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Research Article

Effectiveness Solution-Focused Therapy Group, to Reduce Stress, Anxiety and Depression in Caregivers of Patients with Multiple Sclerosis

Mohammad Taghi Mohseni Takalu,¹ Seyed Ali Hosseini,^{2,*} and Hamidreza Khankeh³

¹Ph.D. Student of Occupational Therapy, Department of Occupational Therapy, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran ²Ph.D. of Occupational Therapy, Professor, Social Determinants of Health Research Center and Occupational Therapy Department, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

³Ph.D. of Emergency and Disaster Health, Professor, Department of Health in Disaster and Emergencies, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

^{*} Corresponding author: Seyed Ali Hosseini, Ph.D. of Occupational Therapy, Professor, Social Determinants of Health Research Center and Occupational Therapy Department, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran. Tel: +98-9123907872, E-mail: alihosse@gmail.com

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Abstract

Background and Objectives: Caring for a patient with multiple sclerosis (MS) creates a lot of physical, economic, social, and psychological problems for caregivers and the patient's families, which can also lead to mental disorders in caregivers. the aim of this study was to investigate the efficacy of solution-focused group therapy in reducing anxiety, stress, and depression among caregivers of multiple sclerosis patients.

Methods: In this semi-experimental study, among the members of the family with multiple sclerosis, there were cases of MS in Kerman province. A total of 30 individuals, who had met the criteria for entering the study were selected by a sampling method and randomly divided into 2 groups: experimental (15 people) and control (15 people). For the experimental group, solution-focused group therapy was performed in 6 sessions of 90 minutes (1 session weekly), however, the control group did not receive any intervention. The instrument for data collection was a depression, anxiety, and stress (DASS-21) questionnaire. It was completed by both groups before and after intervention.

Results: The results showed that the mean score of depression, anxiety, and stress after intervention was significantly lower in the caregivers of the experimental group than in the control group (P < 0.001). In other words, solution-focused group therapy had a significant effect in reducing depression, anxiety, and stress among caregivers of people with multiple sclerosis.

Conclusions: According to the results, solution-focused group therapy is effective in reducing depression, anxiety, and stress of caregivers of MS patients. Therefore, psychologists and rehabilitation therapists can use the positive effects of this method for caregivers.

Keywords: Multiple Sclerosis, Caregiver, Solution-Focused Therapy, Depression, Stress, Anxiety

1. Background

Multiple sclerosis is a progressive chronic and destructive myelin of the central nervous system, which affects the sensory and motor functions (1). It is usually diagnosed in patients between the ages of 20 and 40, and women are twice as likely to be affected compared to men (2).

According to the world health organization (WHO), in 2008, around 1.3 million people were affected by the disease (3) worldwide. The prevalence of this disease in the United States varies from 60 to 200 per 100,000 people (4). According to a report published by the 9th international congress of MS in 2012 (quoted by Saman Nezhad and colleagues), outbreak of MS in the world is 73 per 100,000 persons and in Iran it is 60 per 100,000 individuals (5). This shows that Iran has an average prevalence rate of multiple sclerosis (6).

This illness is accompanied by a sign of fatigue, depression, walking disorders, spasticity, vision problems, and problems with urination as well as faeces. Owing to its unpredictability, it can have a huge impact on relationships and the future of a person's life (7). As the disease progresses, the patient's ability for self-care decreases and he or she gradually needs care from family members (8). Care is given at home by family members or friends of patients (9).

Due to the enormous and unpredictable changes that occur, especially in early life, this disease can also have severe psychological effects on family members and the patient's main caregiver. Families that take care of these

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patients face numerous clinical challenges (10). Therefore, for the multiple sclerosis therapy, instead of focusing solely on the patient, a consolidated approach must be used, in which both the patient and caregiver are considered due to the fact that studies show that caregivers play a vital role in patients' health in the long term. Having a caring role can be very challenging due to the fact that this role requires a lot of time and has duties that can take a toll financially, socially, physically, emotionally, and psychologically. Caregivers should also pay attention to themselves. The most common cause for inability to continue to play a care giving role is deterioration of such a person's health (11). Caring for a person with multiple sclerosis is erosion and this can affect the mental health of individuals (12). Results of the study on caregivers of patients with multiple sclerosis indicate that caregivers of these patients are at risk of lowering quality of life, which may lead to stress, anxiety, depression, and dissatisfaction with marital life as well as chronic fatigue (13). Life satisfaction among members of this group is lower than the normal population. These caregivers experience stress symptoms 4 times more than a normal person and are 30% more likely to be stressed out than caregivers of patients with other progressive illnesses (14). Caring for a person with multiple sclerosis can have an adverse effect on a caregiver's life. Therefore, if the patient's main caregiver is not adequately trained, even after controlling the patients, the stress, anxiety, and psychological symptoms of the caregiver will continue (15).

One of the possible therapeutic interventions that may be effective in reducing depression, anxiety, and stress in caregivers is solution-focused group therapy. Solutionfocused group therapy comes from social structuralism (16). This therapy can be considered as a form of cognitivebehavioral therapy, which has a flexible and collaborative nature and emphasizes on the strengths of caregivers. In this method, it is not necessary to respond to the caregiver's problems by the therapist. Instead, the therapist cooperates with the caregivers to identify problems and goals, as well as seeks solutions to meet the goals (17). In other words, the active role of the therapist is that by asking questions he can help a caregiver look at solutions from a different point of view and make him or her search for them (18). He thus satisfies a caregiver's need for autonomy (18).

Caregivers of multiple sclerosis patients have double problems such as dealing with a person with multiple sclerosis (mental and physical) and then struggling with financial, social, and communication problems (19). These factors can increase the risk of stress and depression (20). The aim of this study was to evaluate the efficacy of short-term solution therapy for reducing stress, anxiety, and depression in caregivers of patients with multiple sclerosis.

2. Methods

In this semi-experimental study, pre-test and post-test design was conducted with the control group. This group's members were also the family members of patients with multiple sclerosis who had files in the MS society of Kerman province. A total of 30 individuals who cared most for the patient were selected by available sampling method and randomly divided into 2 groups, experimental (15 person) and control (15 person).

Criteria for entering the study: age of over 18 years, average or higher score based on the DASS-21 questionnaire (21) on depression, anxiety, and stress, no counseling and psychological counseling during the study period, and willingness to cooperate in a caregiver's study. It also included at least 2 years of experience with multiple sclerosis and a score of 4.5 and higher on the expanded disability status scale (EDSS).

First, a list was extracted that had the required conditions (at least 2 years of multiple sclerosis and a score of 4.5 orhigher on he EDSS) and the main caregivers (the person living with the patient under one roof and caring for the patient the most) were invited. After explaining the goals of the study and considering the criteria considered, the DASS-21 questionnaire was completed by the main caregiver. Then, 30 individuals, who scored the mean score or higher in the scales of depression, anxiety, and stress, were selected. They had to give a written consent that they consciously entered the study. They were randomly divided into 2 groups: Experimental and control. The score obtained from the questionnaire was considered a pre-test score for individuals. For the experimental group, accomplished plan sessions of therapeutics and solution-focused group therapy were conducted in 6 sessions of 90 minutes (1 session weekly), however, the control group did not receive any intervention.

The content of the training sessions for the experimental group included:

First meeting (familiarity): introducing and familiarizing the therapist with group members and encouraging caregivers to share their concerns about their patients.

Second session (caregivers' problems): the focus of this session was from patients to caregivers. Questions were asked to explore the concerns and problems of each caregiver.

Third session (individual goals): this session defined and described the goals of caregivers using the miracle questions and scaling questions in a bid to identify potential exceptions. An example of a magic question: "Suppose a miracle has solved your problem, what is the 1st thing that lets you know what miracles are? What's different?" request caregivers to assess their current status and the final status based on the 10-degree scale. The number 0 is the worst case, and 10 represents the best condition.

Fourth session (analysis of existing strengths): ask questions about caregivers' strengths (active and appropriate search for information) and resources (emotional and functional support from family members, friends, and institutions); propel sessions by finding exception questions to encourage caregivers; request caregivers to write down problems, goals and exceptions that have been identified during past meetings and are ready to be presented at a future meeting.

Session 5: review and discuss the assignments of the previous meetings in the group, requesting caregivers to review the strengths and resources (the assignment specified in the 4th session), and share the proposed matching strategies with other members of the group.

Session 6: request caregivers to report progress during the last 5 sessions and discuss as well as hold discussions with other members of the group regarding their progress and future plans in this area. During these sessions, if the therapist feels there is progress in people, he has to use the technique to compliment statements.

After completing the training sessions, the DASS-21 questionnaire was completed again by both the groups.

The data collection tool was a DASS-21 developed by Lovibond in 1995. The scale has 21 points, which evaluates three subscales of depression, anxiety, and stress by 7 different phrases. Each phrase is based on the Likert quadruple spectrum and ranges from does not apply to me at all (0 score) to it is completely true for me (score 3). The score of each subscale is obtained from the total score of the terms related to that subscale. In this way, the score of each subscale is at least 0 and at the most 21. The reliability of the questionnaire in the study of Sahebi et al., using Cronbach's alpha, was 0.77 for depression, 0.79 for anxiety, and 0.78 stress (21). In the study by Taybi et al., the values were 0.79, 0.72, and 0.80, respectively (22).

Data was analyzed using the SPSS 15 software. First, the Kolmogorov-Smirnov test was used to determine the normal distribution of data. According to the normal distribution, t-test, paired t-test and covariance analysis were used to compare demographic characteristics in 2 groups. Chi-square and Fisher Exact Test were used at a significant level of 0.05. The Ethics Committee of Tehran University of Medical Sciences approved the ethical considerations of the present study under No. USWR.REC.1395.398.

3. Results

From the 30 caregivers under study, 15 were in the experimental group and 15 in the control group. The mean age in the experimental group was 48.5 ± 6.5 and it was 49.7 ± 5.5 years for the control group (P = 0.24). The frequency of distribution of sex and education in the 2 groups of experimental and control groups did not differ significantly (P > 0.05) (Table 1).

Table 1. Demographic Characteristics of the Caregivers of the 2 Experimental a	nd
Control Groups	

Varia	ble	Experiment	Control	Significance
Sex				0.71 ^a
	Female	8 (53.3)	9 (60)	
	Man	7(46.7)	6(40)	
Educa	ation			1.00 ^b
	Cycles	3(20)	2 (13.3)	
	Diploma	5 (33.3)	6(40)	
	Bachelor's and Master's degrees	7 (46.7)	7 (46.73)	
^a Chi s	square.			

^bFisher Exact test.

The results showed that there was no significant difference between mean score of anxiety and stress intervention in the 2 groups; however, the mean depression score was significant (P = 0.005). The mean score of depression, anxiety, and stress after intervention in the experimental group was significantly lower than the control group (P < 0.001) (Table 2).

Mean score of depression, anxiety, and stress in the experimental group after intervention was significantly lower than before (P < 0.001). Also, in the control group, the mean score of anxiety and stress after intervention was significantly lower than before (P < 0.05), however, the mean change in depression score, anxiety, and stress in the experimental group was significantly higher than the control group (P < 0.001) (Table 2).

Covariance analysis was used to remove the distortion effect before intervention. The results of this test, after adjustment, showed that the mean score of depression, anxiety, and stress after intervention was significantly lower among the caregivers of the experimental group than the control group (P < 0.001) (Table 3).

4. Discussion

The results showed that the mean score of depression, anxiety, and stress in the experimental group after intervention was significantly lower than before (P < 0.001). However, in the control group, the mean score of anxiety

Source of Stress	Before Intervention	After the Intervention	P Value Regardingt Paired	Average Changes
Depression				
Experiment	17.07 ± 1.1	10.93 ± 1.16	< 0.001	$\textbf{-6.13} \pm \textbf{1.25}$
Control	15.67 ± 1.4	15.33 ± 1.35	0.31	0.33 ± 1.23
P value Regardingt Independent	0.005	<0.001		< 0.001
Anxiety				
Experiment	17.67 ± 1.05	14.27 ± 1.22	< 0.001	-3.4 ± 0.91
Control	17.73 ± 1.44	16.00 ± 1.13	< 0.001	$\textbf{-1.73}\pm\textbf{1.33}$
P value Regardingt Independent	0.89	< 0.001		< 0.001
Stress				
Experiment	17.00 ± 1.6	13.33 ± 1.35	< 0.001	$\textbf{-4.67} \pm \textbf{1.23}$
Control	17.67 ± 2.06	16.67 ± 1.4	< 0.006	1.00 ± 1.2
P value Regardingt Independent	0.33	< 0.001	-	< 0.001

Table 2. Comparison of Mean Depression Score, Anxiety, and Stress Before and After Intervention in the Caregivers of the 2 Experimental and Control Groups^a

^aValues are expressed as mean \pm SD.

 Table 3. Comparison of the Mean of Depression, Anxiety, and Stress Scores in the Caregivers of the 2 Experimental and Control Groups After the Intervention and After the Adjustment Based on the Score Before the Intervention

Variable Name	Experiment	Control	P Value Related to the Analysis of Covariance
Depression	10.57 ± 0.31	15.69 ± 0.31	< 0.001
Anxiety	14.28 ± 0.26	15.98 ± 0.26	< 0.001
Stress	12.52 ± 0.24	16.48 ± 0.24	< 0.001

^aValues are expressed as mean \pm SD.

and stress after intervention was also lower than before (P < 0.05), yet, the mean change in depression score, anxiety, and stress in the experimental group was significantly higher than the control group (P < 0 P <). In other words, solution-focused group therapy had a significant effect on depression, anxiety, and stress among caregivers of multiple sclerosis patients.

In a study by Ko et al., (2003), regarding the effects of counseling on problem solving based on general stress, stress response, and matching in young delinquents, the results showed that counseling with group-based solution had a positive effect on general stress, stress response, and affectionate matching (23). Sommers-Flanagan et al., (2014), in a study on the effectiveness of solving problems on parental stress and adequacy, concluded that it has a significant effect in reducing parental stress and increasing parental satisfaction (24). Although the statistical population of the present study, the results are similar and suggest the effect of solution-focused therapy in reducing the psychological problems of individuals.

Results of the study by Knekt et al., (2008) showed the efficacy of short-term and long-term psychotherapy on the ability to perform work and the functional potential of people with depression and anxiety disorders in a 3year follow-up. Short-term therapy showed its positive effects earlier than long-term therapy on ability to perform, however, over time, long-term therapy was more effective than short-term therapy (25). The same conclusion was repeated in a study by Malagan and colleagues (26) in a fiveyear follow-up.

The solution-focused therapy uses its customers' own resources and capabilities in the change process, and this creates an image of hope among the patrons. Solutioncentered therapists reinforce self-sufficiency and autonomy in patrons. They do this by empowering clients to create solutions and structure these solutions (27). In the solution-focused therapy, based on the principle of the problem/exception, depression, anxiety, and stress are conceptualized. The change theory in solution-based therapy believes that if a participant can identify and reinforce exceptions to the problem, he or she can make a profound change due to the fact that exceptions will become the law. In this therapy, it is assumed that people with severe depression, anxiety, and stress experience days that are less depressing, less anxious, as well as less stressful. People can assume these days as an exception and use them as their key to advancement and for creating a solution (28).

In the present study, which is presented as a solutionfocused group therapy, it cannot be concluded that reducing depression and anxiety as well as stress can only be attributed to this type of therapy. This may have been a group work, such as a social support group, and reduces depression, anxiety, and stress in the experimental group. This is due to the fact that there is evidence that social support that improves subjective well-being. The control group may also see positive changes in each other and the solution to their problems are learned from each other or from counseling. This can reduce depression, anxiety, and stress (29).

This study also had some limitations. They include the short duration of monitoring and the relatively small sample size making it difficult to generalize. It cannot be concluded from this study that this type of therapy always has the same results for this group. The sample size is low and the length of the monitoring period is low. However, the nature of multiple sclerosis is such that it may take a caregiver his entire life to deal with a patient. Therefore, the longer the monitoring period, the better it is. Thus, it is necessary in future studies that the sample size and monitoring period be higher. The effectiveness of this therapy was compared with the effectiveness of other common therapies for these caregivers. It is also possible to measure the effectiveness of this type of therapy on other areas for caregivers, including self-efficacy.

4.1. Conclusion

This study showed that solution-focused group therapy could be helpful in reducing anxiety, stress, and depression among caregivers of people with multiple sclerosis. However, considering the conditions of this study, in order to judge and generalize the results of this experiment, more studies are needed with a larger sample and a longer follow-up period.

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