Further Validation of the Multiple Sclerosis Resiliency Scale (MSRS)

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Background

- Resilience among persons with multiple sclerosis (MS) has been described as "bouncing back"[1], "living well"[1], and "want[ing] to thrive"[1].
- The Multiple Sclerosis Resiliency Scale (MSRS) was designed to be a multidimensional measure of resilience based on the conceptual framework that MS-related resilience is an interaction between protective and risk factors[2].
  - In addition to a total score, five subscales can be calculated
    - Emotional and Cognitive Strategies
    - Physical Activity and Diet
    - MS Peer Support
    - Support from Family and Friends
    - Spirituality
- In the initial studies investigating its convergent validity[2,3], the MSRS was compared to measures assessing general resilience, depressive and anxiety symptom severity, and perceived stress.
  - However, there are other constructs that are part of the biopsychosocial model of resilience in MS[4] that the MSRS has yet to be evaluated against.

Objective

1) To further assess the MSRS' validity using measures of physical functioning, psychosocial illness impact, and social engagement.

Methods

Participants: 64 persons with MS
Procedures:
- Cross-sectional data were collected electronically using REDCap.
- In addition to the MSRS, participants completed the following measures:
  - *PROMIS Physical Function-Short Form 20a (PROMIS-PF)*[5]: a measure of self-reported capacity in terms of instrumental activities of daily living, upper extremities, lower extremities, and central regions
  - *PROMIS Psychosocial Illness Impact-Positive-Short Form 8a (PROMIS-PII)*[5]: a measure of positive psychosocial outcomes of participants' illness
  - *Neuro-QOL Ability to Participate in Social Roles and Activities Short Form (Neuro-QOL)*[6]: a measure of social health

Statistical Analyses
- Pearson and Spearman correlations were run to examine the relationships between the measures.

Results

	PROMIS-PF
Total Score	r = .36 p = .004
Emotional and Cognitive Strategies	ρ = .55 p <.001
Physical Activity and Diet	ρ = .25 p = .050
MS Peer Support	ρ = -.13 p = .321
Support from Family and Friends	ρ = .28 p = .025
Spirituality	ρ = -.09 p = .465

Table 1: Correlations between the MSRS and PROMIS Physical Function-Short Form 20a

	PROMIS-PII
Total Score	r = .77 p <.001
Emotional and Cognitive Strategies	ρ = .72 p <.001
Physical Activity and Diet	ρ = .40 p = .001
MS Peer Support	ρ = .30 p = .018
Support from Family and Friends	ρ = .46 p <.001
Spirituality	ρ = .34 p = .006

Table 2: Correlations between the MSRS and PROMIS Psychosocial Illness Impact-Positive-Short Form 8a

	Neuro-QOL
Total Score	ρ = .73 p <.001
Emotional and Cognitive Strategies	ρ = .75 p <.001
Physical Activity and Diet	ρ = .36 p = .004
MS Peer Support	ρ = .13 p = .296
Support from Family and Friends	ρ = .47 p <.001
Spirituality	ρ = .14 p = .274

Table 3: Correlations between the MSRS and Neuro-QOL Ability to Participate in Social Roles and Activities Short Form

Results (Cont.)

- The MSRS Total Score was positively correlated with the PROMIS-PF, PROMIS-PII, and Neuro-QoL.
  - Strongest relationships with PROMIS-PII and Neuro-QOL.
- Emotional and Cognitive Strategies also had strong correlations with all three measures, while Support from Family and Friends' correlations were moderate.
- Weakest correlations were noted with MS Peer Support, Spirituality, and Physical Activity and Diet.

Conclusions

- These findings are consistent with the biopsychosocial model of resilience[4], providing further validation of the MSRS.
- The weaker associations with certain subscales are consistent with other validity studies with the MSRS[3,7], suggesting future versions of the MSRS may consider removing these subscales.

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