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Research Article

Impact of depression on coping strategies in multiple sclerosis patients

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Abstract. Objective: This study was designed to evaluate the differences between people with MS and the general population in their coping styles and their psychological adjustment to examine the impact of coping styles on levels of depression in MS patients. Material and Methods A sample comprised of 63 patients with SM and 49 individuals drawn from the general population, who did not have MS was evaluated with COPE and BDI. Results: We found a statistically significant difference between the mean scores of coping strategies in the MS patients and the healthy subjects. Conclusion: In comparison with control group and the MS patients without depression, MS patients with depression used more emotion coping and maladaptative coping strategies.

Key Words: multiple sclerosis, coping, depression.

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Introduction

Multiple sclerosis (MS) is a chronic inflammatory disorder of the Central Nervous System typically affecting young adults. MS is one of the most common progressive autoimmune diseases affecting central nervous system of brain and spinal cord. It has affected about 400 thousand people in America and over 1 million all over the world (Lezzoni 2010). The progress of the disease is unpredictable, the etiology is unclear, there is currently no cure and only symptomatic relief for people with the disorder is available (Rao et al 1992). The symptoms associated with the MS disorder may lead to negative emotional responding. Depression is highly prevalent in MS subjects, with estimates ranging from 18 to 54% (Siegert 2005), and is considered to be the single most important determinant of Quality of life in MS subjects (Siegert 2005).

MS leads to major changes in people's lifestyle and requires effective strategies for coping with stress to continue the normal life. In any chronic disease coping is known to be an important mediator of psychological well-being. Lazarus and Folkman (1984) defined coping as the overall cognitive and behavioral efforts to master, reduce or tolerate inside or outside demands which threaten or surpass personal resources. Two general coping strategies have been distinguished, problem focused coping (PFC) and emotional-focused coping (EFC). The problem-focused coping includes efforts to do something active to alleviate stressful circumstances, whereas the emotional-focused coping includes efforts to regulate the emotional consequences of stressful events. Denial, seeking emotional social support, turning to religion or resignation are some examples (Mc Cabe et al 1984).

Pakenham et al (1997) found that avoidance and other types of emotion-focused coping were related to poorer adjustment (depression, distress, social adjustment) among people with MS, and that problem-focused coping was related to some aspects of better adjustment.

Jean et al (1999) also found that greater levels of distress and depression were experienced by people with MS who used emotion-focused coping, but that problem-focused coping was not related to lower levels of distress.

Most of the studies about coping strategies in MS patients failed to include a comparative group, and so it is difficult to say if people with MS use different coping strategies from other populations.

This study was designed to evaluate the differences between people with MS and the general population in their coping styles and their psychological adjustment to examine the impact of coping styles on levels of depression in MS patients. We predicted that people with MS would use more emotion-focused coping, less problem focused coping than people from the general population, and that patients with MS who used more emotion-focused and fewer problem-focused strategies will have higher level of depression than the patients with MS who used more problem-focused strategies.

Material and method

The study was conducted at the Hospital of Psychiatry and Neurology Oradea. The sample comprised 63 patients with SM and 49 individuals drawn from the general population, who did not have MS. The individuals from the general population

sample were screened for the presence of a chronic illness. The healthy group was selected after being matched in terms of age and level of education with the patients.

Coping style was measured using Coping Orientation for Problem (COPE)-short version. COPE, developed by Carver et al (1989) is a 56-item questionnaire, destined to measure 15 different coping strategies.

Carver et al (1989) have identified four factors: coping focalized on the problem (including the following coping strategies: affective approach, planning and deletion of concurrent activities); coping focalized on emotions (positive interpretation and growth, abstention, acceptance and religious approach); coping focalized on search for social support (use of the social-instrumental support, the social-emotional support and focalizing on expressing emotions) and avoidance coping, for the problem or the associated emotions (denial, mental and behavioral disengagement).

For the Romanian version of the COPE Questionnaire, the internal consistency values range between .72 to .84 and between .48 and .92 for the 15 initial scales (Crașovam & Sava 2013).

Beck Depression Inventory (BDI) (Beck et al 1969) was used for assessing levels of depression. Beck Depression Inventory is a 21 items scale. Scores were marked as follows: normal = 0–9; minimal depression = 10–15; moderate depression = 16–19; moderate-severe depression = 19–29; and severe depression 30–63.

Written consent was obtained from the participants. Completion of the questionnaires was voluntary. Permission was obtained from Ethical Committee of University of Medicine and Pharmacy Oradea prior to the start of the study.

Data were analysed using Statistical Package for Social Sciences (SPSS) version 20 for OS 10.9.1.

Distributions of the studied variables were examined using Shapiro-Wilk's tests. Statistical significance was assumed at $\alpha \leq 0.05$. Because the data wasn't normally distributed we used non-parametric statistics - Kuskal Wallis W.

Results

The main demographic and clinical characteristics of the study sample are reported in Table 1.

Table 1. Characteristics of the study sample (N=112)

	Patients	Controls
Gender (woman/male, %)	46/54	83/17
Mean age±SD (years)	48.49±10.29	46.26±8.49
Mean education±SD (years)	13.2±3.78	13.6±3.72
Mean disease duration±SD years	19.33±11.37	
Mean EDSS±SD	6.62±1.47	

Mean score on the BDI was 9.87 ± 5.63. Specifically, 32 (50.8%) patients had moderate to severe depression and the remaining 31 (49.2%) were not depressed.

About 58.7% patients had a relapsing remitting (RR), 19% had primary progressive, and the remaining 22.2% a secondary progressive (SP) curse of disease.

In comparison with control group MS patients used more avoiding strategies (mental disengagement, denial, behavior disengagement).

Table 3 showed the scores on the three coping mechanism in controls and SM patients (with and without depression).

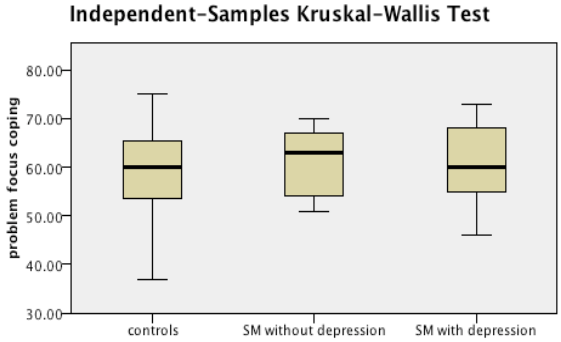

Figure 1. Problem focus-coping scores in the three groups

MS respondents were as likely as the general population to engage in problem-focused coping (Kruskal-Wallis W=2.22, p>0.05).

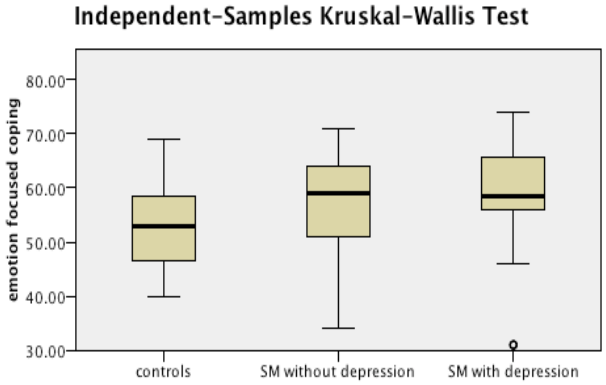

Figure 2. Emotion focus-coping scores in the three groups

MS respondents with depression were more likely than the general population and the SM without depression to engage in emotion-focused coping (Kruskal-Wallis W=11.09, p<0.05).

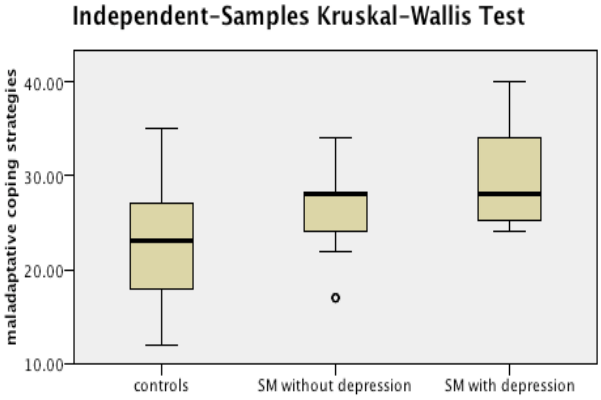

Figure 3. Maladaptive coping scores in the three groups

MS respondents with depression were more likely than the general population and the SM without depression to engage in maladaptive coping (Kruskal-Wallis W=25.07, p<0.001).

Table 2. Coping scores for the three groups

	Controls N=49)		SM without depression (N=31)		SM with depression (N=32)		Kuskal Wallis W	P
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**		
Positive reinterpretation	12.97	2.14	13	2.84	12.21	2.57	2.12	0.346
Mental disengagement	7.53	2.5	8.83	2.29	9.56	3.15	9.259	0.01
Venting of emotion	8.28	2.91	9.06	1.59	12.43	2.21	46.12	<0.001
Instrumental social support	12.04	2.62	11.09	2.94	12.56	2.57	4.24	0.12
Active coping	12.63	2.46	13.03	1.51	13.21	1.64	0.853	0.653
Denial	6.53	2.02	8.16	2.25	7.09	1.94	10.523	0.005
Religious coping	9.69	3.36	11	4.85	12.81	3.77	12.99	0.002
Behavior disengagement	6.87	2.47	8.16	2.06	8.28	2.21	10.08	0.006
Restrain	9.89	2.3	11.45	2.18	11.68	2.76	12.599	0.002
Emotional support	11.57	2.68	10.58	2.6	12.21	3.44	10.08	0.006

Table 3. Use of the three coping mechanism in patients (with and without depression) and controls

	Controls N=49)		SM without depression (N=31)		SM with depression (N=32)		Kuskal Wallis W	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**		**p**
Problem focus coping	58.837	8.971	61.742	6.439	60.688	7.123	2.22	>0.05
Emotion focus coping	52.429	7.179	56.290	10.527	57.594	12.133	11.09	<0.05
Maladaptive coping	22.694	5.767	26.065	4.524	30.281	5.443	25.47	<0.001

Discussions

The aim of this study was to examine coping styles in MS patients and their clinical correlates, with particular focus on depression. In the present research, there is a statistically significant difference between the mean scores of coping strategies in the MS patients and the healthy subjects. Therefore, it can be stated that the overall hypothesis of the present study, the difference between coping styles of MS patients and healthy subjects, is confirmed.

In the present research, no significant difference was observed between the MS patients and the healthy subjects in the use of problem focus coping strategies and this finding is not consistent with the research conducted by Nada et al (2011), Talarico et al (2009), and Beaty (2000). The research of Nada et al (2011) and Lode et al (2007) had showed that MS patients use problem-focused coping styles more than healthy subjects.

In our sample, approximately half of the patients reported moderate to severe depression on the BDI. We found significant relationships between self-reported depression and coping strategies. There is consistent evidence in the literature that the use of problem focus coping instead of emotion focus coping strategies is associated with a better adjustment
to disease-related challenges.

There is some evidence that depression, more than disability level, may negatively affect the type and efficacy of coping (Jean et al 1997; Buelow 1991; Lunch et al 2001) and that dysfunctional (emotion-centered) coping strategies could favor depression (Arnett et al 2002; Lunch et al 2001).

Conclusions

In comparison with control group and the MS patients without depression, MS patients with depression used more emotion coping and maladaptative coping strategies.

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