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Determining the Effectiveness of Acceptance and Commitment Therapy (ACT) on Life Expectancy and Anxiety Among Bereaved Patients

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ABSTRACT

Introduction: Acceptance and commitment therapy tries to increase one's psychological acceptance regarding subjective experiences (thoughts, feelings, etc.,) and in turn, decrease ineffective control actions. **Aim:** The current study was conducted with the aim to investigate the effect of acceptance and commitment therapy (ACT) on the amount of life expectancy and anxiety among bereaved patients. **Material and Methods:** This research was a quasi-experimental study with pretest–post-test control group design. The statistical population included all bereaved patients aged between 20-40 who referred to counseling and treatment centers and psychiatric clinics in Tehran in 2015. Bereaved patients were identified through convenient random sampling method amongst patients and based on clinical diagnosis of psychiatrist treating patients. Thirty four persons were chosen and were randomly assigned in two 17- persons experimental and control groups. Both groups were evaluated at two stages of pre-test and post-test through anxiety scale (Spielberger STAI-y 1970) and life expectancy (Schneider, 1991). **Findings:** Conducted investigation shows that the average life expectancy in the experimental group has increased from 12.40 to 23.30 after acceptance and commitment therapy. Moreover, the average of anxiety scores in the experimental group has decreased in post-test from 121.20 to 79.10 after acceptance and commitment therapy. Results of covariance analysis revealed that the experimental group subjects experienced a significant lower level of anxiety than those in control group ($p<0.001$). Furthermore, the life expectancy has significantly increased in the experimental group ($p<0.001$). **Conclusion:** Inefficient beliefs (illogical), intellectual faults and cognitive distortions have reduced, and these in turn cause a reduction in anxiety. In this way bereaved patients' life expectancy has increased. **Conclusion:** The acceptance and commitment therapy has led to the anxiety reduction and caused an increase in bereaved patients' life expectancy.

Keywords: anxiety, life expectancy, acceptance and commitment therapy.

1. INTRODUCTION

Today, we encounter a third-generation of treatments that they can be named as acceptance based models e.g. Mindfulness-Based Cognitive Therapy, Meta-Cognitive Therapy, and Acceptance and Commitment Therapy. In these treatments, instead of changing recognitions, attempts are made to increase one's psychological relationship with his thoughts and feelings (1). The acceptance and commitment therapy originates from a philosophical theory called functional contextualize, and is based upon a research program about language and recognition which is called one of the subjective relations framework theories. The acceptance and commitment therapy has six core processes which lead to psychological flexibility. These six processes include: acceptance, diffusion, self as context, the relation with present, values and committed action (2). In this treatment, attempts are made to increase one's psychological acceptance regarding subjective experiences (thoughts, feelings, and etc.) and in turn, decrease ineffective control actions. The patient is taught that any action to avoid or control these unwanted subjective experiences is ineffective or has an adverse effect and aggregates them. Therefore, these experiences should be accepted completely without any inner

or outer reaction to remove them; at the second step, one's psychological awareness increases i.e. the person becomes aware of all psychological states, thoughts and his behavior at the present moment. At the third step, the person is taught to separate himself from these subjective experiences (cognitive separation) so that he can act independent of these experiences; step four included attempt to reduce extreme focus on self-description or personal narratives (as a victim)a person has made in his mind; fifth step is helping a person so that he can recognize his original personal values and identify them clearly and convert them to behavioral objectives (clarifying values). Finally, creating incentives to do committed action i.e., activity toward specified objectives and values with acceptance of subjective experience can be depressing and obsessive thoughts related to accidents (trauma), social phobias or anxiety and so on. Recent research on acceptance and commitment therapy has provided satisfactory results and rational reasons for using acceptance and commitment therapy in clinical practice and especially working with patients with mood and anxiety disorders. The investigation of the effect of this method on patients with an average age of 42 years who suffered from social phobia showed that symptoms of avoidance and anxiety decreased significantly in the treated group, and this effect continued during a three month period of follow up (3, 4). In another study, this treatment was individually used for 5 patients with obsessive-compulsive disorder (OCD). Of course, in addition to assessing the severity of OCD, depression and anxiety in patients was investigated as well. The results indicate a significant reduction in the frequency of obsessive behaviors, the severity of OCD symptoms, the amount of belief in obsessive thoughts, destressization and the need to respond to them, as well as, anxiety and depression scores (5). In another research the effectiveness of acceptance and commitment therapy shows a reduction in depression symptoms in patients with multiple sclerosis. The results of the study indicate that an increase in psychological flexibility which is the main component of acceptance and commitment therapy has a significant effect on the dependent variable (depression) reduction (6).

Grief is a natural reaction with severe sorrow which occurs as a result of the following factors: the loss of someone the person has been emotionally dependent on him, the loss of one's part, the loss of material things, the end of a life cycle stage, events such as divorce or separation, loss of a limb or one of the senses such as blindness or deafness, the loss of job (7). In another research, the role of grief in psychological well-being among mothers of children with cancer was shown (8). All people during their life suffer grief when they lose their life important persons. This occurs most often when people lose an important person in their life, but grief may occur in other forms, for example ending an emotional relationship with each other may lead to a grief disorder. Restlessness, loneliness feeling and lack of motivation to perform everyday tasks are among symptoms persons experiencing grief show (9). One who suffers from a grief disorder experiences psychological inappropriate conditions; problems such as incidence of depression, anger, isolation, loss of enthusiasm and motivation and activity, rage, a sense of shock and astonishment, illusion, feel guilty, suicidal tendency, fear of separation from the deceased, misanthropy, mind engagement, skepticism and disbelief, and lack of desire to live are amongst problems these persons encounter (10). The goal of bereavement treatment is to assist mental health professionals so that they can better understand the bereavement complicated phenomenon to help the grief-stricken people coup with their mourning in a healthy way. Mourning for the death is a natural and essential process that most people experience it, but they often lack the necessary support to cope with the pain of dejection, and grief is often considered as the underlying cause of different psychological problems.

The side effects of grief and anxiety have attracted many researchers' attention, and recently substantial research has been conducted in this regard. Moreover, high anxiety and problems caused by that in relationships lead negative perceptions about self to be formed. The disorder disrupts at least part of one's daily activities (11), and decreases self-value. The effect of mindfulness-based therapy on negative automatic thoughts, and ineffective attitude was investigated. The results showed that mindfulness-based therapy had a significant effect on reduction of anxiety and negative automatic thoughts. These studies were conducted based on researcher theoretical approach regarding a specific treatment for this disorder (12). Whereas, each of proposed treatments have been repeated evenly in different studies. Therefore, paying attention to and emphasizing on them at clinical stage and working with patients certainly confuses the therapist. Since, in practice, communicating methods to specialists is essential so that they can adopt the best option for treatment while working with patients. In this vein, according to conducted research there are treatments which have been emphasized on more than others. The importance of this issue is that sometimes patient's anxiety leads him toward choosing unusual methods of treatment, and therefore, postponing treatment and it endangers mental health and life quality and finally leads life expectancy to be decreased. Therefore, the patient's anxiety treatment is part of the patient's main treatment. Considering what was said, the current study aims at answering the following question: Does acceptance and commitment therapy affect life expectancy in people with grief and anxiety disorder?

2. MATERIAL AND METHODS

The current study is a quasi-experiment research and one variable covariance statistical method was used to analyze collected data. This research was conducted with the aim to investigate the effect of acceptance and commitment therapy (ACT) on the amount of life expectancy and anxiety among bereaved patients. The statistical population included all bereaved patients aged between 20-40 who referred to counseling and treatment centers and psychiatric clinics in Tehran in 2015. Bereaved patients were identified through convenient random sampling method amongst patients and based on clinical diagnosis of psychiatrist treating patients. Using screening methods of anxiety (Spielberger STAI-y 1970) and life expectancy (Schneider, 1991, clinical interview) scales, patients with high anxiety and low life expectancy were identified. Thirty four persons were chosen and were randomly assigned in two 17- persons experimental and control groups. Experimental group received acceptance and commitment therapy intervention, and control group received no inter-

vention. Both groups were evaluated at two stages of pre-test and post-test through anxiety scale (Spielberger STAI-y 1970) and life expectancy (Schneider, 1991). In this research two instruments were used:

Life expectancy scale (Schneider et al., 1991) was made by Schneider et al., in 1991 with the aim to measure hope. It has 12 statements and implemented by a self-rating method. Of these statements, 4 statements are for measuring the factorial thinking, 4 statements for measuring the strategic thinking and 4 statements are distractor. Many studies support the reliability and validity of this questionnaire as a hope measurement scale. In an investigation total internal consistency was calculated to be 0.74 – 0.84 and test-retest reliability was calculated to be 0.80 (13).

Anxiety scale (Spielberger STAI-y 1970), this scale was presented in 1970 by Spielberger et al., and was revised in 1983. The main aim of its revision was to prepare a specific amount of anxiety to be a strong basis for differential diagnosis of patients with anxiety disorders from those with depression. The revised form of STAI-Y includes 40 questions. Items 1-20 measure state anxiety (overt) with 4 options (never, sometimes, usually and very much), and items 21-40 for the trait anxiety with 4 options (almost never; sometimes; often; almost always). High correlations have been reported between state anxiety scale and other tests which measures anxiety. This scale correlation with Taylor manifest anxiety scale (TMAS) has been reported to be 0.79-0.83 and correlation between trait anxiety with affection trait (AACT) has been reported to be 0.52 - 0.58. State-trait anxiety questionnaire has a high internal consistency. The median alpha coefficient at state and trait scale was reported to be 0.92 and 0.90 respectively. Research studies show a high correlation between two anxiety forms (0.96-0.98) (14). A high correlation has been reported between Spielberger's trait anxiety scale and other scales measuring anxiety structure. This scale correlation with ASQ (6) has been reported to be 0.75-0.77. This scale correlation with TMAS (7) has been evaluated to be 0.79-0.83 (15).

Diagnostic criteria for bereaved patients

Emotional symptoms such as sadness, anger, feeling guilty, anxiety, fatigue, numbness and confusion, depression (People who were depressed 6 months after the bereavement, and of course, they lack such symptoms prior to bereavement were considered as the main criteria for diagnosis).

Physical symptoms: feeling of pressure in the chest, shortness of breath, muscle weakness, thirst, emptied stomach.

Cognitive symptoms such as infertility, illusion and feel the deceased is present.

Behavioral symptoms: sleep and eating disturbances, distractibility, restlessness, sighing and keeping the deceased's objects, forgetfulness, isolation, dreaming of the deceased, crying.

Inclusion Criteria: a) high levels of anxiety and low life expectancy; b) the lack of physical illness and psychiatric disorders; c) being literate (at least third grade junior high school); d) the age range of 20 to 40 years; e) people express their willingness to participate in the group; f) subject is not being treated psychological by others.

In order to conduct the research, patients with high anxiety and low life expectancy score were chosen from those bereaved patients referred to the given clinic and were willing to cooperate with the researcher and had the inclusion criteria. The Acceptance and commitment therapy or ACT intervention started through familiarity with members and introducing them to each other and therapist, explaining treatment stages (treatment contract), conducting pre-test, and creating a relationship which should be a cooperative relationship in ACT. And in order to observe the ethical considerations, subjects' consent was obtained prior to conducting the research and clients were assured that data remain confidential, and honesty and scientific and practical integrity are respected. Moreover, patients became familiar with therapeutic concepts of acceptance and commitment through proposing three fundamental questions:

What do you expect from treatment?

What efforts have you ever done?

Have these efforts been effective?

By proposing these questions insight into the problem is obtained and the problem's origin analysis begins. Finally, Fear and ACI algorithms were taught to the patients and we practiced the use of them. Acceptance and commitment therapy sessions were held during 12 sessions (Each session was 90 to 120 minutes, once a week) and post-test was used at last.

2. FINDINGS

Testing research hypothesis

Subjects were literate (at least third grade junior high school) with an age range of 20-40 years. Experimental group includes 11 women and 6 men, and there were 10 women and 7 men in control group. The average age of subjects in experimental was 28.33 and varied in the range of 20 years. The average age of subjects in control group was higher (29.80) and subjects' age ranges from 20 to 40 years. The individuals' educational status in the present sample includes "Diploma" and "third grade junior high school", and most persons (56%) held a Diploma certificate. Considering the two-level stratified independent variable (experimental and control group), and dependent variable (post test scores of life expectancy and anxiety), multivariate analysis of covariance (MANCOVA) was used. The significance level between experimental and control group regarding the effect of acceptance and commitment on bereaved patients' anxiety amount (by keeping the effect of pretest constant) equals 0.001, therefore there is a significant difference between these two groups ($f_{1,20}$= 441.591, P<0/001).

		Mean	Standard deviation	Minimum age	Maximum age
age	Experimental group	28.3333	6.88338	20	40
	Control group	29.8000	6.96112	20	40

Table 1. The mean, standard deviation, minimum and maximum age of the experimental and control group

Moreover, the significance level between experimental and

Education	Frequency	Frequency percentage	Density percentage
Diploma	20	56.7	56.7
third grade junior high school	14	43.3	100
Total	34	100	

Table 2. Frequency and frequency percentage of total sample educational status

		Pre test		Post test		
	Group	M	SD	M	SD	f
Factorial thought	Experimental group	6.70	1.494	6.90	1.197	108.639
	Control group	6.40	1.430	12.10	1.663	
Strategic thought	Experimental group	6.40	1.578	6.60	1.075	129.841
	Control group	6.00	1.764	11.20	2.098	
Life expectancy	Experimental group	13.10	1.853	13.50	1.716	294.806
	Control group	12.40	1.776	23.30	2.003	

Table 3. The mean and standard deviation of life expectancy and its variables for each group separately

		Pre test		Post test		
	Group	M	SD	M	SD	f
Overt anxiety	Experimental group	66.10	3.985	66.40	3.893	281.405
	Control group	62.20	5.846	42.30	4.739	
Covert anxiety	Experimental group	60.80	5.940	61.30	5.677	166.728
	Control group	59.00	5.538	36.80	2.573	
Total anxiety	Experimental group	126.90	6.607	128.10	6.027	441.591
	Control group	121.20	5.266	79.10	6.027	

Table 4. The mean and standard deviation of anxiety and its variables for each group separately

control group regarding the effect of acceptance and commitment on bereaved patients' life expectancy (by keeping the effect of pretest constant) equals 0.001, therefore there is also a significant difference between these two groups ($f_{1,20}$= 2949.806, P<0/001. (Tables 1-4).

3. DISCUSSION

The current study was conducted with the aim to investigate the effect of acceptance and commitment therapy on life expectancy and anxiety amount in patients who suffer from grief disorder. Data analysis at the first part showed that using interventive method of acceptance and commitment therapy causes an increase in factorial thought, strategic thought, and life expectancy in patients suffering from grief disorder. Findings of this research are in line with those of other studies (3-6, 15), but why does acceptance and commitment intervention affect life expectancy and anxiety in persons with grief disorder? This issue can be explained based on the previous theories and findings. In Beck's theory, depression can be explained through four explainable cognitive components. These four components are as follows: automatic thoughts, schema, logical errors, and cognitive triangle. Cognitive triangle is related to thoughts content. As thinking content about self, world and future is negative in depression, interpretation of sensory data is done with error (16). In another research, the effectiveness of acceptance and commitment therapy indicates a reduction in symptoms of depression in patients with multiple sclerosis. The results of the study show that an increase in cognitive flexibility which is the main component of acceptance and commitment therapy has a significant effect on reducing dependent variable (depression) (6), which is in line with the current research. In another study it was stated that 10-25 % of bereaved patients will suffer from severe anxiety and depression, and it seems that clinical findings in acceptance and commitment therapy sessions has effect on increasing life expectancy and reducing depression and anxiety in bereaved patients in this way (8). In explaining this research's findings it can be said that human chooses his reaction against unwanted but happened pain and hardship and environmental conditions, and no one except he can get back this right. In researcher's view what exhausts a man is not pains and their undesirable fate but it is life becoming meaningless which is catastrophic; and meaning is not only embedded in pleasure and gladness and joy but meaning can also be found in pain and death. Another study showed the fundamental concepts of acceptance and commitment namely creative disappointment which causes one to be disappointed of his previous useless strategies and efforts and tries to behave in another way i.e., experimental acceptance which leads to accepting past experiences and using them (6). The current study results showed that the lack of cognitive mixing based on which, one differentiates between cognition and other aspects of life, and values becoming clear and behaving based on these elected values in different areas of life, as well as, self-concept as context (Lack of attachment to conceptualized self) had a significant effect on the obtained results in the current study, and this treatment fundamental concepts were practiced with patients in group psychotherapy sessions. The effect of acceptance and commitment therapy method can be assigned to the philosophy of cognitive-behavioral therapy and the role of thoughts and knowledge on the relationship between anxiety and disappointment in life. In cognitive approach, anxiety is affected by ineffective beliefs (irrational), intellectual errors and cognitive distortions in all aspects. From this perspective, in social dealings and events which occur for them, persons make intellectual errors such as exaggeration, disaster identification, distortion, hasty concluding, exaggerated generalization, etc., mostly at the time of perception, and interpretation of events. Events cannot cause problem per se, but it is intellectual pattern, and information processing model and giving sense to events, or events interpretation that creates such negative feelings and emotions in them (11). It seems that through internalizing what occurs in a person we can say the amount of ineffective beliefs (irrational), intellectual errors and cognitive distortions has reduced, and this in turn, leads anxiety to be decreased and causes an increase in life expectancy. Amongst the current research limitations we can refer to the presence of nuisance variables which makes difficult generalizability of the study. As a limited number of patients between 20-40 years who referred to counseling and treatment centers and psychiatric clinics due to suffering from grief symptoms were chosen as research sample, research generalizability of the results is restricted. It was impossible to control variables such as different social, economic and cultural groups in this study. Follow up was not conducted in this research due to time limitation.

4. CONCLUSION

It is suggested to conduct research with larger groups and in different areas. It is suggested to control economic status variables in future studies. In addition to questionnaire, using deep interviews is suggested so that interventive factors

and variables in treatment process can be identified and controlled more accurately.

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