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Management of multiple sclerosis: the role of coping self-efficacy and self-esteem

Pavol Mikula[a], Iveta Nagyova[a], Marianna Vitkova[b] and Jarmila Szilasiova[b]

[a]Faculty of Medicine, Department of Social and Behavioural Medicine, PJ Safarik University, Kosice, Slovakia; [b]Faculty of Medicine, Department of Neurology, PJ Safarik University, Kosice, Slovakia

ABSTRACT

Patients with multiple sclerosis (MS) engage in various coping behaviours in order to manage their disease. The aim of this study is to find out if the self-esteem of patients is associated with coping strategies – problem-focused (e.g. making a plan of action when confronted with a problem); emotion focused (e.g. get emotional support from community); and focused on stopping unpleasant emotions and thoughts (e.g. keeping oneself from feeling sad), and if it can enhance or hinder coping efforts in the disease management. We collected data from 155 consecutive MS patients who completed the Coping Self-Efficacy Scale (CSE) and the Rosenberg Self-esteem Scale (RSE). Explained variance for problem-focused coping, emotion-focused coping, and coping focused on stopping unpleasant emotions and thoughts was 33, 24, and 31%, respectively. Self-esteem seems to be associated with coping strategies indicating that feelings of self-worth are linked with the ability to handle difficult life situations and can be helpful in chronic disease management.

Introduction

Multiple Sclerosis (MS) is a chronic neurological disease, characterised by diffuse changes in white and grey matter within the central nervous system. Common manifestations of MS are chronic pain (Harrison, Silber, McCracken, & Moss-Morris, 2015), mobility problems, diminished strength (Antao et al., 2013) and psychiatric comorbidities such as anxiety or depression (Marrie et al., 2015), or sleep problems (Braley & Boudreau, 2016). Currently, there is no universal rehabilitation or treatment strategy to successfully manage the symptoms of the disease (Beer & Kesselring, 2014).

Coping self-efficacy is a construct describing one's ability to perform certain behaviours successfully with the expected outcome (Bandura, 2001), and general self-efficacy was found to be associated with disease management of MS (Wilski & Tasiemski, 2016). According to self-efficacy theory, patient's confidence in ability to cope in an effective way is a prerequisite to changing coping behaviour, which can be used during interventions (Chesney, Neilands, Chambers, Taylor, & Folkman, 2006). Coping behaviour can range from active changing of

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CONTACT Pavol Mikula ✉ pavol.mikula@upjs.sk

a situation to the emotional regulation in a stressful situation (Folkman, Lazarus, Gruen, & DeLongis, 1986). Problem-focused coping encompasses all strategies that actively eliminate threatening factors or to diminish the impact of such factors and is often described in the literature as most adaptive way of handling difficult life situations (Carver & Scheier, 1994). Emotion-focused coping implements strategies, such as searching for social support and positive emotions from other people (Carver, Scheier, & Weintraub, 1989). Coping focused on stopping unpleasant emotions and thoughts is focused on avoiding unpleasant factors associated with stressful situations. This pool of coping behaviours involves behaviours such as keeping mind off the problem, praying, meditating and trying to think positive thoughts instead of negative ones, and it can be effective in situations when a direct solution is not possible (Carver & Connor-Smith, 2010).

Patients with MS usually report lower levels of self-esteem resulting from the functional disabilities associated with MS (Dlugonski & Motl, 2012), and perceived stress (Ifantopoulou et al., 2015). Self-esteem is a result of personal evaluation and assessment of oneself; which is associated with better health, psychological adjustment, positive emotions, and prosocial behaviour (Leary & MacDonald, 2003; Orth & Robins, 2014).

The aim of this study is to assess whether there is an association between three coping self-efficacy strategies and self-esteem in patients with MS.

Methods

Participants

Of the 184 MS patients who met the McDonald criteria (Polman et al., 2005), 29 refused to participate (21 women and 8 men; response rate 84.2%). Data collection was carried out at the Neurology Department of the Pavol Jozef Šafárik University Hospital in Košice, Slovakia. Of the 155 patients included in the final sample, 117 were women (75.5%) and the majority of them had secondary education (72.9%). Our sample shows typical distribution regarding type of MS, with majority of patients being diagnosed with relapsing-remitting form (69.8%), and about 18% of the sample being diagnosed with secondary progressive form.

Procedure

This cross-sectional study consisted of a self-reported questionnaire, a semi-structured interview, and a neurological examination. Neurologist carried out the neurological examinations on all participants and a trained interviewer conducted the semi-structured interview.

The local Ethics Committee approved the study. Informed consent was obtained from all patients.

Measures

Sociodemographic and clinical variables

Data on age, gender and education were collected in the interview. Information on disease duration and type of MS were retrieved from medical records, and Kurtzke Expanded Disability Status Scale – EDSS (Kurtzke, 1983) was assessed by a neurologist on the day of the interview.

Coping self-efficacy

Coping self-efficacy was measured using the Coping Self-Efficacy Scale (CSE) (Chesney et al., 2006). Patients were asked to indicate the extent to which they believe they could perform each coping behaviour on an 11-point scale. The instrument consists of three subscales representing self-efficacy for the use of problem-focused coping strategies, the ability to stop unpleasant emotions and thoughts and the ability to get support from friends and family. Cronbach's alpha for the three subscales was .94, .86, and .93 respectively.

Self-esteem

Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSE) (Rosenberg, 1965). The score ranges from 10 to 40, with a higher number indicating a higher level of self-esteem. In our study, self-esteem was treated as a continuous variable. In our sample Cronbach's alpha for the RSE was .87.

Statistical analyses

First, we carried out descriptive analyses of the study variables. These were followed by multiple linear regression analyses; the 'enter method' in which all independent variables are entered into the equation by a researcher based on a hypothesis), which examined the variance of coping strategies. Statistical analyses were performed in IBM SPSS 23.

Results

A description of the sample is given in Table 1 ($N = 155$). The mean age of participants with MS was 39.8 years; the sample consisted of 75.5% women. Mean score for RSE was 28.9 with 13.5% of the sample scoring in high self-esteem range (above score of 35). Interquartile range for self-esteem was 7 points (score of 25–32 on the scale) (Table 1).

Table 1. Description of the study population ($N = 155$).

Variables	N (%)/Mean (SD)	Range
Age (years)	39.85 (9.93)	18–61
Gender		
Male	38 (24.5%)	
Female	117 (75.5%)	
Education		
Elementary	6 (3.9%)	
Secondary	113 (72.9%)	
University	36 (23.2%)	
Disease duration (years)	7.32 (5.41)	1–28
MS course		
CIS	17 (12.23%)	
RRMS	97 (69.79%)	
SPMS	25 (17.98%)	
EDSS	3.08 (1.36)	1–8
RSE	28.9 (5.43)	16–40
CSE		
Problem	80.44 (22.32)	22–120
Emotion	34.16 (10.02)	3–50
Stopping	59.47 (19.32)	4–90

Notes: CIS – Clinically Isolated Syndrome; RRMS – Relapse-Remitting Multiple Sclerosis; SPMS – Simple Progressive Multiple Sclerosis; EDSS – Expanded Disability Status Scale.
Missing values: EDSS: (9.6%), Disease duration: (3.2%), MS course: (10.3%).

Multiple linear regressions were performed for three coping self-efficacy strategies. Self-esteem helped to explain 33% of the variance for problem-focused coping, 24% for emotion-focused coping, and 31% for coping focused on stopping unpleasant emotions and thoughts (Table 2).

Discussion

According to our results, there is an association between self-esteem and all three coping strategies under study, with the most variance (33%) explained in problem-focused coping, which is considered to be one of the most adaptive coping models in the literature (Lazarus & Folkman, 1984). Self-esteem helped to significantly explain the variance in other types of coping as well, however. These results indicate that people with MS who have higher levels of self-esteem are also more likely to perform coping strategies regardless of the specific coping strategy. For example, patients with higher self-esteem may perceive themselves as worthy of attention and care, even though they suffer from a chronic disease, and expect the same emotional validation as they would expect with sound health, and that is why they utilize emotion-focused coping strategies as easily as problem-focused ones. General self-efficacy was found to be associated with self-esteem in various chronic conditions (Bonsaksen, Fagermoen, & Lerdal, 2015; Geyh et al., 2012), and may be thus linked to ability to utilize an adequate coping strategy for various situations, be it looking for emotional support, stop distressing thoughts and taking one's mind off of the disease or looking for a problem-specific solution when a solution is possible in MS population as well.

Among the strengths of this study are the high response rate (84.2%). Among the limitations is the women-to-men ratio (75.5% women), and average EDSS score of 3.08, which is

Table 2. Multiple linear regression between self-esteem and coping self-efficacy strategies, controlled for sociodemographic and medical variables.

	Coping								
	Problem			Emotion			Stopping		
	β	F	Adjusted R^2	β	F	Adjusted R^2	β	F	Adjusted R^2
Model 1		2.43	.02		1.79	.01		1.31	.00
Age	−.03			−.10			.00		
Gender	.21			.16*			.13		
Education	−.03			.00			−.07		
Model 2		.94	.00		1.12	.00		.74	.00
Age	−.06			−.12			−.08		
Gender	.16			.10			.03		
Education	.01			.03			−.03		
EDSS	.04			.12			.17		
Disease Duration	−.04			−.11			−.05		
Model 3		12.39*	.33		8.42*	.24		11.36*	.31
Age	−.08			−.14			−.10		
Gender	.15*			.09			.02		
Education	−.02			.00			−.08		
EDSS	.11			.18*			.23*		
Disease Duration	.01			−.06			.00		
Self-esteem	.57*			.49*			.56*		

Note: EDSS – Extended Disability Status Scale; Stopping – Coping focused on stopping unpleasant emotions and thoughts; *$p < 0.05$.

slightly lower compared to studies with similar research questions where average or median EDSS score was in the 3.3–4.0 range (Grytten et al., 2017; Klaren, Pilutti, Sandroff, & Motl, 2015). In addition, due to the cross-sectional design any causal relationships drawn from our results should be interpreted with caution.

By focusing on building self-esteem, patients may be able to boost protective processes like coping, and thus improve their quality of life. Interventions aimed at boosting self-esteem may take form of internet-based intervention containing elements of virtual reality, or Cognitive-Behavioural Therapy (CBT) along with elements of narrative therapy based on age and needs of the patients (Nosek, Robinson-Whelen, Hughes, & Nosek, 2016; Chadwick, Smyth, & Liao, 2014). Caregivers, family, and friends may also benefit from supporting self-esteem in patients or encouraging patients to use various coping strategies in managing MS. This information may be used in educational programs in MS self-support groups or as a valuable piece of advice after diagnosis of MS by their physician. Future research is needed, though, especially longitudinal studies that would shed more light on the causality of the associations between the studied variables.

Disclosure statement

Authors report no conflict of interest.

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