Describing the Population Characteristics of Multiple Sclerosis Related Intention Tremor Using the Multidimensional Assessment of Tremor

Background & Rationale
- Current assessment tools have a unidimensional view of tremor
- Multidimensional assessments allow a comprehensive picture of the tremor & can guide treatment
- The MAT is a self report tool measuring this multidimensional & functional impact of tremor
- Tremor has been multifactorially characterized as a tremor to date.

Purpose
To describe characteristics tremor in people with experiencing tremor that include:
1. Tremor description
2. The psychosocial impact
3. Fatigue
4. The functional impact

Methods
- Participants:
  - Consecutive sample recruited through MS society and UBC MS clinic
  - Participants completed the MAT assessment
- Inclusion Criteria:
  - 18 years or older with definite diagnosis of MS and experiencing tremor
  - Ability to speak in the community and able to comprehend English
- Exclusion Criteria:
  - Cognitive impairment impeding ability to complete the MAT

Measures:
- The Multi-dimensional Assessment of Tremor (MAT), TSS & demographic questionnaire

Demographics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>55</td>
</tr>
<tr>
<td>Men</td>
<td>12 (50%)</td>
</tr>
<tr>
<td>R/F</td>
<td>7 (30%)</td>
</tr>
<tr>
<td>Employment Status</td>
<td></td>
</tr>
<tr>
<td>Not Employed</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>Full Time</td>
<td>3 (12%)</td>
</tr>
<tr>
<td>Part Time</td>
<td>3 (12%)</td>
</tr>
<tr>
<td>Other</td>
<td>6 (25%)</td>
</tr>
<tr>
<td>Employment Status</td>
<td></td>
</tr>
<tr>
<td>Not Employed</td>
<td>1 (8.3%)</td>
</tr>
<tr>
<td>Full Time</td>
<td>3 (25%)</td>
</tr>
<tr>
<td>Part Time</td>
<td>1 (8.3%)</td>
</tr>
<tr>
<td>Other</td>
<td>3 (25%)</td>
</tr>
</tbody>
</table>

Results

Description of Tremor
- Frequency: Intermittent
- Intensity: Moderate
- Body part experiencing tremor: Head/L/L/E, Other/L/L/E, Hand/L/L/E, Arm/L/L/E, Body/L/L/E, Head/R/R/E, Hand/R/R/E, Arm/R/R/E, Body/R/R/E
- Psychosocial Implications:
  - Experience of tremor has marked psychosocial impact, as the majority of participants held negative attitudes towards their tremor
  - Factors reported to increase tremor:
    - Fatigue
    - Stress
    - Overstimulation
    - Depression
  - Factors reported to decrease tremor:
    - Activity involvement of fine motor skills

Limitations
- Participant recruitment from single clinic results in selection bias
- Duration of MS (years) - No knowledge
- Other - No knowledge

Conclusion
- The MAT is a four part measure. Parts A, B & D are self report while Part B is administered.
- Together the 4 parts of the MAT provide an evaluation & characterization of the tremor experience.
- Factors reported to increase tremor: Fatigue, Stress, Overstimulation & Depression
- Factors reported to decrease tremor: Activity involvement of fine motor skills

Future Directions
- Incorporation of additional psychosocial aspects to further gain insights into psychosocial implications of tremor, as well as treatment impact on daily functioning
- It is recommended that future research trial the MAT to direct intervention planning

References