Background

- Resilience among persons with multiple sclerosis (MS) has been described as "bouncing back," "living well," 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, and Spirituality.
- In the initial studies investigating its convergent validity2,3, 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 MS4 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): 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): a measure of positive psychosocial outcomes of participants’ illness
  - Neuro-QOL Ability to Participate in Social Roles and Activities Short Form (Neuro-QOL): a measure of social health

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

Results

<table>
<thead>
<tr>
<th></th>
<th>Total Score</th>
<th>Emotional and Cognitive Strategies</th>
<th>Physical Activity and Diet</th>
<th>MS Peer Support</th>
<th>Support from Family and Friends</th>
<th>Spirituality</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROMIS-PF</td>
<td>Total Score</td>
<td>Emotional and Cognitive Strategies</td>
<td>Physical Activity and Diet</td>
<td>MS Peer Support</td>
<td>Support from Family and Friends</td>
<td>Spirituality</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>Total Score</th>
<th>Emotional and Cognitive Strategies</th>
<th>Physical Activity and Diet</th>
<th>MS Peer Support</th>
<th>Support from Family and Friends</th>
<th>Spirituality</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROMIS-PII</td>
<td>Total Score</td>
<td>Emotional and Cognitive Strategies</td>
<td>Physical Activity and Diet</td>
<td>MS Peer Support</td>
<td>Support from Family and Friends</td>
<td>Spirituality</td>
</tr>
<tr>
<td>r = .77</td>
<td>p = .001</td>
<td>p = .72</td>
<td>p = .40</td>
<td>p = .001</td>
<td>p = .30</td>
<td>p = .48</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>Total Score</th>
<th>Emotional and Cognitive Strategies</th>
<th>Physical Activity and Diet</th>
<th>MS Peer Support</th>
<th>Support from Family and Friends</th>
<th>Spirituality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuro-QOL</td>
<td>Total Score</td>
<td>Emotional and Cognitive Strategies</td>
<td>Physical Activity and Diet</td>
<td>MS Peer Support</td>
<td>Support from Family and Friends</td>
<td>Spirituality</td>
</tr>
<tr>
<td>r = .73</td>
<td>p = .001</td>
<td>p = .75</td>
<td>p = .38</td>
<td>p = .004</td>
<td>p = .13</td>
<td>p = .296</td>
</tr>
</tbody>
</table>

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.5
- The weaker associations with certain subscales are consistent with other validity studies with the MSRS,7 suggesting future versions of the MSRS may consider removing these subscales.

References

5. Ader DN. Developing the patient-reported outcomes measurement information system (PROMIS). LWW; 2007.

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