Reviewer's report

Title: Racial differences in symptom management approaches among persons with radiographic knee osteoarthritis

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Reviewer: Kelli Allen

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This manuscript describes racial and ethnic differences in CAM use among individuals with knee OA in the Osteoarthritis Initiative. There have been differing findings in the literature regarding whether there are racial differences in CAM and conventional treatment use for knee OA; this manuscript attempts to address some of the weaknesses in those prior studies. Some strengths of this sample are that it is well-defined in terms of radiographic OA severity & that it includes many variables that are important covariates. The paper is generally well written, and the topic is relevant and important, particularly since there are racial differences in OA symptoms and outcomes (which could be partly related to differences in treatment use). The following are specific recommendations for strengthening the manuscript:

Abstract:
1. Last sentence of results: clarify that the OR’s are with reference to use of neither CAM or conventional therapies.
2. It would be useful to see the raw %’s in each of the 4 treatment use categories by race. The current first sentence of the results is less related to the main objective of the paper; if word limits are an issue, I recommend removing this sentence to allow for presentation of these %’s.
3. The last sentence of the conclusion is a bit weak, since some CAM therapies are effective, some are not, and for many we do not know. The conclusion of “If some CAM may be effective…” doesn’t give a strong direction or conclusion about what should be done next, given this lack of data.

Background
1. 3rd paragraph, 2nd sentence: given the focus of this paper, it would be useful to expound more on the specific inconsistencies mentioned here.
2. 3rd paragraph, 3rd sentence: similarly, clarify what differences in CAM use you are referring to & how it is argued that disease severity underlies these.

Methods
1. Provide more detail about the sociodemographic characteristics variables & categories.

Results
1. Recommend shortening the 1st paragraph so it doesn’t repeat so much of
what's already in Table 1.

2. Recommend incorporating the results presented in the 1st sentence of 2nd paragraph into one of the tables.

3. Recommend condensing the paragraphs that describe correlates of treatment use. It's not necessary to repeat OR's and CI's from the table.

Discussion

1. 1st paragraph, 2nd and 3rd sentences don't seem to belong here, since this was not a focus of the study. Further, the next sentence mentioned adjustment for disease severity, but the multivariable models included many other variables.

2. 1st paragraph, last sentence: it is a bit of a stretch to say that these analyses "reconcile" prior inconsistencies. While OAI is a rich data source & can adjust for many confounders, there are limitations to any data set.

3. Page 16, middle paragraph, starting “The extent to which the extreme racial differences in obesity…” seems out of place in this discussion.

4. Page 16 last paragraph: 1st sentence
   a. Clarify that access to care may be one underlying factor, but there are many other possibilities.
   b. Was health insurance status measured in OAI?
   c. It's argued here that some of these racial differences may be due to differences in health care status, yet after adjustment there were no differences in use of conventional therapies. Later in the paragraph, there is also mention of a possible reason for more treatment in Whites, but that result does not seem to be robust in these analyses. The discussion later in this paragraph argues that the specific CAM and conventional therapies used more by whites; it would be useful to describe which therapies this refers to.

5. Page 17, 1st paragraph: As mentioned above regarding the abstract, the “If proven effective” part of this discussion is a bit weak because this varies widely across CAM therapies. It may be useful to describe any specific CAM therapies in these analyses that do have some evidence base for effectiveness & note whether there were racial differences in use.

Conclusion

1. The statement about racial differences in patient-reported outcomes isn’t within the main focus of the paper; recommend omitting from the conclusion.

2. Consider also emphasizing the importance of studying the effectiveness of various CAM therapies commonly used for OA.

Level of interest: An article of importance in its field

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.