Author’s response to reviews

Title: Factors associated with alcohol consumption and prescribed drugs with addiction potential among older women and men – The Nord-Trøndelag Health Study (HUNT2 and HUNT3), Norway, a population-based longitudinal study

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Version: 1 Date: 04 Mar 2019

Author’s response to reviews:

The Editor in Chief
Tovah Honor Aronin

Dear Dr Aronin,

Please find enclosed a copy of the manuscript “Factors associated with alcohol consumption and prescribed drugs with addiction potential among older women and men – The Nord-Trøndelag Health Study (HUNT2 and HUNT3), Norway, a population-based longitudinal study”. We hope you will reconsider this research article for publication in BMC Geriatrics.

There are no prior interactions with BMC Geriatrics regarding the resubmitted manuscript. The article has not been published or submitted elsewhere, and the study was approved by the Regional Committee for Medical Research Ethics, Norway. The authors have contributed to the conception, conduct and analyses of the study and preparation of the manuscript according to the requirements of your journal and the Vancouver conversion.

We appreciated the review. The revision has now been completed. The entire document with the reviews from the editor and the reviewers is copied below, and our response of the review is written in red. We are looking forward to receiving a response from you regarding our manuscript.
Dear Mrs Tevik,

Your manuscript "Factors associated with alcohol consumption and prescribed drugs with addiction potential among older women and men – The Nord-Trøndelag Health Study (HUNT2 and HUNT3), Norway, a population-based longitudinal study" (BGTC-D-18-00666) has been assessed by our reviewers. Based on these reports, and my own assessment as Editor, I am pleased to inform you that it is potentially acceptable for publication in BMC Geriatrics, once you have carried out some essential revisions suggested by our reviewers.

Their reports, together with any other comments, are below. Please also take a moment to check our website at https://www.editorialmanager.com/bgtc/ for any additional comments that were saved as attachments. Please note that as BMC Geriatrics has a policy of open peer review, you will be able to see the names of the reviewers.

If you are able to fully address these points, we would encourage you to submit a revised manuscript to BMC Geriatrics.
Once you have made the necessary corrections, please submit a revised manuscript online at:

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We request that a point-by-point response letter accompanies your revised manuscript. This letter must provide a detailed response to each reviewer/editorial point raised, describing what amendments have been made to the manuscript text and where these can be found (e.g. Methods section, line 12, page 5). If you disagree with any comments raised, please provide a detailed rebuttal to help explain and justify your decision.

Please also ensure that your revised manuscript conforms to the journal style, which can be found at the Submission Guidelines on the journal homepage.

A decision will be made once we have received your revised manuscript, which we expect by 15 Mar 2019.

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We look forward to receiving your revised manuscript and please do not hesitate to contact us if you have any questions.

Best wishes,

Deepa Nath, on behalf of:

Tovah Honor Aronin, Ph.D.
BMC Geriatrics
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Technical Comments:

Editor Comments:
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Reviewer reports:

Jonathan Howland (Reviewer 1):

The authors have addressed the issues noted in my initial review.

Reviewer 2 (Reviewer 2): 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?

Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

Statistics - Is the use of statistics in the manuscript appropriate?

Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?
Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: This is a straightforward study of a repeat assessment of a large cohort of Norwegian citizens with respect to their drinking and prescribed drug use. The data are complex, but the discussion is (for the most part) clear. The study has potential clinical implications that could be drawn out more.

ADDITIONAL REQUESTS/SUGGESTIONS:

They should explain the delay. So, consideration will be needed of whether a more current survey might produce different data.

We appreciated this suggestion and have added to the discussion section under “Strengths and limitations” from line 524, page 23:

“Moreover, HUNT2 was conducted in 1995-1997 and HUNT3 in 2006-2008. Thus, a more current survey might have produced different data. The fourth health study in Nord-Trøndelag (HUNT4) (2017-2019) will give us new opportunities to investigate the trend in use of alcohol among older adults in Norway”.

As the final sample included very few participants of 80+ years (and a very low proportion of those invited) perhaps they should be excluded from the analyses.

We understand the remark from the reviewer regarding exclusion of participants who were 80 years or older in HUNT2. In total only 84 of 2783 individuals who were 80 years or older when they participated in HUNT2 participated in HUNT3. We have conducted new analyses comparing the participants 80 years and older with those who were 79 years or younger when they participated in HUNT2 and later participated in HUNT3 and responding to the alcohol question. We found no significant difference in frequent drinking (≥ 4 days/week) or the possible combination of frequent drinking and use of drugs with addiction potential between these two age groups in HUNT3. However, the 80+ year’s age group used more often drugs with addiction potential. We assume that keeping or excluding the participants 80 years or older in HUNT2 responding in HUNT3 will not affect the findings in our study. To illustrate the broad variation in home-dwelling older adults in Norway we would like to keep them in the analysis, although the low number of participants.

In the method section under “Study setting, data sources and participants”, we have added from line 185, page 8:

“Very few participants who were 80 years or older in HUNT2 participated in HUNT3 (see Table 1). As they did not differ compared to those 79 years or younger in HUNT2 regarding frequent
drinking or the possible combination of frequent drinking and use of drugs with addiction potential in HUNT3, they were included in our analyses”.

In the discussion section under “Strengths and limitations”, we have added (line 530, page 23):

“In addition, very few person 80 years or older in HUNT2 participated in HUNT3. These participants were kept in our analyses as they did not differ compared to those 79 years or younger regarding frequent drinking or the possible combination of frequent drinking and use of drugs with addiction potential.”

Please explain why you dichotomized the outcome variables."

Consistent with previous research (i.e. Andersen 2011 et al., Barnes 2010 et al., Du 2016 et al., Li 2017 et al., Qato 2015 et al.), we dichotomized the outcome variables and used logistic regression analyses to investigate factors associated with alcohol consumption and drugs with addiction potential.

In our study, we chose to use a categorical variable regarding drinking frequency. The values in the drinking frequency question could not be meaningfully ordered as answer such as “not at all the last year” and “never drink alcohol” was included as possible values. Thus, we dichotomized the variable and defined the highest drinking frequency value (4-7 days a week) with value 1 and those drinking with lower drinking frequency or non-drinking with value 2. In the method section under “Alcohol consumption in HUNT2 and HUNT3”, we have explained why the outcome variable “drinking frequency” was dichotomized (line 209, page 9):

“As drinking frequency was a categorical variable it was dichotomized in order to distinguish between those with high drinking frequency and those with lower drinking frequency or non-drinking”.

In our study, we also wanted to distinguish between participants who used drugs with addiction versus no use. Thus, this variable was also dichotomized. In the method section under “Drugs with addiction potential in HUNT2 and HUNT3”, we explained why use of drugs with addiction potential was dichotomized (line 228, page 10):

“In order to distinguish between use of drugs with addiction potential versus no use, the prescription of drugs with addiction potential was categorized as a dichotomized variable”.

References:


**Results**

For the data shown in Table 4, it is unclear whether the combined use people are also included in the single-use analyses.

Participants included in outcome 3 (possible combined use) are drawn from participants included in outcome 1 and outcome 2 (the single-use analyses). This information is added to the method section under “Statistical analyses” from line 305, page 13:

“The participants included in the assessment of outcome 3 (possible combined use of frequent drinking and use of drugs with addiction potential) were drawn from those included in outcome 1 (frequent drinking) and outcome 2 (drugs with addiction potential)”.

Also with respect to Table 4, the text refers only to the unadjusted data. The unadjusted data are a big distraction when trying to make sense of Table 4. Consider listing Table 4 as a Supplementary online file and showing only the adjusted data here.

Thank you for this comment. Table 4 is large and we agree that the unadjusted data in Table 4 may be a distraction. Thus, we have made a supplemental table (see Supplemental Table 2) were only the unadjusted analyses is showed. The unadjusted data from Table 4 in the result section is removed, and the following is added from line 340, page 15:

“Unadjusted results are shown in Supplemental Table 2”.

**Discussion**

A table summarizing the factors associated with each of alcohol/drugs/combination would be helpful as an overview. Without this there is too much information to hold easily in mind. In
particular, I find it difficult to relate the results for combined use to those for single alcohol/drug use.

We have made a table summarizing the factors associated with alcohol, drugs with addiction potential and the possible combination of these substances. This table is added to the main manuscript (see page 44). Editor should judge whether this table should be included in the main manuscript, as this table repeats information already given in Table 4 and in the text. Table 4 is also simplified.

The section on limitations should also consider the age of these data.

Thanks for this suggestion, and as already mention this is included in the discussion section under “Strengths and limitations” from line 524, page 23.

The Discussion is clear but complex. It would benefit from a longer paragraph at the end summarizing the main take-home messages for physicians to consider in relation to their older patients. (This would also be helpful in the Abstract.)

In the conclusion in the Abstract (line 77, page 4) and in the Conclusion at the end of the manuscript (line 559, page 24), we have added a main take-home message for health care professionals:

“Health care professionals need to be aware of use of alcohol among older adults using drugs with addiction potential”.

Note: This reviewer report can be downloaded - see attached pdf file.

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- Availability of data and materials
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