Reviewer's report

Title: The Four-Dimensional Symptom Questionnaire (4DSQ). A validation study of a multidimensional self-report questionnaire to assess distress, depression, anxiety and somatization.

Version: 1 Date: 28 June 2006

Reviewer: Robert Ferdinand

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The authors did a good job by reorganizing the manuscript. The paper is much more easy to read. I have a number of specific comments.

Page 13. Clinical implications. The authors state that the AUC for the distress score (.81) was higher than for the anxiety scale (.70) of the DSQ. Was this a significant difference? If not, it is not right to state that the AUC of the distress scores was higher. Further, the outcome criterion for the ROC analysis was rather vague; “psychosocial diagnosis/reason for encounter”. It can be doubted if this criterion is good enough to serve as a valid outcome criterion, given that the reliability of this outcome measure can be doubted. Also, the Depression and the Distress score of the DSQ performed equally well in predicting major depression, which casts further doubt on the divergent validity of the DSQ scales. The validity of the Anxiety scale can be doubted anyway, given the low AUC for predicting anxiety disorders.

Page 14. The validity of the Somatization scale was tested against the outcome “suspected by GP of somatization”. I don’t know if this is a scientifically appropriate outcome, since little will be known about the psychometric properties (reliability/validity) of this outcome. Further, the AUC for this outcome was .65, which is low and does not support the psychometric properties of this scale.

Page 14. The correlations in table 13 seem to indicate that the DSQ scales partly measure the same emotions/behaviors, and that their divergent validity may not be sufficient. Thus is corroborated by the finding that the Distress scale had the lowest proportion of unique variance, which casts doubts on its usefulness/additional value, whereas development of the Distress scale was a major aim of this study. Knowing this, it is strange that elevated scores on the Distress scale were not always accompanied by high anxiety and depression scores. How can this be explained?

Figures 4-7 seem to be numbered the wrong way. It seems that I did not receive figure 7.

Page 15/appendix. Why were loadings of all items on all factors not presented? This would enable the readers to judge the results of factor analysis by themselves.

Page 17. The authors indicate that study E was not ideal. Why not leave it out?

Page 18. The discussion is very short, given the large number of findings. I think the paper could be improved by discussing the validity of all DSQ scale, given the findings from all the sub studies. Further, it is surprising that the authors conclude that the scales are valid and useful, given my previous remarks.

Page 18-20. The list of practical applications is overly long and does not fit in the discussion section of a research report, in which the findings of the study should be discussed. Further, the authors seem somewhat optimistic. For instance, page 19, they conclude that the DSQ can be used to detect anxiety and depression. Is this consistent with the relatively low AUC’s they found? Further, page 20, how do the authors know that the DSQ can be used to measure change in problem levels across time? Without investigating this, how can it be recommended to use the DSQ to measure such change in clinical practice?

Most comments concern major compulsory revisions/questions.

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

Level of interest: An article of importance in its field.
Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

no competing interests