

## Comparison of the Effectiveness of Acceptance and Commitment Therapy and Schema Therapy on Resilience among Patients with Cardiovascular Disease: A Pilot Study

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Received: 3 July 2021

Accepted: 31 July 2021

Published: 3 October 2021

### How to cite this article:

Ahmadi F, Goodarzi K, Farrokhi N, Roozbahani M. Comparison of the Effectiveness of "Acceptance and Commitment Therapy" and "Schema Therapy" on Resilience among Patients with Cardiovascular Disease: A Pilot Study. *Salāmat-i ijtimāi (Community Health)*. 2021; 8(4): 17-29. DOI: <http://doi.org/10.22037/ch.v8i4.31463>.

### Abstract

**Background and Objectives:** Patients' psychological characteristics can affect how they deal with cardiovascular problems, and any intervention that can improve their mental state will lead to a better response to the disease. The aim of this study was to compare the effectiveness of acceptance and commitment therapy and schema therapy on resilience among patients with cardiovascular diseases.

**Materials and Methods:** This quasi-experimental study was conducted with a pretest-posttest design, including two experimental groups and an unbalanced control group. Participants included 45 patients with cardiovascular diseases who were referred to the Nuclear Medicine Center for diagnostic examinations and cardiac scans in 2017 in Tehran. Participants were selected via convenience sampling method and were randomly assigned to three groups, each including 15 participants: the commitment training group, schema therapy training group, and the control group. Data were collected via Connor-Davidson resilience questionnaire. After performing the pretest for all three groups, the experimental groups underwent therapeutic intervention in 12 sessions using the commitment and acceptance therapy protocol and the schema therapy protocol in 10 sessions. After the intervention, a posttest was performed in all three groups. Data were analyzed using SPSS software version 21 statistical using descriptive tests and multivariate analysis of covariance.

**Results:** Among the participants in the study in the schema therapy group, 9 (60%) were female, and 6 (40%) were male, in the treatment group based on commitment and acceptance, 8 (53%) were female, and 7 (47%) were male. In the control group, 5 (33%) were female, and 10 (67%) were male. In the schema therapy experimental group, the mean (SD) resilience score in the pretest increased from 43.8 (20.4) to 58.5 (23.9) in the posttest ( $P=0.003$ ). In the experimental group based on commitment and acceptance treatment, the mean (SD) resilience score increased from 43.7 (20.3) in the pretest to 84.5 (22.8) in the posttest ( $P=0.002$ ). No significant changes were seen in the control group.

**Conclusion:** The study showed that both commitment and acceptance therapy interventions and schema therapy training effectively increased resilience of individuals with cardiovascular problems, but the effectiveness of commitment and acceptance therapy was more significant than schema therapy education.

**Keywords:** Acceptance and commitment therapy; Resilience; Schema therapy.

### Introduction

Cardiovascular diseases are the leading cause of mortality and disability and lead to 46% of total mortality and 23-20% of disease burden

in Iran (1). One of the psychological factors that can be involved in the severity of the cardiovascular disease is resilience. People with high resilience adapt more quickly, plan

for long-term goals, recover faster in the face of injury, and become less anxious (2). One of the interventions that can help improve mental health among patients is acceptance and commitment therapy. Acceptance and commitment therapy uses acceptance processes, mindfulness, and values to create psychological flexibility, and this ability means acting on values in the presence of unwanted thoughts and feelings and bodily sensitivities (3, 4). This therapeutic approach emphasizes pervasive consciousness, along with openness to acceptance (5). Another therapeutic approach designed to solve chronic and complex problems is schema therapy. Schema therapy is an evidence-based therapy based on previous theories and techniques and has integrated them into a systematic treatment model (6). Schema therapy has improved feelings of inferiority, depressive disorder symptoms, positive emotions, social interactions, and interpersonal communication. The aim of this study was to compare the effectiveness of acceptance and commitment therapy and schema therapy on resilience among patients with cardiovascular diseases.

### Materials and methods

This quasi-experimental study was conducted with a pretest-posttest design, including two experimental groups and an unbalanced control group. Participants included 45 patients with cardiovascular diseases who were referred to the Nuclear Medicine Center for diagnostic examinations and cardiac scans in 2017 in Tehran. Participants were selected via convenience sampling method and were randomly assigned to three groups, each including 15 participants: the commitment training group, schema therapy training group, and the control group. Data were collected via Connor-Davidson resilience questionnaire (7). After performing the pretest for all three groups, the experimental groups underwent therapeutic intervention in 12 sessions using the commitment and acceptance therapy protocol and the schema therapy protocol in 10 sessions. After the intervention, a posttest was performed in all three groups. Data were analyzed using SPSS software version 21 statistical using

descriptive tests and multivariate analysis of covariance.

### Results

Among the participants in the study in the schema therapy group, 9 (60%) were female, and 6 (40%) were male, in the treatment group based on commitment and acceptance, 8 (53%) were female, and 7 (47%) were male. In the control group, 5 (33%) were female, and 10 (67%) were male. In the schema therapy experimental group, the mean (SD) resilience score in the pretest increased from 43.8 (20.4) to 58.5 (23.9) in the posttest ( $P=0.003$ ). In the experimental group based on commitment and acceptance therapy, the mean (SD) resilience score increased from 43.7 (20.3) in the pretest to 84.5 (22.8) in the posttest ( $P=0.002$ ). No significant changes were seen in the control group.

### Discussion

The study showed that schema therapy effectively increased resilience among patients with cardiovascular diseases, which was consistent with previous studies (8, 9). The ultimate goal of schema therapy is to improve early maladaptive schemas. Modifying the structure and content of early maladaptive schemas is necessary to prevent the recurrence of symptoms (10). Commitment and acceptance therapy also increased resilience in people with cardiovascular problems, consistent with other studies (11, 12). Cardiovascular patients could continue to live their everyday lives despite difficult environmental conditions and life problems by relying on the techniques derived from this therapeutic approach. The main goal of acceptance and commitment therapy is to create psychological flexibility while accepting the suffering that life inevitably brings with it to have a meaningful and rich life (13). The two main dimensions of this treatment are acceptance of thoughts and commitment to change behavior in the direction of life values (14). Acceptance and commitment-based treatment approaches focus on accepting negative thoughts and feelings, not changing thoughts and feelings. Therefore, by reducing a person's focus on negative thoughts, this approach may be helpful for people with cardiovascular

problems and promote their psychological well-being. Acceptance and commitment therapy has six central processes that lead to psychological flexibility: acceptance, failure, self as context, connection to the present, values, and committed action. Acceptance and commitment-based therapy has shown a significant increase in the willingness to participate in strenuous activities while experiencing difficult emotions (15). In connection with improving the resilience of these patients, it can be said that the use of techniques related to increasing the fault and acceptance of the person in accepting thoughts and feelings related to life and accompanying these patients and focusing on abilities for valuable movement during the experience of emotions in situations.

### Conclusion

The study showed that both commitment and acceptance therapy interventions and schema therapy training effectively increased resilience of individuals with cardiovascular

problems, but the effectiveness of commitment and acceptance therapy was more significant than schema therapy education.

### Acknowledgment

The authors thank all participants of the study especially the officials of the Tehran Nuclear Medicine Center, cardiovascular patients and their families. This article was derived from the first author doctoral dissertation.

### Conflict of Interest

None of the authors has any conflict of interest to disclose.

### Ethical publication statement

We confirm that we have read the Journal's position on issues involved in ethical publication and affirm that this report is consistent with those guidelines.

**Ethical code:** IR.IAU.B.REC.1397.041.

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