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Brief Report

Comparing emotion dysregulation and distress tolerance in multiple sclerosis patients and healthy individuals

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Abstract

Introduction: Multiple Sclerosis (MS) impacts on the quality of life of patients even in early phases of illness. Therefore, this study aimed to compare the emotion dysregulation and distress tolerance in people with multiple sclerosis and healthy cases.

Materials and Methods: The statistical population of this comparative study included all MS patients aged 20 to 50 years who were referred to Kermanshah MS Society in the summer and fall of 2016. Three hundred seventy-six subjects, including 175 MS patients and 201 healthy cases, were selected using the convenient sampling method. Research instrument included Difficulties in Emotion Regulation Scale (DEES) and Distress Tolerance Scale. Data were analyzed by multivariate analysis of variance.

Results: The mean scores of difficulties in emotion regulation in multiple sclerosis group and control group were 104.02 ±17.90, and 94.12 ± 19.75 respectively. Also, the mean scores of distress tolerance scores in multiple sclerosis patients group was significantly lower than the control group (37.05 ± 9.47 vs 41.41 ± 10.14).

Conclusion: Multiple sclerosis patients have more emotion dysregulation and less distress tolerance compared with the normal people.

Keywords: Distress tolerance, Emotion dysregulation, Multiple sclerosis.

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Introduction

Multiple Sclerosis (MS) is a chronic disease characterized by recurrent inflammation, damage to neuronal axons, myelin degradation, and irreversible pathologic changes in the central nervous system. This disease is the most common chronic disorder of the nervous system, which leads to disability and reduced physical and mental function in young people (1). Clinical signs of multiple sclerosis include weakness, fatigue, shaking of hands, bladder dysfunction, visual changes, decreased intestine function, muscle stiffness, and sexual dysfunction. Sleep disturbances, decrease daily activity, urinary tract infection, urinary incontinence and stool, dyskinesia, muscle contractions, peripheral neurological problems, depression, job loss, changes in the family,

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divorce, loss of ability, and economic, social, and occupational activity are also common in this disease (2).

According to cognitive views, when people are involved with difficult problems, they seek to determine the reasons for their behaviors and the others that create different emotional and emotional consequences for themselves. These consequences may reduce or increase their stress, and it seems that one of the factors associated with MS is emotion dysregulation. Maladaptive strategies of emotion dysregulation can endanger the mental health and well-being (3). Linehan believes that the difficulty in emotion regulation, as a critical factor in the pathogenesis of many forms of mental disorders, is considered the basis for the relationship between personality and these disorders. Therefore, emotion regulation should be distinguished from the emotional vulnerability that originates in personality traits (4). Distress tolerance is one of the joint structures for research in emotional disorder; tolerance of distress is considered an essential structure in the growth of new insight on the onset and continuation of mental health and prevention and treatment (5). According to Simons and Gather's view, people with low distress tolerance have the following characteristics: they are aware that they cannot tolerate the feeling of discomfort and feel that others have better ways to deal with the negative emotions. These people struggle hard to avoid negative emotions due to the lack of perceived coping abilities and the inability to manage annoying emotional situations. If the avoidance is unlikely, they will resort to unhealthy ways to overcome the annoying emotional states. If this approach is not helpful, their total energy will likely focus on their emotions, ultimately disrupting their function (6). This study has particular importance in reducing and minimizing the recurrence of this disease or creating suitable living conditions for MS patients.

Therefore, the study was conducted to compare the emotion dysregulation and distress tolerance in MS patients compared to the control group.

Materials and Methods

The statistical population of this comparative study included all MS patients aged 20 to 50 years who were referred to Kermanshah MS Society in the summer and fall of 2016. Three hundred seventy-six subjects, including 175 MS patients and 201 healthy cases, were selected using the convenient sampling method. The inclusion criteria for MS group included the lack of other severe and chronic diseases other than multiple sclerosis, and having at least a high school degree. The control group was matched to the patient group regarding age, education, and lack of chronic and severe disease.

Research instrument

A) Difficulties in Emotion Regulation Scale (DEES): This tool introduced by Gratz and Roemer (2004) (7), which was designed to evaluate the difficulties in emotional regulation. It had 36 questions and six subscales including non-acceptance of emotional passages, difficulty in dealing with targeted behavior, difficulty in controlling impulse, lack of emotional awareness and limited access to the emotion regulation strategies, and lack of emotional clarity. The cases respond to this questionnaire by five-degree Likert scale (rarely, 1 to almost always, 5). The higher scores indicate more incredible difficulty in emotion regulation. The results related to the reliability of this questionnaire showed that this scale has high internal consistency. Cronbach's alpha for the total scale is 93%, the non-acceptance subscale is 85%, the subscale of goals is 89%, the subscale of impulse is 86%, the subscale of awareness is 80%, the subscale of the strategies is 88%, and the subscale of transparency is 84%, and the reliability of the test for overall scores is 88% (8). Regarding the validity of this scale, the studies also show the structure validity and right prediction. The Persian version of this questionnaire in Iran was assessed by Alavi et al. Its Cronbach alpha is reported to be 92% (9). Cronbach's alpha of the six components of this scale in the study done by Rihani et al., respectively, for the non-acceptance of emotional responses, difficulty in dealing with the targeted behavior, difficulty in controlling impulse, lack of emotional awareness, limited access to emotional regulation strategies, and lack of emotional transparency were 60%, 77%, 77%, 61%, 84% and 63% (10).

B) Distress Tolerance Scale: It is an emotional distress tolerance self-assessment index, developed by Simons and Gaher (2005) (6). This scale has 15 options, including four subscales of emotional distress tolerance,

attraction by the negative emotions, mental distress estimation, and regulation of efforts to relieve distress.

This scale measures the distress tolerance based on an individual's ability to tolerate the emotional distress, mental distress assessment, attention to negative emotions in case of regulator occurrence, and actions to relieve the distress. The scale options are graded according to the Likert scale; the score of one means full agreement with the desired option, and five means that there is no agreement with the desired option. Alavi et al. (9) showed high internal consistency reliability for the total subscale (71% and moderate reliability for subscales, which include 54% for tolerance subscale, 42% for attraction subscale, 56% for assessment subscale, and 58% for tolerance regulation subscale (11). Also, in the study done by Reyhani et al. the alpha coefficient for each of the tolerance, attraction, assessment, and regulation subscales was 72%, 82%, 78%, 70%, and 82% for the total distress tolerance scale, respectively (10).

Results

In this study, 175 MS patients and 201 healthy cases participate. The descriptive statistics of variables are presented in terms of groups (Table 1).

Table 1. Comparison of emotion dysregulation and distress tolerance in two groups

Variable	MS group	Control group
Emotion dysregulation (Mean ± SD)	104.02 ± 17.90	94.12 ± 19.75
Distress tolerance (Mean ± SD)	37.50 ± 9.47	41.41 ± 10.14

Based on the box test that was not significant for any of the variables, the variance/covariance homogeneity condition was correctly observed (P= 0.058, F= 5.46, BOX 55.34). The Levine test showed the equation of two group variances. The effect of group on the linear composition of the variables studied is significant (P<0.001 and Wilks's lambda 0.753). The above test allowed the use of multivariate variance analysis. The results showed that there was a significant difference between the two variables in the two groups.

Emotion dysregulation and distress tolerance in patients with multiple sclerosis and control groups have been compared. F showed that the difference between the mean scores of the two groups in emotion dysregulation and distress tolerance was significant (P<0.001). In other words, MS patients have a higher mean score in the emotion dysregulation variable, while the control group has higher scores in the distress tolerance variable.

Discussion

The purpose of this study was to compare emotion dysregulation and distress tolerance in multiple sclerosis patients with the control group in Kermanshah city. The results showed that emotion dysregulation was significantly higher in people with multiple sclerosis than in healthy people. Distress tolerance in people with multiple sclerosis was significantly lower than in healthy people. The results are consistent with the study done by Alavi et al. (8), Miller et al. (12), who used the excitement regulation skill to increase distress tolerance. In explaining this dysregulation, it can be noted that people with MS are turning into avoidance behaviors to control existing stressors and react to them by escaping from stressful situations. These patients had a higher incidence of emotional responses, difficulties in dealing with the targeted behaviors, limited access to emotion regulation strategies, and lack of excitement.

The lack of awareness of excitement leads to the exacerbation of emotional excitement. If this situation lasts, it will pressure the immune systems, pituitary gland, adrenal gland, and autonomous systems. The continuation of stimuli on these systems causes physical and psychological distress (13). People with emotional problems are more likely to be physically presenting their psychological problems and discomfort because they cannot express their excitement. People who can recognize their emotions and express their emotional states effectively can be better able to face life problems, succeed in coping with the environment and the others, and ultimately enjoy a high quality of life (14). Emotion dysregulation can lead to poor interpersonal

relationships, social maladaptation, mental health problems, and physical illnesses, including MS. Failure in emotional regulation can increase the negative experiences. Therefore, when people feel that there is little control over the situation, they interpret it as negative and stressful, which results in a negative emotional experience and a low level of distress tolerance.

Conclusion

Patients with multiple sclerosis had more emotion dysregulation and less distress tolerance compared to the healthy cases. In explaining this relationship, it must be acknowledged that expressing emotions and regulating emotions can excite emotions and relaxation. As these people are confronted with difficulty regulating emotions, emotional problems can reduce the recovery of disease.

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