “self-as-context”—a stable sense of self distinct from transient internal experiences such as thoughts, emotions, and bodily sensations. This perspective allows individuals to relate more flexibly to distressing thoughts and to view themselves from a broader, non-judgmental stance (36). For participants in this study, developing an enduring and accepting sense of self may have played a pivotal role in enhancing self-esteem.

The present study was conducted with several limitations. The sample was restricted to female high school students with a history of attempted suicide in Bafgh, which limits the generalizability of findings to other populations, including males and individuals from different regions or age groups. Besides, potential confounding variables such as intelligence quotient (IQ), academic performance, and socioeconomic status were not controlled and may have influenced the outcomes and the generalizability of the findings.

Conclusion

The findings from this study demonstrated that both positive psychotherapy (PPT) and acceptance and commitment therapy (ACT) significantly increased self-esteem among female students with a history of attempted suicide. Importantly, the positive effects of both interventions were sustained at the follow-up stage, indicating their lasting impact. Given their comparable levels of efficacy, both therapeutic approaches can be considered effective and practical strategies for improving self-esteem in adolescents at risk of suicide. These interventions not only serve as valuable treatment options for individuals with a history of suicide attempts but also hold promise as preventive measures within school counselling centers.

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Authors' Contribution

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Competing Interests

The authors declare that they have no competing interests.

Data Availability and Materials

All handwritten notes, manuscripts, datasets, and related research materials are available upon request via the following email address: R.Kargaran1896@gmail.com.

Ethical Approval and Consent to Participate

All participants completed a general informed consent form, which is securely maintained by the researcher. This study was extracted from the first author's doctoral dissertation in psychology and was approved by the Ethics Committee of the Islamic Azad University, Zarand Branch, under the code IR.IAU.KERMAN.REC.1402.094. The trial was registered with the Iranian Registry of Clinical Trials under the code IRCT20230930059561N1.

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