Global Journal of Scientific Researches
Available online at gjsr.blue-ap.org
©2018 GJSR Journal. Vol. 6(3), pp. 40-44, 29 June, 2018
E-ISSN: 2311-732X

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

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Received: 29 May, 2018 *Accepted: 06 June, 2018* *Published: 29 June, 2018*

ABSTRACT

This research was carried out to study the effectiveness of acceptance and commitment therapy on depression 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 Depression Inventory-II (BDI-II). 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 depression of the nurses, comparing to the control group. ($p<0.01$) Hence, acceptance and commitment therapy is an effective method in decreasing depression.

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

INTRODUCTION

Nursing is among the job groups that are exposed to stress and psychological problems (Hache, 1985) and depression, anxiety and fatigue are among the main complaints of this group. (Angermeyer et al, 2006; Landsbergis, 1988) Long-term job stresses influence the job satisfaction among the nurses. (Adams, 2000) Khajenasiri (2000) reported the mild and severe depression among the nurses in Tehran County Imam khomeini Hospital to be 26.9 percent. A study carried out by Kawano (2008) in Japan showed, comparing to the other jobs, nurses are exposed to more stressful factors. In this stud, it was reported that physical and psychological health of nurses affect the quality the provided service and patients' satisfaction.

At least 12 percent of the population in developed countries refer to psychologists to treat the depression syndromes during their lives and it is estimated that 75 percent of the individuals who refer to the healthcare centers are suffering from depression. (Rossello and Bernal, 2007) Some researchers also believe that around 30 percent of the people, especially in the west, suffer from depression at least once in the course of their lives. (Rodin et al, 2009)

Both medicinal and psychological treatments are used to treat depression. (Rowa, 2005) Although short-term use of these medicines might be useful in treatment, it seems that they are not valuable in more sustainable treatments. (Alfano, 2011) Although there have been studies on determining which method is better than the other method, there is no reliable finding to show one of the treatments is better than the other and there is no consensus among the experts. (Rowa, 2005)

One of the treatments whose effectiveness on treating depression (Twohig, 2017; Zetli, 2015; Hallis et al., 2016; Yadavaia et al., 2014; Fledderus, 2013; Hajsadeqi et al., 2017; 'Alavizade and Shakerian, 2016; Baradaran et al., 2016) and decrease in stress (Brinkborg et al., 2011; Flaxman, 2010) is acceptance and commitment therapy (ACT). ACT is based on "functional conceptualism". The goal of functional conceptualism is to predict the effect of continuous application of the whole organism in interaction with the historical and situational context. Accomplishing a goal of influencing behavior requires successful manipulation of events, and only contextual variables can be manipulated directly. (Hayes et al, 2003) In ACT, the main objective is to create psychological flexibility; that is, creating a practical choice capability among different choices that is more

convenient, not choices are made to avoid the thoughts and feeling, memories or disturbing desires, or in fact imposed on the individual. (Forman, 2008)

ACT includes six main principles: defusion, acceptance, and contact with the present moment, mindfulness, values and committed action. 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. These phenomena change, but self is always the same. Values and committed action refer 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. (Hayes et al., 2003; Hayes, et al, 2006)

Due to the mechanism, such as acceptance, increase in awareness, desensitization, being in the present tense, observation without judgment, confrontation and release in combination with traditional cognitive behavioral therapies, hidden in it, ACT could increase the effectiveness, while decreasing the psychological symptoms. (Witkiewitz, 2005) Hence, considering the increasing growth of mental disorders, especially depression, 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 depression 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 Depression Inventory-II (BDI-II) This questionnaire is a revision of Beck's Depression Inventory (1996) that was developed to evaluate the depression severity. This questionnaire could be used in the population above 13 years old. The 21 items of Beck Depression Inventory is categorized in three emotional, cognitive and physical symptoms groups. (Fat'hi Ashtiyani, 2010) The four choices of each question is scored in a four-part continuum from zero to three. The studies carried out by Beck and Rush (2000) on the second edition of the questionnaire indicate an internal consistency of 0.73-0.92 and Cronbach's alpha of0.86 for the patient group and 0.81 for the non-patient group. In a study carried out on 125 students of University of Tehran and Allameh Tabataba'i University, that was conducted to test the validity and reliability of BDI-II on Iranian population, the Cronbach's alpha was reported to be 0.78 and the test-retest reliability within two weeks was reported to be 0.73. (Fat'hi Ashtiyani, 2010)

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 observe 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 depression based on group and stage of the test.

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

Variable	Group	Numbers	Pretest		Posttest	
			Mean	Standard Deviation	Mean	Standard Deviation
Depression	Experiment	15	19.66	9.30	9.53	4.73
	Control	15	16.53	7.42	16.80	5.08
Emotional Depression	Experiment	15	7	4.01	3.20	1.97
	Control	15	5.86	3.75	5.93	2.71
Cognitive depression	Experiment	15	6.86	3.64	3.33	2.12
	Control	15	6.33	2.82	6.40	2.74
Physical Depression	Experiment	15	5.80	2.85	3	1.64
	Control	15	4.33	2.69	4.46	2.26

As it could be observed from table 2, there is no significant difference between the pretest scores of depression in both groups. In addition, it is observed that the mean of depression 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 depression, in posttest:

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

Sov	Posttest	ss	df	Ms	F	Significant	Etta Sq	Statistical
Group	Depression	573.934	1	573.934	117.856	0.001	0.814	1.000
	emotional depression	82.703	1	82.703	50.622	0.001	0.669	1.000
	cognitive depression	77.146	1	77.146	29.271	0.001	0.539	0.999
	physical depression	37.26	1	37.726	26.004	0.001	0.510	0.998
Error	Depression	131.484	27	4.870	-	-	-	-
	emotional depression	40.483	25	1.634	-	-	-	-
	cognitive depression	65.889	25	2.634	-	-	-	-
	physical depression	36.269	25	1.451	-	-	-	-

As it could be observed from Table 3, there is a significant difference between depression scores and emotional, cognitive and physical components of the participants based on their group (experiment or control) in posttest stage. ($p<0.01$) Hence, ACT has been able to improve depression. The effect rate on depression was 81.4 percent, emotional depression 66.9 percent, cognitive depression 53.9 percent, and physical depression 51 percent in posttest.

Discussion and Conclusion

The objective in this research was to study the effectiveness of ACT on depression in nurses. Hence, after conducting this method and studying the pretest and posttest results, it could be concluded that ACT was able to decrease depression and the emotional, cognitive and physical components. A wide range of studies has applied ACT in different fields and has considered it effective. Among these studies could be referred to Twohig, 2017; Zetly, 2015; Hajsadeghi et al 2017; Alavizadeh and Shakerian, 2016; Baradaran et al, 2016; Hallis et al, 2016, Yadavaia et al 2014; Fledderus et al, 2013; Brinkborg et al, 2011 and Flaxman, 2010.

To explain the abovementioned findings, it could be claimed that ACT is a therapy that uses mindfulness, acceptance and cognitive defusion skills to increase the psychological flexibility. In ACT, cognitive flexibility includes increase in the capability of the patients to create a relationship with their experiences in the present time and act according to their chosen values, based on what is possible for them in that moment. (Rajabi and Yazdkhasti, 2014)

The effectiveness of this method is due the fact that ACT has a lot of emphasis on mindfulness skills. Training mindfulness skills increases the capability of the patients in for bearing the negative emotional states and enables them to cope effectively. (Baer, 2006) It seems that such state could improve depression. In fact, continuous conduct of mindfulness exercises could increase the cognition and awareness about the body, feelings and thoughts. In mindfulness, focusing on body and breathing is exercised and the individual becomes aware of different senses of the body and even the breathing that they experience. Also, the individual understands that during anger, the body turns warm or during fear. The heartbeat increases and breathing changes and becomes short and quick. During yoga exercises, the focus on the body increases and this awareness paves the way for the next control.

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 the effectiveness rate of this therapy method in depression is compared with cognitive-behavioral therapies and third-wave therapies, such as mindfulness.

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.

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