Reviewer's report

**Title:** Validation of the Spanish version of the Oral Health Impact Profile (OHIP-14Sp) in elderly Chileans.

**Version:** 4

**Date:** 19 June 2014

**Reviewer:** Mike John

**Reviewer's report:**

The manuscript “Validation of the Spanish version of the Oral Health Impact Profile (OHIP-14Sp) in elderly Chileans” by Leon et al. describes the development of a 14-item version of the OHIP. Using the methodology that Slade used for the development of the original 14-item version, these authors developed an abbreviated instrument that is different from the standard OHIP-14. Short OHIP forms are widely used. They are necessary tools to assess oral health-related quality of life (OHRQoL) in situations where limited resources don’t allow the use of the long instrument. OHIP-14 is probably the most popular OHRQoL instrument today. Validation of this instrument is required to understand how well it performs in different populations. Above and beyond this methodological point, it is interesting to use OHIP scores to express how oral conditions affect individuals in different settings.

One of the advantages of OHIP is that it is globally used, and researchers have compatible findings across nations and cultures. However, it is unfortunate that several different 14-item OHIPs exist already. Adding a new instrument now makes this situation worse because the existence of several OHIPs limits the comparability of findings. Although the authors’ intention was to create an instrument that would illicit globally comparable results, I believe the current authors’ new OHIP-14Sp does not create internationally compatible scores because the questionnaire items are different compared to other OHIP-14 instruments.

**Major Compulsory Revisions**

The key to understanding the findings of the submitted article is OHIP’s dimensionality. While the authors mention an article which suggests that OHIP-14 score is unidimensional, I would recommend two articles that appeared in the Journal of Oral Rehabilitation (John et al., 2014) for a detailed insight into OHIP’s dimensionality. As these authors report, OHRQoL is multidimensional, but for OHIP, one summary score can also be used. If these findings are true, it is expected that several different OHIP-14 can be derived because all OHIP items are indicators of the construct OHRQoL. All these different OHIP-14s describe one construct and, according to classical test theory, only the idiosyncrasies of the particular sample result in the selection of a different set of items. If the current authors would compare their OHIP-14Sp with the standard OHIP-14, they would likely find that scores of the two instruments are not too
different in terms of their reliability and validity. Only if the new OHIP-14Sp scores would make a clinically relevant difference compared to using the standard OHIP-14 scores, would a new OHIP-14 be justified.

I see substantial value in the validation of the STANDARD OHIP-14 in this population. If the authors assume that the standard OHIP-14 is unidimensional, the logical conclusion would be to present only one summary score. Although they are complex, tables 5 and 6 don’t provide any evidence that the 7-dimensional structure is valid. For example, one would expect that the number of teeth has a functional influence. If the 7 dimensions are useful, one should also see a differential impact (not in terms of statistical significance, but in the magnitude of score differences) of tooth loss across dimensions. This does not seem the case. It is also not clear why the logistic regression (Poisson regression? in the results) was used. I think a simple description of OHIP-14 summary scores across various clinical and sociodemographic conditions would be informative enough and would suffice as validation in this population. OHIP’s major strength is that it is globally used. How different oral conditions affect individuals and what other factors shape this experience is still of considerable interest for the dental community. The present manuscript could provide some valuable information about the oral health of older Chileans, and whether this population is similar to other elderly populations if presented scores were comparable with the literature.

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, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.