The Impact of Restless Legs Syndrome on Various Dimensions of Life: Results of a Web-Based Patient Survey

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INTRODUCTION
Restless Legs Syndrome (RLS) is a relatively common neurological disorder that is often unrecognized and misdiagnosed (Evidente and Adinolfi, 1998; Killian and Chosroz, 2002). The condition is characterized by unpleasant sensations of the legs and an urge to move them for relief. Because these symptoms are often intermittent and can be exacerbated by inactivity, patients with RLS often have difficulty falling and staying asleep, resulting in reduced sleep duration and sleep quality as well as impairments in subsequent daytime performance. Long-term implications of RLS include psychological disorders and diminished quality of life (Allen and Elley, 2001; Kessler et al, 2004; Allen et al, 2009).

OBJECTIVE
The purpose of this study was to describe the impact of RLS on overall health status, sleep, psychological distress, work productivity, and other daily activities.

METHODS
Identification of Sample
A web-based survey was conducted within a multinational panel of US adults.

Data collected February – May 2006.

Inclusion criteria:
- Aged ≥ 18 years
- Living in the US
- Responded “yes” to all 4 validated screening questions based on diagnostic criteria established by the RLS working group and the National Institute of Health (Allen et al, 2009) as well as an additional question of frequency

RESULTS

Impact Measured on Various Dimensions of Life

Symptom Severity
- Patients were asked to rate the frequency and intensity of RLS symptoms during the past 12 months.

Health Status
- Medical Outcomes Study Short Form 12 Version 2 (SF-12 v2)
  - Eight domains and two component scores

Psychological Distress
- Center for Epidemiological Studies Depression Scale (CES-D)
  - Scored 0 to 60, higher scores indicative of greater distress.

Work Productivity/Activity
- Work Productivity and Activity Impairment – General Health Questionnaire (WPAI-GH)
  - Scored 0-100, lower scores indicative of worse health status
  - 0.5 SD has been viewed as a clinically important difference

SLEEP QUALITY/QUANTITY
- Medical Outcomes Study Sleep Measure
  - N=723

PSYCHOLOGICAL DISTRESS

Table 1. Survey Sample Demographics

| Measure                             | N723 (%) | 50%
|------------------------------------|----------|------
| Mean age (SD)                      | 56.8 (13.3) | 0.5
| Gender                             | Male 287 (39.6) | 25%
|                                   | Female 445 (60.4) | 25%
| Ethnicity                          | White 576 (82.1) | 75%
|                                   | Black/African American 47 (6.7) | 6%
|                                   | Hispanic 52 (7.4) | 7%
|                                   | Other 16 (2.3) | 2%
|                                   | Not answered 11 (1.6) | 1%
| Mean MOS Sleep Score*              | 0.0        | 0
| Mean SF12 v2 Score                 | 50        | 0
| Mean CES-D Scale                   | 35        | 0
| Mean SF12 v2 Domain                | Physical 100 | 0
|                                   | Mental 50 | 0
|                                   | General 70 | 0
|                                   | Vitality 100 | 0
| Time Limited RLS                   | ≥18 years 100 | 0
| Current prescription for dopamine agonist | 20 | 0
| Current taking insomnia/sleep medication | 15 | 0
| Current taking antidepressant      | 10 | 0
| RLS Diagnosed With Treatment Interventions | 50% | 0

**Higher score is better**

Health-Related Quality of Life

- Compared to population norms, the RLS sample reported greater limitations in work productivity across all domains.
- The area of greatest impact was physical demand, with RLS respondents reporting limitations 32.7% of the time versus 25.1% of the time for US Norms.

WORK PRODUCTIVITY

Table 2. Work Limitations Questionnaire (N=275)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Mean % Limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Management</td>
<td>20.6</td>
</tr>
<tr>
<td>Physical Demands</td>
<td>20.6</td>
</tr>
<tr>
<td>Mental Demands</td>
<td>18.0</td>
</tr>
<tr>
<td>Interpersonal Demands</td>
<td>17.4</td>
</tr>
<tr>
<td>Role-Management</td>
<td>17.0</td>
</tr>
<tr>
<td>Work Productivity</td>
<td>15.0</td>
</tr>
<tr>
<td>Work Productivity Management</td>
<td>12.0</td>
</tr>
<tr>
<td>Work Limitations Questionnaire</td>
<td>10.0</td>
</tr>
</tbody>
</table>

**Higher score is a worse outcome**

SLEEP QUALITY/QUANTITY

- RLS sample reported poorer sleep quality across all domains compared to population norms (Hays et al, 2005), with differences of more than 10 points on 10 to 100 point scales.
- RLS respondents reported approximately 1 hour less sleep per night on average than those in the normative sample (0.5 hours versus 0.5 hours).

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