Characterizing fatigue in US, European and Latin-American adults with relapsing multiple sclerosis: a real-world study conducted using a novel disease specific scale

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CONTEXT & OBJECTIVES

Fatigue is one of the most common symptoms of relapsing multiple sclerosis (RMS).2 Considering its subjective aspect, using MS-specific patient reported outcomes to characterize it would grant a better understanding of its impact on patients’ quality of life (QoL).3,4 This study aimed to measure fatigue in RMS patients from multiple countries using the Fatigue Symptoms and its Impacts Questionnaire-Relapsing Multiple Sclerosis (FSIQ-RMS).

METHODS

• Data Collection:
  o US: March 17th - September 27th 2020
  o EU5: November 3rd 2020 - March 17th 2022
  o LATAM: December 15th 2021 - March 15th 2022
• Adult patients from the US (n=300), EU (n=362) and LATAM (n=60) recruited via an online questionnaire.
• Self-reported data were collected via an online patient community of patient with MS (Carenity platform).
• The 20-item FSIQ-RMS addresses MS fatigue, rated for severity based on the mean daily ratings over 7 days, and the corresponding impacts of fatigue on 3 subdomains: physical, cognitive/emotional, and coping.
• The FSIQ-RMS domain scores range from 0-100 (higher score=greater severity).
• FSIQ-RMS were compared to a 7-day lookback scores using Pearson's correlation coefficient (r) for all regions.

Fig 1: Design: An ongoing, non-interventional, prospective study

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RESULTS

Patient profile
- Mean age: 43 y/o
- Gender:
  - US: 88% women
  - EU: 86% women
  - LATAM: 77% women

Impact of fatigue

<table>
<thead>
<tr>
<th>Region</th>
<th>Relapsing</th>
<th>Not relapsing</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>93%</td>
<td>10%</td>
</tr>
<tr>
<td>EU</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>LATAM</td>
<td>90%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Fig 2: Percentage of US patients relapsing or not. (Similar figures in EU and LATAM (not relapsing 88%, 92%)

Fig 3: Percentage of patients with an impact of fatigue on their QoL, almost all patients reported being impacted on their QoL by fatigue.

FSIQ-RMS score summary

<table>
<thead>
<tr>
<th>Region</th>
<th>Symptoms score</th>
<th>Physical impacts score</th>
<th>Cognitive/Emotional impacts score</th>
<th>Coping impacts score</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>57.3</td>
<td>42.3</td>
<td>43.4</td>
<td>50.1</td>
</tr>
<tr>
<td>EU</td>
<td>55.2</td>
<td>47.0</td>
<td>42.2</td>
<td>51.5</td>
</tr>
<tr>
<td>LATAM</td>
<td>67.8</td>
<td>53.4</td>
<td>52.3</td>
<td>59.0</td>
</tr>
</tbody>
</table>

Fig 4: Symptoms score, physical impacts score, cognitive/emotional score and coping impacts score for US, EU and LATAM patients according to FSIQ-RMS tool. Overall high score reported, especially for coping impact score and symptoms score.

Fig 5: FSIQ-RMS symptoms daily assessment and 7-day lookback. High similarity between the FSIQ-RMS daily symptom score and its 7-day retrospective assessment (r close to 1).

CONCLUSIONS

- Using an RMS specific tool, the FSIQ-RMS, this survey helped quantify the severe levels of fatigue experienced by a multi-country cohort of RMS patients, even outside of relapses. Plus, given the high similarity between the FSIQ-RMS daily symptom score and its 7-day retrospective assessment in different regions, the results suggest that the 7-day lookback assessment is reliable.
- However, it is important to note a few limitations: in this type of study, there is a severity bias, as patients with a greater impact tend to participate more, which may explain the relatively high level of fatigue.
- These findings provide new insights into patients’ perspective on the impact of fatigue-related symptoms and supports the integration of patient-reported instruments into clinical practice.

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