Development and Validation of the MS Resiliency Scale

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Introduction

Resiliency is a common pattern of adjustment, in which the individual is able to keep a relatively healthy and stable level of psychological and physical functioning after a traumatic experience [1-2]. For some individuals, having a major medical diagnosis such as multiple sclerosis (MS) may be a traumatic experience.

Within MS and other chronic illness literature, factors such as hope, adaptive coping styles, physical activity, social support, and emotional awareness have been associated with resiliency [2-7].

While there have been measures of resiliency developed, few focus on chronic illness and none are MS-specific.

This study aimed to develop and validate the MS Resiliency Scale (MSRS), a multidimensional measure of resiliency. By pinpointing the factors associated with resiliency in MS, the MSRS could be used to identify patients who are at increased risk of becoming distressed and may benefit from psychological interventions.

Methods

Seventy-five items for the MSRS were generated from the resiliency and MS adjustment literatures that were anticipated to be related to MS-specific resiliency. Five subscales were hypothesized: *Hopefulness and Optimism*, *Physical Well-Being*, *Cognitive Processes*, *Emotional Management*, and *Support System*.

Participants (N = 1038) were individuals with MS who were recruited through the North American Research Committee on MS (NARCOMS) who completed the survey online: 106 participants were removed from the analyses due to missing data. The majority of respondents were women (n = 766) with relapsing remitting MS (n = 577) in middle adulthood (M = 56.35 yrs ± SD = 9.55).

Principal components analysis was run to determine construct validity. The (non-MS specific) Resiliency Scale and Hospital Anxiety and Depression Scale (HADS) were used to establish convergent and divergent validity.

Results

Reliability (α)	Component Loading	Item
Subscale 1: .915	.835	I can deal with the stress related to my MS
	.827	My MS makes me want to cry
	.782	Thinking about my MS makes me feel like I am falling apart
	.771	I feel nervous or anxious about my health often
	.747	Thinking about the future makes me feel depressed
	.746	I can handle the emotional ups and down associated with my MS
	.730	Having MS makes me feel hopeless
	.625	When things go wrong, I figure out a positive way to handle it
	.596	I believe I can successfully manage my MS
	.571	I feel I have control over my life
	.559	I can manage my physical symptoms
	.538	My future does not look good because of my MS
	.535	When I have an exacerbation, I feel optimistic about my recovery
Subscale 2: .771	.859	I regularly exercise
	.817	Exercising helps reduce my stress
	.624	I have made positive changes to my diet and physical activity
Subscale 3: .822	.554	I have learned to reach out to others with MS
	.501	I talk to others who have MS, either in person or through the Internet
Subscale 4: .790	.854	My family has become a strong source of support since my diagnosis
	.747	I have supportive relationships on which I can rely
	.745	My relationships with family members have grown stronger since my MS diagnosis
	.703	People who were there when I was healthy are not there when I am sick
	.595	I have maintained friendships since being diagnosed with MS
Subscale 5: .911	.933	Having a belief in a higher power helps me deal with my MS
	.918	Spirituality does not play a role in my life

Table 1: Reliability (internal consistency) and component loadings for the 25-item MSRS

Scale	Correlations				
	1	2	3	4	5
1. Emotional and Cognitive Strategies					
2. Physical Well-Being	.310***				
3. Information Seeking	.103**	.153***			
4. Social Support	.401***	.196***	.106**		
5. Spirituality	.100**	.061	.163***	.150***	
6. Total	.886***	.499***	.326***	.639***	.342***

Table 2: Correlations between MSRS total and subscale scores
** p < .01
*** p < .001

Acknowledgements

Results (Cont.)

Using an unforced solution with oblique (promax) rotation and Kaiser normalization, and suppressing items with coefficients below 0.4, 25 items were retained in five subscales that accounted for 42.75% of the variance.

Each subscale had high reliability, and the subscales were weakly to moderately and significantly correlated with each other, with the exception of *Spirituality* and *Physical Well-Being* subscales, which were nearly significant (r = .061, p = .068).

The total score was positively correlated with the Resiliency Scale (r = .632, p < .001), and negatively correlated with HADS Depression (r = -.721, p < .001) and Anxiety (r = -.559, p < .001).

Discussion

Although not exactly as originally hypothesized from the general literature, the subscales that emerged strongly supported the construct validity of the MSRS.

The 25-item MSRS enables clinicians to assess multiple domains associated with adjustment in MS in a brief measure. In addition to quantifying overall adjustment, they can focus on one particular area, which may help target where their patients need additional intervention and support.

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