



Psychological Characteristics of Patients Suffering from Multiple Sclerosis

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ABSTRACT: Purpose of the present study was to compare resiliency, styles of coping with stress, alexithymia and fear of negative evaluation in people suffering from MS and healthy people. To this end, 50 women and men suffering from MS, chosen based on convenience sampling, were evaluated by resiliency scale, short form scale on coping with stressful situations, Toronto alexithymia scale and fear of negative evaluation scale. Results of T-test for independent samples showed that between the participating patient and healthy groups, there is a significant difference only in emotion-oriented coping style dimension. Also, multivariate variance analysis showed that the progressive-relapsing group of patients has acquired higher scores for difficulty identifying feeling compared to the benign, relapsing-remitting, primary progressive and secondary progressive patients. Progressive-relapsing group of patients has also acquired higher scores in alexithymia variable compared to the benign group patients. Also, patients of relapsing-remitting type has acquired higher scores in fear of negative evaluation compared to the progressive-relapsing patients. Benign group patients has acquired higher scores in emotion-oriented coping style compared to primary progressive and progressive-relapsing group patients.

Keywords: MS. Multiple Sclerosis, Fear of Negative Evaluation, Resiliency, Styles of Coping with Stress.

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INTRODUCTION

Multiple sclerosis (MS) is one of the most common diseases of the central nervous system and a class of neurological disorders that causes local damage to and inflammation of myelin sheath covering nerve fibers in the brain and spinal cord. This chronic and autoimmune disease is diagnosed by some kind of signs and symptoms and unpredictable periods like impaired body coordination and balance, muscle cramp, fatigue, sensory changes, burning sensation and pain, visual disturbances, disorders in swallowing, speaking and respiration, bladder and bowel problems, sexual problems, sensitivity to heat and cognitive and affective problems. Various studies have investigated the Psychological characteristics of MS patients and the role of these factors in the initiation, continuation or quality of life of these patients and have compared MS patients with ordinary people in terms of such factors as personality, depression, anxiety, stress, self-esteem, self-efficacy and self-sufficiency. These findings suggest that besides the involved biological mechanisms, other factors that may have an influence on psychosomatic diseases like MS are psychological factors. These findings have shown that in addition to genetics, other factors including environmental and biological factors, life style and psychological factors may be involved in the incidence of chronic diseases like MS; particularly, MS has been recognized as a stress centered disease. Among the most common psychological symptoms of MS patients are depression, fatigue and anxiety which are largely associated with disabilities and inadequate living

conditions of these patients. One of psychological characteristics considered in the present study is the styles of coping with stress. Numerous studies in the field of health psychology has shown that persistent and sever stress often underlies numerous psychological and physical diseases. Coping styles refer to the behavioral and cognitive approaches used by person to cope with stress and are classified into three categories of problem-oriented strategy, emotion oriented strategy and avoidance oriented strategy (Psychiatry society of America, 2000)

Generally, when people are able to logically classify the stressful situations, Task-oriented strategy is most effective, buy if people are no able to predict the stressful situations and adopt solutions to them, emotion oriented strategy will be more effective . Since the association of MS disease with stress and anxiety has not been confirmed in the previous studies, it seems that styles of coping with stress are also influenced by this disease. Another important variable in psychological studies that is considered one of the personality traits of people and is among the internal factors in preventing and coping with stress is resiliency that its association with MS disease has been investigated in the present study. Resiliency is simply positive adjustment in the event of adverse conditions. Resilient people are able to maintain a sense of self-efficacy and evaluate the conditions, strengthen the commitment to their goals and promote the motivational behavior and as a result make great progress .conservative effects of resiliency in resistance and successful coping and developed adaptation with risky and stressful conditions (like

chronic diseases) and in contrast, low levels of resiliency is associated with vulnerability and psychological disorders. Generally it seems that resiliency may have a role in response to tough conditions like chronic diseases.

Another psychological factors of interest in MS patients are emotions. Alexithymia refers to difficulty in emotional self-regulation and in other words, disability in cognitive process of emotional information and regulation of emotions. Recent studies suggest that alexithymia is associated with many psychological and psychiatric disorders like major depression, posttraumatic stress disorder, drug abuse and dependence, dogmatization disorder, eating and panic disorders. With respect to the association of MS disease with emotional disorders like depression, anxiety, stress and so on, it seems that inadequate emotional regulation is also associated with the severity or occurrence of this disease. The last variable whose association with MS disease is of interest in the present study is fear of negative evaluation that is considered a special kind of social anxiety.

Considering above information, the present study was carried out with the purpose of evaluating the relationship between resiliency, coping with stress, alexithymia and fear of negative evaluation variables in MS disease. To this end, the difference between people suffering from MS and controls and also the difference between five types of MS disease (benign, relapsing remitting, primary progressive, secondary progressive, progressive relapsing) has been considered in the aforementioned variables.

MATERIAL AND METHODS

Study hypotheses:

There is a difference between the psychological characteristics (resiliency, styles of coping with stress, alexithymia and fear of negative evaluation) of people suffering from MS and controls.

There is a difference between psychological characteristics (resiliency, style of coping with stress, alexithymia and fear of negative evaluation) of the five types of MS patients.

Procedure:

This study is of a casual-comparative research type. The sample of this study is composed of 50 people (33 female and 17 male) suffering from MS who are chosen based on convenience sampling method. The control group was also composed of 49 people (29 female and 20 male) who were chosen based on demographic variables of age, gender, education and marital status.

Measurement tools:

Resiliency scale questionnaire: in the present study Davidson et al. (2004) resiliency scale (CD-RISC, 1984) was used to measure resiliency. This scale is a 25 item questionnaire with a 5 point scale (completely wrong to always right) considered for each. Jokar has obtained the scale's reliability (by alpha Cronbach method) of 0.93 for an Iranian sample. Hashemi has also reported the alpha cronbach of 0.87 and retest reliability of 0.73. He has confirmed the unidimensionality of the scale by using factor analysis. In the current study, alpha cronbach of 0.91 was obtained for the whole scale. Also the validity and reliability of respectively 0.83 and 0.76 were obtained by using factor analysis and alpha cronbach.

Short form questionnaire on coping with stressful situations (CISS): styles of coping with stress (CISS) questionnaire is a paper and pencil test designed by Endler and Parker to measure the coping approaches of people (adults and adolescents) and which is normalized by Akbarzade in Iran. In a study carried out by Taghilou, the degree of reliability pertaining to respectively problem orientation, emotion orientation and avoidance orientation subscales in two groups of delinquent and ordinary people were 0.92, 0.85, 0.85 and 0.85 and 0.68 and 0.82, respectively (health, 2001). The validity of the aforementioned scale was obtained in Iran by using correlation calculation between coping styles and types of identity. Also, in the present study the validity and reliability of respectively 0.88 and 0.75 were obtained using factor analysis and alpha cronbach.

Alexithymia questionnaire (TAS-20): this scale was constructed in 1986 by Taylor and revised in 1994 by bagbi, Taylor and Parker. The scoring method of the test is based on Likert scale (1 = completely disagree to 5 = completely agree). Psychometric properties of 20-item Toronto alexithymia scale are assessed and confirmed in multiple studies. Besharat (2006) has calculated alpha-cronbach coefficients of respectively 0.85, 0.82, 0.75, 0.72 for the whole questionnaire of alexithymia and three components of difficulty in describing feelings and externally-oriented thinking which indicates the relatively good internal consistency of the scale. He has also assessed and confirmed the concurrent and construct validity of the scale. The results of the confirmatory factor analysis also confirmed the presence of three factors of difficulty identifying feelings, difficulty describing feeling and externally-oriented thinking in the Persian version of 20-item Toronto alexithymia scale (Besharat, 2006). Also, in the present study the validity and reliability of 0.81 and 0.72 were obtained using factor analysis and alpha-cronbach.

Fear of negative evaluation scale questionnaire: this scale has been prepared by Lyri and is a 12-item scale with 5-point Likert based response method from 1 = completely disagree to 5 = completely agree. The designer of the scale has reported the alpha cronbach of 0.90 and, with a four-week interval, retest reliability of 0.74 for this scale. The reliability of this scale was reported as desirable by calculating its correlation with SAD scale and interaction anxiety scale. Also, in the present study the validity and reliability of respectively 0.77 and 0.78 were obtained by using factor analysis and alpha cronbach.

RESULTS

Table 1 indicates that in the total score of alexithymia the highest average is for control. Group and the highest standard deviation and maximum score are for patients' group. In alexithymia dimensions, the highest average and maximum scores are also for control group. For the fear of negative evaluation variable, the control group possesses the highest average and maximum score and for resiliency variable the patients' group has the highest average, highest standard deviation and maximum score. Descriptive findings for coping styles also indicated that in problem oriented and emotion oriented styles, the patients' group has the highest average and highest standard deviation. For distraction and turning to society dimensions, the highest average and maximum score belong to control group.

Table 2 shows the multivariate variance of the five types of patients for alexithymia (difficulty

identifying feelings, difficulty describing feelings, concrete thinking style). Findings suggest that there is a difference between the alexithymia dimensions and the five types of patients (benign, relapsing-remitting, primary progressive, secondary progressive, progressive – relapsing). Also, findings of Tukey post-hoc test show that there a significant difference among the five types of patients (benign, relapsing-remitting, primary progressive, secondary progressive, and progressive- relapsing) in terms of difficulty identifying feelings. Multivariate variance analysis of the five types of patients for styles of coping with stress (problem oriented, emotion oriented, and distraction, turning to society) are shown in table 3. Also, these findings indicate a significant difference among the five types of patients (benign, relapsing-remitting, primary progressive, secondary progressive and progressive relapsing) in terms of emotion-oriented coping style.

Table 4 shows a one-way variance analysis of the five types of patients for alexithymia, fear of negative evaluation, resiliency and emotion-oriented coping style variables. Findings pertaining to alexithymia variable suggest that F value for total score of alexithymia variable is significant at 0.01 level. This table suggests that F value for fear of negative evaluation variable is significant at 0.05 level. Likewise, results of table 4 show that F value for resilience variable is not significant and the findings indicate that F value for emotion-oriented coping style is significant at 0.004 level.

Table 1. Total Average, Standard Deviation and Range of Variations for alexithymia variable and its dimensions.

Variable	Patients' group			Control group		
	Average	SD	Minimum-Maximum	Average	SD	Minimum-Maximum
Difficulty identifying feelings	20.69	6.19	35-7	20.40	4.18	28-8
Difficulty describing feelings	14.9	4.28	23-7	15.00	3.49	23-6
Concrete thinking style	23.6	3.39	30.16	24.06	4.93	34-12
Alexithymia(total score)	59.44	10.46	84-33	59.46	8.90	74.26
Fear of negative evaluation	34.64	7.82	54-21	36.38	5.54	55-26
Resiliency	79.26	12.01	111-60	77.20	7.34	109-59
Problem oriented coping style	55.66	8.89	73-30	53.52	6.38	80-43
Emotion oriented coping style	50.00	10.35	75-30	48.70	4.78	59-38
Distraction	28.60	6.80	41-11	30.76	5.16	43-13
Turning to society	13.78	3.84	21-5	16.08	3.22	23-9

Table 2. Multivariate variance of the five types of patients for alexithymia dimensions (difficulty identifying feelings, difficulty describing feelings, concrete thinking style)

Variable	Variance source	df	SS	MS	F	Sig
Difficulty identifying feelings	Intergroup	4	696.71	174.18	7.4	0.001
	Intragroup	43	1017.77	23.67		
Difficulty describing feelings	Intergroup	4	144.69	36.17	2.2	0.09
	Intragroup	43	712.78	16.58		
Concrete thinking style	Intergroup	4	11.65	2.91	0.3	0.9
	Intragroup	43	548.32	12.75		

Table 3. One-way variance analysis of five types of patients for alexithymia, fear of negative evaluation, resiliency and emotion oriented coping style variables.

Variable	Variance source	df	SS	MS	F	Sig
Problem oriented coping style	Intergroup	4	154.61	38.65	0.56	NS
	Intragroup	43	2940.87	68.39		
Emotion oriented coping style	Intergroup	4	1553.67	388.42	4.58	0.004
	Intragroup	43	3645.58	84.78		
Distraction	Intergroup	4	208.49	52.12	1.12	NS
	Intragroup	43	1993.42	46.36		
Turning to society	Intergroup	4	28.89	7.22	0.46	NS
	Intragroup	43	679.59	15.80		

Table 4. One-way variance analysis of five types of patients for alexithymia, fear of negative evaluation, resiliency and emotion oriented coping style variables

Variable	Variance source	df	SS	MS	F	Sig
Alexithymia	intergroup	4	1294.60	323.65	3.80	0.01
	intragroup	43	3666.38	85.26		
Fear of negative evaluation	intergroup	4	619.19	154.78	2.98	0.03
	intragroup	43	2232.73	51.92		
Resiliency	intergroup	4	432.40	108.10	0.07	NS
	intragroup	43	6200.91	144.21		
Emotion-oriented coping style	intergroup	4	1553.67	88.42	4.58	0.004
	intragroup	43	3645.58	84.78		

DISCUSSION

The aim of the present study was assessing the psychological characteristics (resilience, coping with stress styles, alexithymia and fear of negative evaluation) of MS patients. Findings of the study suggested that there is no significant difference between patients' group and participating control group in terms of alexithymia dimensions. With respect to the previous study it was anticipated that because of experiencing stress and other negative emotions and poor physical conditions, people suffering from MS would have higher levels of alexithymia compared to the control group, but it was not supported by the findings of study.

Regarding difference between diverse types of patients in terms of alexithymia variable, findings suggest that the progressive-relapsing type has more difficulty identifying feelings than all other types (benign, relapsing-remitting, primary progressive, secondary progressive). Also in total score of alexithymia, the progressive-relapsing type had reported significantly more difficulty expressing their feeling than benign type. It should be noted that this group had higher scores for total score of alexithymia compared to other three groups, though differences did not reach a significance level. Recent studies suggest that alexithymia is associated with many psychological and psychiatric disorders like major depression, posttraumatic stress disorder, drug abuse and dependence, dogmatization disorder, eating and panic disorders. Similarly, damage to emotional processing capacity and emotional regulation based

on alexithymia may be a potential risk factor for different kinds of medical and psychological diseases including psychosomatic disorders. Considering MS disease association with emotional disorders like depression, anxiety, stress, so on, it seems that inadequate emotional regulation also has an association with severity or occurrence of this disease. According to the studies, difficulty identifying and expressing feelings is directly associated with many mental and physical problems. Therefore, it is reasonable that a person in the progressive-relapsing course who is experiencing tougher situation will acquire higher score for this factor. According to Muller and Emper results of Jonathan et al. In general, these findings support the perspective that emotional regulation and cognitive process are likely not involved in occurrence of this disease. Nonetheless, these factors effect is demonstrated by varying severity of the disease. Also, it is necessary to note that the present study is Ex-Post Facto in nature and it is likely that people suffering from MS make some changes in themselves after occurrence of disease that are caused by their knowledge of being ill. Similarly, Ex-Post Facto nature of this study makes it difficult to draw a causal conclusion. Regarding comparison between patient group and control group in resiliency, findings suggest that there is significant difference between the two groups. Similarly, findings pertaining to the five types of patients showed that there is no significant difference between these patients in terms of resiliency. Since resiliency is associated with indicators of psychological health and vulnerability through effecting self-esteem, competence and

personal integrity, tolerance for negative emotions, self-control and spirituality, it was anticipated that people suffering from MS would have less capability in this variable, but the results did not supported this assumption. As an explanation of these findings it may be noted that many factors (physical and psychological) play a role in occurrence and development of this disease including Axonal damage, unknown infection, inaccurate nutrition and lack of certain vitamins, genetics, environmental factors and autoimmunity, increased stress, vaccination, lack of some nutrients, impaired antioxidant defense system, lack of uric acid, etc. It seems that these factors contribution to occurrence and severity of this disease is stronger than that of psychological variable resiliency. In accordance with this conclusion, Lack of significant difference between patients suffering from MS and controls in the present study may be explained in two ways: first, this psychological factor has no effect on occurrence or severity of this disease. This interpretation is in contrast with those studies that show people suffering from MS will experience higher anxiety than ordinary people; because many studies have shown that resiliency has a negative relationship with stress and anxiety. Nevertheless, this interpretation is more consistent with those studies suggesting that occurrence of disease, in the first place, dose not relate to stress and anxiety but these factors play a role in patients' quality of life and severity of symptoms and recurrence of attacks. Second interpretation refers to this possibility that occurrence of this disease puts the individual in a situation that, to maintain their health, he/she makes some changes in their style and method of coping with adverse conditions such as illness (Clark al. 2001).

Regarding patients and control groups in styles of coping with stress, findings suggested that, only in styles of emotion-oriented coping, there is no significant difference between participating patient group and control group (Etkinson and Etkinson 1983). People using this strategy, while having control over emotions, may express such feelings as anger or frustration. Maybe one of the reasons for this case is that people who are suffering, noting their physical and psychological status, have found out that negative emotions and thinking may aggravate their disease, so they eventually try to avoid these emotions and instead use more useful alternatives with lower vulnerability. Moreover, these people are frequently receiving the emotional support of family, friends and nurses and this emotional support acts as a moderator and reduces the incidence of negative emotions. In their studies, Ebrahimi et al., Dachnick et al., have confirmed the negative relationship between emotional support and incidence of negative

emotions. Carver et al., have confirmed the direct relation between problem-solving approach, oppression and incidence of disease. To reduce stress, these people mostly use avoidance approach type of turning to society. People using this approach, consciously push back stressful thoughts and replace them with others. Regarding the difference between patients' groups in styles of coping with stress, findings suggest that the progressive-relapsing group has acquired a higher score compared to the benign and relapsing-remitting groups. Also, the primary progressive group has reported higher emotion-oriented strategy than benign group. Since some psychological factors such as stress may be involved in the development and progression of MS, it is probable that not using emotion-oriented solution as much as healthy people maybe one of the reasons they remain sick; because result of many studies have recognized emotional coping as the most important mediator of stress and disease relationship . Some studies have shown that emotion-oriented coping styles will lead to better mental health. Emotion-oriented copings in uncontrollable situations will reduce disease symptoms (Ostovar, 2007).

Regarding comparison between patient and healthy control groups in fear of negative evaluation variable, findings do not support a difference. The progressive-relapsing group has reported more concern than other groups and the differences with relapsing-remitting group reach a significant level (Miler and Farmez1991). By definition. One of the most important cognitive errors is the fear of negative evaluation by others. With respect to the definition of this variable, it was anticipated that people suffering from MS would have higher scores in this factor than control group. But this factor is strongly influenced by cultural (family and community) and cultural values, social comparison, society's emphasis on visual attractiveness, and negative experiences in interacting with peers. So, after considering the factors listed, if a person has grown in a culture where these factors are not considered as values, this factor will not appear in them.

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