Reviewer's report

Title: Dermatology Life Quality Index (DLQI) Scores in Vitiligo: translation and validation study of the Persian version

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Reviewer: Francesca Sampogna

Reviewer's report:

General

This paper concerns the translation and validation of the Persian version of the Dermatology Life Quality Index (DLQI), a simple and useful instrument to measure quality of life in patients with skin conditions.

It would be interesting to have a Persian version of such a useful instrument. However, the analyses performed by the authors do not demonstrate the validity of the instrument. A major problem in their analysis is that DLQI has been considered as a multidimensional instrument, with six underlying dimensions, while it is a unidimensional instrument, as also further investigations (see Mork et al. Acta Derm Venereol 2002; 82: 347-51) have confirmed. The six headings to which the authors refer (Finlay and Khan, 1994) are groups of questions, but they do not indicate six different dimensions. The groups of questions cannot be defined as scales, if a factor analysis is not performed, and factor analysis performed until now on DLQI showed a single dimension. On the contrary, analyses of reliability and validity performed in the present study were done considering six different dimensions, and statistical analyses were used inappropriately.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. Introduction, first paragraph: it is stated that each item of DLQI is rated on a 3 to 6 point scale. In the original version each item of DLQI is rated on a 4-point scale from 0 to 3. If there are other ways of scoring DLQI, please add the references.
2. Methods, first paragraph, and Discussion: the authors state that they used the standard forward-backward procedure to translate the questionnaire from English to Persian. However, in the discussion they admit that native English speakers were unavailable. So, this indication of the IQOLA Project was not fulfilled. It should be then clarified who evaluated the back translation.
3. Methods, last paragraph: it is not clear how convergent validity was evaluated. The authors write that convergent validity was used “…to demonstrate the extent to which the DLQI correlated with global quality of life”. It seems that DLQI was compared with another measure of quality of life, but nowhere else in the paper this is mentioned and no description of, or reference to, this measure is made.
4. Methods, item scaling test: the analysis is not correct. The analysis that the authors performed looks like a homogeneity test of the items, the item-total correlation, where the correlation between each item and the total scale is calculated. It is not possible to compare items in such small groups (two or even one item). In two cases it seems that a correlation has been calculated between an item and itself, so it is obvious that the correlation is 1. In any case, this analysis can not be used considering the six groups of items of DLQI, because they have not been demonstrated to be six
different dimensions. Convergent validity should be evaluated seeing how closely the new scale is related to other variables and other measures of the same construct to which it should be related.

5. Methods, Cronbach’s alpha: Cronbach’s alpha should be calculated after performing a factor analysis to evaluate the dimensions of the instruments. It has not been demonstrated that the six headings correspond to six dimensions, and, on the contrary, it has been previously shown that DLQI is a unidimensional instrument, so it does not make sense to calculate different alphas for each group of questions. It is not correct to calculate alphas on one or two items.

6. Results, page 6: there is a reference to Table 4, which does not correspond to the real Table 4, where alphas are compared in each level of the variables of interest and not in each scale. All the subsequent comments refer to results not shown and should be clarified. Perhaps the authors intended to compare the “scale” scores in different levels of variables, but the variables are not described and it is not clear how these results fit with the aims of the study.

7. Results, page 6, p-values: it is not clear to which test P-values refer.

8. Discussion, page 6, last paragraph: the description of vitiligo at the end of the discussion seem more suitable for the Introduction paragraph. In general, all the Discussion should be restructured.

9. Discussion, page 7, third paragraph: “the finding of this study indicate that mental health in vitiligo patients is poor…”. Why do the author suddenly talk about mental health? How was it measured? Why this is not mentioned before in the Methods and Results sections?

10. Discussion, penultimate paragraph: the comparison of scores with Finlay and Khan is unwarranted, since they did not have patients with vitiligo in their study.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Introduction, after Table 1: the sentence “the scores for each of these sections can also be expressed as a percentage of either 6 or 3” should be clarified and referenced.

2. Introduction, last paragraph: the sentence “Since the DLQI is a brief, simple, easy to complete” should be completed.

3. Methods, description of the study population: it is not clear how the sample of patients was selected. Were they consecutive patients? When were they selected? For how long?

4. Results, paragraph after Table 2: does the sentence “there were no statistically significant differences between the sex, item scores and mean DLQI scores” mean that no differences between men and women in item scores and mean DLQI scores were observed? If this is the case, this concept is expressed again below and should be deleted here.

5. Discussion, first sentence: it is better to say that the DLQI is an instrument intended to measure quality of life other than dermatological distress.

6. Discussion, third paragraph: “Reliability was associated by internal consistency…”. Perhaps the authors should write “was evaluated”.

7. Discussion, last paragraph: the sentence “it is worth nothing that occasionally the questionnaire was administered by a trained nurse in a face-to-face interviews” should be clarified. If this means that no differences was observed in questionnaires self administered and administered by a nurse, the authors should explain what kind of differences they evaluated.

8. Conclusions: the last sentence “because of the great cosmetic importance in these groups” should be clarified.

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Discretionary Revisions (which the author can choose to ignore)

1. At the beginning of the Introduction section it would be suitable to describe in a few words the
DLQI and its role in evaluating quality of life.

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes

**Declaration of competing interests:**

none