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Commentary

Double Dutch: The 'think-aloud' Brief IPQ study uses a Dutch translation with confusing wording and the wrong instructions

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This commentary describes the methodological shortcomings and the misleading presentation of the 'think-aloud' Brief Illness Perception Questionnaire (IPQ) paper by van Oort, Schröder, & French (2011). We highlight that this paper uses a confusing Dutch translation of the scale, fabricates incorrect instructions, and employs a sample in which the majority of patients do not have established illness diagnoses. We believe these problematic methodological issues are the likely cause of the results presented in the paper. We argue that the conclusions of the paper are inaccurate, unsupported, and overstated given the limitations of the study. Furthermore, the think-aloud method cannot be a substitute for the established psychometric methods for assessing reliability and validity.

Psychologists depend on valid and reliable assessment methods to conduct good research. It is important that researchers carefully apply questionnaires using the proper instructions and item wording. In our opinion, the paper by van Oort, Schröder, & French (2011) shows that some patients can have difficulties trying to answer some items when they are given the wrong instructions and a confusing Dutch version of the Brief IPQ. Unfortunately, the authors of this paper do not appear to realize the importance of these basic issues and the limitations they place on the interpretation of results. In the following commentary, what we consider to be the methodological shortcomings of this paper and its misleading presentation are discussed in more detail.

When reading this paper, it is easy to miss the fact that it is not based on the published Brief Illness Perception Questionnaire (Broadbent, Petrie, Main, & Weinman, 2006) but on a new Dutch language version taken from an unpublished Dutch physiotherapy student's dissertation, that he called the IPQ-B DLV (Dutch Language Version) (de Raaij, 2007). Unfortunately, this is not revealed anywhere in the title, the abstract, or in

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the introduction, which is potentially misleading to readers. This issue is especially problematic because this specific Dutch language version contains some incorrectly translated words.

There are two important language issues that compromise the validity of the paper. The first issue is that the majority of patients had musculoskeletal complaints and were not suffering from a diagnosable illness, so the Dutch term for illness is not suitable for these patients. Therefore, many of the patients in this study were being asked questions about an illness they did not have, adding unnecessary confusion, and possibly causing 'stumbling' or re-reading. In fact, we consider it bizarre to investigate what people think about when they answer the Brief Illness Perception Questionnaire with patients who clearly don't recognize that they have an illness – nine of the 11 patients used in study 2 are visiting a physiotherapist for a sore shoulder, back, or knees.

A further major language issue concerns the translation of the word 'control' in this particular Dutch language version. As stated in the discussion, 'Dutch people use the term "going on control" when they have a medical check-up at the hospital. This Dutch ambiguity of the word "control" may be responsible for the misinterpretation of this question in some cases'. Unlike the questionnaire used in this study, the Dutch translation of the Brief IPQ published on the IPQ website since 2004 by Kaptein and colleagues contains the careful translation the English 'control' into '*beheersen' (to master)* not as *'controleren'* (to check) (Kaptein, van Korlaar, & Scharloo, 2004). The incorrect translation of 'control' is a major problem since it alters the meaning of the item, making it non-sensical.

Another serious problem in this study concerns the instructions given to the participants. Readers not well acquainted with the Brief IPQ, will not realize that the authors have in fact changed the instructions of the scale making the paper even more misleading and inaccurate. The 'original content' stated in Table 4: 'Replace the word "illness" with the health threat you need treatment for' (p. 13) is a complete fabrication. There is no such instruction in the Brief IPQ or even in the Dutch physiotherapy student's version.

This added instruction causes problems that affect the whole administration of the scale. For example, it would confuse patients who perceive they do not need treatment or indeed are not prescribed any treatment. Furthermore, it would confuse patients who perceive multiple 'health threats' or have multiple treatments. Illustrating further problems with the added instruction, no participant actually replaced the word illness with their own musculoskeletal complaints while thinking aloud. Indeed, attempting to replace the word 'illness' in each question would almost certainly necessitate re-reading the questions, which in this study is interpreted as evidence of a 'problem' with the item. The authors of the paper then suggest removing this instruction when it never existed in the Brief IPQ in the first place!

In the original Brief IPQ, the published recommendations are:

> 'Like the IPQ and IPQ-R, the most general version of the Brief IPQ uses the word 'illness', but it is possible to replace this with the name of a particular illness such as 'diabetes' or 'asthma'. Similarly, the treatment control item uses the word 'treatment', but this can be replaced by a particular treatment such as 'surgery' or 'inhaler' if researchers are interested in a particular treatment.' (Broadbent *et al.*, 2006, p. 632).

This major deviation from the standard administration of the scale is incorrectly presented as a problem with the original scale. We think that this presentation suggests

sloppiness or an attempt to mislead readers that is unacceptable, particularly in a paper that asserts to be testing a scale's psychometric properties.

The authors do not acknowledge the significance of using this problematic translation together with the incorrect instructions, for the subsequent interpretation and implications of their results. Rather than limit their conclusions to this particular translation and wrong instructions, they go on to make what we consider to be unsubstantiated suggestions to change the original English scale. There is no evidence provided in the paper that the changes suggested in Table 4 make any difference to think-aloud processes or the content validity of this Dutch version of the questionnaire, let alone the original questionnaire. We, the authors of the Brief Illness Perception Questionnaire, would like to make clear that we reject these suggestions and see them as totally inappropriate.

The first suggestion is relevant only for the particular Dutch version used in this study and not even to the Dutch version provided on the IPQ website. In our opinion, had the correct translation of the word 'control' been used, or the original English, this issue is unlikely to have arisen.

Second, the coherence item of the original Brief IPQ was intentionally worded to assess how well the participants feel they understand their illness, rather than assessing actual knowledge, as this is a different construct. Furthermore, we believe it would be highly inappropriate to suggest to patients that there is something '*wrong*' with them as the authors of this article propose in their suggested change.

Third, we believe that a patient not counting frustration as being emotionally affected does not constitute sufficient evidence to change the emotional representation item, particularly considering potential language issues with the item. Unfortunately, by not providing the Dutch instructions or items in the paper, the reader cannot determine what the translated questionnaire used looks like.

The causal item in the Brief IPQ is the same as that in the IPQ-R and this allows comparison with other studies that use that scale. The responses to the causal item pertaining to symptoms found in this think-aloud paper are very likely due to the majority of the sample not actually having an illness, only symptoms. As already mentioned, the last suggested change is completely inaccurate and irrelevant to the Brief IPQ.

We consider a further inaccuracy in this paper concerns the citation of the Dutch student's masters thesis. The title cited is different to the title that is shown in the thesis.

In addition to the rather fundamental problem that this study failed to use the proper version of the Brief IPQ, we believe there are limitations to the conclusions that can be drawn from the think-aloud approach. While the use of this methodology can provide interesting data about the ways in which people process test items, it cannot be a substitute for the established psychometric methods for assessing reliability and validity. As the authors themselves point out, the use of think-aloud methods have revealed problems in the use of other measures commonly used in health psychology. Moreover, it is very likely that if the items from many established measures were subjected to think-aloud analysis then these would also show evidence of ambiguity and misunderstanding. However, the utility of any measure can only be judged by the more conventional indicators of reliability and validity in studies with suitably powered sample sizes and, by these criteria, the Brief IPQ has been shown to have robust psychometric properties in the original paper (Broadbent *et al.*, 2006) and the considerable number of studies that have used the scale since. We therefore consider it very misleading for these authors to produce a health warning for the Brief IPQ based on this analysis, even if they had used the correct version and instructions.

In conclusion, research into the validity and reliability of the Illness Perception Questionnaire (Weinman, Petrie, Moss-Morris, & Horne, 1996) and its derivatives is welcome, but it must be carefully performed using the correct instructions and items, that are worded appropriately for the chosen patient population. If a translated version of any original scale is used, this should be clearly stated in the abstract and in the title of the paper. Researchers need to take particular care to check the meaning of translated scales. The methods used to assess the metrics of the questionnaire must be appropriate, and any conclusions made must be bounded by the limitations of that method. Careful consideration of these issues will hopefully guide future researchers to avoid what we consider to be many of the mistakes made in this paper.

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