Patients’ Stated Health Outcome Preferences for Confounded Patient-Reported Outcome Domains for Osteoarthritis

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BACKGROUND

- Patient-reported outcome (PRO) instruments yield scores for outcomes that cannot be measured clinically.
- Scores from PRO instruments assume that domain and scales are separable and additive.
- PRO scores may not indicate patients’ perceptions of the relative importance of therapeutic endpoints.

METHODS

Survey Instrument

- Web-enabled survey instrument
- Discrete choice experiment (online-format conjoint survey method)
- 68 items of tradeoffs among alternatives with varying levels of different endpoints
- Repeated choices over treatment profiles with varying severity of outcomes provides reliable information for quantifying preference.

HYPOTHESIS

- Patient preferences in the United Kingdom (UK) for osteoarthritis (OA) outcomes are separable and additive in PRO domains

RESULTS

Sample

- Data collected from 204 subjects (Table 2)
- Participants had no variation in their responses and were omitted from subsequent modelling

Table 2. Demographic Characteristics (N = 296)

<table>
<thead>
<tr>
<th>Category</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>35%</td>
</tr>
<tr>
<td>Female</td>
<td>65%</td>
</tr>
<tr>
<td>Age, mean (standard deviation), years</td>
<td>59.8 ± 9</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
</tr>
<tr>
<td>45-65</td>
<td>77%</td>
</tr>
<tr>
<td>&gt;65</td>
<td>23%</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>8%</td>
</tr>
<tr>
<td>Married</td>
<td>62%</td>
</tr>
<tr>
<td>Widowed</td>
<td>7%</td>
</tr>
<tr>
<td>Divorced or separated</td>
<td>31%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
<tr>
<td>Highest education</td>
<td></td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>54%</td>
</tr>
<tr>
<td>University first degree (e.g., BA, BSc)</td>
<td>8%</td>
</tr>
<tr>
<td>Vocational qualification gained in further education (e.g., BTEC National, ONC, OND)</td>
<td>15%</td>
</tr>
<tr>
<td>Secondary school qualification (e.g., O levels, CSEs, GCSEs)</td>
<td>33%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
</tbody>
</table>

Hypothesis

- Log-odds parameter estimates are preference weights indicating the relative strength of preference for each endpoint level
- Larger parameter estimates represent more preferred outcomes
- Main-effects categorical model that did not account for clinical correlation of endpoints
- A model that accounts for clinical correlation of ambulatory pain and difficulty doing daily activities

CONCLUSIONS

- PRO domains for OA are not separable and additive and thus complicate estimating valid preference weights
- Patients may reject certain domain combinations as implausible
- Effect of implausible combinations of endpoint levels may be controlled to obtain valid preference weights
- In this case, controlling for confounding in PRO domains reversed the benefit-risk implications of the analysis

REFERENCES


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