

Research Paper:

The Effects of Schema Conceptualization-based Acceptance and Commitment Therapy on Patience and Psychological Symptoms in Married Women With Anxiety

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ABSTRACT

Background and Objectives: Anxiety symptoms include various anxiety, panic, worry, restlessness, and fear that require early diagnosis and intervention. Accordingly, the present study aimed to investigate the effects of Acceptance and Commitment Therapy (ACT) using Schema Conceptualization (SC) on patience and psychological symptoms in married women with anxiety symptoms.

Methods: This was a quasi-experimental study with pre-test, post-test and a control group. The statistical population consisted of all married women referring to the Education Counseling Center of Birjand City, Iran, in 2019. Among the individuals who received anxiety scores >30 in the Beck Anxiety Inventory (BAI), based on a simple random sampling method, 30 subjects were selected; they were placed in two experimental and control groups. To collect the necessary data, the Depression, Anxiety, and Stress Scale (DASS-21), the BAI, and the Patience Scale was used. Data analysis was performed using Analysis of Covariance (ANCOVA) and Multivariate Analysis of Covariance (MANCOVA).

Results: The ANCOVA results indicated that ACT using SC effectively increased patience ($P=0.001$) and decreased psychological symptoms ($P=0.002$) in the explored subjects with anxiety symptoms. There was a significant difference between patience and the post-test scores of depression, anxiety, and stress in the experimental and control groups.

Conclusion: The present research results suggested that ACT using SC was effective on patience and psychological symptoms in women with anxiety symptoms.

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Introduction

Anxiety disorders are among the most frequent psychiatric disorders in the general population [1]. Studies outlined that the prevalence of this disorder affects approximately 8%-12% of children and 5%-10% of adolescents [2]; this condition is characterized by symptoms, such as premature fatigue, irritability, muscle tension, sleep disturbance, impaired social and occupational function, indifference, the lack of pleasure, lack of concentration and attention, isolation, crying, and frequent restlessness [3].

Patience is essential religious teaching and among the strategies of religious confrontation against psychological pressure [4]. Patience components consist of transcendence (enduring hardships & being patient in hardships & adversity to achieve the goal & reach the nearness of God & better spiritual growth), patience (endurance in the face of adversity), satisfaction (accepting the surroundings & events), endurance (perseverance & stability in performance and perseverance in work & activity) and procrastination (creating an interruption in the face of desires and the control of inner desires) [5]. This religious-psychological structure has various consequences in life; subsequently, they decline individuals' quality of life, make them feel inefficient, and generate stress, anxiety, and depression [6]. Stress is an emotion that arises in the presence of significant interaction (real or imaginary) between the individual, the environment, conflicts, and perceived personal desires [7]. Besides, as a stimulus, stress can present even different effects on the healthy population; these influences depend on various factors, such as the severity of stress, individual living conditions, biopsychological status, age, and coping mechanisms [8]. Stress can also lead to psychological conditions, such as depression, anxiety, and suicide. Moreover, stress can induce physical illnesses, like cardiovascular disease [9]. In this regard, an approach that was suggested to be effective in increasing the psychological competence of individuals is Acceptance and Commitment Therapy (ACT) using Schema Conceptualization (SC) [10].

The SC-based ACT is an experience-based psychological intervention that employs awareness and acceptance strategies along with commitment and behavior change skills to increase psychological flexibility. Psychological flexibility indicates that one is fully in touch with the present moment and changes or continues to behave per the values of the current situation [10]. In other words, in SC-based ACT first, the subject attempts to increase

their psychological acceptance concerning mental experiences (thoughts & feelings, etc.); in return, it reduces the ineffective control actions. The subject is taught that any actions to avoid or control these undesired mental experiences are ineffective or present the opposite effect and exacerbates them. Therefore, these experiences must be accepted without any internal or external reactions to eliminate them. In the second step, the individual's psychological awareness is increased respecting the present moment. In other words, the individual becomes aware of all his/her mental states, thoughts, and behaviors in the present moment. In the third stage, the individual is taught to separate self from these mental experiences (cognitive defusion) to be able to act independently of these experiences. The fourth step is to attempt to reduce the excessive focus on the visual self or personal story (e.g. being a victim) that one has created for self in one's mind. Eventually, the fifth stage assists individuals to recognize their core personal values and turn them into specific behavioral goals (the enlightenment of values) [11].

The SC-based ACT is more effective in treating psychological problems than other common psychotherapies [12]; however, studied the effectiveness of ACT on various clinical conditions, such as depression, obsessive-compulsive disorder, occupational stress, end-stage cancer stress, anxiety, post-traumatic stress disorder, anorexia, and schizophrenia remain less addressed [13].

Anxiety symptoms severely affect individuals' lives with their destructive influences; if there is no timely treatment, they expose individuals to other mental disorders. Thus, it is necessary to perform therapeutic interventions for timely examination and treatment. Additionally, SC-based ACT is less studied. Therefore, this study aimed to evaluate the effects of SC-based ACT on patience and psychological symptoms in individuals with anxiety symptoms.

Methods

This was a quasi-experimental study with a pre-test-post-test and a control group design. The statistical population of this study included all married women who were referred to Education Counseling Center in Birjand City, Iran, in 2019. The study participants included 51 respondents to the Beck Anxiety Inventory (BDI) who were selected by purposive sampling approach. In total, 30 participants were divided into the experimental and control groups (n=15/group). The inclusion criteria of the study were married, living in Birjand, minimum diploma education, and obtaining a score >30 in the BDI. More-

over, the exclusion criteria were using other psychological interventions and absence from >2 therapy sessions.

After obtaining the ethics approval from the Ethics Committee of Birjand University of Medical Sciences (Code: IR.BUMS.REC.1399.198), sampling was performed on the ethical considerations of the Helsinki Declaration. Initially, a demographic characteristics questionnaire (including age, the place of residence, the level of education) was completed for each individual by a research colleague. Then, individuals were selected by the purposive sampling method and randomly divided into the experimental and control groups using a simple random classification method.

First, the study groups completed the Depression, Anxiety, and Stress Scale-21 Item (DASS-21) and the Patience Scale 60 minutes before the treatment protocol. Then, the SC-based ACT protocol as per Lev and McKay's package (Table 1) was performed in the experimental group at the Birjand Education Counseling Center in eight 60-minute sessions, twice a week. However, the control group received no training. In the next step, the collected data were analyzed.

The DASS-21 was used to assess psychological symptoms. It includes 21 items developed by Lavibund and Lavibund in 1995. Each of the DASS-21 subscales consists of 7 questions; the final score of each of which is obtained through the sum of the scores of the related questions. Anthony et al. (1998), factor analyzed the scale, and suggested the existence of 3 factors, as follows: depression, anxiety, and stress. The collected results revealed that 68% of the total variance of the scale was measured by these 3 factors. The effects of stress, depression, and anxiety in the study were computed to be 9.07, 2.89, and 1.23, respectively. Besides, the Cronbach's alpha coefficient for these three factors was calculated as 0.97, 0.92, and 0.95, in sequence [14]. In the present study, Cronbach's alpha coefficients for the dimensions of depression, anxiety, and stress were measured to be 0.73, 0.89, and 0.83, respectively. Moreover, test-retest coefficients for these dimensions were obtained as 0.80, 0.68, and 0.71, respectively, i.e., acceptable.

Beck Anxiety Inventory (BDI, 1998) was used to identify married women with anxiety. In this 21-item scale, the subject chooses one of the 4 options (scoring from zero to 3) in each item, specifying the severity of anxiety. Its internal consistency coefficient (using Cronbach's alpha coefficient) equaled 0.92, its validity varies by 0.75 applying a one-week test-retest method; the correlation of its subscales varies from 0.30 to 0.76. The scale's con-

tent, concurrent, structural, exploratory, and face validity were measured; all of which indicated the high efficiency of this tool in measuring anxiety severity [15]. In the present study, Cronbach's alpha coefficient of 0.82 was obtained for this tool.

Patience was measured using the Patience Questionnaire developed by Khormaei, Farmani, and Soltani [6]. This 25-item scale is scored based on a Likert-type scale, ranging from completely correct to completely incorrect. The internal consistency evaluation results provided evidence based on the convergent and differential validity of this scale. The Cronbach's alpha coefficient of the subscales was calculated to range from 0.60 to 0.84. Besides, Cronbach's alpha coefficient of the total scale was equal to 0.86. In the Kamari and Khormaei research [16], Cronbach's alpha coefficient was measured to be 0.74 to 0.86 for its subscales and 0.86 for the whole questionnaire. In the present study, Cronbach's alpha coefficient was obtained as 0.80 for the whole questionnaire.

The SC-based ACT package of Lev and McKay is beneficial for individuals in identifying and changing interpersonal maladaptive schemas [11]. This package focuses on 10 schemas (Abandonment and instability: fear, anger, and grief; mistrust and abuse: fear, anger, and yearning; emotional deprivation: loneliness, yearning, sadness, and anger; defectiveness and shame: shame, sadness, and anger) along with ACT techniques. Besides, it teaches individuals to differently cope with schema-induced pain and replace maladaptive schema-related behaviors with value-based responses [11]. The summary of the training sessions and their content is as described in Table 1.

Data analysis was performed using descriptive and inferential statistics. Thus, first, descriptive statistics were used to describe the results of the statistical population. In descriptive statistics, the table of mean and standard deviation was used. Hypothesis analysis and testing were performed with the help of inferential statistics. To test the hypotheses, the collected data were analyzed using Analysis of Covariance (ANCOVA) and Multivariate Analysis of Covariance (MANCOVA). Additionally, all steps of describing, combining, and testing the hypotheses were performed in SPSS.

Results

Of the 30 study participants, the largest proportion (n=11) had a BA degree and the average age of most research participants (n=19) was between 25 and 35 years.

Table 1. SC-based ACT training sessions as per Lev and McKay's package

Meeting	Content
First	Introduce and review goals. Investigate the conflicts that occurred during the week and get acquainted with the types of schemas.
Second	Continue to recognize and identify schemas. Familiarity with behaviors to cope with schemas.
Third	Understand how schemas affect interpersonal relationships. Learn how to avoid old strategies and schemas.
Fourth	Focus on treating behavioral schemas.
Fifth & sixth	Understanding how to eliminate maladaptive schemas.
Seventh & eighth	Value-based problem-solving training and accepting responsibility for avoiding or dealing with schemas.



There was no significant difference concerning demographic variables between the study groups.

ANCOVA data in Levene's test and Box's M test signified that the reported significance level was >0.05 ; the

homogeneity of variance and equality of variance-covariance matrix respected dependent variables. Table 2 lists the descriptive statistics, including the mean and standard deviation scores of psychological symptoms, anger, and aggression for the experimental and control groups at pre-

Table 2. Descriptive pre-test and post-test data of psychological symptoms and patience in the study groups

Group	Variable	Mean \pm SD	
		Pre-test	Post-test
Experimental	Depression	14.53 \pm 2.26	7.73 \pm 1.66
	Stress	14.54 \pm 1.76	7.93 \pm 1.43
	Anxiety	14.80 \pm 2.11	7.73 \pm 1.94
	Transcendence	22.40 \pm 2.29	30.80 \pm 4.79
	Patience	19.20 \pm 1.56	25.93 \pm 3.45
	Satisfaction	14.13 \pm 1.50	18.46 \pm 2.32
	Endurance	8.40 \pm 0.98	11.40 \pm 1.24
	Patience	8.33 \pm 0.72	11.60 \pm 1.54
Control	Depression	14.0 \pm 2.32	13.53 \pm 2.29
	Stress	14.13 \pm 1.80	13.33 \pm 1.87
	Anxiety	14.20 \pm 2.11	13.07 \pm 1.62
	Transcendence	23.0 \pm 2.20	24.33 \pm 3.13
	Patience	20.46 \pm 1.59	21.40 \pm 1.84
	Satisfaction	13.0 \pm 1.55	14.73 \pm 1.79
	Endurance	8.20 \pm 1.32	10.0 \pm 0.92
	Patience	7.40 \pm 1.72	8.60 \pm 1.59



Table 3. ANCOVA data for comparing the experimental and control groups

Source	Variable	Type 3 Sum of Squares	df	Mean Squares	F	P
Group	Transcendence	266.76	1	266.76	2.317	0.001
	Patience	162.58	1	162.58	5.280	0.001
	Satisfaction	58.59	1	58.59	3.281	0.001
	Endurance	13.61	1	13.61	1.712	0.002
	Patience	37.83	1	37.83	1.113	0.001
Error	Transcendence	224.58	23	9.76		
	Patience	74.36	23	3.23		
	Satisfaction	43.07	23	1.87		
	Endurance	24.63	23	1.07		
	Patience	66.35	23	2.88		

test and post-test stages. Accordingly, the mean post-test scores of the control group presented not much difference, compared to the pre-test step. However, psychological symptom components scores in the experimental group further decreased in the post-test, compared to the pre-test. Furthermore, the scores of patience components in the experimental group further increased in the post-test, compared to the pre-test. According to Table 3, there was a significant difference in all components of patience between the experimental and control groups.

Table 4 addresses a significant difference in all components of psychological symptoms between the experimental and control groups. Therefore, SC-based ACT was effective on patience and its components as well as the psychological symptoms of individuals with anxiety symptoms.

Discussion

The ANCOVA results signified that SC-based ACT was effective on patience in individuals with anxiety symptoms; the mean score of the experimental group increased, compared to those of the control group. The present study data were in line with those of Tarkhan [17], Manshei, and Javanbakht [18], as well as Fiorillo, McLean, Pistorello, and Follette [19].

Tarkhan [17] documented the effectiveness of ACT on meaning in life; patience can also be a meaningful component in life [20]. Manshei and Javanbakht [18] argued that ACT was effective in increasing patience.

Patience is among the major religious teachings and a strategy of religious confrontation against psychological

Table 4. ANCOVA data for comparing the experimental and control groups

Source	Variable	Type 3 Sum of Squares	df	Mean Squares	F	P
Group	Depression	270.45	1	270.45	9.060	0.001
	Stress	239.94	1	239.94	1.3966	0.001
	Anxiety	231.34	1	231.34	9.454	0.001
Error	Depression	75.07	25	3		
	Stress	36.05	25	1.44		
	Anxiety	61.23	25	2.45		

pressure [4]. Patience reflects a state of mind that occurs to certain individuals when in hardship. Besides, it makes a subject feel peaceful and stable and resilient to pressures and adverse events; accordingly, they do not manifest harsh emotional reactions far from Islam and sharia [5].

This religious-psychological construct (patience) has various consequences in life; subsequently, it decreases individuals' anxiety symptoms, makes them feel inefficient, stressed, anxious and depressed [6]. In this regard, an effective approach for increasing patience in individuals with anxiety symptoms is SC-based ACT [19].

Accordingly, the present study data can be explained as follows: In the present study, the study subjects with low patience, during the ACT sessions and by conceptualizing their schemas, accepted their feelings and biopsychological symptoms; the acceptance of these feelings reduced their excessive attention and sensitivity to the reporting of these symptoms in them. As a result, this measure improved their adaptation and increased their patience. Furthermore, the defusion technique of maladaptive schemas in this treatment addresses taking a step backward and watching the thoughts; in the present study, this action caused the thoughts to be considered only thoughts and not pure reality. Therefore, the absolute fact of not assuming verbal meanings in SC-based ACT enormously helped with improving patience in the research subjects.

In addition, the ANCOVA results revealed that ACT was effective with the conceptualization of designs on psychological syndromes (anxiety symptoms); the mean score of the experimental group decreased, compared to the control group in this respect. The present study data were to some extent in line with those of the Sayyadi Asl research [21], Salehi et al. [22], Mousavi et al. [23], Trompetter et al. [24], Binfet and Passmore [25], and Russ [13].

Notably, the mentioned research studies were performed on statistical societies, such as women with fibromyalgia, students, individuals with substance use disorders, individuals with breast cancer, patients with essential hypertension, patients with multiple sclerosis, women with chronic pain, and patients with schizophrenia; each study examined the effectiveness of ACT without using SC on one or two psychological symptoms. However, the statistical population of the present study included subjects with the symptoms of anxiety who were treated with SC-based ACT for stress, anxiety, and depression.

Sayyadi Asl's [21] stated the effectiveness of ACT on reducing the symptoms of anxiety and depression. Trompetter et al. [24] also outlined a relationship be-

tween the effectiveness of ACT in depressive/anxiety symptoms and positive mental health. Accordingly, SC-based ACT improves the defusion of maladaptive schemas along with accepting responsibility to avoid and cope with schemas as well as detailed discussions about values and goals and the necessity to specify values, leading to reduced tension and stress occurring in individuals with anxiety symptoms. In this treatment, the purpose of emphasizing individuals' desire for inner experiences is to help ill subjects to experience their disturbing thoughts only as a thought and to take essential measures in their lives in line with their values. Therefore, by substituting themselves as a context, patients easily experience unpleasant inner events in the present and can separate themselves from unpleasant reactions, memories, and thoughts. In the process of this treatment, individuals with anxiety symptoms are taught to overcome their annoying thoughts and maladaptive schemas, instead of self-conceptualization. Such actions help to strengthen their observing self, accept internal events instead of controlling them, clarify their values, and pay attention to them.

Conclusion

Using self-report tools and the lack of follow-up studies due to time constraints and conditions caused by the coronavirus pandemic were among the limitations of the present study; however, the present study data suggested that SC-based ACT was effective on patience and psychological symptoms in individuals with anxiety symptoms. Performing SC-based ACT sessions in clinics and treatment centers are suggested to reduce psychological symptoms and increase patience in individuals with anxiety symptoms. Moreover, holding specialized workshops, principles, and special methods of SC-based ACT is recommended for physicians and mental health professionals. Such measures can help to adequately prepare this population for managing patients with anxiety syndrome.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Ethics Committee of Birjand University of Medical Sciences (Code: IR.BUMS.REC.1399.198) and sampling was performed on the ethical considerations of the Helsinki Declaration.

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Authors' contributions

Both authors equally contributed to preparing this article.

Conflict of interest

The authors declared no conflict of interest.

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