Author’s response to reviews

Title: How active are women who play bingo: A cross-sectional study from the Well!Bingo project

Authors:

gemma ryde (gemma.ryde@stir.ac.uk)
Trish Gorely (trish.gorely@stir.ac.uk)
Ruth Jepson (ruth.jepson@ed.ac.uk)
Cindy Gray (cindy.gray@glasgow.ac.uk)
Ashley Shepherd (Ashley.shepherd@stir.ac.uk)
Dionne Mackison (dionne.mackison@nhs.net)
Aileen Ireland (a.v.ireland@stir.ac.uk)
Brian Williams (brian.williams@stir.ac.uk)
Marion McMurdo (m.e.t.mcmurdo@dundee.ac.uk)
Josie Evans (josie.evans@stir.ac.uk)

Version: 1 Date: 06 Mar 2017

Author’s response to reviews:

Manuscript ID: BMWH-D-16-00134

Response to Reviewer and Editors Comments

Thank you for your comments. Please find below our response to your points and indications of where manuscript adaptations have occurred.

Editor Comments:

Please represent authors' names using their full initials, not their full name, in the Authors’ Contributions section. If there are any duplicated initials, please differentiate them to make it clear that the initials refer to separate authors.
This has been changed accordingly

Reviewer reports 1:

Britni Belcher (Reviewer 1): -This manuscript employed a self-report and objective measure to describe physical activity and sedentary time in low socioeconomic Scottish women who regularly attended bingo. The authors stated the goal was to use this data for intervention development in the target population. Not surprisingly, the findings indicated that physically active time was over-reported via questionnaire compared to accelerometer data. In addition, older women were more sedentary and less physically active than younger women.

-The manuscript was well-written, however the data analysis was somewhat simple (only providing cross-sectional descriptive statistics), and prior research has already determined that these two methods of assessing physical activity and sedentary behavior do not often correspond. While I agree that it’s important to develop tailored interventions for this population, this was not expanded upon on the Discussion section and it is unclear what this analysis adds to the literature.

-Were the self-report questionnaires and accelerometer data collected over the same week? If so, it seems that the authors may be missing out on a unique opportunity to use the self-report questionnaire data to provide information on the types of physically active and sedentary behaviors that were being performed as captured by the accelerometers. This could be important because it could help target specific activities that could be encouraged (e.g. walking) or discouraged (e.g. time spent watching TV). This seems important for intervention development, which the authors state is the overall goal of the project. Suggest adding some statistics on concordance between self-reported activities and acceleration-measured time spent in each activity category.

We agree that SR and objective data are not comparable. That is why in the paper we present these results separately and have not tried to draw a comparison between them. The SR and objective data were collected on separate occasions and therefore we cannot link the data as the reviewer suggests although we would have liked to and will keep this in mind for our future research.
With regards to the discussion not linking into the intervention development aspect, this study provided the required evidence that at risks groups did exist and engaged in this setting and it allowed us to create an intervention for older SES women. Before this study, we did not know who attended the bingo clubs and whether they were even an at risk group. To ensue this is very clear, we have stated the link to intervention development again in the first paragraph of the discussion after reiterating the aims. We have also changed the end of the second para to read ‘the bingo club could be an ideal novel setting to engage them in a health intervention’, in order to bring the links to the intervention development throughout the discussion.

-Were there differences in the self-report and accelerometer-measured activity levels by health status? Was one measure more strongly associated with health status? This could be added to the analysis.

As stated, the aim of this paper was to 1) describe the socio-demographic characteristics of bingo players at the club; and 2) to assess their health status, physical activity and sedentary behaviour. Whilst we acknowledge the reviewers comment, this data was not collect to look at such relationships and we would use a different research design, approach to the sampling and data collection if this were one of the research questions. This paper is novel given the hard to reach people involved who completed the survey and a sub sample who wore accelerometers and it is this unusual setting that is the strength of this paper.

-What activities accounted for older women spending more time sedentary and less time physically active than younger women? They have time diaries, so it seems like they could get that information to possibly target specific types of activities to limit throughout the day, or to replace with light or moderate PA.

The diaries were to assess wear time and when they were are the bingo and did not look at what the reviewer has suggested so unfortunately this is not possible.

-Tables 1 and 2: there are different sample sizes for each of the items. Was this due to women not completing the questionnaire, or that they didn't report certain activities (e.g. 'Time spent sitting on a weekday' has an n=90 but 'Meeting 150 mins PA guidelines' has an n=139.

This was due to not every participant completing every question.
Reviewer reports 2:

Andrea K Chomistek (Reviewer 2): The purpose of this cross-sectional study was to report on the sociodemographic characteristics, physical activity level, and sedentary time among women in a bingo club in Scotland with the goal of potentially designing a health promotion intervention in this group.

Although the overarching goal of the project is interesting and innovative, the topic of this paper—reporting on the baseline characteristics—is not very exciting. However, this paper does provide some supporting evidence that this may be a good target population for a physical activity intervention.

Please find specific comments and suggestions below:

Background, Lines 54 - 55: "Mental health" is not a chronic condition. Please revise.

The word chronic has been removed.

Background, Line 68: 14% difference in physical activity levels is a little unclear. Is this supposed to be mean level of physical activity? Or do you mean 14% difference in the proportion meeting the physical activity guidelines?

We mean the latter. This has now been changed accordingly.

Background, Lines 74 - 75: How popular are bingo clubs in Scotland? Do a large proportion of older women attend bingo clubs?

There are not exact statistics out there on this. We know that 35.5 million people in 2010 reported gambling of some sort. We also know that bingo accounts for 12% of gambling
activities in women but they tend to link this with online bingo so we haven’t reported these things as it is not clear how many people in the population attend bingo. We understand what the reviewer is trying to get at here – will it hit a large population or not, but we are unsure what data would help support this and no be misleading so have no changed the text –we are open to suggestions though.

Methods, Line 103: "Past" should be changed to "passed"

Changed

Methods, Lines 143 - 144: What was the reason for asking them to record time spent at bingo in their wear-time diaries?

After attending the bingo for several months, it was clear that you could sit still for very long periods of time without moving so we wanted to make sure bingo sitting data from the accelerometers was not removed during accelerometer cleaning.

Results, Lines 214 - 215: Did you assess employment status?

Yes. This has now been added to Table 1 and in the results section.

Results, Lines 222 - 223: The sentence that starts with "Five women…." does not make sense. Please revise.

This has been changed to ‘Time spent in sedentary behaviour whilst playing bingo was misclassified as non-wear time in five women’s accelerometer data totalling 20.5 hours.’

Discussion, Lines 246 - 247: I think a bingo club could be an interesting place to deliver a PA intervention. However, did you in any way assess the women's level of interest in participating in
this type of intervention? They may purposely be choosing bingo because they are not interested in more active social activities.

Unfortunately we didn’t assess their level of interest at this stage of the study. We conducted focus groups prior to the intervention to gauge interest and develop an intervention and this has been reported elsewhere in the literature (in review).

Discussion, Lines 261 - 263: This probably has very little to do with the ability to find time to take part in the study given that both active and less active women were at the bingo hall. This is much more likely to do the fact that often healthier people are the ones who choose to participate in studies, particularly if they know they are health-related. These sentences should be edited to reflect this.

Agreed. This has been changed in the text.

This would very likely be an issue for an intervention as well, where the more active women would be more willing to participate.

Again I agree with this. We have now conducted the intervention so this is something we will look to report in this other paper.

Discussion, Lines 265 - 267: Perhaps, but why? Should give some rationale for this assertion.

Agreed. This line has been removed as no valid rationale could be thought of for continuing to include this sentence.

Table 1: P values cannot be 0. Please edit the p-value for marital status to p < 0.001 (or whatever the journal guidelines are for very low p-values).
Changed throughout table and text.

Table 2: Instead of reporting MET mins/week in each category, I think it would be better to simply report minutes/week or hrs/week for interpretability, particularly given that you simply assigned the same MET value to all vigorous activities and all moderate activities. This would also make it easier to compare time spent in PA to time spent sedentary.

Agreed. We were just following the protocol for the survey we used but have changed this in Table 2, in the methods and in the text results.

Also, please edit the P-value for weekday sitting so it is not equal to 0.

Changed.

If improvements to the English language within your manuscript have been requested, you should have your manuscript reviewed by someone who is fluent in English. If you would like professional help in revising this manuscript, you can use any reputable English language editing service. We can recommend our affiliates Nature Research Editing Service (http://bit.ly/NRES_BS) and American Journal Experts (http://bit.ly/AJE_BS) for help with English usage. Please note that use of an editing service is neither a requirement nor a guarantee of publication. Free assistance is available from our English language tutorial (https://www.springer.com/gb/authors-editors/authorandreviewertutorials/writinginenglish) and our Writing resources (http://www.biomedcentral.com/getpublished/writing-resources). These cover common mistakes that occur when writing in English.

Editorial Policies

Please read the following information and revise your manuscript as necessary. If your manuscript does not adhere to our editorial requirements, this may cause a delay while this is addressed. Failure to adhere to our policies may result in rejection of your manuscript.
In accordance with BioMed Central editorial policies and formatting guidelines, all manuscript submissions to BMC Women's Health must contain a Declarations section which includes the mandatory sub-sections listed below. Please refer to the journal's Submission Guidelines web page for information regarding the criteria for each sub-section (https://bmcwomenshealth.biomedcentral.com/).

Where a mandatory Declarations section is not relevant to your study design or article type, please write "Not applicable" in these sections.

For the 'Availability of data and materials' section, please provide information about where the data supporting your findings can be found. We encourage authors to deposit their datasets in publicly available repositories (where available and appropriate), or to be presented within the manuscript and/or additional supporting files. Please note that identifying/confidential patient data should not be shared. Authors who do not wish to share their data must confirm this under this sub-heading and also provide their reasons. For further guidance on how to format this section, please refer to BioMed Central's editorial policies page (see links below).

Declarations

- Ethics approval and consent to participate
- Consent to publish
- Availability of data and materials
- Competing interests
- Funding
- Authors' Contributions
- Acknowledgements
Further information about our editorial policies can be found at the following links:

Ethical approval and consent:

http://www.biomedcentral.com/about/editorialpolicies#Ethics

Availability of data and materials section:

http://www.biomedcentral.com/submissions/editorial-policies#availability+of+data+and+materials