Reviewer's report

Title: Can cancer patients assess the influence from pain on functions? A randomised, controlled study of the pain interference items in the Brief Pain Inventory.

Version: 1 Date: 18 October 2006

Reviewer: Diane Zelman

Reviewer's report:

General

Summary: Addressing an important question for outcomes research in pain, this manuscript considers whether, when they complete the Brief Pain Inventory Interference scale, patients with cancer meaningfully distinguish between functional interference due to pain and functional interference in general (i.e., related to all causes, including cancer and its treatments). A small sample of adult cancer inpatients (N=45 had complete data) completed the EORTC QLQ-C30 quality of life questionnaire and the Brief Pain Inventory (BPI) on two occasions separated by a four day interval. The questionnaire directions provided for the BPI Interference scale were manipulated: on one of the two occasions, patients were asked to complete the BPI Interference Scale using standard directions inquiring about pain-related interference with function; on the other occasion, patients were instead asked to indicate the extent of interference with function in general, with no specific reference to pain. Half the sample received the original BPI first and half received the revised BPI first. The authors found that except for the BPI Mood item which showed more Mood interference in the revised BPI condition, there were no significant differences between ratings of interference due to pain and interference in general. Furthermore, 26/45 of the sample reported higher summed Interference for the revised BPI, 17/45 reported higher summed Interference for the original BPI, and 2/45 scored the same on the two occasions, also suggesting that patients do not distinguish between the two versions in any systematic way.

Given the ubiquitous presence of the BPI in cancer pain research, it is important to consider factors that might constrain the validity of the Interference scale. This is also of particular relevance for epidemiological studies and clinical trials of cancer pain interventions; researchers need to know whether the BPI Interference scale measures the construct of pain-related functional interference or is responded to as more of a global interference measure.

The current paper provides more of an interesting observation that merits further investigation, rather than a stand-alone study. The chief finding of this study is based on a null hypothesis finding (that of no group difference), which requires more investigation to provide a convincing finding. Suggestions for further investigation are presented below.

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

Further research would be strengthened by the following:

1. A larger sample size with a more representative range of pain and symptom severity: Mean Karnofsy for the sample was 82, indicating a moderately well functioning group of patients, and mean BPI pain severity in the sample was low (Average Pain = 1.9 on a 0 to 10 scale), also indicating a sample without significant pain. This would help identify whether the two BPI versions are distinguished to a different degree among samples with more complex symptom pictures.

2. Similar to #1, consideration of whether extent of additional symptoms, Karnofsky status and other indices of severity of illness make it even more likely that pain related interference and general interference will be conflated.

3. Consideration of the correlational relationship between the EORTC QLQ-C30 and the BPI items for the two versions: if patients can distinguish between pain related functional interference and general functional interference, the correlation between general QOL and general functional interference should presumably be higher than that between general QOL and pain-related inference.
4. If a larger sample was available, consideration of the larger BPI Interference validity questions raised by the paper – such as, does the presence of a complex symptom picture change the validity of the Interference scale as measured by its factor structure or correlations with other disease-related variables? Are there other ways of wording the Interference items to make the questions maximally pain-specific (or is the cognitive task we are asking of patients, to distinguish pain from general interference, too difficult)? Given that the BPI is increasingly used for other disease conditions associated with pain, are these findings replicable for other conditions?

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

There are a few minor typographical errors and a few changes in English wording required throughout the paper.

Discretionary Revisions (which the author can choose to ignore)

It is recommended that the authors more extensively and explicitly consider the potential meaning of these findings for the use of the BPI and other pain-related interference measures.

What next?: Reject because too small an advance to publish

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: No

Declaration of competing interests:

I declare that I have no competing interests.