Reviewer's report

Title: Effectiveness of a Cognitive-Behavioral Group Intervention for Knee Osteoarthritis Pain: Protocol of a Randomized Controlled Trial

Version: 1 Date: 15 November 2012

Reviewer: Dan Riddle

Reviewer's report:

The trial is reasonably well described and consistent with the trial registry but there are some substantial gaps in the description. These are elaborated on in the comments below.

Page 3: To be correct, the Riddle et al study is not an RCT but rather a quasi-experimental design. Also, the Somers study is independent and separate from the Riddle study. This should be clarified in the paper.

Also there have been several trials of pain coping skills training (see Hurley et al and Keefe et al for examples) and other behavioral interventions that have been very similar to CBT with fairly extensive overlap with CBT based principles. These types of trials should be mentioned so as not to imply that the studies you mentioned are the only trials of CBT based interventions on persons with knee OA.

Page 4: Please state the number of patients in each block. This is important for replication and for knowing whether study staff may be biased in estimating group assignment.

Page 5: Please specify the roles of the physios versus the psychologists in care delivery. It is not clear what these clinicians will do and not do during the intervention. Also, please provide some description of the extent of training and how you will determine whether the clinicians are adequately trained to deliver the intervention and how you will determine whether the intervention was delivered as planned. I also found not description of the contents of the intervention. A more elaborate description of the treatment elements along with who is responsible for each element would be helpful here. Perhaps a table summarizing these elements and their contents would assist the reader.

Obtaining and assessing KL grades are not as simple as they appear. Valid measures are dependent on knee flexed standing views and examiner experience. Please discuss how you will assure that the radiographic data will be valid.

Your exclusion criteria require some elaboration. For example, how will you screen for “Severe psychiatric or psychological disorder.” How will you determine if “Other back or lower limb pain symptoms are more aggravating than knee pain.” These judgements require data and in order for your study to be replicable, you need to define methods for determining these criteria. Also, how will you determine if a potential subject is “unlikely to be compliant.” This also is important
for replication and is relevant given you appear to be conducting a pragmatic trial.

Evidence supporting the psychometric properties of the instruments on Finnish patients should be provided.

The attention given to the two groups is different. Patients assigned to the CBT group will receive 12 more hours of attention relative to the control group. How will the authors determine whether any effects found are due to attentional effects versus actual improvement due to CBT?

The power analysis does not provide a description of the effect expected and the bases for this effect. It is also unclear why you chose to use WOMAC scores different from the Tubach paper. Please clarify. There is no mention in the analysis section for how the cost utility analysis will be handled. No mention is made for how missing data will be handled. How will all the secondary measures be analyzed?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests