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**EFFECTIVENESS OF ACCEPTANCE AND COMMITMENT THERAPY ON  
ANXIETY IN PATIENTS WITH HEART DISEASE**

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**ABSTRACT**

The purpose of this research was the Effectiveness of Acceptance and Commitment Therapy on Anxiety in Patients with Heart Disease. The research method was experimental through two group of control and experimental. Statistical society contained heart patient's referenced Kosar hospital. 40 patients were selected via available sampling. Questionnaires contained Beck anxiety Questionnaire and Goldberg psycho health Questionnaire, Beck anxiety Questionnaire. Experimental group were tested in 8 sessions with acceptance and commitment therapy. Results showed there is significant difference between control group and experimental group for purposes of anxiety measure in posttest stage. Therefore, the effectiveness of acceptance and commitment therapy is significant on decreasing anxiety of patients. Also psycho health, body complaints, anxiety, disorder in society relationship and depression of heart patients have been affected by acceptance and commitment therapy in post test stage.

**Keywords: Acceptance and Commitment Therapy, Heart Patients, Anxiety, Psycho Health**

**INTRODUCTION**

Cardiovascular disease, a major cause of morbidity and mortality in different countries and there various methods of treatment, still has a high prevalence

(Gasiorowski A, Dutkiewicz, 2013). More than 25 percent of heart patients in wards and hospitals are patients with heart failure (Lewis, Karkaby, Jaffee and Bowl, 2005).

Statistics show that for every thousand people, 100 people aged over 65 years heart disease, and its prevalence because of age, reducing mortality and recent developments in the treatment of myocardial infarction and congenital heart disease are on the rise (Albackr, Alhabib, UllahT Alfaleh & Hersi, 2013). Every year a large number of hospitalized heart patients are eventually due to disability. The patient enters the relative major economic impact on communities (palace, beautiful, competent and Akbari, 2012). Damage to the heart, in addition to physical symptoms and disability, the person's mental state leaves a negative impact on the worry, stress, anxiety and depression are among the outcomes of heart disease (Khodai, Gharaei, Kazemi, Ali Abadi, 2012). Anxiety disorders are the most common class of mental disorders. As an independent national study reported that one out of every four diagnostic criteria for at least one anxiety disorder and the prevalence of this disorder and 17.7% in twelve months. The most detailed studies regarding the treatment of generalized anxiety disorder, a cognitive-behavioral techniques that appear in both the short- and long-term is effective (Kaplan & Saduck, 2007).

### **Statement of the problem**

We are social beings, and always emotional and material needs to communicate socially, but making that connection is not possible for all too easily and factors such as: lack of confidence about the assessments of others, fear of rejection, and criticism or other factors cause people to feel anxious in social situations. Face or anticipate dealing with these situations, creating Immediate anxiety response, the individual realizes the fear is irrational, it would avoid such situations or to handle these situations with great fear and in the end this anxiety in the social relations of disorder make (Borkovec & Ruscio, 2005). Although there is no doubt about the intertwining of body and mind, interweaving the mechanism is still an issue. Check moods and psychological characteristics and the nature of their relationship to health and disease in revelation is the way that these should be over. A very sensitive to the psychological disease, cardiovascular disease. The disease in the West, more than any other disease kills people. In the United States more than half of people over forty-five years to die from heart disease or circulatory disease (Wells, Stewart, Hays & Burnham, 1989). So, determine if psychological factors involved in the etiology of such diseases, have important implications for prevention and treatment brings. Normal and natural

response to danger or stress, anxiety phenomenon has only become a problem when the level of quality it does not fit with the position. Surround mode and with vague anxiety unpleasant arousal of the autonomic nervous system, headache, sweating, palpitations, cramps, chest muscles, digestive discomfort and restlessness is (Sadok and Sadok, 2008). Research has shown that excessive worry and generalized anxiety would continue to be disturbing features of this disorder is filed.

Heart patients often due to multiple stressors such as acute conditions, environment, equipment and specific diagnostic or therapeutic procedures, especially the high level of anxiety and fear of the unknown (Kiyohara, Kayano, Oliveira, Yamamoto & Inagaki, 2004). Medical studies on this disorder generally in the field of medication, behavioral therapy, cognitive therapy and cognitive behavioral therapy combined with drug therapy is focused (Jenik 1998, according to the minister, 2012) The most detailed studies regarding the treatment of anxiety disorders with cognitive behavioral techniques that seem to be effective both in the short and long term (Sadok and Sadok,) Despite the strong evidence that exists regarding the effectiveness of cognitive-behavioral therapy, cognitive-behavioral

evidence suggests that the use of methods, for a large number of therapists and people with this disorder is difficult and many even with the most accurate treatment plans planning and execution are not met with an appropriate response. Referring to concerns that challenge their arguments in the context of real-life problem. A study by Herman et al., Found that the risk of coronary heart disease associated with anxiety, especially in women, physical structure and physical symptoms of anxiety can increase the risk of coronary heart disease gets (eifert, forsyth & erche, 2009). In another study, which was conducted by Day. et al., Showed that patients with depression and anxiety, negative emotions are effective in heart disease and mental health status of their patients according to the disease heart impact (according to the Vaziri, 2009). Carl and colleagues compared behavioral information, quality of life and risk factors in patients with coronary heart disease proband, before and after exercise and rehabilitation program showed that anxiety is the main cause of coronary heart disease, especially in younger patients Accordingly, it showed that the cardiac rehabilitation program to reduce anxiety in these individuals is useful (quoted from Milan, 2006).

## **RESEARCH METHODOLOGY**

Methods of testing (pretest-posttest control group), respectively. The independent variable in this study is based on acceptance and commitment therapy (ACT) and anxiety was considered as the dependent variable.

For this study, the pre-test and post-test experimental and control groups were used.

### **Statistical Society**

The population in this research, including cardiovascular disease were living in the city. , Patients with high educations in the age range 35 to 60 years who were treated during the study period in Kosar hospital and inclusion and exclusion criteria for the study. In this study, the arrival of patients based on medical records, psychiatric treatment or serious medical problems such as chronic diseases other than heart disease or a serious physical disability, such as blindness or suffering drug dependence brand, prevention were carried out.

### **Sample and sampling**

Sampling in this study, for sampling and among heart patients who came and went during the study period were in the hospital outpatient clinic, were selected. 40 cardiac patients who had high scores on the Beck Anxiety Inventory were selected randomly to two groups of 20 students as the experimental group and the control group.

### **Data collection**

In this study, the tools are: individual interview, Beck Anxiety Inventory, mental health questionnaire.

### **Anxiety Inventory Beck:**

A self-administered questionnaire that included 21 questions and four options in the range of 0 to 3 scored. The range goes from 0 to 63.

### **Mental Health Inventory**

Gabri other instruments were GHQ-28 questionnaire mental health. The first questionnaire by Goldberg (1972) was set. He GHQ questionnaire to screen patients and community mental health centers designed.

### **Procedure**

This research is an independent variable, based on acceptance and commitment therapy (ACT) is. The dependent variables anxiety and heart disease. In the pre-test, anxiety and mental health in both groups in the same condition was measured with the Beck Anxiety Inventory and mental health Goldberg. The independent variable (ACT) in eight 2-hour sessions per week for a meeting on the experimental group was applied. In the post-test again the level of anxiety was measured in both groups. Tailored therapy based on Acceptance and Commitment (ACT) with metaphors and practical exercises based on the ideas of the creators of the model health Hayes is set.

### **RESULTS**

Hypothesis 1: This research was based on effect on anxiety in heart patients. acceptance and commitment therapy has an

Table 1: Mean standard deviation of the pre-test and post-test variables

| After the test     |         | pre-exam           |         | Number | Group   | Variable            |
|--------------------|---------|--------------------|---------|--------|---------|---------------------|
| standard deviation | Average | standard deviation | Average |        |         |                     |
| 3/10               | 8/45    | 3/91               | 23/75   | 20     | Test    | Beck Anxiety        |
| 3/07               | 19/10   | 3/18               | 21/95   | 20     |         |                     |
| 10/09              | 47/00   | 9/13               | 52/95   | 20     | Control | General Health      |
| 8/27               | 71/50   | 8/52               | 54/95   | 20     |         |                     |
| 3/94               | 13/95   | 3/09               | 15/00   | 20     | Test    | Somatization        |
| 3/85               | 21/75   | 4/02               | 16/80   | 20     |         |                     |
| 3/38               | 11/55   | 3/46               | 13/30   | 20     | Control | Anxiety             |
| 3/36               | 15/95   | 3/10               | 13/45   | 20     |         |                     |
| 2/08               | 5/35    | 2/66               | 6/55    | 20     | Test    | Community Relations |
| 2/39               | 10/55   | 3/03               | 6/85    | 20     |         |                     |
| 4/65               | 16/15   | 4/72               | 18/10   | 20     | Control | Depression          |
| 4/50               | 23/25   | 3/51               | 17/85   | 20     |         |                     |

Table 2 shows the results of cauliflower default equality of variances in the post-test anxiety

| Significant | Degrees of freedom 2 | Degrees of freedom 1 | F     | Variables    |
|-------------|----------------------|----------------------|-------|--------------|
| 0/718       | 38                   | 1                    | 0/133 | Beck Anxiety |

Table 3: Results of regression slope Beck Anxiety Inventory

| Significant | F     | Mean square | df | Total squares | Source                    |
|-------------|-------|-------------|----|---------------|---------------------------|
| 0/053       | 3/196 | 29/21       | 2  | 58/41         | Group                     |
| 0/382       | 3/42  | 31/26       | 1  | 31/26         |                           |
| 0/382       | 0/783 | 7/157       | 1  | 7/16          | Interaction Group*Anxiety |

Table 4: Results of the subjects in the two groups at post-test anxiety

| Significant | F      | Mean square | df | Total squares | Phase    |
|-------------|--------|-------------|----|---------------|----------|
| 0/000       | 126/47 | 1148/92     | 1  | 1148/92       | Group    |
| 0/095       | 2/930  | 26/62       | 1  | 26/62         | pre-exam |

Hypothesis 2: This study is based on acceptance and commitment therapy has an effect on the mental health of heart patients.

Table 5: Test results Lone default equality in the post-test variance mental health

| Significant | Degrees of freedom 2 | Degrees of freedom 1 | F     | Variables     |
|-------------|----------------------|----------------------|-------|---------------|
| 0/103       | 38                   | 1                    | 2/796 | mental health |

Table 6: Results of regression slope mental health test

| Significant | F     | Mean square | df | Total squares | Source                            |
|-------------|-------|-------------|----|---------------|-----------------------------------|
| 0/015       | 6/46  | 610/73      | 1  | 610/73        | Group                             |
| 0/864       | 0/03  | 2/825       | 1  | 2/825         | The mental health test            |
| 0/200       | 1/706 | 161/16      | 1  | 161/16        | Interaction Group * Mental health |

Table 7: Results of the effects on mental health subjects at post-test

| Significant | F     | Mean square | df | Total squares | Phase    |
|-------------|-------|-------------|----|---------------|----------|
| 0/000       | 61/66 | 5937/10     | 1  | 5937/10       | Group    |
| 0/937       | 0/07  | 0/67        | 1  | 0/67          | Pre-exam |

1 sub-hypothesis: acceptance and commitment therapy based on the patient's physical complaints impact.

**Table 8: test results during the default equality in the post-test Variance physical complaints**

| Significant | Degrees of freedom 2 | Degrees of freedom 1 | F     | Variables           |
|-------------|----------------------|----------------------|-------|---------------------|
| 0/851       | 38                   | 1                    | 0/036 | Physical complaints |

**Table 8: Slope of regression test results, physical complaints**

| Significant | F     | Mean square | df | Total squares | Source                                    |
|-------------|-------|-------------|----|---------------|-------------------------------------------|
| 0/026       | 5/37  | 83/52       | 1  | 83/52         | Group                                     |
| 0/735       | 0/116 | 1/809       | 1  | 1/809         | The test physical complaints              |
| 0/310       | 1/059 | 16/47       | 1  | 16/47         | Physical complaints*<br>Interaction Group |

**Table 9: Results of physical complaints among the participants at posttest**

| Significant | F     | Mean square | df | Total squares | Phase    |
|-------------|-------|-------------|----|---------------|----------|
| 0/000       | 36/37 | 566/85      | 1  | 566/85        | Group    |
| 0/937       | 0/06  | 0/10        | 1  | 0/10          | Pre-exam |

2sub-hypothesis: acceptance and commitment therapy based on the patient's anxiety affects.

**Table 10: Variance test results during the default equality in the post-test anxiety**

| Significant | Degrees of freedom 2 | Degrees of freedom 1 | F     | Variables |
|-------------|----------------------|----------------------|-------|-----------|
| 0/550       | 38                   | 1                    | 0/363 | Anxiety   |

**Table 11: The results of the test, the regression slope**

| Significant | F     | Mean square | df | Total squares | Source                         |
|-------------|-------|-------------|----|---------------|--------------------------------|
| 0/294       | 1/135 | 478/43      | 1  | 13/59         | Group                          |
| 0/854       | 0/034 | 6/43        | 1  | 0/410         | Pre-test anxiety               |
| 0/890       | 0/019 | 140/14      | 1  | 0/231         | Interaction Group *<br>Anxiety |

**Table 12: The results of the test and post-test anxiety**

| Significant | F     | Mean square | df | Total squares | Phase    |
|-------------|-------|-------------|----|---------------|----------|
| 0/000       | 16/56 | 193/04      | 1  | 193/04        | Group    |
| 0/839       | 0/042 | 0487        | 1  | 0487          | Pre-exam |

**DISCUSSION**

Hypothesis 1: This research was based on acceptance and commitment therapy affects the patient's anxiety.

To investigate this hypothesis and determine acceptance and commitment therapy based on the patient's anxiety, the analysis of covariance was used to control the pre-test anxiety And differences in the post-test groups were compared in terms of anxiety. The results show that the difference between experimental and control groups in terms of anxiety at

posttest was significant and therapeutic intervention based on acceptance and commitment is to reduce anxiety of heart patients. The results of this study with the findings of other researchers that educational interventions in improving anxiety patients have reported abroad is consistent. Including Force Telm et al (2013) showed that people with health anxiety based on acceptance and commitment therapy can improve symptoms win Them. Sovyn et al (2013) also indicate that interventions based on

acceptance and commitment therapy on anxiety problems in clinical and non clinical populations is effective. Joanna Earch et al. (2012) is based on acceptance and commitment therapy was effective in anxiety disorders. Mac Kraken and O'Brien (2010) in a recent study showed that people with chronic pain who experience psychological, without trying to control them, functions better and suffer fewer daily reported. Forman et al (2009) Efficacy of cognitive therapy is based on acceptance and commitment have positive anxiety. Romer and Aversylv (2007), based on acceptance and commitment therapy for generalized anxiety disorder was significant. Peterson (2007), a study based on acceptance and commitment therapy showed less anxiety. Bransteter et al (2004) reported that patients in the treatment group based on acceptance and commitment to a significant reduction in anxiety Showed. Thus it becomes clear that the results of the thesis research with overseas research the above, has been coordinated and aligned. Also it becomes clear overview and comparative findings are consistent with studies and coordinated interior. Rajabi in research and Yazdekhashti General Practitioner (2014) showed that acceptance and commitment therapy to reduce anxiety in women with multiple sclerosis was significant. Izadi and Abedi (2013).

Significant reduction in anxiety scores reported. Hoseynaiyai et al (2013) The impact of group Education based on acceptance and commitment therapy to reduce job stress and burnout among staff showed, in addition to Ebrahimi et al (2012) showed that treatment based on acceptance and commitment after eight group meeting to reduce the anxiety associated with pain.

Ashja et al (2012) showed that the treatment of generalized anxiety disorder based on acceptance and commitment effective. Porafraj Omran (2009) showed that at the end of treatment, social anxiety scores in the intervention group than the control group significantly decreased. All in all in-country research study is coordinated and consistent. On account of these findings it can be said that the intervention will be accepted and commitment in meeting with the patient in the face of stress and anxiety Using the technique of fault and the acceptance of the fear of the disease and reduce the time detailed discussions about values and Stressed the need for individual goals and values, all leading to a reduction in the anxiety-related consequences. In this treatment instead of focusing on the face, increased tendency of an individual to experience events as they are internal causes of anxiety and I accept that it's just

an experience and opportunity is frightening and rather than respond to it, to do what is important in life and in order to pay its value. In other words, anxiety for the patient's response to it did not matter, but the main problem was that the techniques mentioned, may be provided to reduce anxiety. The experimental group meetings were encouraged in such a way that thoughts and emotions as they arise experience, that the judge, evaluate, modify or avoid them lower in the group that in the etiology of behavioral and cognitive anxiety, anxiety is an important factor to cope with the situation. Research hypothesis: based on acceptance and commitment therapy has an effect on the mental health of heart patients.

To test this hypothesis and determine the effect of treatment based on acceptance and commitment on the mental health of people with heart disease and mental health scores were used analysis of covariance to control pre-test and post-test group differences in the rate of mental health were compared . Results showed that between experimental and control groups in terms of mental health in the post-test was significant and intervention based on acceptance and commitment therapy reduced General Health Questionnaire scores have been tested, resulting in improved mental health is. The results also indicated that the

hypotheses based on acceptance and commitment therapy reduces physical complaints, anxiety, depression and heart disease are social relations. The results are consistent with the findings of other researchers abroad. Including force Telm and colleagues (2013) showed that, based on acceptance and commitment therapy a significant reduction in health anxiety, somatic symptoms, emotional stress caused patients, Sovin et al (2013) based treatment intervention acceptance and commitment on anxiety problems in clinical and non-clinical population considered effective. Arch et al. (2012); McCracken and O'Brien (2010) in a recent study showed that people with chronic pain who are eager to experience unpleasant psychological without trying to control them, the better daily functioning and less pain report. Kranz et al. (2010) in their studies have shown that psychological well-being of patients with chronic pain with daily activities has a direct relationship. More recent studies have shown that chronic pain compliance with higher quality of life in patients with back pain, the effect of pain reduction in patients with rheumatoid arthritis and maintaining function of the adaptive function in patients with multiple pain associated. The results of laboratory studies (Wales and MacCracken, 2008) as well as the effectiveness of strategies based

on acceptance in the face of pain induced by the experimental stage. Wicksell et al (2009) in order to assess the effectiveness of strategies for and dedication to improving the quality of life in people with chronic pain and function showed that those who were treated with this approach to the control of higher performance and better quality of life respectively. The findings of the researchers on the findings of previous studies on the effectiveness of these interventions for chronic pain and mental health improvement verify. The results derived from therapeutic approaches based on acceptance and commitment, improve physical function, psychological, social, emotional and medical care is also reduced. Forman et al. (2009) to reduce anxiety and depression as a result of more effective treatments are based on acceptance and commitment. Peterson (2007) showed that people who had received acceptance and commitment therapy, Less anxiety and depression. Asman et al (2006) Effect of treatment based on acceptance and commitment on reducing avoidance of social situations reported. Bransteter and colleagues (2004) reported that patients in the treatment group based on acceptance and commitment to a significant reduction in anxiety, depression, grief and distress than cognitive-behavioral group have shown. Then we can say that

the results of this research with studies abroad is consistent and coordinated. Also, it becomes clear overview and comparative findings are consistent with studies and coordinated interior. Rajabi and Yazdkhasti (2014) showed that the acceptance and commitment therapy on anxiety and depression in women with MS is significant. Peasant Dehghani Najvani and colleagues (2014) showed that based on acceptance and commitment therapy as a treatment approach in patients with depression in women with breast cancer, Iazidis and Abedi (2013), based on acceptance and commitment therapy in a sharp drop in obsessive-compulsive symptoms, depression and anxiety scores have shown; Hosyeniayy et al (2013) in a study on reducing the impact of group Education based on Acceptance and Commitment Therapy job stress and burnout have shown, move and colleagues (2012) in a study based on acceptance and commitment therapy effects on depression in patients with type 2 diabetes have reported. In addition, Ebrahimi et al (2012) showed that treatment based on acceptance and commitment to reduce the anxiety associated with pain and enhance the quality of life of patients with chronic pelvic pain scores at the end of treatment. Gharayi Ardakani et al (2012) study, the effectiveness of acceptance and

commitment therapy in reducing pain in women with chronic headache were reported and the importance of acceptance and commitment therapy effectiveness of psychosomatic diseases and offer new horizons in clinical interventions focus have coordinated and aligned respectively. This finding may be explained by stating that these treatment approaches based on the adoption of the third wave therapy, three basic problems that make up a person's underlying psychological disorders include problems associated with Awareness, avoidance of internal experiences and the valuable life activities. However, with intervention based on acceptance and commitment therapy, a person experiences the inner experience so that the inner experiences of relations and resolution of inner consciousness is at the same time broaden the relationship in addition to strengthening non-judgmental and compassionate the experience is emphasized. Patients with reduced flexibility at the same time to avoid the mental experiment is led to believe and practice the valuable routes. The procedures and interventions acceptance and commitment therapy, causes the patient's relationship with his excitement and ongoing criticism of the judgment seeks to avoid It would clearly have been reported in different studies and the results

obtained can be said is not far-fetched. This study is based on acceptance and commitment therapy on heart patients showed a decrease in anxiety. The training is based on acceptance and commitment therapy can be effective in improving the mental health of heart patients.

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