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A Study on the Effectiveness of Acceptance and Commitment Therapy on Anxiety in Nurses

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ABSTRACT: This research was carried out to study the effectiveness of acceptance and commitment therapy on anxiety in nurses. The method in this research was quasi-experimental with pretest and posttest design with control group. The statistical population in this research included all nurses in Shiraz County Dena Hospital during 2018. The sample included 30 participants who were selected through purposive sampling and they were randomly divided into two groups of experiment (15 members) and control (15 members). The data collection instrument n this research was Beck Anxiety Inventory (1988). In order to analyze the data, analysis of covariance (ANCOVA) was used by SPSS. The results indicated that acceptance and commitment therapy had led to a decrease in the anxiety of the nurses, comparing to the control group. ($p<0.01$) Hence, acceptance and commitment therapy is an effective method in decreasing anxiety.

***Keywords*:** Acceptance and commitment therapy, Anxiety, Nurses.

INTRODUCTION

One of the occupations that includes many stressful factors is the nursing career. (Al-Amery, 2003; Lee and Wang, 2002) Presence of stressful occupational and environmental factors in nursing career increases the probability of emergence of emotional reactions such as depression, anxiety and stress. (Balducci et al., 2014) In a study from Asadzandi et al. in 2011, it was proved that high levels of anxiety and stress is alarming in nurses and could create risks. (Asadzandi et al., 2011) A research with a focus on studying stress in nurses and its role on patient care that was carried out by Farquharson in Scotland in 2011, showed that stress could decrease the work efficiency of a nurse in patient care. (Farquharson et al., 2013) Additionally, a study was designed by Farquharson et al in 2013 that researched the anxiety, stress and depression in female nurses employed at one of Japanese hospitals, and its results indicated that these factors could create adverse psychological and physical effects in them. Similar results are proved in a study conducted in 2014. (Balducci et al., 2014)

Hence, considering the increasing growth of mental disorders, especially anxiety, in individuals, the necessity of identifying and providing health care services to decrease them is felt. Among the therapeutic techniques and methods used for decreasing the aforementioned disorders, many methods have been applied by the researchers and among them, the acceptance and commitment therapy has been an effective method.

Acceptance and commitment therapy (ACT) has its roots in a philosophical theory called functional contextualism and it is based on a research program on language and cognition that is called the theory of mental relations framework. The objective in this therapy method is to help the authorities for reaching a more valuable and satisfactory life through increasing the psychological flexibility and it includes six central processes that lead to psychological flexibility, which are as the following: cognitive defusion, acceptance, making and maintaining contact with the present moment, self as context, recognition of values, and committed action towards value-driven behavior. (Hayes et al., 2006)

Defusion is for prevention of cognitive mixture. Cognitive mixture refers to the state in which the individual sees themselves and their thoughts in mixture. Defusion is to accept that the thoughts are separate from self and thoughts are nothing more than temporary personal events. Acceptance refers to creating a space for feelings, senses, tendencies and other unpleasant personal experiences, without trying to change them, or avoid them or review them. Maintaining contact with the present time includes

presence of complete awareness to the experience of here and now with openness, interest, acceptance and focus on them, and complete involvement with what is happening now. Observing self includes continuous awareness of self that does not change and it is always present and is resistant to damages. Through this approach, experiencing thoughts and feelings, memories, tendencies, senses, images, roles and even the physical body are different from the self. These phenomena change, but self is always the same. Values and committed action refers to the fact that the individual understands what is more important and deeper for them and set goals based on them and acts committed and effectively to reach them. (Harris, 2006)

Acceptance and committed therapy helps the individuals to experience problematic thoughts and emotions differently, and not to perform regular activities to change or decrease their frequency. (Linhan, 1993) In this therapy, the therapy seeker is trained that any action to avoid or control unintentional mental experiences (thoughts and feelings) is ineffective or has reverse effects and leads to increase them and such experiences must be accepted completely, without any intrinsic or extrinsic reactions. (Forman and Herbert, 2008)

A wide range of studies have proved the global interest in the model of behavior change from the theory of mental relations framework and ACT. Among these studies could be referred to Yadavaia et al 2014; Hoffmann et al, 2014; Bluett, 2014; Swain, 2013; Fledderus et al, 2013; Hajsadeghi et al 2017; Baradaran et al, 2016; that showed that though ACT the clinical symptoms of anxiety could be decreased. In this research, also, ACT is used due to its high effectiveness in this regard.

Hence, considering the increasing growth of mental disorders, especially anxiety, in individuals, the necessity of identifying and providing health care services to decrease them is felt. Accordingly, this research was conducted to study the effectiveness of ACT on anxiety in nurses.

Methodology

The method in this research was quasi-experimental with pretest and posttest design with control group. The statistical population in this research included all nurses in Shiraz County Dena Hospital during 2018. The sample included 30 participants who were selected through purposive sampling and they were randomly divided into two groups of experiment (15 members) and control (15 members).

Research Instrument

Beck Anxiety Inventory (1988)

This questionnaire includes 21 anxiety symptoms. The four choices of each question is scored in a four-part continuum from zero to three. Any of the questionnaire items describes one of the common symptoms of anxiety (mental, physical, fear symptoms). This questionnaire is designed so that the depression symptoms are not included. Kaviyani and Musavi (2008) assessed the validity and reliability of Beck anxiety inventory in Iranian sick and healthy population. Results suggested that beck anxiety scale has 0.72 validity, 0.83 reliability and 0.92 inner consistency. (According to Faraji et al., 2011)

Implementation Method

In order to implement this study, initially 30 individuals were chosen and were asked to answer the measuring instrument in two groups of experiment and control. Subsequently, the independent variable which was ACT was applied to the experiment group and after the intervention, both experiment and control group answered the measurement instrument as the posttest. The number of therapy sessions for ACT was 8 sessions. In any session, a brief of the issues discussed in the previous sessions were discussed again and the two sessions were linked together again. The therapy sessions were held once a week for 90 minutes. The ACT sessions are as the following: (Hayes et al., 2006)

Table 1. ACT Sessions Topics

Session 1	Establishing a therapeutic relationship, closing a therapeutic contract, psychological training
Session 2	Discussing experiences and evaluating them, efficiency as a measure of measure, creating creative disappointment
Session 3	The expression of control as a problem, the introduction of desire as the other answer, engaging in purposeful actions
Session 4	Application of cognitive fault techniques, intervention in the performance of language-constraining chains, weakening
Session 5	Self-observation as a background, self-conceptual weakening and self-expression as observer, showing separation between oneself, internal experiences and behavior
Session 6	The use of mental techniques, the modeling of exclusion, the teaching of internal experiences as a process
Session 7	Introducing value, showing the dangers of focusing on results, discovering the practical values of life
Session 8	Understanding the nature of desire and commitment, determining the patterns of action appropriate to values

Findings

In order to test the research hypotheses, ANCOVA was used through SPSS ver. 22. To observed the assumptions of the ANCOVA test, the assumptions of this test were studied and approved by Shapiro–Wilk test, Levene test and homogeneity slope of regression. Table 2 presents the descriptive statistics of anxiety based on group and stage of the test.

Table 2. Mean and Standard Deviation of Pretest and Posttest Scores of Anxiety and its Components in Both Groups

Variable	Group	Numbers	Pretest		Posttest	
			Mean	Standard Deviation	Mean	Standard Deviation
Anxiety	Experiment	15	22.86	7.83	12.66	6.34
	Control	15	17.13	8.66	17.40	7.42
mental component	Experiment	15	6.067	1.79	2.86	1.06
	Control	15	4.73	2.34	5.13	2.09
Physical component	Experiment	15	10.66	5.56	6.20	4.52
	Control	15	8.26	5.48	8.06	4.86
Fear component	Experiment	15	6.13	2.55	3.60	2.02
	Control	15	4.13	2.47	4.20	2.21

As it could be observed from table 2, there is no significant difference between the pretest scores of anxiety in both groups. In addition, it is observed that the mean of anxiety scores in the experiment group has decreased in the posttest, comparing to the posttest, while there is no significant difference between the control group in pretest and posttest. Table 3 presents the ANCOVA results from the differences between the groups in anxiety, in posttest:

Table 3. Univariable ANCOVA Results on the Posttest Scores of Anxiety and its Components in both Groups

Sov	Posttest	ss	df	Ms	F	Significant	Etta Sq	Statistical
Group	anxiety	570.141	1	570.141	108.993	0.001	0.801	1.000
	mental component	53.980	1	53.980	59.853	0.001	0.705	1.000
	Physical component	80.490	1	80.490	35.600	0.001	0.587	1.000
	fear component	30.893	1	30.893	66	0.001	0.725	1.000
Error	anxiety	141.237	27	5.231	-	-	-	-
	mental component	22.547	25	0.902	-	-	-	-
	Physical component	56.524	25	2.261	-	-	-	-
	fear component	11.702	25	0.468	-	-	-	-

As it could be observed from Table 3, there is a significant difference between anxiety scores and mental, physical and fear components of the participants based on their group (experiment or control) in posttest stage. ($p<0.01$) Hence, ACT has been able to decrease the anxiety. The effect rate on anxiety was 80.1 percent, mental component 70.5 percent, physical 58.7 percent and fear 72.5 percent in posttest.

Discussion and Conclusion

The objective in this research was to study the effectiveness of ACT on anxiety in nurses. Hence, after conducting this method and studying the pretest and posttest results, it could be concluded that ACT was able to decrease anxiety and mental, physical and fear components. A wide range of studies has applied ACT in different fields and has considered it effective. Among these studies could be referred to Yadavaia et al 2014; Hoffmann et al, 2014; Bluett, 2014; Swain, 2013; Fledderus et al, 2013; Hajsadeghi et al 2017; Baradaran et al, 2016.

To explain the abovementioned findings, it could be claimed that ACT attributes mental problems to three reasons: problems of individuals from their internal experiences, avoiding the unpleasant internal experiences and avoiding behaviors and actions that are important and valuable for the individual. Decrease or lack of awareness of the individuals from their internal experiences, decrease their ability in functional use of their emotional responses and this leads the individuals not to be able to apply suitable behaviors or have problems in finding the roots for their behaviors. One of the other issues that can increase the mental disorders in the individuals is the relationship type they have with their emotions. Patients have formed this habit to have critical judgements about their unpleasant experiences and they make a lot of effort to avoid these experiences. These avoiding efforts often have contradictory effects, increase the avoiding issues (such as thoughts, feelings and physical senses), and lead to higher psychological problems and interfere with the life quality. Negative view of self and experiences could decrease the individuals' motivation for changing their behaviors or their complete involvement with their lives. Avoiding efforts create problems for the change, since avoiding responses are often improved negatively through immediate decrease of the sadness. (Zargar et al., 2012) Accordingly, the decrease in anxiety due to the ACT is explainable.

Any given study has inevitably its limitations that make the interpretation of the findings in the context of the limitations. Among the limitations of this research could be referred to the fact that the results in this research cannot be generalized and also the fact that it could not controlled or measured after several months. Hence, it is recommended that the later studies follow-up is used. Also, it is recommended that in the future studies other therapy methods whose effectiveness are approved in improving anxiety are used comparatively.

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