Original Article

Group Positive Psychotherapy and Depression of Females Affected by Multiple Sclerosis

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Objectives: Multiple Sclerosis is one of the most important and prevalent central nervous system diseases, causing disorders such as depression among affected patients. Positive psychotherapy is also a new approach that can be effective in reducing the depression of these people. This study aims to investigate the efficiency of group positive psychotherapy for decreasing the depression among females affected by Multiple Sclerosis.

Methods: A samples of 30 females affected by Multiple Sclerosis with mild to moderate depression were participated, and were divided into two groups, intervention and control. Both groups completed Beck Depression Inventory II (BDI-II) at the beginning, he intervention group received six sessions of positive psychotherapy. After the intervention both group completed the questionnaire again. Data was analyzed by descriptive and inferential statistical methods.

Results: The result demonstrated that, the decline of depression was more in the intervention group than the control group. Moreover in the intervention group than control group, there was obtained significant reduction in both sub-scales of Beck Depression Inventory II.

Discussion: Results of this study indicated that group positive psychotherapy is effective in reducing the depression of females affected by Multiple Sclerosis. This treatment can be widely used in the caring centers for treatment of people affected by Multiple Sclerosis and this can be justified because of its low cost and good efficiency.

Keywords: Depression; Multiple Sclerosis (MS); Group Positive Psychotherapy

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Introduction

Multiple sclerosis (MS) is one of the most important and prevalent diseases of central nervous system (CNS) causing by inflammation and destruction of myelinated nerve sheath followed by complications in the electrical conductivity of nerve impulses in the CNS and based on the place of involvement, it makes different clinical symptoms among patients (1). MS has been usually diagnosed between 20 and 40 years old and females are more influenced by this disease than males (2). It is estimated that more than 40,000 people are affected to this disease in Iran (3). MS begins slowly, and continues throughout the life, with periods of exacerbation and remission (4,5).

According to the prevalence of disease in the youth ages, it may be accompanied with reduced individual and social performance as well as emotional and mental complications. Depression is one of the main psychological problems encountered by people affected by MS. Studies indicated that prevalence of depression disorders among patients affected by MS is more than other chronic diseases proportional to total population (6,7). The prevalence of depression among MS patients in India, Australia and Canada was 51.6% (8), 18.5% (9) and 25.7% (10) respectively. In a study conducted by Seyed Saadat and others in Iran, it was determined that 59.4% of people affected by MS had some degrees of depression and 18.1% of them had severe depression (11). Depression in people affected by MS might be a mental reaction to uncertainty of living and unexpected chronic conditions (12). Other recommendations for determining the reason of depression among such patients is cognitive deficits related to MS, social stresses and problems related to occupational performance among this people (13). Some of the undesirable causes of depression in such patients include presence of constant sad

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feeling, disappointed feeling to future, frequent imaginations about their disability and frequent preoccupation with negative thought in the affected patient and even may come with extreme behaviors like suicide attempt. Depression can also influence the quality of life in the affected person disappointing him/her from follow ups for medical treatments with intensifying the symptoms of disease risk. In addition, depression may have adverse impact on adaptation (14).

Because of extra effects of depression on MS patients, different psychological treatments have been designed and implemented for this group. For example, stress inoculation training (15) and group therapy based on confrontation with feelings (16) have been considered effective for treating the depression. Because of following reasons a new aspect of treatment should be considered. First, MS disease incurs many costs on patients affected to this disease; therefore, such people might not be able to supply their cost of psychotherapy. Second, according to the recent viewpoint of health, treatments are focused on promotion, strength and capabilities of patients. Therefore treatments based on positive psychology which can cover above limitations are recommended. Positive psychology is the scientific study of positive experiences, positive individual traits and institutions facilitating their development (17). Interventions derived from positive psychology include treatment methods or intentional activities with the objective of increased feelings, behaviors or positive cognitions (18). Some of the advantages of positive psychotherapy include: 1) suitable for depressed patients who don't respond to drug treatment; 2) it is relatively cheap; 3) it takes less time with fast improvement in the mood signs; 4) no one gets stigmatized; 5) it comes with no side effects (19). Positive psychotherapy for depression discusses this hypothesis that depression not only can be improved by reducing the negative signs, but also it will improve directly by creating positive emotions, character strengths and meaningfulness. It is likely that directly creating such positive sources may be successfully opponent to negative signs and even acts as a shield against its recurrence (20).

There are no studies investigating Group Positive Psychotherapy among patients affected by Multiple Sclerosis, this study was conducted in order to investigate this treatment for reducing the depression level among patients affected by Multiple Sclerosis.

Methods

This study is a semi-experimental type with pre-test, post-test with control group and its participants include all females referring to MS Society of Iran. Among whom 30 patients with mild to moderate depression were selected randomly and divided into two groups randomly, treatment and control group. The informed consent agreement was filled. Both groups completed Beck Depression Inventory II (BDI-II) at the beginning. In recent 35 years, BDI-II during was one of the most accepted tools for diagnosing depression among patients who received diagnosis of clinical depression. BDI-II is the newest version of initial Beck Depression Inventory that was designed for assessing the intensity of depression among adults and adolescents with 13 years old and more that can evaluate the symptoms of two recent weeks. Because initial BDI only covers 6 criteria out of 9 criteria of depression, it was revised on 1996 for more coordination with Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM-IV-TR) (21). This inventory comes with 21 items each of which coded from 0 to 3 and total score of each individual is among 0 to 63. Individuals may be grouped in four categories: score between 0 and 13 indicates minimum depression, between 14 and 19 indicates mild depression; between 20 and 28 indicates moderate depression and between 29 and 63 indicates severe depression (22). Beck detected two sub-scales for this inventory. They discussed 12 items for somatic-affective factor and 9 items for cognitive factor (23). There were used two sub-scales in this study as verified in some studies (23,24). For person version of this inventory, there was obtained alpha coefficient of 0.7 and test- retest reliability of 0.74 (25).

The treatment group were participated in six session of Group Positive Psychotherapy, each sessions lasted 1.5 hours on weekly based in the MS Society of Iran; while control group didn't receive any treatment. Group Positive Psychotherapy was formulated and studied at the University of Pennsylvania in 2009 by Parks-Sheiner (26). The interventions were carried out by a master clinical psychology student who had been trained in the area of positive psychotherapy. The sessions included using strengths, gratitude visit, active-constructive response, counting blessings, savoring, and biography. Considering the fact that this method of therapy is exercise oriented, during each session a set of exercises were given to the participants, from which they should complete during the sessions (20,26). At

the end of treatment, as post-test both groups completed Beck Depression Inventory and data was analyzed. For studying the difference between intervention and control group χ^2 and independent-samples t test, and the Analysis of Covariance (ANCOVA) for comparing the differences of both groups depression was used.

Results

The results indicated that the mean age of all females affected by MS was 31.11 with standard deviation of 6.24. For comparing the age, education occupation and marital status among both intervention and control groups, there was used of independent-samples t test and Chai-square test. As indicated in table (1), there was no significant difference among groups, intervention and control in related variables.

Table 1. Demographic properties and depression score among both groups- intervention and control.

Variable		Total Sample N (%) M (S.D.)	Intervention Group N (%) M (S.D.)	Control Group N (%) M (S.D.)	*t* or χ^2	P
Depression		16.45 (9.54)	19.93 (4.41)	20.07 (3.51)	0.092	0.928
Age		31.11 (6.42)	30.67 (6.01)	31.53 (7.63)	0.346	0.732
Education	Pre-university	46 (43.8)	8 (53.3)	7 (46.7)	0.13	0.715
	University	59 (55.7)	7 (46.7)	8 (53.3)		
Job	Unemployed	78 (74.3)	9 (60.0)	13 (86.7)	2.72	0.099
	Employed	27 (25.7)	6 (40. 0)	2 (13.3)		
Marital Status	Married	75 (71.4)	6 (40. 0)	4 (26.66)	0.60	0.439
	Single or Divorced	30 (28.6)	9 (60.0)	11 (73.34)		

The mean and SD of pre-test and post-test scores of depression among both groups are shown in table (2).

Table 2. Mean and Standard Deviation of depression scores among both groups in pre-test and post-test

Variable	Group	Pre- test		Post- test	
		Mean	Standard deviation	Mean	Standard deviation
Depression	Intervention	19.92	4.61	12.85	5.06
	Control	20.07	3.51	18.87	4.67
Somatic-Affective	Intervention	11.30	3.94	8.23	3.46
	Control	11.20	2.87	10.53	3.20
Cognitive	Intervention	8.61	1.85	4.61	2.25
	Control	8.86	2.66	8.33	2.46

For comparing the rate of depression reduction in the intervention and control groups in post-test, Analysis of Covariance (ANCOVA) was used. Results indicated that after controlling the pre-test effects, depression was more reduced in the intervention group than control group ($p<0.001$) (table 3).

Table 3. ANCOVA results for comparing the difference of depression in both groups

Variable	source	SS	Df	MS	F	P	Eta Squared	Observed power
Depression	Pre- test	239.302	1	239.302	15.991	P<0.001	0.390	0.970
	Group	243.425	1	243.425	16.266	P<0.001	0.394	0.972
	Error	374.124	25	14.965				
	Total	8098.000	28	140.268				
Somatic-Affective	Pre- test	140.268	1	140.268	23.730	P<0.001	0.487	0.997
	Group	39.332	1	39.332	6.654	0.016	0.210	0.698
	Error	147.773	25	5.911				
	Total	2833.000	28					
Cognitive	Pre- test	32.591	1	32.591	7.159	0.013	0.223	0.730
	Group	89.829	1	89.829	19.731	P<0.001	0.441	0.989
	Error	113.819	25	4.553				
	Total	1465.000	28					

In addition to total score, two sub-scales, somatic-affective and cognitive of BDI were investigated. Results indicated that significant reduction in both sub-scales in the intervention group.

Discussion

Depression is one of the most prevalent mental disorders among people affected by MS. This study was conducted for studying the efficiency of group positive psychotherapy for reducing the depression of people affected by MS. As results indicate, by controlling the pre-test effect by ANCOVA, it was determined that depression has been reduced in the intervention group than control group. Results of this study are conformed to the results of other studies (20,26-28). In a similar study conducted on patients affected by MS, the effects of positive experiences on depression were investigated. Results of this study indicated that the more the number of positive experiences, the less is the symptoms of depression (29). Seligman, Rashid and Parks introduced group positive psychotherapy for the first time (20); and discussed this hypothesis about depression that it not only can be improved by reducing the negative signs, but also it will improve directly by creating positive emotions, character strengths and meaningfulness. According to this approach, creating positive emotions, character strength and meaning may act as a shield against depression and even preventing its recurrence (20). For this reason, positive psychotherapy exercises have been designed such that they will reduce the depression. For example, Three Good Things or counting Blessings exercise asks the patients for three good things or counting blessings and he/she forced to write three good events happened for him/her on daily based before going to bed and also describes the reasons of such events. This exercise may cause patient to attend positive dimension of his life besides distracting him/ her from negative events of life.

Layous et al provided a different model of how positive interventions influence on the patients in the field of positive psychotherapy. In their view, positive interventions may both directly increase the subjective wellbeing and reduce the signs of depression and indirectly by increasing the positive thoughts, behaviors and emotions (19). Positive psychotherapy has also been designed such that follows both objectives, increased positive emotions and reduced negative emotions (figure 1).

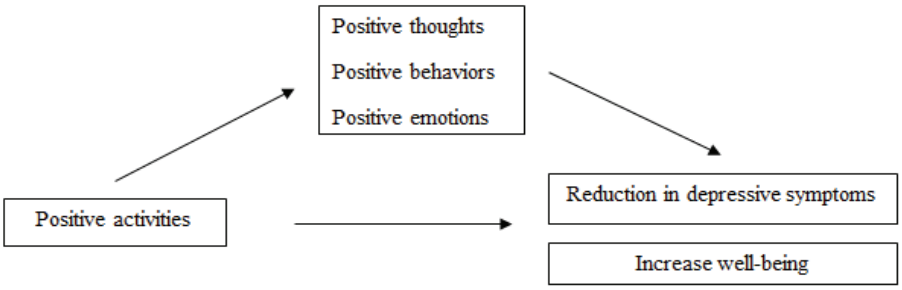

Fig 1. Layous et al Model for how positive interventions influence

However, results included that in the intervention group indicated considerable reduction at the end of treatment and this reduction was significant comparing to control group in both somatic-affective and cognitive subtitles of Beck Depression Inventory. The reductions in cognitive signs were higher than somatic-affective. It can be stated that people naturally intend for reminding negative subjects, attending to negative affairs and expecting the worst events. For this reason, some of positive psychotherapy exercises have been designed which changes the direction of such a negative cognitions like attention, memory and negative expectations towards positive cognitions (20).

Conclusion

As results of this study indicate, the intervention with six sessions on weekly based of 1.5 hours reduced the depression level of people affected by MS (both cognitive and somatic- affective). As the treatment is time and cost saving, it can be widely used in clinics for treating patients affected by MS. It is recommended that positive psychotherapy must be also investigated on other disorders prevalent among patients affected by MS such as anxiety.

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References

1. Miller J. Multiple sclerosis. In: Ronald P, editor. Merritts text book of, neurology. 10 ed. Philadelphia: Lippincott & Wilkins; 2000.
2. Masoudi nejad M, Ebrahim k, Shirvani H. Impact of selected combinations of training on muscle strength and motor function in women with multiple sclerosis. Journal of Sports Physiology. 2013; 16: 81-96 (persian).
3. Aghabagheri H, Mirzaeian B, mohammadkhani P, Omrani S. Effectiveness of Group cognitive therapy Mindfulness-based on depression in patients with multiple sclerosis. Thought & Behavior in Clinical Psychology Journal. 2012; 6(23): 75-82 (persian).
4. Ahadi F, Rajabpour M, Ghadamgahi A, Pouryousef-Kaljahi M, Tabatabaee S. Effect of 8-week Aerobic Exercise and Yoga Training on Depression, Anxiety, and Quality of Life Among Multiple Sclerosis Patients. Iranian Rehabilitation Journal. 2013; 11(17): 75-80.
5. Arastoo A, Zahednejad S, Ahmadi A, Nikbakht M. The effects of Combined Treadmill Training and Pharmacological Treatment on management of Multiple Sclerosis female patients. Iranian Rehabilitation Journal. 2013; 11(17): 5-10.
6. Feinstein A. The Neuropsychiatry of multiple sclerosis. Canadian Journal of Psychiatry. 2004; 49(3): 157-63.
7. Gottberg K, Einarsson U, Fredrikson S, von Koch L, Holmqvist LW. A population-based study of depressive symptoms in multiple sclerosis in Stockholm county: association with functioning and sense of coherence. J Neurol Neurosurg Psychiatry. 2007; 78(1): 60-5.
8. Nagaraj K, Taly AB, Gupta A, Prasad C, Christopher R. Depression and sleep disturbances in patients with multiple sclerosis and correlation with associated fatigue. J Neurosci Rural Pract. 2013; 4(4): 387-91.
9. Wood B, van der Mei IA, Ponsonby AL, Pittas F, Quinn S, Dwyer T, et al. Prevalence and concurrence of anxiety, depression and fatigue over time in multiple sclerosis. Mult Scler. 2013; 19(2): 217-24.
10. Patten SB, Beck CA, Williams JV, Barbui C, Metz LM. Major depression in multiple sclerosis: a population-based perspective. Neurology. 2003; 61(11): 1524-7.
11. Seyed Saadat SM, Hosseininezhad M, Bakhshayesh B, Seyed Saadat SN, Nabizadeh SP. Prevalence and predictors of depression in Iranian patients with multiple sclerosis: a population-based study. Neurol Sci. 2014; 35(5): 735-40.
12. Dalton EJ, Heinrichs RW. Depression in multiple sclerosis: a quantitative review of the evidence. Neuropsychology. 2005; 19(2): 152-8.
13. Gilchrist AC, Creed FH. Depression, cognitive impairment and social stress in multiple sclerosis. J Psychosom Res. 1994; 38(3): 193-201.
14. Mokhtari S, Taher Neshat Doost H, Molavi H. The Effect of Cognitive-Behavior Group Therapy on Depression and Dogmatization of Patients with Multiple Sclerosis (M.S.). Journal of Psychology. 2008; 12(3): 242-51 (persian).
15. Hamid N, Mehrabi Zadeh Honarmand M, Sadeghi S. The Effect of Stress Inoculation Training (SIT) on Depression and Quality of Life n Multiple sclerosis (MS) Patients with Control of Duration of Disease in Esfahan City. Jundishapur Scientific Medical Journal. 2012; 11(1): 77-84 (persian).
16. Khezri-Moghadam N, Ghorbani N, Bahrami-Ehsan H, Rostami R. Efficacy of Group Therapy on Reduction of Psychological Signs of Multiple Sclerosis Patients. Journal of Clinical Psychology. 2012; 4(13): 13-22 (persian).
17. Duckworth AL, Steen TA, Seligman MEP. Positive Psychology In Clinical Practice. Annu Rev Clin Psychol. 2005; 1: 629-51.
18. Sin NL, Lyubomirsky S. Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: a practice-friendly meta-analysis. J Clin Psychol. 2009; 65(5): 467-87.
19. Layous K, Chancellor J, Lyubomirsky S, Wang L, Doraiswamy PM. Delivering Happiness: Translating Positive Psychology Intervention Research for Treating Major and Minor Depressive Disorders J Altern Complement Med. 2011; 17(8): 675-83.
20. Seligman MEP, Rashid T, Parks AC. Positive Psychotherapy. Am Psychol. 2006; 61(8): 774-88.
21. Dabson K, Mohammadkhani P. Psychometric Characteristics of Beck Depression Inventory – II in Patients with Major Depressive Disorder. Journal of Rehabilitation. 2007; 8(2): 80-6 (persian).
22. Dolle K, Schulte-Körne G, O'Leary AM, von Hofacker N, Izat Y, Allgaier A-K. The Beck Depression Inventory-II in adolescent mental health patients: Cut-off scores for detecting depression and rating severity. Psychiatry Research. 2012; 200(2–3): 843-8.
23. Vanheule S, Desmet M, Groenvynck H, Rosseel Y, Fontaine J. The factor structure of the Beck Depression Inventory-II: an evaluation. Assessment. 2008; 15(2): 177-87.
24. Yavari A. Design and test a model of Neuro-psycho-pathological, emotional and behavioral variables as predictors of future depression in patients with multiple sclerosis (persian). shiraz: University of shiraz; 2000.
25. Ghassemzadeh H, Mojtabai R, Karamghadiri N, Ebrahimkhani N. Psychometric properties of a Persian-language version of the Beck Depression Inventory - Second edition: BDI-II-PERSIAN. Depression and Anxiety. 2005; 21(4): 185-92.
26. Parks-Sheiner AC. Positive Psychotherapy: Building A Model Of Empirically Supported Self-Help. East Eisenhower Parkway: University of Pennsylvania; 2009.
27. Ghasemi N, Kajbaf M, Rabiei M. The Effectiveness of Quality Of Life Therapy (QOLT) on Subjective Well–Being (SWB) and Mental Health. Journal of Clinical Psychology. 2011; 3(2): 23-34 (persian).
28. Senf K, Liau A. The Effects of Positive Interventions on Happiness and Depressive Symptoms, with an Examination of Personality as a Moderator. J Happiness Stud. 2013; 14(2): 591-612.
29. Phillips LJ, Stuifbergen AK. The influence of positive experiences on depression and quality of life in persons with multiple sclerosis. J Holist Nurs. 2008; 26(1): 41-8.