Effectiveness of physical therapy in addressing sexual dysfunction in individuals with multiple sclerosis: systematic review and meta-analysis

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Background, Purpose, Hypothesis

• In people with multiple sclerosis (MS), 40-80% of females and 50-90% of males report sexual dysfunction (SD).
• SD may be due to decreased sensation, MS-related pain or spasticity, or psychosocial factors that impact the sexual experience.
• Physical therapists (PTs) are well-equipped to address a variety of impairments related to SD.

Studies, Methods, Analysis

- Inclusion criteria:
  - Study participants had a diagnosis of MS, reported SD, and received a PT intervention to address SD.
  - Outcome measures addressed sexual function, satisfaction, or emotional well-being.
  - PUBMED, CINAHL and PEDro were searched through January 13, 2020.
  - Of 8 studies included, 7 were randomized controlled trials; 1 was a cohort study.
  - Means and standard deviations were extracted.
  - Effect size (d) and 95% confidence intervals (CI) were calculated within and between groups across studies.

Results

- PT interventions included yoga, vibratory therapy, mindfulness, and pelvic floor muscle training.
- Within-group combined effects:
  - For sexual function were significant and large across six studies (d=0.82, CI 0.57, 1.06).
  - For sexual satisfaction were moderate across seven studies (d=0.66, CI 0.43, 0.87).
  - For emotional well-being were moderate across two studies (d=0.78, CI 0.17, 1.40).
- Between-group differences were small but were significant for sexual satisfaction (d=0.29, CI 0.03, 0.55).

Conclusions

- Sexual function, sexual satisfaction and emotional well-being all improve with PT intervention.
- Highly effective interventions included a combination of pelvic floor muscle training and mindfulness to address the multifactorial nature of SD.

Clinical Significance

- Interventions for SD in MS should target both physical and psychosocial factors.
- This review highlights the diversity of PT interventions to address these factors most are easy to implement and cost effective.
- Future research should compare groups receiving PT interventions to no-PT controls to confirm effectiveness.

Table 1: Summary of Included Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>N Control</th>
<th>Experimental</th>
<th>Participant Characteristics</th>
<th>Age (years)</th>
<th>Disease Duration (years)</th>
<th>EDSS Score</th>
<th>Intervention</th>
<th>Study Duration</th>
<th>Outcomes</th>
<th>Level of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahmadi et al.</td>
<td>RCT</td>
<td>10</td>
<td>11</td>
<td>Females with MS</td>
<td>9.05</td>
<td>4.45 +/- 4.47</td>
<td>1.15</td>
<td>Yoga</td>
<td>8 weeks</td>
<td>MSQoL-54</td>
<td>2b</td>
</tr>
<tr>
<td>Alexander et al.</td>
<td>RCT</td>
<td>10</td>
<td>10</td>
<td>Females with MS</td>
<td>46.7 +/- 8.7</td>
<td>13.7 +/- 7.7</td>
<td>-</td>
<td>CBT + psycho-education</td>
<td>12 weeks</td>
<td>MS, MAT</td>
<td>2b</td>
</tr>
<tr>
<td>Foley et al.</td>
<td>Quasi-experimental</td>
<td>18</td>
<td>18</td>
<td>Females with MS</td>
<td>45.7 (9.9)</td>
<td>-</td>
<td>4.70 (2.46)</td>
<td>CBT + psycho-education</td>
<td>10 weeks</td>
<td>FISI</td>
<td>2b</td>
</tr>
<tr>
<td>Horakosnik et al.</td>
<td>Cohort study</td>
<td>7</td>
<td>7</td>
<td>Females with MS or SCI</td>
<td>47.9 (11.2)</td>
<td>2.5 - 42</td>
<td>-</td>
<td>FISI</td>
<td>8 weeks</td>
<td>intervention</td>
<td>FISI</td>
</tr>
<tr>
<td>Lucio et al.</td>
<td>RCT</td>
<td>7</td>
<td>7</td>
<td>Females with RRMS</td>
<td>G1: 4.45</td>
<td>G1: 15</td>
<td>G1: 3.5</td>
<td>PFMT, NMES, TINS</td>
<td>12 weeks</td>
<td>FISI</td>
<td>2b</td>
</tr>
<tr>
<td>Maslanjancic et al.</td>
<td>RCT</td>
<td>23</td>
<td>23</td>
<td>Males with MS in remission</td>
<td>G2: 47</td>
<td>G2: 12</td>
<td>G3: 4.5</td>
<td>PFMT, mindfulness</td>
<td>12 week follow-up</td>
<td>FISI</td>
<td>1b</td>
</tr>
<tr>
<td>Najafi-Shokouhi et al.</td>
<td>RCT</td>
<td>30</td>
<td>30</td>
<td>Females with MS</td>
<td>31.6 +/- 8</td>
<td>-</td>
<td>-</td>
<td>SS and IIE scale</td>
<td>12 weeks</td>
<td>FISI</td>
<td>1b</td>
</tr>
<tr>
<td>Sutherland et al.</td>
<td>RCT</td>
<td>11</td>
<td>11</td>
<td>Males and females</td>
<td>46.32 +/- 4.9</td>
<td>10.77 +/- 6.88</td>
<td>-</td>
<td>Aquatic aerobic exercise</td>
<td>10 weeks</td>
<td>MSQoL-54</td>
<td>2b</td>
</tr>
</tbody>
</table>


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Disclosures

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References