Reviewer's report

Title: Factors associated with access to health services and quality of life in knee osteoarthritis patients: a multilevel cross-sectional study

Version: 0 Date: 06 Nov 2018

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?
Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
No - there are major issues

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?
No - there are major issues

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
No - there are major issues

OVERALL MANUSCRIPT POTENTIAL - Could an appropriately REVISED version of this work represent a technically sound contribution?
Maybe - with major revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: Overall impression: This is an interesting question however the paper is very Thai-focused and the wider implications to global osteoarthritis care and service provision is questionable. The methods used to answer this question may also be questioned with a more stratified approach by characteristics of service provider being a more beneficial approach that randomisation.

What have the authors done well: The authors have chosen an interesting question and provided an initially strong rationale for this question.
Ways it does not meet best practice: (1) The interpretation of these findings has limited international implications and is very Thai-focused. This means the value of the paper and external validity is questioned. (2) The selection of service providers may have been more valuable if selected purposely by characteristics compared to randomisation. This may have provided a more useful evaluation. (3) There is a wealth of data but it is unclear how this was all used to answer the question. Accordingly the message of the paper may have been somewhat lost and could have been clearer. (4) further Statistical Analysis methods would have been desirable to better understand what and why the researchers analysed the data as they did.

REQUESTED REVISIONS:

Thank you for submitting this interesting paper. Please find below my comments which I hope prove useful.

Abstract - please consider the use of decimal places. Two decimal places for % is excessive. I would recommend 1 decimal place maximum.

Abstract - "the implementation was at an intermediate level (5.92 out of 11.00)." - this is a stand-alone comment and does not make sense in the current context. Please revise the text.

Abstract - "Access to health services was determined by self-management, but it was not significantly associated with QoL" - this statement needs clarification with statistics/values to support this.

Abstract - "Furthermore, it identifies a need to develop health services that are more in harmony with patient preferences" - I don't think the data presented in the abstract necessarily supports this statement. Please consider whether this needs to be in the Abstract.

Introduction
The Background provides a strong rationale for this study however the current text is very Thai-focused and I am unsure how generalizable the findings are to a worldwide perspective. The paper could therefore be revised to have a greater value and impact if structured to account for international exposure. For example "The reality in current practice is that nearly half of knee OA patients who enter health systems do not access the health services that they needed" - is this true for the international stage?
The link to self-management as a reason for this study needs developing further as it currently feels like a conceptual jump to this in the Introduction.

Materials and Methods
The study was conducted 2 to 3 years ago. Is this now current in Thailand or have there been service provision changes in this time. This should be considered as a limitation in the Discussion section.
"Normally, orthopedic services are composed of two types of health services: generalist and specialist." - this is not typical of the international stage and therefore there is an issue of generalizability for this point. I think generalist services refer to primary/community care and specialist services are hospital/tertiary referral services. This is another example of issues with generalizability and external validity to this paper.

Design - a randomization process was adopted to identify service providers. A more appropriate approach would be to stratify the identification of sites purposely for a breath of important characteristics. This would have provided a more robust analysis of sites and outcomes based on heterogeneity. A randomization process is not always the optimal approach to answer all research questions.

Outcome selection - further demographic characteristics of patients and services would have been useful to be able to understand the characteristics of this cohort.

Outcome selection - text is required on the validity and reliability of the tools adopted.

Outcomes - a mixed-methods (quantitative and qualitative) approach may have better answered this research question.

Data analysis - this methods section is brief. Were analyses adjusted for confounders, most notably for socioeconomic grouping.

Results - please see earlier comment about decimal points

Results - these are all head-line and gross in presentation. There is a wealth of data on in- and out-patient service provision but it is unclear how this data was actually used to answer the overarching research question.

Discussion - this is rather long and detailed in presentation, with a focus on Thai factors. I think the message of the findings could have been clearer. I think the authors needed to focus on the original question and explore the implications of the findings to that.

Note: This reviewer report can be downloaded - see attached pdf file.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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No