Reviewer's report

Title: Association between Socioeconomic Status and Pain, Function and Pain Catastrophizing at Presentation for Total Knee Arthroplasty

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Reviewer: Paul Campbell

Reviewer's report:

This interesting study looks to describe the association between SES and pain, function and catastrophising in patients awaiting TKA. The paper shows both individual level and area level SES indicators associate with these outcomes. I think this paper would be a nice addition to BMC MSK, although I do have a few points that I feel need addressed before acceptance.

Major compulsory revisions

Page 5, line 85 – Wording “...aimed to investigate the impact”, I feel “impact” is a little too strong for a cross sectional design and “association” be used instead.

Figures 3 and 4 legends mention that adjustment occurred for age, sex, BMI and depression but within the statistical analysis section the authors state that they did not adjust for depression? In addition, the authors suggest that depression was not included because it did not associate with “both SES and outcomes”, however neither did sex (SES 0.89) but this was added to the model. There seems to be a lack of consistency in the analysis.

Minor essential revisions

Page 4, line 60, sentence “In the UK...” onward to end of paragraph. The authors report evidence of a review study, and then go on to describe evidence from a Canadian based study to support their argument on the effects of SES. I feel that they could structure their argument a just little more clearly here, and spell out what the implications are, it just does not feel clear enough.

Table 1. I have no sense of the spread or distribution of the values and I would like to ask if the median values could be entered.

Whilst the authors report the non-significant relationship between SES and MHI-5, this was for area level, was this the same for individual level?

Page 272. Authors state that “SES remained an important correlate of these outcomes [outcomes in the study] after adjusting for these factors”. This sentence is within a general discussion of the effect of mental health however, the measure of mental health was not entered into the multivariate analysis because it had a non-significant relationship with SES. I wonder if the authors would tailor this slightly to reflect this?

Whilst the general trends within figures 3 and 4 are similar there are also some differences and I feel it would be good to discuss reasons for those differences in
terms of the two types of SES. For example area level SES does not appear to factor for catastrophising but at an individual level it does, why might this be?

Discretionary revisions

Pg6, Individual Level SES section. Whilst the authors offer a reference that shows educational attainment can be used as a proxy for SES, can they give any details of the specific questions they used, have they been used previously?

It would have been nice to have some indication whether adjustment in the multivariate models attenuated the relationship between SES and outcome at all.

Page 14, line 284. “...income the low rate areas”, should the “the” be “than”?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I have no competing interests