The Effectiveness of Stress Management Skills on Perceived Stress and Resiliency of Women with Multiple Sclerosis (MS)

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Abstract: A group of experts has been called the century of stress common. Effects on patients health, it depends on ability to cope. One of coping strategies of resilience is faced with stressful situations. Due to resilience as factor in successful adaptation to changes proposed. The aim of this study was to evaluate effectiveness of stress management skills on perceived stress and resiliency of women with Multiple Sclerosis (MS). This is experimental study with pretest-posttest design and control group. The 44 people were selected by convenient sampling. Data were analyzed by using SPSS Software, Version 18 and the Co-variance, Shapiro Wilk and Levene test. According to results mean and standard division in pre-test for received stress was (29.78 and 17.7) and for resiliency was (60.47 and 20.38). However, in post-test mean and standard division decreased to (26.20 and 44.3) and for resiliency it increased to (87.68 and 6.72) (p<0.001). According to the results of effective stress management skills on perceived stress and resiliency, this study could reach effective solution to reduce perceived stress and increase resiliency and generally improve the mental state of MS patients is helpful.

Key words: Stress management, perceived stress, resiliency, Multiple Sclerosis (MS), Iran

INTRODUCTION

MS is a myelin debugger of central nervous system. It is one of the commonest neurological diseases of human being and is the most disabling disease of youth. It is most common during youth and women are afflicted with this disease twice as men. The affliction to MS normally occurs between the age of 2 and 40 and its diagnosis is based on MRI (Vosoughi and Freedman, 2010). The American Health Organization and Public Services announced rate of death resulting from this disease as 0.9% in 1000 people. MS is the third disabling factor in US (Habibabadi et al., 2011).

There is no definite treatment for MS but there are some measures to reduce its symptoms and support the patients. Apart from medications, other treatments can be resorted to Schapiro (2007). In general, MS significantly affects lifestyle of afflicted people even at its early stage. However, serious disabilities appear in later years. One of the most stressful aspects of disease is the uncertainty of the future. The patient even does not know how person will feel a week later. Just as the patient is adapting with the disabling symptoms of previous fit, another fit with more limitations begins and person has to face another adaptability and change of life (Murray, 2007). Since, the patients have to confront with both the everyday stresses and those resulting from the disease's symptoms which are fluctuating and unpredictable, the disease progress may get mixed with research, familial life, communications and social activities. The aim of psychological interventions is to help these people confront with above challenges (Malcomson et al., 2007). Therefore, new intervention studies should address the psychological factors related to the patient's health and not merely suffice to physical harms and disabilities (Mitchell et al., 2005). Lazarus and Folkman (1985) believe that the people who believe they will have helping resources when confronted with stress, show less vulnerability. So, far different studies have been conducted which show that daily stress acts as the intensifying factor of MS

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Stress includes physical, mental and emotional reactions which are experienced as the outcome of changes in the life of individuals. Changes may be small or large. Reply to change varies from one person to another. While positive stress can act as motivator, negative stress may be created when these changes and needs defeat individual. Since wide range of behaviors can affect stress, it can be controlled by learning necessary skills and resiliency of individual can be changed through change in person’s evaluation system.

Resiliency is defined as the ability to act actively and to be efficient instead of being reactionary and inactive in respond to stressful situations (Freiberg, 1994). Confronting stress includes the responds in the form of thoughts, feelings and actions that the individual employs in the face of troublesome situations (Frydenberg, 1996). In other words, it is defined as behavior coordination in order to satisfy the environmental needs which often require change in behaviors and emotions or motivation (Khani et al., 2012). The results of Khezri et al. (2012) showed that group treatment has been effective in reducing psychological symptoms of MS patients and their depression and anxiety. The research of Khani et al. (2012) showed effect of Lazarus multi-facet treatment on general health promotion of MS patients. Hassanzadeh et al. (2013) while studying effectiveness of methods for confronting stress in the resiliency, anxiety, depression and stress of the patients afflicted with spinal cord injury came to the conclusion that training the methods of confronting stress will lead to meaningful increase in resiliency level and meaningful decrease of depression and stress of these patients but it does not result in meaningful reduction of their anxiety.

Since MS is more common in women (Khezri et al., 2012) the general purpose of this research is to determine of training effect stress management skills on perceived stress and resiliency of women with MS. Therefore, the subject of research is that whether interventions related to stress management approach affects perceived stress perception and resiliency of women with MS in such a way that they can practically take control of their lives or create new story about their own confrontational capabilities.

MATERIALS AND METHODS

This research was of experimental type with pre-test, post-test and proof group. The demographics were composed of all the MS patients who visited MS society of Kerman in 2015. Out of the women visiting the MS society of Kerman 44 volunteers were randomly chosen and were randomly placed in case (n = 22) and proof (n = 22) groups. The conditions for participation were as follows: Affliction with MS, female, literacy at least being 18 years of old. The exclusion conditions were: affliction with other diseases other than MS, illiteracy, being under psychotherapy other than stress management.

Tools

Demographic information questionnaire: This questionnaire was compiled for information collection of demographics in subjects. It was self-made questionnaire which included information related to the age, education, marital status and employment status of patients.

All patients filled in and submitted consent forms prior to intervention participation. They were ensured of the confidentiality of questionnaire’s results.

Perceived stress scale: This scale was first invented by Kohon in 1938 has 3 versions of 4, 10 and 14 study and is used to measure the perceived normal stress in the previous month. It is designed for a group of society who have diploma as a minimum. In this research the 14-study questionnaire is used. The scoring of the questionnaire is based on the 5° Likert range including never = 0, almost never = 1, sometimes = 2, frequently = 3, many times = 4, 5, 6, 7, 9, 10 and 13 phrases are scored reversely (never r = 4 to many times = 0). The minimum score is 0 and the maximum is 56. A higher score indicates more perceived stress. Kohon calculated the Cronbach’s alpha for this scale as 0.84 and 0.86 (Nesyani et al., 2011). In a study conducted by Salehi Fadardi the Cronbach’s alpha for this scale was reported as 0.75 (Hassanzadeh et al., 2012).

Resiliency scale: This questionnaire was designed by Conor and Davidson through overviewing research resources of 1979-1991 in the resiliency area. The study of this scale’s psychometrics has been provided in the following six groups: general population, visitors to first aids care, psychiatric outpatients, patients with comprehensive anxiety disorder and two groups of patients with stress disorder of post-accident. Designers of this scale believe that it can well differentiate tolerate people from intolerant ones in clinical and nonclinical groups and can be used in research and clinical situations (Mohammadi, 2005). Mohammadi has adapted it to be used in Iran. This questionnaire has 25 items which are scores in Likert scale as always true = 4, most of the time true = 3, sometimes true = 2, rarely true = 1, quite untrue = 0. Reliability study among students by means of Cronbach’s alpha coefficient amounted to 0.87. Also,
Samani and Joker (2007) reported that the result of factor analysis test on this scale indicates the existence of a general factor in the scale. KMO coefficient for this analysis and Bartlett sphericity test amounted to 0.89 and 0.83. The special value for this general factor determines 26.6% of the total scale’s variance (Samani and Joker 2007).

**Training program:** It was based on stress management practical guide book, according to cognitive-behavioral method and was executed in 2 months in eight 90 min sessions (Anthony et al., 2007).

The first session included introduction, discussion about stress-inducing factors, outcomes of lasting stress, training relaxation and diaphragm breathing. The second and third sessions were dedicated to relationship between thoughts and feelings ways of recognizing irrational thoughts training the reassessment of thoughts and challenging them as approach to change the irrational thoughts of patients. The fourth session was about anger management training. The fifth session was about problem solving training. The sixth session was dedicated to self-expression and communicational skills. The seventh session included time management. The eighth session was about overview and exercise of the taught skills.

At the beginning of each session the facilitator reviewed the previous session’s discussions and the patients reported homework of the previous session; then facilitator specified the session’s objective, taught the patients new skills and set homework to be done in interval of sessions. Patients were requested to do homework and give report at next session (Landoni et al., 2000).

While describing how to fill in questionnaires, facilitator distributed them one session prior to intervention startup, i.e., at pre-test stage and their completion lasted about 60 min. After interventions, i.e., two months later, a post-test was given to participants. In present research data were analyzed by using SPSS Software, Version 20 and the Covariance, Shapiro Wilk and Levene test.

**RESULTS AND DISCUSSION**

Totally 44 MS female patients who visited the MS society of Kermanshah in 2015 participated in this research. The mean and criterion deviation of their age amounted to 7.63 and 36, the eldest of whom was 47 year old and the youngest one was 26. Out of this figure, 93.3% (42 people) were married, 5.55% (3 people) were single, 15.55% (7 people) were employed, 84.44% (38 people) were jobless, 17.77% (8 people) were under diploma, 48.88% (22 people) had diploma and 33.33% (15 people) were university graduates. Table 1 the descriptive statistics including the studied mean and criterion deviation by group has been provided. As you can see in Table 1, the mean and criterion deviation level of each case group’s subject variable prior to training amounted to 29.78, 7.17, 60.47 and 20.38. After training sessions and in post-test stage the perceived stress was reduced to 20.26 and 3.44 and tolerability increased to 87.68 and 6.72. But no noticeable change was observed in the proof group in post-test stage. The difference between mean and criterion deviation of obtained data in pre-test, post-test stages is meaningful at p<0.001 level.

Covariance analysis was used to evaluate data normality and covariance and homogeneity of pretest scores between the two groups. In order to examine the normality data, the Shapiro Wilk test was used. The Levine test was used to evaluate homogeneity of variance within groups. According to the data in Table 2 and 3 the findings were not significant (α = 0.05 level). Assumptions were inferred about normality and homogeneity of data covariance and regression slope and the use of covariance were permitted for evaluation of assumptions with homogeneity of covariance.

According to Table 4 the results show significance (α = 0.05) and therefore it can be concluded that stress management skills trainings was effective in perceived stress and resiliency of women with Multiple Sclerosis (MS).
Conclusion

The aim of this research was studying the effectiveness of training stress management skills on stress level of women with MS. The research results in relation to effectiveness of training stress management skills on stress reduction were meaningful.

In surveying the effectiveness of training stress management skills on increasing resiliency of women with MS, research result showed that difference between the two groups in the resiliency’s total score after holding training workshop of stress management skills is meaningful and is increasing in favor of the intervention group. This means that the training workshop of stress management skills has led to increase in patient’s resiliency and that their perception of stress-inducing situations has changed. The research results are consistent with those of Jabbarzadeh et al. (2012) who studied effect of training life skills on resiliency of female teachers and students. The research of Noone and Hastings (2009), Salimi (2010), Nesyuni et al. (2011) and Hassanzadeh et al. (2013) are consistent with the results of the present research.

Like every other research, the present research faced a series of limitations including sample volume, unsexuality of the studied sample and age limit of 26-47. Given the mentioned limitations, it is recommended that larger samples, male gender and lower age be used and also follow-up stage be included, in future research. Given the present research results, it is recommended that the specialists involved in treatment of MS patients use this method as complementary treatment so that patients can better confront with their disease through reducing their perceived stress and increasing their resiliency.

It can be summed up that training stress management skills within groups reduces perceived stress of women with MS and increases their resiliency, reason of which is learning how to confront the indispensable hardships of life and to better cope with stress and unpleasant events of life from performance aspect point of view. Group treatment for these patients is offered for the purpose of expressing and sharing the individual experiences. Groups can create an atmosphere in which the healthy features can be brought forth and perceived stress can be managed better, despite the denial and projection generated by the disease. One of the benefits of participating in group sessions is that people are able to express their feelings and raise questions. More often than not, questions and replies relate to some important information of the relevant people and help them both express their feelings and learn to confront the unpleasant ones. At last they can reduce perceived stress and thus patients can resist against their disease’s problems.

Recommendations

Given the research results it is recommended that the cognitive-behavioral treatment of stress management be applied as a selective treatment method for treating the psychological disorders of patients which complements the medical treatment.

Acknowledgement

The researchers appreciate of all patients who participate in the study as well as Dr. Sanobar Golshani, for his great recommendations and kindness.

References


