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ORIGINAL ARTICLE

The Effectiveness of Acceptance and Commitment therapy on mental Health in women with Chronic pain

Shayeste Gharaei-Ardakani, Seyed Abbas Tavallaie, Zahra Dehghanizade, Mansour Tork, Majid Eydi- Baygi, Hooman Nikbakhsh

Counseling and Guidance, Islamic Azad University, Science and Research Branch, Tehran, Iran
Associate Professor of Behavioral Sciences Research Center, University of Medical Sciences Baghiyat Allah, Tehran, Iran
Clinical Psychology, and Elite Young Researchers Club, Islamic Azad University, Branch Shiraz, Iran
Clinical Psychology, and Elite Young Researchers Club, Islamic Azad University, Science and Research Branch, Tehran, Iran
Clinical Psychology, and Elite Young Researchers Club, Islamic Azad University, Branch Torbat, Iran
Corresponding Author: Email: Majid_eydi@yahoo.com
Industrial and Organizational Psychology, Islamic Azad University, Arsanjan, Iran

ABSTRACT

Headache chronic is a degenerative condition, So that the person suffering not only Stress-induced pain, But faced are many other factors causing stress that affects various parts of his life. This study was examined the effectiveness of acceptance and commitment therapy approach, on mental health of women with chronic headaches. In this study which was a Quasi-Experimental with pre-test, post-test and control group, the sample group was selected by available sampling method from patients referred to the Baghiyat Allah pain clinic. Therefore 30 female subjects were chosen randomly and assigned to two control & experimental groups (each with 15 subjects) and were evaluated based on international headache society criteria and physician diagnosis. To assess the mental health sample in pre-test and post-test was used questionnaire of 28 questions. The experimental group was administered in 8 sessions of one hour, once a week acceptance and commitment therapy intervention approach. But the control group received no intervention. Data were analyzed using analysis of covariance with the software SPSS. The results showed after the intervention acceptance and commitment therapy approach there was a significant difference between the two experiment and control all subscale of mental health ($p<0.001$). The results emphasize the importance of this intervention in psychosomatic diseases and provide new horizons in clinical interventions.

Keywords: *Acceptance and Commitment Therapy, Mental Health, Chronic Pain*

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INTRODUCTION

Pain is a common phenomenon that people are forced to seek help from care health systems. Various aspects of the life of a person suffering, not only with the stress and discomfort caused by pain, but by the effects of other stressors, such as medical expenses, job and family outcomes affecting [1]. Pain reduces the emotional and affective abilities; and also a constant demand of the person to freedom from it is often unattainable; this ultimately led to demoralization, hopelessness, helplessness and depression in patients. Furthermore, chronic pain, not only the ability of the patient, but also undermines the ability of the family and his supporters (2). Among the chronic pain, headaches are the most common of these disorders. So that more than 90 percent of the population, are infected with at least one day per year to a headache. And 10 to 12 percent of those who do see a physician, their primary complaint are headache (3). Psychological and physical consequences of headache, implies the need to treat the disorder and applying ways to reduce pain sufferers. In the treatment of headache there are two general types of treatment, medication and non-medication. Drug therapy focuses only on the physical aspects of a biochemical headache. The main mechanism of the treatment effect in this way is more restoring the biochemical balance of the body. The focus is less on the Emotional aspects and consequences of headache in the patient's life. One of the structures in the field of positive psychology has been introduced and has aspects

of treatment; is acceptance. Avers and Colleagues (4) in relation to chronic pain have proposed domain of positive psychology, that based on it have emphasized the role of positive terms such as acceptance. Acceptance role in coping with chronic pain for years which is discussed in medical centers. Pain Acceptance means the willingness to engage in the activity, despite the presence of pain. And that pain is experienced without trying to control it or avoid it (5). Acceptance of chronic pain include active desire on the presence of pain, Also thoughts and feelings associated with it, along with the concern and involvement of conducting valuable activities, And achieving personal goals. Pain acceptance is defined as the tendency to experience chronic pain without the need for reducing, avoiding or any attempts to change it (6). In line with this idea, research findings show that patients with more accepting attitudes more compatible with chronic pain and based on diagnostic questionnaire, They report less depression, anxiety and desperation(6). Also, observed that people with greater pain acceptance have more levels of adaptation (6). Want to have pain and involvement in daily activities, regardless of the presence of pain in patients with chronic pain can lead to health (7). Pain acceptance is a strong association with more engaged in activities of daily living (8). Pain acceptance is associated strongly with the cognitive control of pain. Therefore, the researchers concluded that the best way in the pain Acceptance is to remove the painful aspects of life from non-painful aspects of it. Several studies support the role of pain acceptance in daily function in patients with chronic pain .Have been observed in clinical samples, pain acceptance is associated with pain experience, psychological problems, less physical disabilities, and psychological well-being (9, 10). Results of recent studies have shown that pain acceptance is associated with a high quality of life in patients with low back pain (11), the effect of pain on function in patients with rheumatoid arthritis (12), more engaged in personal activities (13), retained adaptive functioning (14), reduced distress, disability, less pain, and psychological well-being (8, 15) . Interventions based on Acceptance, such as Acceptance and Commitment Therapy, have been introduced as the third wave of cognitive – behavior therapy, and used in the treatment of patients with chronic pain (16). Acceptance and commitment therapy is one of the subsets of cognitive behavior therapy. This approach is based on that, avoids the pain, causing disability and reduced quality of life. According to this theory, avoidance occurs when rational thoughts and feelings are inappropriate and excessive influence on behavior and in the treatment process, exposure to avoided situations, can be considered as an intervention. Unlike many treatments, which focuses on reducing or controlling the symptoms or increase the level of acceptance of negative reactions, which are not directly modified (thoughts, feelings, and physical), this approach focuses on improving the level of activity (17). Vowels and McCracken regarding the effectiveness of acceptance and commitment therapy on patients with chronic pain a study on 171 patients after performing treatment showed significant improvement compared to pre-treatment performing on parameters such as the level of pain experience, depression, anxiety, disability, occupational status and physical performance. Despite advances in the fields of anatomy, physiology, biology, chemistry and the development of drug inventions, the pain is considered as a significant problem. In this regard, it is observed that the use of drugs (including opioids drugs, antidepressants, and anticonvulsants) for patients with pain, decrease their pain, only 30% to 40% (18). Due to the impact of psychological interventions on chronic diseases, the aim of this study was to evaluate the efficacy of acceptance and commitment therapy on mental health women with chronic headache.

MATERIALS AND METHODS

The study population included women aged 20 to 40 who were referred to a pain clinic in Tehran in 1390, who had been suffering from chronic headaches. The sample in this study was the available sampling method, considering the nature of the study (experimental study) has the interventions; Sampling was used voluntary. In this study, 30 patients were randomly divided into two groups of 15 each (experimental and control) groups. Criteria for the study included: 1. Chronic tension headaches and migraine diagnosis by a psychiatrist on the basis of the International Headache Society (second international classification of headache disorders) 2. The age range between 20 to 40 years. 3. High school the educational level 4. Willingness and informed consent to participate in the research project. Also absence of the sample criteria were: 1. getting of severe physical disease. Serious neurological disorders, or symptoms psychotics; 2. History of drug abuse or dependence.

Acceptance and Commitment approach to interventions was done in eight one-hour sessions, once a week and individually. According to it protocol (19) was compiled and summarized below:

Session 1: Establishing the medical relations, people familiar with the subject, explaining headache, signs and symptoms, drugs and other therapies, to assess the willingness of individuals to change the response to the questionnaire and medical contracts. **Session 2:** detection and evaluation of patient treatment and scoring them; evaluate the effectiveness of treatment methods; causing distress on a temporary and ineffective treatment with using the analogy; assignments and provide feedback. **Session 3:** helping

patients control for the detection of personal events, thoughts and memories; diagnosis of dysfunctional strategies and realize the futility of their acceptance of painful personal events, without conflict with their and lack of control using the metaphor, Feedback, and offer assignments. **Session 4 and 5:** Explain avoiding painful experiences and awareness of the consequences of avoidance; avoid situations that are discovered and contact them through adoption; training steps acceptance by explaining concepts enthusiasm, barriers, expressing the evaluation concept; described using the analogies; change language concepts by using analogies, relaxation training, feedback and offer assignments. **Session 6:** explain the role and background concepts; viewing himself as a platform and establish contact with oneself through the use of allegory; awareness of the different sensory information and separation of sense that are part of mental content. In this exercise, participants are trained to focus on their activities (such as breathing, walking) and aware every moment of their status, and when emotions, senses and cognitive processing; they are to be observed without judgment. When participants find that the minds wander into thoughts, memories or imagine, if possible, without regard to the content of their nature, return your attention to the present moment. Therefore, participants are trained to pay attention to the thoughts and feelings, although not attached to their content; provide feedback and assignments. **Session 7:** Explain the concept of value and express the difference between the values, goals and needs; clarifying the patient's values; creating a powerful motivation for change and better life in the patient; concentration exercises (focusing on breathing, walking, eating, brushing, ambient sounds and ...); assignments and provide feedback. **Session 8:** Training commitment to action; identify patterns of behavior consistent with the values and make a commitment to practice them; review assignments and summing up sessions with patients; performing after test.

In the present study to investigate mental health in a sample of pre-test and post-test was used General Health Questionnaire. The questionnaire was constructed in 1972 by Goldberg. Form of 28 questions were constructed by Goldberg and Hillier in an effort to increase the variance based on factor analysis on main form and includes four scales of 7 items (21). Reliability and validity of this instrument is reported in good (22). It is noted that much lower score on the General Health Questionnaire is a more appropriate level of mental health (21).

Results

Descriptive results showed that the mean and standard deviation age in experimental and control groups were respectively 33.28 ± 7.91 and 32.83 ± 7.53. Also, the mean and standard deviation disease duration was respectively 8.5 ± 8.06 and 7.63 ± 6.74.

Table 1. Mean and standard deviation scores for mental health and its subscales

Variable	Experimental group				**control group**			
	Pre-test		Post-test		Pre-test		**Post-test**	
	Mean	Std	Mean	Std	Mean	Std	Mean	**Std**
Physical Symptoms	9.87	3.14	4.13	1.92	9.40	3.44	7.93	**3.45**
Anxiety and insomnia	8.13	3.42	3.53	2.97	8.47	3.96	7.87	**3.60**
Social dysfunction	10.00	3.78	5.27	2.60	10.93	4.45	9.53	**3.87**
Depression	4.07	4.03	1.13	1.73	4.33	4.13	3.87	**4.16**
Mental health	32.07	10.65	14.07	7.46	33.13	12.47	29.20	**12.97**

The contents of Table 1 shows the mean scores mental health and its subscales include physical symptoms, anxiety and insomnia, Social dysfunction and depression the experimental group in pre-test are respectively 32.07, 9.87, 10.00 and 4.07 and post-test respectively 14.07, 4.13, 3.53, 5.27 and 1.13. Also, mean scores mental health and its subscales include physical symptoms, anxiety and insomnia, Social dysfunction and depression the control group in pre-test are respectively 33.13, 9.40, 8.47, 10.93 and 4.13 and post-test respectively 29.20, 7.93, 7.87, 9.53 and 3.87.

Table2. Levine's test for equality of variance assumption

Variable Index	**Physical Symptoms**	**Anxiety and insomnia**	**Social dysfunction**	**Depression**	**Mental health**
F	0.032	0.077	2.565	0.033	0.184
P	0.858	0.782	0.112	0.856	0.668

The contents of Table 2 shows the Levine's test results is not significant for the variable mental health and its subscales, so the assumption of equal variances is confirmed. Therefore can be used for analyzes of variance (ANCOVA).

Table 3. Results of covariance analysis effect acceptance and commitment therapy on physical symptoms in women with chronic headache

Index	SS	df	MS	F	P
Source					
physical symptoms	124.055	1	124.055	30.159	0.000
error	111.061	27	4.113		
Total	1419.00	30			

The contents of Table 3 shows the training acceptance and Commitment Therapy is a significant on physical symptoms in women with chronic headache after adjusting for pre-test scores (F= 30.159, P<0.001). These results indicate that the acceptance and commitment therapy is effective in reducing physical symptoms in women with chronic headache.

Table 4. Results of covariance analysis effect acceptance and commitment therapy on anxiety and insomnia in women with chronic headache

Index	**SS**	**df**	**MS**	**F**	**P**
Source					
Anxiety and insomnia	125.565	1	125.565	30.460	0.000
error	111.301	27	4.122		
Total	1421.00	30			

The contents of Table 4 shows the training acceptance and Commitment Therapy is a significant on anxiety and insomnia in women with chronic headache after adjusting for pre-test scores (F= 30.460, P<0.001). These results indicate that the acceptance and commitment therapy is effective in reducing anxiety and insomnia in women with chronic headache.

Table 5. Results of covariance analysis effect acceptance and commitment therapy on social dysfunction in women with chronic headache

Index	SS	df	MS	F	P
Source					
Social dysfunction	102.042	1	102.042	20.067	0.000
error	137.295	27	5.085		
Total	2048.00	30			

The contents of Table 5 shows the training acceptance and Commitment Therapy is a significant on social dysfunction in women with chronic headache after adjusting for pre-test scores (F= 20.067, P<0.001). These results indicate that the acceptance and commitment therapy is effective in reducing social dysfunction in women with chronic headache.

Table 6. Results of covariance analysis effect acceptance and commitment therapy on depression in women with chronic headache

Index	SS	df	MS	F	P
Source					
Depression	48.845	1	48.845	18.499	0.000
error	71.289	27	2.640		
Total	527.000	30			

The contents of Table 6 shows the training acceptance and Commitment Therapy is a significant on depression in women with chronic headache after adjusting for pre-test scores (F= 18.499, P<0.001). These results indicate that the acceptance and commitment therapy is effective in reducing depression in women with chronic headache.

DISCUSSION AND CONCLUSION

The aim of this study was to evaluate the efficacy of acceptance and commitment therapy on mental health women with chronic headache. Based on the results in tables 3 to 6, the results of this study indicate that the approach of acceptance and commitment therapy is effective on mental health, women with chronic headache. These results are consistent with previous studies (19, 22, 23). In explaining these

results must be acknowledged that the acceptance and commitment therapy approach to providing flexibility makes use of acceptance process, mental focus, commitment and behavior change processes (24). Acceptance and commitment therapy focuses on accepting further, focusing on the present moment awareness and involvement in activities that are in line with personal values. It seems that acceptance process is key in reducing the painful experience of emotional functions. It is also predictive of patient performance in the future. Strategies based on the acceptance implies on reduction of pain symptoms and improving quality of life along with pain. The main theoretical constructs in acceptance is based on behavioral treatments such as acceptance and commitment therapy, psychological flexibility. That means the ability to take effective action in line with personal values despite the presence of pain (25). The results of these studies demonstrate the importance of psychological acceptance in psychological functioning. Patients who are reported to have more tendency to experience negative psychological experiences, emotional experiences, thoughts and bad memories, show social functioning, physical and emotional better. Acceptance and commitment therapy approach instead focus on resolving and removing harmful factor helps the patient

To accept emotions and their cognition controlled and to free themselves from control verbal rules, which is caused due to their problems and to allow them to give up the struggle and conflict (25)? Acceptance and commitment therapy is essentially a process orientation and clearly emphasized the increasing acceptance of psychological experiments, by using increase in meaningful, flexible, adaptive, activities, regardless of the content of psychological experiences. Second goal acceptance and commitment therapy used in the treatment is not increased realism, effective, rational thinking, or emotional encouragement. But also the goal of therapy is based on the decrease a void psychological experiences, and raise awareness of them focus on the present moment without taking unnecessary conflict and non-evaluative manner (26). Aim of most patients is blurring the past and the suffering associate with it. Most people have a long-term struggle with their problems in different ways, and avoid these practices. When a person will not make contact with their own experiences, and it will not take steps to alter the form or frequency of these events and their contexts; this is exactly the time that is caused by psychological trauma. One of the key advantages of acceptance and commitment approach, it is the first to go the experience has been avoided and puts it aim.

The limitations of the present study was the lack of sufficient time for Follow-up of treatment outcomes and No examine male patients with Chronic headaches and different age groups. We recommend the approach used in this study, larger groups and male group should be re-examined to validate the methods reliably be overestimated. Also, study examined to longitudinally to be more assure the accuracy of results during the time. Research further can are compared the effectiveness of this treatment with other behavioral therapies.

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