The OWLQOL and WRSM in European Community Studies
(Obesity and Weight-Loss Quality of Life and Weight-Related Symptom Measures)

Bushnell DM1, Patrick DL2, Zhang M3, Rothman M3
1HRA, Inc., Seattle, WA, USA; 2Dept. of Health Services, University of Washington, Seattle, WA, USA; 3Johnson & Johnson Pharmaceutical Research & Development, L.L.C., Raritan, NJ, USA

November 1, 2002

OBJECTIVES

To compare patient-reported outcome characteristics of obese and non-obese populations in Europe.

To compare and confirm basic psychometric properties of the Obesity and Weight-Loss Quality of Life (OWLQOL) measure and the Weight-Related Symptom Measure (WRSM) in these four European countries to the original U.S. validation.

To confirm the subscale structure based on a sample of obese persons in the United States: self-image, social stigma, trying to lose weight, physical health.

METHODS

Data were collected in four countries. In Germany, France and the United Kingdom data were collected at four sites. In Italy, questionnaires were delivered and picked up by the interviewers.

The questionnaire consisted of the OWLQOL (condition-specific QOL), SRQ-20 (weight-related symptomatology), SF-36 (general health status), Current Activity Limitations (CAL) measure (health-related “thermometer”), and demographic characteristics.

Item reduction statistics were used to evaluate missing data, ceiling effects, item-to-item and item-to-total correlations.

A confirmatory principal component analysis (over-axis rotation) was conducted using previously identified subscales from the original U.S. validation study.

Population Comparisons

Table 1. Population Characteristics

<table>
<thead>
<tr>
<th>Country</th>
<th>General Obesity (n=1000)</th>
<th>General Population (n=1000)</th>
<th>General Obesity (n=493)</th>
<th>General Population (n=493)</th>
<th>General Obesity (n=500)</th>
<th>General Population (n=500)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>46.4 ± 14.2</td>
<td>47.4 ± 15.4</td>
<td>46.4 ± 14.2</td>
<td>47.4 ± 15.4</td>
<td>46.4 ± 14.2</td>
<td>47.4 ± 15.4</td>
</tr>
<tr>
<td>France</td>
<td>52.6 ± 14.0</td>
<td>52.6 ± 15.0</td>
<td>52.6 ± 14.0</td>
<td>52.6 ± 15.0</td>
<td>52.6 ± 14.0</td>
<td>52.6 ± 15.0</td>
</tr>
<tr>
<td>Italy</td>
<td>48.0 ± 14.0</td>
<td>48.0 ± 15.0</td>
<td>48.0 ± 14.0</td>
<td>48.0 ± 15.0</td>
<td>48.0 ± 14.0</td>
<td>48.0 ± 15.0</td>
</tr>
</tbody>
</table>

Table 2: Convergent Factor Structure

A confirmatory factor analysis was conducted within each country. Table 2 shows a comparison of each OWLQOL item and factor (subscale) loadings. While the subscale structure of Trying to Lose Weight and Physical Health subscales were confirmed, there was some variation in the factor loadings of items in the Social Stigma subscale (from the original validation data) loaded on the Social Stigma subscale in all samples (I avoid having sex and I feel embarrassed eating certain foods in front of others).

Table 3: Internal Consistency of the OWLQOL and WRSM Measures

Table 4: Correlation Matrix of the OWLQOL/WRSM Measures with the SF-36

CONCLUSIONS

The general psychometric performance of the OWLQOL and WRSM in these four European countries was similar to the original U.S. validation study. The OWLQOL, WRSM, SF-36 and CHQ measures were able to discriminate between an obese population and a general population.

While some variation occurred between the Social Image and Social Stigma domains, there was confirmation of the previously identified subscale structure.

These weight-related QOL measures are good options for use in clinical trials.