Author's response to reviews

Title: Medication and Supplement Use for Managing Joint Symptoms among Patients with Knee and Hip Osteoarthritis: A Cross-sectional Study

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Author's response to reviews: see over
Friday, September 30, 2011

Enclosed is a revised version of a manuscript for *BMC Musculoskeletal Disorders* entitled: "Medication and Supplement Use for Managing Joint Pain among Patients with Knee and Hip Osteoarthritis." We have revised the manuscript according to the reviewer comments and outlined our responses and changes to the manuscript below (in bold). Comments from both reviewers have helped strengthen this manuscript and we appreciate their time and advice regarding this manuscript.

Reviewer: Steven M Albert

Major compulsory revisions:
1. Since patients were seen in a clinical setting, with access to medical records, I am surprised the authors relied on self-reported prescription use. It would seem that the authors should have access to prescription data, refills, changes in regimen, etc. This is important in light of patient's inability to report reliability in medication use. If this is not the case, can the authors clarify? Were all patients followed in the clinic?

   Patients in this study were recruited from an outpatient orthopaedic clinic, which only has records of prescriptions provided by that outpatient orthopaedic clinic (n = 45; 28% of our sample). Self-reported medication use was selected because of limitations within our current health system, a desire to capture over-the-counter medication use, and a preference to include any patient entering the clinic versus a biased sample of people that were willing to return with their medication bottles. We hypothesize that self-reporting was more likely to bias the results towards less medication use and safer patterns of medication use. Therefore, our data may represent a conservative reflection of how patients in an inner-city orthopaedic clinic manage their symptoms. Hopefully, these findings will spur further research on an underrepresented but growing segment of the population. We have modified the limitation paragraph to further clarify these issues (page 14 to 15).

2. Analyses are limited to descriptive statistics. While the sample is small, the authors could develop simple regression models to assess correlates of dual use, for example. This would be valuable and would allow readers to learn which subgroups of patients are most likely to use a combination of self- and professional-guided medications.

   Agreed with recommendations (pages 8 to 11): This revision has helped strengthen the manuscript. We explored four logistic regression models to predict 1) same day dual-medication use, 2) use of self-guided recommendations compared to professionally-guided recommendations, 3) use of medication as directed, and 4) reporting a medication as ineffective or requiring a stronger medication. Potential predictors were ethnicity, sex, obesity, age, reporting multiple OA joints, and education. The first model demonstrated that participants reporting multiple OA joints were more likely to report same day dual-medication use while participants with less than a high school education were less likely to report same day dual-medication use. The other three models were not statistically significant. These findings have been added to the results and discussion.
Reviewer: Michael Friger

General comment.
The lack of univariate and multivariate analysis makes the part of Results insufficient. The statistical analysis has to be continued for proper conclusions.

Agreed with recommendations (pages 8 to 11): This revision has helped strengthen the manuscript. We explored four logistic regression models to predict 1) same day dual-medication use, 2) use of self-guided recommendations compared to professionally-guided recommendations, 3) use of medication as directed, and 4) reporting a medication as ineffective or requiring a stronger medication. Potential predictors were ethnicity, sex, obesity, age, reporting multiple OA joints, and education. The first model demonstrated that participants reporting multiple OA joints were more likely to report same day dual-medication use while participants with less than a high school education were less likely to report same day dual-medication use. The other three models were not statistically significant. These findings have been added to the results and discussion.

Methods.
All the questionnaires are interview-based. The reliability of each one of questionnaires has to be written in the describing of methods.
All of the questionnaires are interview-based. Furthermore, the interviewer performed a set of training interviews with the instruments. According to the Spearman-Brown prophecy formula, longer scales are more reliable than shorter (e.g., one item) scales. Therefore, we cannot calculate the internal-consistency reliability for our questionnaire which is based on one-item analyses.

Results.
P.7. It will be easier for the reader if the socio-demographic data will be organized in the table.
Agreed with recommendations (Table 1; pages 8 to 9): The socio-demographic data has been converted into a new table (Table 1). Furthermore, the overall number of medications and supplements has been added to Table 2.

P. 8. The reasons that five of participants reported not using pharmacological and supplemental intervention have to be analyzed, or these patients have not to be included into the study.
Agreed with recommendations (Page 9): We have added to the results: “Five participants reported not taking any medications or supplements. Three of the five participants were managing their joint symptoms with intra-articular injections only. Another participant that reported no medications or supplements stated that she was avoiding medication because of a bad experience with an intra-articular injection. The final participant that reported no medications or supplements did not provide a reason for not taking medications or supplements. These 5 participants were excluded from the remainder of the analyses.”

P. 9. Authors did not explain the reason of that two participants were reported their results twice. Without such an explanation, it is not clear why this information is analyzed twice in the text and not included into the table.
Agreed with recommendations (Page 10): A sentence has been added to the results to clarify that two participants reported two distinct patterns of dual use. Therefore, among 15 participants there were 17 patterns of dual medication use. The specific details of these patterns are provided in Table 4.

The percentage of participants used drug combinations due to the physician-physician recommendations or due to other reasons has to be added.
Agreed with recommendations (Page 10): We have added the percentage of combinations that were physician-physician recommendations and other patterns. The percentages were not calculated by individual because the two participants reporting two distinct patterns of dual use would have been classified in to categories. The specific details of these patterns are provided in Table 4.

P. 9. The additional behaviors mentioned in this part could be organized in the table to simplify the understanding.
Agreed with recommendations (Page 11; Table 5): Thank you for the recommendation. We have created a fifth table to outline the frequency of the additional behaviors. The text was modified to provide an overview of the table.
Discussion.
P. 10. In the beginning of Discussion, 20% of participants that reported the ineffectiveness of treatment were mentioned. This result was not described in the Results part of the article.

Agreed with recommendations (Page 12): We have modified this phrase to be more conservative. The sentence now indicates that “almost 17%” of participants reported the ineffectiveness of treatment or were prescribed stronger medication. This is based on data presented in Table 5.

In any case, from Table 1 we can see that 21% of participants never used their medications as directed and 29% reported never consistent medication usage in 2 week period. The correlation between these groups of patients seems to be necessary to make proper conclusions about the treatment.

Agreed with recommendations (Page 8, 11): These analyses have been completed and add value to the manuscript. Participants that reported not always taking their medication consistently for 2 weeks were more likely to report their medication as ineffective or require a stronger medication. No association was found between reporting to take medication as directed and reporting medication as ineffective or requiring a stronger medication. These findings have been added to the results and discussion.

P. 12. The reasons for using additional methods or stopping taking drugs are written without any analysis in the Results part, so the source of this conclusion is not clear.

Agreed with recommendations (Page 14): The reasons participants stopped taking medications was beyond the scope of our study. We have noted in the text that the reasons for stopping the medication are based on our hypothesis. Hopefully future studies will evaluate this issue.

Table 1. In “Level of intervention” for “Rx and OTC users” - the word “only” is needless.

Agreed and revised (Table 2): Thank you for pointing that out. We have removed the word “only”.

Thank you in advance for your time and commitment in reviewing this manuscript.

Sincerely,

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