Reviewer's report

Title: Measuring Outcome after Wrist Injury: Translation and validation of the Swedish version of the Patient-Rated Wrist Evaluation (PRWE-Swe)

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Reviewer: Isam Atroshi

Reviewer's report:

This is an interesting study that presents a Swedish version of the patient-rated wrist evaluation (PRWE) outcome measure. Injuries and diseases of the wrist are important research topics and a valid and reliable measure that facilitates comparisons across studies is very helpful in this respect.

In general the study is well conducted, the analyses are adequately described and the findings are valid.

A number of areas can be improved.

1. The manuscript is somewhat repetitive with the same information given in more than one place. For example the methods used for the analyses are described both in the Methods section and in the Statistics section. The unnecessary repetitiveness can be eliminated.

2. There are many general statements that do not add any vital information. Patient-reported outcomes measures have now been used for several decades and are no longer "modern". In fact they are established outcome measures even in big randomized trials and have been recognized by several important agencies such as the FDA. Most readers are well aware of their importance. Even though the journal does not have limits on length this manuscript will be much more "user-friendly" if shortened to include the essential information. The background can be substantially shortened.

3. The same applies to the definitions of reliability, validity, etc. These are now familiar concepts and it is probably not necessary for every one of the large number of new articles concerning questionnaires to explain these terms. It is fully adequate to start with a description of the methods used to evaluate these measurement properties.

Specific comments:

METHODS

1. The D in the DASH is “Disabilities” not “Disability”.

2. In the section “Adaptation process”, is specifying the place where one the team members worked relevant for the subject?

3. At the end of that section (page 7) the authors refer to a “high-quality” questionnaire, this term may not be appropriate or may need to be defined.
4. Page 8, line 16, seems the word “more” is missing

5. It would be helpful to also add the median test-retest time because the data seem to be skewed.

6. The SRM (page 10) is the mean change divided by ….

7. It might be argued whether the DASH can be considered a “gold standard” for measuring wrist-related disability to justify the use of the term criterion validity rather than construct validity. This might be an issue because the correlation with the DASH was the only validity test done. Although the authors also present evidence of discriminative validity, it is only mentioned in the Discussion.

RESULTS

1. The data about floor and ceiling effects are given under the section “Internal consistency”, is it the correct place?

2. In the Content validity (page 13) the manuscript states that the group “found the content in the Swedish version of the PRWE no different from the original Canadian version”. However in the Discussion it is revealed that in one item the activity was replaced by a completely different activity. This inconsistency should be addressed. In fact changing an item belongs to the Adaptation process (not the Discussion) even if it merits discussion any changes done on the original questionnaire should be first mentioned in the right place, which is not the Discussion.

3. The results show almost identical responsiveness of the DASH and PRWE in patients with a specific wrist injury. It would be interesting to comment on the reasons for and the interpretation of this finding given that the DASH is supposed to be arm “generic” measure.

4. Presenting the data about missing values is interesting but it is unclear what the purpose is, it seems that it partly questions the content validity. It may be more appropriate to have the missing responses data in that section.

DISCUSSION

1. In first sentence, the PRWE is described as “quickly filled-out”, but there is no prior description of how this was studied and no actual results. Maybe the statement can be rephrased.

2. To call the QuickDASH a “mini-questionnaire” may not be appropriate.

3. Instead of starting with a discussion of the main results of the study, there is a disproportionately long section about one researcher’s publication criticizing the QuickDASH which is not even the subject of this manuscript. No other studies that have used or evaluated the QuickDASH are mentioned. Although a discussion of the QuickDASH is merited, this should be balanced and proportionate.

4. In page 16, the statement that “.. during the validation process of the PRWE, there was only a weak to moderate correlation between the PRWE and the impairment scores that were used as a reference tool.”, the reader would be
interested to know what exactly were these impairment scores.

5. In discussing the missing values the authors discuss the importance of taking into consideration whether the injured hand was dominant. What is the evidence supporting the statement (page 19) that “handedness strongly affects the outcome of the questionnaire”? A supporting reference would be appropriate. This is described as a “lack” (possibly meant weakness) of the PRWE.

6. It is known that the DASH asks patients to rate their ability irrespective of which hand is injured or how they perform the activity whereas the PRWE asks about the ability to perform the activity with the affected hand. What does the finding that the results of these two measures were highly similar indicate regarding the difference between the two measures in their instructions to patients as to whether or not to consider only the injured hand in rating their ability?

7. Is the statement about responsiveness of the pain and function subscales (page 18) that “It may also indicate that the pain subscale is somewhat less sensitive to change than the function subscale.” a correct interpretation of the results? This can only be applied to this patient sample because at the first measurement patients had lower pain score than function score. It could be completely different in another sample with a different diagnosis.

8. Statement in page 18 “Moreover, our findings suggest that the PRWE results in fewer incomplete questionnaires than the DASH when in clinical or scientific use”, does this statement refer to missing items or missing total scores? This distinction is important because it depends on the rules chosen for missing values; the developers of the DASH chose a more conservative rule to enhance validity of the results obtained from the questionnaire. Is this statement adequately supported by the data?

9. The statement in the conclusion that the PRWE offers “the surgeon” a useful tool can be modified because it is not only for surgeons.

Table 2:
You can consider adding the mean change (baseline-to-followup) and 95% CI for the PRWE and DASH for the 2 groups.

Table 3:
Does “effects” mean the proportion of patients? It would be helpful to add “n” to the percents.
To maintain consistency with the other tables, it would be appropriate to add the corresponding results for the DASH (proportion with floor and ceiling scores etc) to this Table.

Table 4:
Since you have 95% CI in the column titles you do not need to repeat it in the cells.

A few language corrections are needed in the manuscript text.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
'I declare that I have no competing interests'