Author’s response to reviews

Title: Patients’ Perspectives of Outcomes after Total Knee and Total Hip Arthroplasty: A Nominal Group Study

Authors:

Susan Goodman (GoodmanS@HSS.EDU)
Bella Mehta (mehtab@hss.edu)
Serene Mirza (mirzas@hss.edu)
Mark Figgie (figgiem@hss.edu)
Michael Alexiades (alexiadesm@hss.edu)
Jose Rodriguez (RodriguezJose@hss.edu)
Peter Sculco (sculcoP@hss.edu)
Michael Parks (ParksM@hss.edu)
Jasvinder Singh (jasvinder.md@gmail.com)

Version: 1 Date: 02 Aug 2019

Author’s response to reviews:

Dear Dr. Ciaran Martin Fitzpatrick,

Thank you for the opportunity to make revisions to our manuscript, “Patients’ perspectives of outcomes after total knee and total hip arthroplasty: a nominal group study” (BRHM-D-19-00019).

We have made the following changes to address the reviewer comments.

Background:

p.3/line 38: Pl provide relevant reference after first sentence, as I think the statement needs to be backed up by publications.

Response: I agree- thank you for noting this oversight. This reference was added.

Response: Added to the text: up to 30% of patients report that they are dissatisfied due to insufficient pain relief, inadequate functional improvement, or failure to meet their pre-operative expectations (2, 3).

Methods:

I am a qualitative researcher, so I hope another reviewer can comments on the Questionnaire results and its appropriateness and results.

p.4/line 69/70: 'high volume' was mentioned twice, why?

There is a well described relationship between surgical volume and surgical outcomes, so a high volume hospital would be expected to have dependable, good results with a lower complication rate. This has now been discussed in the text as well.

p.4/line 76/77: pl add Reference number and date for the Ethics Review Board approval, it was not mentioned at the end of the paper too.

This has been added in both places (approval received November 30, 2018; IRB #2018-2087).

p.4/line 79: did patients signed written and informed consent, at the moment it states only informed, pl clarify.

Added to text: All patients provided written and informed consent

p.5/line 83-84: the question in relation to satisfaction of surgery is not clear in my view, pl provide more information what aspects before, during or after the surgery the satisfaction related to.

Changed and added to the text: In addition, patients answered whether they were satisfied with their surgery in four areas: pain relief, functional improvement for housework/yardwork, improving ability to do recreational activities, and overall satisfaction. Each area was answered in a 5-point Likert scale ranging from very satisfied to very dissatisfied.

p 5/line 95: where where the patient discussion groups held, pl specify.

Added to the text: The patient discussions lasted approximately 1 hour and were held in non-clinical conference rooms in the hospital

p.6/line 106: who transcribed the discussion group content?
The discussions were recorded to ensure we kept a record to be used for clarification if needed, but not transcribed.

p.6/line 107: how was the qualitative data analysed, what approach was taken, ?thematic analysis? Pl expand.

We did not use a thematic analysis. Themes are not determined a priori, but determined within the groups as items are grouped together thematically. After completion of all groups, the items were reviewed by the investigators and 5 distinct themes were identified. The nominated items were then allocated into one of the 5 themes identified. Two sub-themes/sub-domains were identified that did not fall exclusively to any of the five themes.

p.6/line 117: good move to include two groups with younger participants.

Thank-you

Results:

This whole section I suggest needs further work, at the moment the content is too dense, it is very difficult to keep the reader engaged, Suggestions: group the accounts into themes and sub-themes, have the accounts indented in the text with different font and add denominators after each account, e.g. NT Group 3, female, age so the reader has a better overview and idea where the accounts come from.

Response: This section was significantly edited. Quotes that were redundant were eliminated from this section.

Discussion:

p.12/lines 254-279: far too many repetitions of the same words, e.g. 'improved', and 'important' throughout the sections, the reader will not stay engaged, in my view.

The whole section does not provide any new information, specifically as OMERACT has come up with the same findings, however from quant. studies and systematic reviews, so I am unsure what extra value the study brings. The authors did not include other studies that had different outcomes.

Response: Patients are included in the OMERACT working groups, but may not challenge an expert dominated group if they disagree. This was the first study to our knowledge that collected this data from patients directly in an open-ended fashion. We felt that this was an important and overlooked step in the development of a patient reported outcome measure.
The suggestion for young people 45 years to provide a support group for comes to me out of the blue, where did the suggestion come from and why? Support groups come in all shapes and forms, e.g. in person, online, chat rooms?

Agree- this has been removed from the discussion.

Although stated in the limitations, the participants seemed to be a selective group of well educated patients with hardly any pain, a similar study with a more diverse group would probably come up with other findings.

While we tried to diversify our participants by race, age, and sex, THR/TKR are highly successful operations. We included the questionnaire responses so the outcomes achieved by our cohort would be transparent to the reader. This has been included in the discussion.

The authors also stated other factors such as emotional impact, self confidence etc. need to be further explore, in my view these were highlighted by the patients in their discussion groups already, however, as the data analysis is not clearly described, such findings were not identified enough in this study.

Do not understand why Table 1-3 was listed x2.

Corrected.

In summary: I cannot recommend the paper to be published in the current form, due to (i) selection bias of participants, (ii), no new findings identified due to the work of OMERACT , despite the fact this study had a qual approach, and (iii) lack of detailed data analysis.
The concerns of the reviewer were addressed in extensive editing and re-writing throughout the paper.

Annette de Thurah (Reviewer 2): The purpose of this study is to rank the most important outcomes after total joint replacement.

The method used is nominal group technique, a method which was originally developed for evaluation of education.

As also mentioned by the authors, this method is very structured, and driven by consensus. Therefore, it does not leave room for much variation among participants. I think the authors must address this important issue. Why was this method chosen in the first place, and what are the pros and cons? This must be elaborated in more detail.

I find it hard to see the argument for this.

Response: We selected nominal group technique to identify the outcomes patients thought were important. We had progressed through literature review to identify outcomes we thought should
be important but had not included patient selected outcomes. While the outcomes the MDs and researchers selected were previously endorsed by patients, we had not given patients the opportunity to provide their own choices. We chose this method as it permits first- the generation of ideas by the participants in an open ended fashion and second, a group consensus to determine which of the selected outcomes are most important to the group. NGT permits efficient exploration of a specific question in detail, and provides both qualitative and quantitative data.

This explanation has been added in depth to the paper.

Secondly, 475 patients declined or did not meet the criteria. A total of the remaining 106 were interested. But then the numbers don't add up. I would suggest a flow-diagram. Only approximately 20% studies of all potential patients agreed to participate, and (as also stated by the authors) they where white, well educated, pain free and with a high degree of satisfaction. This can hardly call 'purposeful sampling'. It is highly selected. This must be elaborated in more detail.

Response: We have added a flow diagram as suggested for clarity.

We specifically enriched our sample for African Americans, and achieved 16% AA participation. Most arthroplasty cohorts are comprised of ≤4% AAs. We also sampled young patients only for groups 7 and 8. We agree, our hospital population is unusually well educated and that diminishes generalizability. We obtained and included the HOOS/KOOS and satisfaction surveys in the study to be transparent about the characteristics of the cohort we were studying.

Response rates for study recruitment/participation are low. This response rate is in line with other studies. Recruiting through flyers, or specifically inviting participants with particular characteristics is also described for focus group/nominal group studies, but that also introduces selection bias.

This limitation has been included in the discussion.

The results section is suffering from a lack of cogency and a lack of theory based analysis. If the purpose of the study is to rank outcomes, why then talk about: 'optimization of post-operative care', 'concern about patient education'. This has to do with patient satisfaction with the operation procedure and process. Moreover, how can; 'relief of pain' and 'improved function and mobility' be characterized as a 'concern'? It is as if the authors have forgotten the purpose of the study, and report all the experiences that these patients might have had during the course of operation, and not only the ranking of outcomes.

The results section has been substantially re-written and the thematic organization of the results emphasized.

The authors conclude that the top 3 outcomes are: relief of pain, improved function and quality of life. These are all indications for offering total joint replacement in the first place, and therefor this study does not add much new to the field.
Response: While patients have endorsed the MD and researcher selected outcomes for TJR we wanted the patients who had undergone TJR to generate their own list of prioritized outcomes. We thought this was an important step. I agree that they ended up choosing the same outcomes the researchers and MDs had selected, but that was not known a priori. This gap has been explained more fully in the text.

------------

Thank you for considering our manuscript,

Susan Goodman
Professor of Clinical Medicine
Weill Cornell Medicine College
Attending Physician
Hospital for Special Surgery
P: (212) 606-1163
goodmans@hss.edu