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The Effectiveness of Acceptance and Commitment Therapy on Depression in Multiple Sclerosis

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Abstract

The main purpose of this research was to evaluate the effectiveness of acceptance and commitment therapy on depression in patients with Multiple Sclerosis (MS). This research was carried out based on questionnaire survey and Beck Depression Inventory. The method of the experimental design of pretest - posttest control group design was used. The respondents of the survey were chosen from members of MS Tehran and classified in two experimental/control groups. The data were analyzed using Statistical Packages for Social Sciences (SPSS). Results showed that pre-test and post-test scores of depression in patients with MS significantly different ($P < 0.05$) and follow-up ($P < 0.01$). In other words, reduce depressive symptoms in patients with MS in the test in follow up period has survived. It can be concluded that treatment acceptance and commitment therapy is effective in reducing depression in patients with multiple sclerosis.

Keywords: acceptance and commitment therapy; depression; Multiple Sclerosis

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1. Introduction

Multiple Sclerosis (MS) is a, neurological, chronic inflammatory demyelinating in the central nervous system. In this disease, the central nervous system sheath including the brain, optic nerve and spinal cord are damaged (Holland, Halper, 2005). Where immune cells are auto- T reactive, to enter orbit around the central nervous system and make chronic inflammatory demyelinating and Axonotmesis, thus, the disease is considered as an autoimmune disease (Sriram, Steiner, 2005). Interactions of genetic and environmental factors, individual susceptibility to developing the disease marks (Comabella, Khoury, 2011). MS symptoms vary depending on the location of plaques in the central nervous system, the most common include: poor vision, weakness, muscle spasms, sensory disturbances (including pain and tingling), lack of coordination, abnormal walking, bladder dysfunction and diplopia (Compston et al.2006), sleep disorders, Depression and Cognitive weakness (Gelfand, 2014).

The most common mood disorders in MS include, depressive disorders (major depressive disorder, Dysthymia and bipolar) and generalized anxiety disorder. (Minden, 2000). Symptoms of depression, anxiety and other psychiatric symptoms in patients with MS, Common and More than normal (Sarisooy, Terzi, Gumuş, Pazvantoglu, 2012; Marrie, Fisk, Yu, et al, 2013). Since depression is a major negative effect on patients' quality of life (Randolph, Schiffer, 2005). Therefore researchers wants to measure the effect of therapy on mental health , coping and adapting to the patient in the face of illness and the effect of treatment on MS disease process in patients with multiple sclerosis.

There is reasonable evidence that cognitive-behavioral approaches are beneficial in the treatment of depression and help adapting to and coping for patient with MS (Thomas, Thomas, Hillier, Galvin, Baker, 2005). Including psychotherapy that can be cited is the Acceptance and commitment therapy (ACT), (Nordin, Rorsman, 2012)

Acceptance and Commitment Therapy (ACT), is derived from the third wave of behavior therapy that began in the early 1990s with an innovative treatment that uses the principles of mindfulness and Emphasis on awareness of the moment and acceptance (Cardaciotto, 2005). ACT is essentially a field - oriented therapy instead of trying to change content of clinical behavior, to change social context or verbal. In fact, ACT is less focus on reducing symptoms but instead more focused on improving quality of life (Levin, Plumb-Villardaga, Villatte, Pistorello, 2013). Acceptance and commitment therapy (ACT) is the behavioral therapy that uses skill of mindfulness, acceptance and cognitive fault to increase psychological flexibility (Herbert, Forman, 2011). The main purpose of this research was to evaluate the effectiveness of acceptance and commitment therapy on depression in patients with Multiple Sclerosis (MS).

2. Method

2.1 Participants

This study evaluates the effectiveness of acceptance and commitment therapy on depression in patients with Multiple Sclerosis (MS). The method of the Quasi-experimental design of pretest - posttest control group design was used The respondents of the survey were selected 30 people between 20-50 years from members of MS Tehran and classified in two experimental/control groups

2.2. Instrument and procedure

To achieve the aim of this research, the methodology chosen for this study is based on the questionnaire survey, Beck Depression Inventory (BDI). In pre -test the Beck Depression Inventory was used to assess depression. The experimental group received 8 treatments an hour and half sessions

just twice a week, but the control group did not receive any treatment, in the post -test and follow-quarter, Beck Depression Inventory was used for both groups again.

2.3. Data analysis

The data were analyzed by using Statistical Packages for Social Sciences (SPSS). Data collected from the respondents was analyzed multivariate analysis of variance (MONOVA).

3. Findings

3.1. Questionnaire results

Table 1. Describes the Pre-Test and Post-Test Scores of Depression for Patients with MS.

Groups	Pre-Test Median	Post-Test Median	Follow up Median	Pre-Test Mean	Post-Test Mean	Follow up Mean
Experimental Group	22	14	12	24.13	14.93	12.53
Control Group	16	17	20	18.86	19.13	23.66

Table 1 describes the pre-test and post-test scores of depression for patients with MS. As can be seen in table 1, average pretest score of "depression" patients with MS in the experimental group is 24.13 and the control group 18.86 and also the mean post-test score of " depression in experimental group is 14.93and the control group 19.13 . According to the results, scores of "depression" at posttest in the experimental group decreased but in the control group is almost constant.

Table 2. Covariance Analysis Adjusted Mean Differences in Depression Scores in Patients with MS in Experimental and Control Groups

Sources of changes	Sum of squares	Degrees of freedom	Mean Square	F-test	Significance	Effect size
Pre-test	960.951	1	960.951	44.449	0.001	0.622
Groups (Independent)	387.621	1	387.621	17.513	0.001	0.393
Error variance	583.716	27	21.619			
Total	10381	30				

Table 2 illustrates covariance analysis adjusted mean differences in depression scores in patients with MS in experimental and control groups. As can be seen in table 2, Because the value of F calculated (17.513) with degrees of freedom is 1 and 27 greater than the F-test , so the null hypothesis is rejected and the research hypothesis was that acceptance and commitment therapy affects on reduction depression in patients with MS , with 0.99 reliability is confirmed .

According to the results in Table 1. The mean scores of experimental group decreased than the control group that difference was significant. The effectiveness index showed that 39 decreased of reduction depression patients with MS in the experimental group can be attributed to the acceptance and commitment therapy.

Table 3. Analysis of Variance with Repeated Measures of Depression

Sources of changes	Sum of squares	Degrees of freedom	Mean Square	F-test	Significance	Effect size
Intergroup	1124.80	1	1124.80	20.87	0.001	0.599
Error	754.53	14	53.89			

Table 3 shows analysis of variance with repeated measures of depression As can be seen in table 3, value of "F" for depressive symptoms in patients with MS in three stages (pre-test, post-test , follow-up) was significant (P <0.01) and 60 % of the total variance

Table 4. Bonferroni Comparison Test Between Depression Scores in Three Stages

Steps of measured	Mental health	
	Mean	Significance
Pre-teat/Post-test	9.20	0.026
Pre-test/Follow up	11.60	0.004
Post-test/Follow up	2.40	0.999

Table 4 shows Bonferroni comparison test Between depression scores in three stages As can be seen Pre-test scores of depression in patients with MS is significantly different with post-test (P <0.05) and follow-up (P <0.01). But the difference between post-test scores of depression and follow-up was not significant. In other words, reduce depressive symptoms in patients with MS in the test in follow up period has survived.

5. Conclusion

The results show, a significant decrease in scores indicates the experimental group than the control group. Therefore, the findings suggest the effectiveness of acceptance and commitment therapy in reducing depression in multiple sclerosis patients and also, results of the analysis indicate a lasting effect Acceptance and Commitment Therapy on Depression in patient with MS

These results supported by Pirkhaefi & Nida (2013). On the effectiveness of acceptance and commitment on reducing symptoms of depression, and also supported by Izadi, Asgari, Neshat and Abedi (2012) and Yazidi and Abedi (2013), based on the effectiveness of ACT on thoughts, feelings and behaviors in patients with severe obsessive-compulsive disorder and anxiety and depression.

ACT's effectiveness in increasing psychological flexibility and increasing quality of life, mood and reduce stress, and also the effectiveness of ACT on the overall performance compared with drug therapy or no treatment, significant improvement in In disaster mental, acceptance of pain, mental pain, quality of life, and also depression that supported by Luciano, Guallar, Aguado, López-del-Hoyo et al. (2013).

This study aimed to promote psychological resilience in multiple sclerosis patients. The most important factor in mental flexibility is acceptance.

Accept what the person cannot change that in this research, unchanging factor in MS. It should be noted that the concept of tolerance or acceptance is different with admission of failure

It can be concluded that learning skills in each of these six core principles, cognitive defusion, acceptance, being present, values, commitment and self as context can facilitate another factor and finally all these six core principles in individual and mutual interaction with each other to promote psychological resilience accrue in person.

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