Health-related quality of life in dermatology: measurement, interpretation and application

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Interpretation of Skindex-29 scores: response to Sampogna and Abeni

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TO THE EDITOR

Until recently, little was known about the interpretability of scores of the Skindex-29, a well-established, dermatology-specific health-related quality of life (HRQoL) instrument. Nijsten et al. (2009) and Prinsen et al. (2010, 2011) were the first to identify the clinical meaningfulness of Skindex-29 scores by estimating a categorization of Skindex-29 scores, denoting mildly, moderately, and (very) severely impaired HRQoL. In their thoughtful commentary in the Journal of Investigative Dermatology, Sampogna and Abeni persuasively showed how different methods, a distribution-based and an anchor-based method, respectively, result in different categorizations of scores. They applied the distribution-based ranges of scores found by Nijsten et al. and the anchor-based cutoff scores found by Prinsen et al. to an Italian sample of inpatients diagnosed with psoriasis, and to another Italian sample of dermatological outpatients. By means of this comparison, differences between the two categorizations were shown; in general, the ranges of scores presented by Nijsten et al. were lower than the cutoff scores presented by Prinsen et al. Sampogna and Abeni also explored the clinical implications of these differences, for instance the consequence of using different categories in determining patient’s eligibility for systemic treatment.

Unfortunately, a misinterpretation leading to an incorrect categorization of scores was made. To illustrate, according to Prinsen et al., the cutoff scores for mildly, moderately, and severely impaired HRQoL on the emotions domain were ≥24, ≥35, and ≥39, respectively, meaning that a patient with a score ≥24 can be categorized as having a mildly impaired HRQoL on this domain, a score ≥35 as “moderate”, etc. However, Sampogna and Abeni categorized “mild” as having a score between 0 and 23.9 and, as a consequence, misclassified all cutoff scores. Therefore, we would like to provide a correct overview of the categorization of Skindex-29 scores (Table 1).

Having said this, we fully agree with Sampogna and Abeni on the limitations of both methods, such as dependence on the distribution of HRQoL scores in estimation samples and biases when using prospective anchors. Nevertheless, we believe that, under the condition that

<table>
<thead>
<tr>
<th>Categorization</th>
<th>Symptoms</th>
<th>Emotions</th>
<th>Functioning</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very little</td>
<td>-</td>
<td>&lt;3</td>
<td>-</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Mild</td>
<td>≥39</td>
<td>4-10</td>
<td>≥24</td>
<td>6-24</td>
</tr>
<tr>
<td>Moderate</td>
<td>≥42</td>
<td>11-25</td>
<td>≥35</td>
<td>25-49</td>
</tr>
<tr>
<td>Severe</td>
<td>≥52</td>
<td>26-49</td>
<td>≥39</td>
<td>&gt;50</td>
</tr>
<tr>
<td>Very severe</td>
<td>-</td>
<td>&gt;50</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

1 The domain scores and the overall score are expressed on a 100-point scale, with higher scores indicating a lower level of quality of life.
2 Skindex-29 cutoff scores are derived from the original articles.
3 Categorization of Skindex-29 scores are derived from the original article.
the same scale or anchor question is being used, anchor-based methods may lead to less variant estimates of cutoff scores than distribution-based methods. In addition, anchor-based methods are less dependent on the sociocultural and clinical characteristics of the estimation sample. For example, patients in one sample, scoring themselves as having a severely impaired HRQoL on a global rating scale or anchor question (for instance, an anchor question such as “In your opinion, how severe is your skin condition?”), are likely to have Skindex-29 scores in the same range of scores as patients of another sample who also score themselves as having a severely impaired HRQoL. Nevertheless, the phrasing of an anchor question is a great source of variation in the comparison of different cutoff scores. We therefore advocate the use of standardized anchors.

A clinically meaningful interpretation of Skindex-29 scores is of great value. At present, two studies on this intriguing subject are available. As already expressed by Sampogna and Abeni, the combination of an anchor-based and a distribution-based method in a subsequent study would allow an objective comparison of the results within one study population. In addition to this, we recommend including standardized anchors, and to conduct such a study on an international level. Eventually, such efforts will contribute to reaching consensus on the categorization of scores so that they can be applied in clinical practice.

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REFERENCES