Reviewer's report

**Title:** Measuring troublesomeness of chronic pain by location

**Version:** 1  **Date:** 22 November 2005

**Reviewer:** Tonya M Palermo

**Reviewer's report:**

**General**

The authors describe a reasonable approach to validation of a new measure of the troublesomeness of chronic pain by body location. They present psychometric data on the reliability and validity of the measure and make some conclusions on how the measure performed. Strengths of the manuscript are the appropriate approach to developing and validating a new measure and the large and representative sample.

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

1. A primary concern that I had with the manuscript was in the rationale for why this measure is needed and the specific definition and conceptualization of troublesomeness. The authors state that a primary purpose of the troublesomeness grid is to develop a measure that can be used to compare the burden of pain in different body regions. They go on to discuss some limitations of health related quality of life measures. This rationale was confusing because troublesomeness is not explicitly defined by the authors and their discussion of quality of life implies that it has something to do with this concept. However, in their description of how the measure came about the term bothersomeness is discussed. Further conceptualization of troublesomeness is needed so that the reader can understand how this concept is the same or different than pain bother or pain burden. In particular, the authors should cite previous research definitions of these concepts. I would like to see the authors particularly address how troublesomeness is different from pain intensity or pain presence in different body locations. What is the presumed advantage of measuring troublesomeness versus pain intensity in different body regions?

2. The authors should state how the body regions they selected for inclusion on the grid correspond with the previous literature on painful body locations (for example, the 9 body regions identified by Lester, Lefebvre, & Keefe, 1996)?

3. Rather than calculating percent agreement for the test-retest reliability of the troublesomeness grid, the authors should re-do this analysis using the more appropriate statistic for this, the intraclass correlation coefficient.

4. Additional sample description would be useful. Did the sample contain individuals with diagnosed chronic conditions? The authors state that they excluded individuals with terminal illness or severe psychiatric disorder. However do they have other health information for their participants?

5. I would like to see a section in the Results on descriptive statistics where the authors provide some descriptive information including means and standard deviations on their primary measures of pain, disability, QOL, and psychological distress of their sample. This could be accomplished with a table showing means and SDs on each measure. It would also be useful to see the frequency and means of the troublesomeness grid presented in tabular form. This would help to contextualize their
results. The scores that are shown for pain intensity in Figure 2 appear to be very low at a mean around 4.0 on a scale of 0-100. Is this correct? If so, the authors should comment on potential floor effects of their measures. If the majority of the sample is reporting extremely low pain intensity, how clinically meaningful are the analyses?

6. It would also be useful to see correlations between the primary variables. For example, what is the relationship between pain intensity and disability and is this different than the relationship between troublesomeness and disability? By examining the relationships between troublesomeness and other study outcomes in direct comparison to the relationship between pain intensity scores and other study outcomes, it may help the reader to understand the presumed advantage and possible independence of measuring the construct of troublesomeness.

7. I had some difficulty understanding Figures 2-4. The title of Figure 2 is “Relationships between the most common troublesome pains and pain intensity from CPG.” A more accurate title would seem to be “Mean Pain Intensity Scores for Individuals with and Without Troublesome Pains” rather than “Relationship” because the figure plots the number of individuals who either do or do not have troublesome pain in various locations and shows their mean pain intensity. In addition, it is not one Figure but rather a group of 5 figures. I do not think it is necessary that each body location be graphically displayed. Similar concerns apply to figures 3-4.

8. Table 2 shows the odds ratio and confidence intervals for logistic regressions predicting factors associated with troublesome pain in several body regions. It would be useful for the reader if this analysis was explained in more detail. In particular how were the variables used for the logistic regression calculated (i.e., how were they dichotomized)?

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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. On page 6, the authors should list the possible range of scores on the Chronic Pain Grade.

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Discretionary Revisions (which the author can choose to ignore)

1. On the Figures, rather than giving the list of abbreviations, couldn’t the authors use different titles on their axes so as to eliminate the need for abbreviations?

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: Acceptable

Statistical review: No

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