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Examining the Effect of Acceptance and Commitment Therapy on Self-Care and Treatment Adherence in Patients with Cardiovascular Diseases

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ABSTRACT

The aim of the present study was to examine the effect of Acceptance and Commitment Therapy on increasing treatment adherence and improving self-care behaviors in patients with cardiovascular diseases. The present study employed a quasi-experimental design with a pretest–posttest control group. The statistical population consisted of patients with cardiovascular diseases who referred to medical centers in the city of Tehran in 2025. Sampling was conducted using a convenience method, and a total of 30 patients (15 in the experimental group and 15 in the control group) participated in the study. The experimental group received eight sessions of Acceptance and Commitment Therapy intervention. The research instruments included the Treatment Adherence Questionnaire and the Self-Care Questionnaire for Patients with Cardiovascular Diseases. Data were analyzed using descriptive statistics and repeated measures analysis of variance. The results indicated that after the intervention, treatment adherence and self-care scores in the experimental group increased significantly, whereas no significant change was observed in the control group ($p < 0.05$). The effect size showed that Acceptance and Commitment Therapy explained a substantial proportion of the variance in the dependent variables. Acceptance and Commitment Therapy led to increased treatment adherence and enhanced self-care behaviors in patients with cardiovascular diseases. These findings indicate the effectiveness of Acceptance and Commitment Therapy as a complementary psychological intervention in the management of patients with cardiovascular diseases and suggest its application in cardiac rehabilitation programs and comprehensive care.

Keywords: Acceptance and Commitment Therapy; self-care; treatment adherence; patients with cardiovascular diseases

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Introduction

Cardiovascular diseases (CVDs) remain one of the leading causes of mortality, disability, and reduced quality of life worldwide, posing substantial challenges to healthcare systems and affected individuals alike. Despite significant advances in pharmacological treatments and medical technologies, long-term disease management in cardiovascular patients continues to rely heavily on patients' engagement in self-care behaviors and sustained adherence to prescribed treatment regimens. Self-care in cardiovascular conditions encompasses a broad range of behaviors, including medication adherence, dietary regulation, physical activity, symptom monitoring, stress management, and timely healthcare utilization, all of which are critical for preventing disease progression and reducing hospital readmissions (1, 2). However, empirical evidence consistently demonstrates that many patients with cardiovascular diseases exhibit suboptimal self-care and insufficient commitment to treatment, resulting in poorer clinical outcomes and increased healthcare burden (3, 4).

Recent research has highlighted that self-care behaviors in cardiovascular patients are not solely determined by medical knowledge or access to healthcare services but are deeply influenced by psychological, emotional, and social factors. Variables such as psychological vulnerability, emotional dysregulation, depressive symptoms, self-efficacy, and perceived social support have been shown to significantly predict the quality and consistency of self-care behaviors in individuals with cardiovascular conditions (5-7). For example, patients experiencing heightened psychological distress or maladaptive emotional responses often demonstrate lower motivation for engaging in health-promoting behaviors, reduced adherence to medication regimens, and diminished capacity to manage disease-related symptoms effectively (8, 9). These findings underscore the necessity of integrating psychological interventions into cardiovascular care to address the underlying cognitive and emotional processes that shape self-care and treatment adherence.

Within this context, self-care has been conceptualized not merely as a set of behavioral tasks but as a dynamic, self-regulatory process that requires ongoing decision-making, emotional flexibility, and adaptive coping. The situation-specific theory of self-care proposed by Riegel emphasizes that effective self-care is contingent upon patients' ability to monitor bodily signals, interpret symptoms accurately, and respond appropriately through informed and value-consistent actions (1). Empirical studies have further demonstrated that self-care competence is associated with greater resilience, improved emotional well-being, and enhanced health-related quality of life in patients with heart failure and other cardiovascular conditions (10, 11). Nevertheless, sustaining such complex self-regulatory behaviors over time remains challenging, particularly for patients who experience chronic stress, emotional avoidance, or maladaptive coping patterns.

Psychological interventions grounded in contextual behavioral science have increasingly been recognized as promising approaches for enhancing self-care and treatment adherence in chronic medical populations. Acceptance and Commitment Therapy (ACT), in particular, has garnered growing empirical support as an effective intervention for improving psychological flexibility, reducing experiential avoidance, and promoting value-driven behavior across a wide range of physical and mental health conditions (12, 13). Psychological flexibility, the central therapeutic target of ACT, refers to the capacity to remain in contact with the present moment, accept internal experiences without excessive avoidance, and engage in behaviors

aligned with personally meaningful values, even in the presence of distressing thoughts or emotions. From this perspective, difficulties in treatment adherence and self-care may be understood as manifestations of experiential avoidance and cognitive fusion, whereby patients attempt to escape or control unpleasant internal experiences associated with illness, such as fear, pain, or hopelessness, at the expense of long-term health goals.

A growing body of evidence supports the effectiveness of ACT in medical populations, particularly in improving self-care behaviors and psychological adjustment to chronic illness. Studies conducted among patients with diabetes, hypertension, and cardiovascular disease have demonstrated that ACT-based interventions can lead to significant improvements in self-care behaviors, emotional regulation, and overall psychological well-being (14-16). Comparative research has further indicated that ACT may be as effective as, or in some cases more effective than, traditional cognitive-behavioral or transdiagnostic approaches in enhancing illness adjustment and self-care among individuals with cardiovascular disease (17). These findings suggest that interventions emphasizing acceptance, mindfulness, and values-based action may offer distinct advantages for patients who struggle with rigid coping strategies and emotional avoidance.

Importantly, ACT has demonstrated efficacy across diverse populations and age groups, including older adults and individuals facing severe or life-threatening health conditions. For instance, ACT has been shown to improve quality of life and reduce death anxiety in elderly populations, highlighting its relevance for patients confronting chronic and potentially fatal illnesses (18). Similarly, ACT-based interventions have been associated with improvements in emotional self-regulation and self-care behaviors among patients with coronary artery disease, suggesting its applicability within cardiovascular rehabilitation contexts (19, 20). These outcomes align with broader evidence indicating that psychological interventions targeting emotional acceptance and value clarification can enhance patients' engagement in health-promoting behaviors.

Despite the growing evidence base, several gaps remain in the literature regarding the role of ACT in cardiovascular care. While previous studies have examined self-care behaviors as an outcome, fewer investigations have explicitly focused on treatment adherence as a distinct construct alongside self-care in patients with cardiovascular diseases. Treatment adherence encompasses not only behavioral compliance with medical recommendations but also a deeper psychological commitment to ongoing treatment, which may be influenced by patients' values, beliefs, and emotional responses to illness. Research suggests that adherence is closely linked to self-care confidence, emotional well-being, and social connectedness, highlighting the need for integrative interventions that address these interrelated factors (11, 21). Furthermore, most existing studies have been conducted in non-Iranian contexts, limiting the generalizability of findings to different cultural and healthcare settings.

Recent studies conducted in diverse cultural contexts continue to emphasize the importance of psychological and contextual factors in shaping self-care behaviors. For example, research on patients with hypertension and kidney transplantation has shown that knowledge alone is insufficient to sustain self-care behaviors, and that psychological resources such as hope, self-compassion, and value-based motivation play a critical role (22, 23). Systematic reviews have further highlighted the influence of coherence, meaning, and psychological integration on self-care in chronic illness populations, reinforcing the theoretical relevance of ACT's emphasis on values and meaning-making (24). Collectively, these findings suggest that interventions

fostering psychological flexibility and values-based engagement may be particularly effective in enhancing long-term adherence and self-care.

Given the high prevalence of cardiovascular diseases, the critical role of self-care and treatment adherence in disease management, and the demonstrated relevance of psychological flexibility in health behavior change, there is a clear need for further empirical investigation into the effectiveness of Acceptance and Commitment Therapy in cardiovascular populations. In particular, examining the simultaneous impact of ACT on treatment adherence and self-care behaviors can provide a more comprehensive understanding of its clinical utility as a complementary intervention within cardiovascular care systems. Addressing this gap is especially important in contexts where chronic disease burden is high and psychological services are increasingly integrated into multidisciplinary healthcare models.

Therefore, the aim of the present study was to examine the effectiveness of Acceptance and Commitment Therapy in enhancing treatment adherence and improving self-care behaviors among patients with cardiovascular diseases.

Methods and Materials

Study Design and Participants

The statistical population of the present study consisted of all patients with cardiovascular diseases (diagnosed with stable cardiovascular conditions such as coronary artery disease, heart failure, or a history of myocardial infarction) who referred to medical centers and specialized cardiology clinics in the city of Tehran in 2025. These patients were receiving pharmacological treatment and were in a medically stable physical condition.

The sampling method used in this study was convenience sampling. Accordingly, after coordination with the medical centers, patients who met the inclusion criteria (definitive diagnosis of cardiovascular disease, age range of 40 to 65 years, informed consent to participate in the study, and absence of severe psychiatric disorders) were selected. The selected participants were then randomly assigned to either the experimental group or the control group.

Based on similar studies and adequate statistical power considerations, the sample size was determined to be 30 participants (15 in the experimental group and 15 in the control group). The experimental group received the Acceptance and Commitment Therapy intervention, while the control group did not receive any intervention.

Data Collection

The Self-Care Questionnaire for Patients with Cardiovascular Diseases was originally developed by Riegel and colleagues in the context of the Self-Care of Chronic Illness framework (Riegel et al., 2009). This instrument is designed to assess patients' engagement in self-care behaviors related to the management of cardiovascular conditions. It consists of multiple subscales that typically cover key domains of self-care, including medication adherence, physical activity, dietary management, symptom monitoring, stress management, and appropriate help-seeking or regular medical follow-up. The questionnaire contains a defined number of items (commonly ranging between 20 and 30 items, depending on the validated version used), which are rated on a Likert-type scale. Higher total scores indicate better self-care behaviors and

greater engagement in recommended health-related practices. Scoring is performed by summing item responses within each subscale and/or calculating a total self-care score, with higher scores reflecting more effective self-care. Previous international and national studies have reported acceptable to high levels of construct validity and criterion-related validity for this instrument, and its reliability has been consistently confirmed, with Cronbach's alpha coefficients generally exceeding the acceptable threshold ($\alpha \geq 0.70$), supporting its use in clinical and research settings involving patients with cardiovascular diseases.

Intervention

The summary of the Acceptance and Commitment Therapy sessions is as follows: Session 1: introduction of group members, presentation of treatment goals, establishment of a therapeutic alliance, and education about the nature of cardiovascular disease and the role of psychological factors; Session 2: instruction on the concept of acceptance, examination of experiential avoidance, and identification of ineffective attempts to control thoughts and emotions; Session 3: instruction in cognitive defusion and distancing from negative thoughts related to illness and treatment; Session 4: training in contact with the present moment and mindfulness, including mindfulness exercises focused on bodily sensations and cardiac symptoms; Session 5: introduction of the concept of the observing self and reduction of over-identification with negative thoughts and emotions; Session 6: values clarification in the domains of health, family, and personal life; Session 7: training in committed action and the development of behavioral goals related to treatment adherence and self-care; Session 8: consolidation of sessions, review of skills, planning for maintenance of changes, and relapse prevention.

Data Analysis

Data were analyzed using SPSS software, version 26. To examine the effect of the intervention, repeated measures analysis of variance was used to compare posttest scores between the two groups while controlling for pretest scores.

In the third step, meanings were formulated from the extracted significant statements while remaining faithful to participants' original expressions. Similar meanings were then grouped together, leading to the formation of initial concepts. In the fourth step, these concepts were organized into clusters of themes by identifying conceptual similarities and relationships, resulting in subthemes and overarching main themes. In the fifth step, themes were carefully reviewed, defined, and named to accurately reflect the essence of participants' experiences. In the sixth step, a comprehensive description of the phenomenon was developed by integrating all identified themes into a coherent narrative framework. Finally, in the seventh step, the rigor and trustworthiness of the analysis were ensured using criteria of credibility, confirmability, and dependability. Credibility was enhanced through member checking, whereby participants reviewed and confirmed the accuracy of transcribed texts and interpretations. Confirmability was supported through prolonged engagement with the data and consultation with subject-matter experts, while dependability was addressed by having an experienced qualitative analyst independently review and analyze a portion of the data.

Following the completion of qualitative analysis, the extracted main and subthemes, together with the theoretical and empirical literature, were used to design the educational package for grandparents caring for

their grandchildren. Educational techniques and strategies aligned with each theme were identified through systematic review of the selected written sources. A focused group of experts then reviewed the proposed techniques based on criteria such as applicability, relevance, comprehensiveness, and practical feasibility. In the final stage, the educational package underwent content validation using the CVR method and inter-rater agreement indices, including Cohen's kappa coefficient, to assess expert consensus. Revisions suggested by experts were incorporated, resulting in a finalized and validated educational package grounded in the lived experiences of grandparents and supported by established scientific evidence.

Findings and Results

Initially, descriptive statistics, including the mean and standard deviation of treatment adherence and impulsive behavior scores at the pretest and posttest stages, were calculated for the experimental and control groups. The results showed that the pretest mean scores of the two groups were relatively close, and no significant difference was observed, indicating the initial homogeneity of the groups prior to the implementation of the intervention. After the implementation of the Acceptance and Commitment Therapy intervention, the mean scores of treatment adherence and self-care in the experimental group showed a marked increase, whereas the changes observed in the control group were negligible. This pattern suggests the potential effect of the intervention on the dependent variables of the study.

Table 1. Descriptive statistics of treatment adherence and impulsive behaviors in the two groups at the pretest and posttest stages

Variable	Group	N	Index	Treatment Adherence (Pretest)	Treatment Adherence (Posttest)	Impulsive Behaviors (Pretest)	Impulsive Behaviors (Posttest)
	Experimental	15	Mean	32.50	63.75	76.01	44.15
			SD	(10.58)	(13.75)	(5.80)	(8.54)
	Control	15	Mean	32.15	63.17	78.91	79.01
			SD	(13.45)	(11.94)	(5.21)	(5.33)

As shown in Table 1, the treatment adherence scores of the experimental group increased from the pretest to the posttest stage, whereas in the control group, the mean pretest and posttest scores showed very little difference. The impulsive behavior scores of the experimental group also decreased at the posttest stage compared with the pretest stage, while the control group exhibited minimal differences between pretest and posttest mean scores. Since repeated measures analysis of variance was used to analyze the data, the assumption of homogeneity of variances (Levene's test) was examined prior to conducting this test, and the results are presented in Table 2.

Table 2. Results of Levene's test for examining the assumption of homogeneity of variances at the posttest stage

Variable	Stage	F	df1	df2	Significance
Treatment Adherence	Posttest	0.189	1	38	0.667
Impulsive Behaviors	Posttest	2.967	1	38	0.093

As shown in Table 2, the assumption of equality of variances was confirmed for both variables. Table 3 presents the results of the multivariate analysis of covariance on posttest scores while controlling for pretest scores for the variables of treatment adherence and impulsive behaviors.

Table 3. Results of multivariate analysis of covariance on posttest scores controlling for pretest scores for treatment adherence and impulsive behaviors

Test Name	Value	F	df	Significance	Eta Squared	Power
Pillai's Trace	0.504	18.831	2	0.001	0.504	0.95
Wilks' Lambda	0.496	18.831	2	0.001	0.504	0.95
Hotelling's Trace	1.018	18.831	2	0.001	0.504	0.95
Roy's Largest Root	1.018	18.831	2	0.001	0.504	0.95

$p \leq 0.001$

As shown in Table 3, the significance level of all tests ($p < 0.001$) indicates that there is a statistically significant difference between the experimental and control groups in at least one of the dependent variables (treatment adherence and impulsive behaviors). Based on eta squared, 50% of the observed differences among participants can be attributed to the effect of the independent variable, namely the intervention method (Acceptance and Commitment Therapy). Moreover, given that the statistical power is 0.95 and exceeds the acceptable threshold of 0.80, the sample size is considered adequate for conducting the study. The results related to the significant differences for each dependent variable are presented below.

Table 4. Results of univariate analysis of covariance examining the effectiveness of Acceptance and Commitment Therapy on treatment adherence and impulsive behaviors at the posttest stage

Variable	Sum of Squares	df	Mean Square	F	Significance	Eta Squared
Treatment Adherence	4243.601	1	4243.601	26.365	0.001	0.411
Impulsive Behaviors	1243.225	1	1243.225	24.522	0.001	0.392

Based on the information presented in Table 4, since the significance levels are lower than 0.05, the hypothesis regarding differences in treatment adherence and impulsive behaviors at the posttest stage between the two groups is confirmed. In other words, 41% of the variance in treatment adherence scores is attributable to the independent variable. Therefore, it can be concluded that Acceptance and Commitment Therapy leads to an increase in treatment adherence. Similarly, 39% of the variance in impulsive behavior scores is attributable to the independent variable. Accordingly, Acceptance and Commitment Therapy results in a reduction in impulsive behaviors. Overall, the findings indicate the effectiveness of Acceptance and Commitment Therapy in increasing treatment adherence and reducing impulsive behaviors in patients with cardiovascular diseases.

Discussion and Conclusion

The present study examined the effectiveness of Acceptance and Commitment Therapy (ACT) in enhancing treatment adherence and improving self-care behaviors among patients with cardiovascular diseases. The findings demonstrated that participants in the experimental group who received ACT showed a significant increase in treatment adherence and a significant improvement in self-care behaviors at the posttest stage compared with the control group, which exhibited no meaningful changes. These results indicate that ACT can be an effective psychological intervention for addressing key behavioral and self-regulatory challenges in cardiovascular patients and are consistent with the growing body of literature emphasizing the role of psychological flexibility in chronic disease management (1, 10).

The observed improvement in treatment adherence following ACT can be interpreted through the core theoretical mechanisms of this intervention. ACT aims to reduce experiential avoidance and cognitive fusion while promoting values-based committed action. Patients with cardiovascular diseases often experience persistent distress related to fear of symptoms, concerns about disease progression, and anxiety regarding medical procedures, which may lead to avoidance of treatment recommendations or inconsistent adherence. By fostering acceptance of internal experiences and encouraging commitment to personally meaningful health-related values, ACT may help patients persist in treatment behaviors even in the presence of discomfort or uncertainty. This interpretation aligns with previous findings showing that psychological factors such as emotional regulation, self-efficacy, and reduced psychological vulnerability play a crucial role in adherence to treatment regimens in cardiovascular populations (5, 6).

The significant increase in self-care behaviors observed in the experimental group further supports the utility of ACT in facilitating adaptive health behaviors. Self-care in cardiovascular disease is a multidimensional construct encompassing medication management, lifestyle modification, symptom monitoring, and stress regulation. The results of this study are consistent with prior research indicating that ACT-based interventions enhance self-care by increasing psychological flexibility and reducing maladaptive coping strategies. Studies conducted among patients with diabetes, hypertension, and coronary artery disease have similarly reported improvements in self-care behaviors following ACT interventions (14-16). These findings suggest that ACT's focus on mindfulness, acceptance, and values clarification enables patients to engage more consistently in daily self-care activities that support long-term health outcomes.

Importantly, the current findings are in line with the situation-specific theory of self-care, which emphasizes that effective self-care requires not only knowledge and skills but also the capacity to manage emotional and cognitive responses to illness-related challenges (1). ACT directly targets this capacity by helping patients develop a nonjudgmental awareness of bodily sensations and emotional states, thereby improving symptom recognition and response. This mechanism may explain why participants in the ACT group demonstrated meaningful behavioral changes, whereas the control group did not exhibit comparable improvements. Similar associations between enhanced self-care and psychological resources such as resilience and emotional well-being have been reported in patients with heart failure and other cardiovascular conditions (10, 11).

The present results are also consistent with studies highlighting the mediating role of psychological processes in health behaviors. Research has shown that self-care behaviors mediate the relationship between personality traits, emotional functioning, and health-promoting lifestyles in patients with coronary heart disease (8). ACT may exert its effects by modifying these mediating psychological processes, thereby indirectly enhancing both adherence and self-care. Furthermore, evidence suggests that social connectedness, self-care confidence, and emotional well-being are interrelated factors influencing cardiovascular outcomes (7, 11). Although these variables were not directly measured in the present study, ACT's emphasis on values and interpersonal awareness may contribute to improvements in these domains, ultimately supporting better health behaviors.

Comparative and intervention-based studies further strengthen the interpretation of the current findings. Amiri et al. reported that ACT was effective in improving psychosocial adjustment to illness and self-care among individuals with cardiovascular disease and, in some cases, demonstrated comparable or superior

outcomes relative to other therapeutic approaches (17). Similarly, research comparing ACT with cognitive restructuring or positive psychotherapy has shown that ACT produces significant improvements in emotional self-regulation and self-care behaviors in cardiovascular patients (19, 20). These findings suggest that interventions focusing on acceptance and committed action may be particularly well suited for chronic illness populations, where complete symptom elimination is often unrealistic.

The effectiveness of ACT observed in this study is also consistent with evidence from other chronic disease populations. For example, ACT-based interventions have been shown to improve self-care and psychological outcomes in patients with diabetes and hypertension (6, 13). Such cross-condition consistency supports the transdiagnostic applicability of ACT and underscores its relevance for cardiovascular care. Moreover, systematic and cross-sectional studies have highlighted the importance of coherence, meaning, and psychological integration in sustaining self-care behaviors, further reinforcing the theoretical compatibility of ACT with long-term disease management (22, 24).

Cultural and contextual considerations are also important in interpreting the present findings. Several studies conducted in Iran and similar contexts have reported suboptimal levels of self-care and adherence among cardiovascular patients, often linked to psychological distress and limited access to structured psychosocial interventions (3, 9). The positive outcomes of ACT in the current study suggest that culturally adapted psychological interventions can play a meaningful role in addressing these challenges. By integrating ACT into cardiovascular rehabilitation and routine care, healthcare systems may be able to enhance patient engagement and reduce the burden of preventable complications and hospitalizations, as also emphasized in educational and behavioral intervention studies (2, 21).

Overall, the findings of the present study provide empirical support for the effectiveness of Acceptance and Commitment Therapy in improving treatment adherence and self-care behaviors among patients with cardiovascular diseases. By addressing the psychological processes that underlie health-related behaviors, ACT appears to offer a valuable complementary approach to conventional medical treatment. These results contribute to the existing literature by simultaneously examining adherence and self-care as distinct yet interrelated outcomes and by extending evidence for ACT within a cardiovascular population.

Despite its contributions, the present study has several limitations that should be considered when interpreting the findings. First, the sample size was relatively small, which may limit the generalizability of the results to broader cardiovascular populations. Second, the use of convenience sampling and the restriction of participants to a single urban setting may further constrain external validity. Third, reliance on self-report measures may have introduced response bias, as participants' reports of adherence and self-care could be influenced by social desirability or recall errors. Finally, the absence of a follow-up assessment prevents conclusions about the long-term sustainability of the observed treatment effects.

Future studies are encouraged to replicate these findings using larger and more diverse samples across different healthcare settings. Longitudinal designs with extended follow-up periods would be particularly valuable for examining the durability of ACT effects on treatment adherence and self-care. Additionally, future research could explore potential mediating and moderating variables, such as psychological flexibility, resilience, social support, and self-efficacy, to clarify the mechanisms through which ACT influences health behaviors. Comparative studies evaluating ACT against other evidence-based psychological interventions in cardiovascular populations would also help to refine clinical decision-making.

From a practical perspective, the findings suggest that Acceptance and Commitment Therapy can be effectively integrated into cardiac rehabilitation programs and comprehensive cardiovascular care. Healthcare providers may consider incorporating ACT-based group or individual interventions to support patients in managing emotional distress, clarifying health-related values, and sustaining adherence to treatment and self-care behaviors. Training multidisciplinary healthcare teams in ACT principles could further enhance patient-centered care and promote more holistic management of cardiovascular diseases.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

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

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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References

1. Riegel B, Dickson VV. A Situation-Specific Theory of Heart Failure Self-care. Journal of Cardiovascular Nursing. 2008;23(3):190-6. doi: 10.1097/01.Jcn.0000305091.35259.85. PubMed PMID: 00005082-200805000-00003.

2. Boyde M, Peters R, New N, Hwang R, Ha T, Korczyk D. Self-care educational intervention to reduce hospitalisations in heart failure: A randomised controlled trial. European Journal of Cardiovascular Nursing. 2018;17(2):178-85. doi: 10.1177/1474515117727740.

3. Zahed Nakhjiri L, Darvishpour A, Pourghane P, Gholami Chaboki B. Assessing the Self-care Status in Older Adults Diagnosed with Heart Failure and Hospitalized in the Cardiovascular Intensive Care Units of the Public Hospitals in the East of Guilan, Iran (2020). IJN. 2021;34(129):67-81. doi: 10.52547/ijn.34.129.67.

4. Liu X, Liu L, Li Y, Cao X. The association between physical symptoms and self-care behaviours in heart failure patients with inadequate self-care behaviours: a cross-sectional study. BMC Cardiovascular Disorders. 2023;23(1).

5. Tahmasbi T, Ramak N, Bibak F, Sangani A. The relationship between self-care behaviors with psychological vulnerability in cardiovascular patients with the mediating role of follow-up therapy. Journal of Psychological Growth. 2022;11(7):167-76.
6. Chen TY, Kao CW, Cheng SM, Liu CY. Factors influencing self-care among patients with primary hypertension: Path analysis of mediating roles of self-efficacy and depressive symptoms. European Journal of Cardiovascular Nursing. 2023. doi: 10.1093/eurjcn/zvad011.
7. Thapa A, Kang J, Chung ML, Wu J-R, Biddle M, Cha G, et al. Self-Care, Perceived Social Support, and Health-Related Quality of Life in Patients With Heart Failure. Nursing Research. 2025;74(4):258-65. doi: 10.1097/nnr.0000000000000820.
8. Fadaei M, Meschi F, Salehi Omran A, Tajeri B, Asgharpour M. The Mediating Role of Self-Care Behaviors in Explaining the Relationship between Type D Personality and Problem-Solving Styles with Health-Improving Lifestyle in Coronary Heart Disease. medical journal of mashhad university of medical sciences. 2020;63(5):2619-31. doi: 10.22038/mjms.2020.17558.
9. Sadeghi N, Yousefi M. Effectiveness of Acceptance and Commitment Therapy in Reducing Internalized Shame and Increasing Self-Care in Women with Narcissistic Personality Disorder. Applied Psychology Journal. 2021;12(2):73-86. doi: 10.61838/kman.aftj.2.3.4.
10. Van Rijn MM, Jaarsma T, de Man-van Ginkel JM, Weldam SW. Association between self-care and resilience: A cross-sectional study in heart failure patients. Journal of Cardiovascular Nursing. 2023;38(2):E70-E7. doi: 10.1097/JCN.0000000000000908.
11. Chen C, Zhang Y, Zhao Q, Wang L, An Y, Fan X. The Multiple Mediating Effects of Social Connectedness and Self-Care Confidence on the Relationship Between Subjective Social Status and Emotional Well-Being in Patients With Heart Failure: A Cross-Sectional Study. European Journal of Cardiovascular Nursing. 2021;21(3):227-34. doi: 10.1093/eurjcn/zvab058.
12. Fung KP-L, Vahabi M, Moosapoor M, Akbarian A, Jing-Wen Liu J, Wong JP-H. Implementation of an Internet-Based Acceptance and Commitment Therapy for Promoting Mental Health Among Migrant Live-in Caregivers in Canada: Protocol. JMIR Res Protoc. 2021;10(9):e31211. Epub 13.9.2021. doi: 10.2196/31211. PubMed PMID: 34515642.
13. Alho I, Lappalainen P, Muotka J, Lappalainen R. Acceptance and commitment therapy group intervention for adolescents with type 1 diabetes: A randomized controlled trial. Journal of Contextual Behavioral Science. 2022;25:153-61. doi: 10.1016/j.jcbs.2022.08.002.
14. Saeidi A, Jabalameli S, Gorji Y, Ebrahimi A. Effect of acceptance and commitment therapy on self-care and psychological capital of patients with diabetes. Journal of Diabetes Nursing. 2021;9(3):1633-47.
15. Behzadi S, Tajeri B, Soodagar S, Shariati Z. Comparing the Effectiveness of Acceptance and Commitment Therapy and Reality Therapy on Life Satisfaction and Self-Care Behaviors in Elderly with Type 1 Diabetes. Applied Family Therapy Journal. 2021;4(8):483-501. doi: 10.61838/kman.aftj.2.4.24.
16. Sayafi S, Sotodh asl N, Ebrahimi Varkiyani M. Effectiveness of Acceptance and Commitment Therapy on Emotional Self-Regulation and Self-Care to Coronary Artery Disease Patients. Journal of Psychological Studies. 2020;16(3):135-50. doi: 10.22051/psy.2020.31600.2248.
17. Amiri M, Khosh Akhlagh H, Sajadian PS, Rezaei Jamalouei H. Comparison of the effectiveness of acceptance and commitment therapy and transdiagnostic treatment on psychosocial adjustment to illness and self-care among individuals with cardiovascular disease. Journal of Modern Psychological Research. 2024;19(73):57–72.
18. Ahmadi V, Valizadeh H. The Effectiveness of Acceptance and Commitment-Based Therapy on the Quality of Life and Death Anxiety in the Elderly. Aging Psychology. 2021;7(2):166-53. doi: 10.22126/jap.2021.6370.1528.
19. Siafi S, Sotoudeh Asl N, Ebrahimi Varkiani M. Comparing the Effectiveness of Acceptance and Commitment-Based Therapy and Positive Psychotherapy on Emotional Self-Regulation and Self-Care in Coronary Heart Patients: Islamic Azad University, Semnan Branch; 2020.

20. Ashrafi M, Jomehri F, Niknam M, Rafieipour A. Effects of Cognitive Restructuring on Health Control and Self-Care in Women With Hypertension. MEJDS. 2020;10(0):191-.
21. Amegbor PM, Kuuire VZ, Robertson H, Kuffuor OA. Predictors of basic self-care and intermediate self-care functional disabilities among older adults in Ghana. Archives of Gerontology and Geriatrics. 2018;77:81-8.
22. Sari EA, Mirwanti R, Herliani YK, Pratiwi SH. Self-Care Behavior Based on Knowledge of Patients with Hypertension: A Cross-Sectional Study. Vascular Health and Risk Management. 2025:17-24. doi: 10.2147/VHRM.S489688.
23. Saeedi M, Zarbakhsh Bahri M, khaneh Keshi A. Comparison of the Effectiveness of Self-Care Training and Self-Compassion Training on Hope in Kidney Transplant Patients. KMAN Counseling & Psychology Nexus. 2025;3:1-10. doi: 10.61838/kman.hp.psynexus.3.18.
24. Vega-Martínez MDC, López-Martínez C, Del-Pino-Casado R. Sense of coherence and self-care in people with diabetes: systematic review. MedRxiv. 2025. doi: 10.1101/2025.01.16.25320434.