Title: Are variations in rates of attending cultural activities associated with population health in the United States?

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Author's response to reviews: see over
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Dear BMC Public Health Editors:

My colleagues and I were pleased to further revise our manuscript based on the statistical reviewer’s thoughtful and constructive comments. We would like to resubmit a revised version of our manuscript entitled “Are variations in rates of attending cultural activities associated with population health in the United States?” We agree with Dr. Stewart’s overall assessment and feel that we were able to address all of her comments. As a result we no longer include the mediation effect analysis; the paper focuses on the association between attending cultural activities and self-rated health (SRH).

In response to Dr. Stewart’s comments we have made the following changes:

Major recommendations:

“I would recommend the removal of the individual statistical testing …” We have removed the p-values from table 1. Per Dr. Stewart’s suggestion we examined the associations between the demographic variables and cultural activity using a multiple variable analysis (p. 7). For the associations between control variables/cultural activity and SRH, we tested the individual associations using logistic regression (p. 7). We also used logistic regression for the multivariable analysis (p. 8, Table 3). The reader is therefore able to examine changes in observed relationships when confounding variables are included (i.e., by comparing ORs reported on p. 7 with ORs reported in Tables 2, 3).

“Table 3 should include the overall p value …” We now include all the p-values in table 3. (The overall p value for categorical variables with three or more levels is reported in the text, p.8).

“The sentence on the separate analyses with different binary outcomes…” We have removed all references to the analyses with different binary definitions of activities attended as this analysis had been included at the request of a previous reviewer.

“The reanalysis of the data treating health status, measured on a 4 point ordinal scale…” We have removed the mediation effect analyses. We agree with Dr. Stewart that it is better to restrict interpretations of the data to the descriptive associations, and have done so (discussion section). Consistent with the Swedish study and existing literature, we analyzed SRH as a binary variable rather than as a four-level variable (p. 4).

Minor essential:

“The estimate of the odds ratio should be included before its CI…” We have added the estimate of the odds ratio for attendance at cultural activities before its CI. This result was originally presented on page 9 and is now in the first full paragraph on page 8.

Minor discretionary:
“Suggest the removal of the word ‘linear’…” We have revised the introduction and in so doing have removed the word linear from the first sentence of the introduction.

“The reason for running 3 hierarchical models…” In this revised manuscript, we present 2 hierarchical models for each of the individual activities and Cultural Activity (Table 2), rather than the three as originally presented. In the first we adjusted for the demographic factors (gender, age, number of children, marital status and race) that are not associated with SES. In the second we further adjusted for SES and factors associated with SES (subjective social status, work status, educational attainment and income).

In conclusion, we feel that we successfully addressed Dr. Stewart’s points and therefore hope that you will consider publishing the revised manuscript.

Sincerely,

Anna Wilkinson, Andrew Waters, Lars Olov Bygren, Alvin Tarlov