Reviewer's report

Title: Patient anxiety and concern as predictors for the perceived quality of treatment and patient reported outcome (PRO) in orthopaedic surgery

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Reviewer: Munier Hossain

Reviewer's report:

Bilberg et al have submitted the protocol for a prospective cohort study. I think the study question is relevant and useful. There is increasing realisation amongst the orthopaedic community that the body-mind paradigm can perhaps be managed better and this may improve patient reported outcomes and satisfaction. The authors have set out the rationale for the study well in their preamble. I think sufficient detail is indeed provided in the protocol to allow replication of the work. I think the proposed standard of reporting is adequate and standard of writing, considering the fact that the native language of the authors does not appear to be English, is adequate. I congratulate them on their proposed design and encourage such studies in future.

I have some general concerns regarding the submission:

I think the authors have complicated the study by proposing to look at both patient reported outcome and satisfaction for two different joints in one study. This is important as it has bearing on choosing the appropriate sample size. What outcome will they choose and from which joint? They are not the same.

Major revision:

Section on sample size is unsatisfactory. Firstly, it is simplification to consider hip and shoulder arthroplasty patients in the same boat and consider the same sample size. I think the authors should look at the relevant literature and identify minimal clinically significant difference for each joint and consider sample size accordingly (separate for each joint). Although pain relief is an important outcome the authors described PROM and patient satisfaction in their introduction but did not consider them in the sample size. For example, with regard to PROM the most accepted design will be to look at MCID for OHS for THR patients and consider sample size accordingly. This will not identify adequate sample size for patient satisfaction that has to be separately addressed. Then the authors should choose the larger of the two samples.

Minor revision:

1. The authors proposed to invite the patients to complete a number of questionnaires and it is not clear how feasible this is (it might be different for Denmark). I have concerns that the authors might be subjecting themselves to a large number of missing data. The authors described an initial stage of the study when they propose to investigate the test-retest reliability of the CMD-SQ questionnaire. I think it may be worthwhile to undertake a pilot study initially to
investigate how much of missing data they are likely to generate and modify sample size taking into consideration missing data and loss to follow-up.

2. Although most of the outcome measures are well known and validated there are others that are less well known to the average reader. The authors would do well to discuss them in further detail (CMD-SQ and HVOK) in their introduction and also indicate if and how the proposed outcome measures have been validated in the type of population that they propose to recruit.

3. The authors suddenly introduced HVOK in the methods section without spelling the abbreviation or any relevant discussion. I think it may be better to place the materials section before methods section simply to introduce the reader to relatively unfamiliar scores (HVOK). It may be worthwhile to introduce the materials section at the end of the introduction chapter.

4. The authors indicated at the end of the sub-chapter “The perceived quality” that they will add the RCS Eng patient satisfaction questionnaire but did not clearly mention this in the methods section. This should be amended.

5. They need to clarify why they chose some of the questions from HVOK but not the rest. Similarly why only 3 questions from the RCS Eng satisfaction questionnaire? They need to address the concern that this will not invalidate their results.

6. Statistical analysis section is inadequate. The authors did not mention what kind of statistical tests they propose to undertake to rule in or out their hypothesis (patients who are anxious and concerned are less satisfied with their treatment and have a poorer outcome). They simply mentioned regarding the test-retest reliability. They also did not clarify how they intended to control the outcomes for confounding by co-morbidities. I do not intend that a detail discussion is required but some indication should be there as to the proposed statistical design.