Author’s response to reviews

Title: Predicting hazardous drinking in late adolescence/young adulthood from early and excessive adolescent drinking - A longitudinal cross-national study of Norwegian and Australian adolescents

Authors:

Froydis Enstad (froydis.enstad@fhi.no)

Tracy Evans-Whippb (tracy.evanswhipp@mcri.edu.au)

Anne Kjeldsen (anne.kjeldsen@fhi.no)

John Toumbourou (john.toumbourou@deakin.edu.au)

Tilmann von Soest (t.v.soest@psykologi.uio.no)

Version: 2 Date: 28 Feb 2019

Author’s response to reviews:

Response to editor and reviewer comments

We would like to thank the editor and the reviewer for their work evaluating our manuscript. We greatly appreciate the comments made by the reviewer and found them very helpful for improving the paper. Below is a point-by-point response to the reviewer comments. We refer to section, page and line in the new resubmitted manuscript where you will find the amendments made. The new text in the manuscript is further highlighted in red.

Response to reviewer

1) The final sample from Norway included around 30% of the participants in the first wave. Besides, the attrition analyses conducted found that the dropout was predicted by low maternal education level and being male. This is an important limitation, not only because the representativeness of the sample is at stake, but also because gender and education level are related to alcohol drinking and this fact could have influenced the results found and the cross-country comparisons.

Response: We agree that it is important to present in greater detail the issue of attrition in the NOR sample and how attrition may bias our results. To address this issue, we have now added a statement in the methods part of the manuscript, where we clearly state the proportion of
participants included in our analyses relative to all families that were invited to participate in the study (30.4%) (Methods, p. 10, lines 201-202). Moreover, we also discuss in greater detail the issue of selective attrition in the discussion part. In particular, we emphasize the low proportion of participants included in our analyses and we discuss that findings related to gender and maternal education have to be interpreted with caution. We also refer to a study where data from the NOR sample and simulation data were used to examine the effect of selective attrition on estimates of the association between variables (Strengths and limitations, p. 24, lines 536-540, 545-549), showing that selective attrition leads to biased estimates of means of variables while estimates of associations between variables were not affected even with selective attrition and high attrition rates.

2) The authors should discuss the different finding related to the family variables. As stated in the previous comment, dropout in Norway was higher in the low maternal education level and it could have driven the results.

Response: We agree that it is important to note that some of the different results of the family variables may be driven by the overrepresentation of adolescents whose mothers have higher levels of education in the NOR sample. In the revised manuscript, we state more clearly that the different findings related to the family variables needs to be interpreted with caution (Strengths and limitations, p. 24, lines 545-546). See also our response to point 1 above.

3) Most of the results compare the findings in both countries. However, most variables were created from different questions in both countries and are not easily comparable. In this sense, it is important that the authors highlight it and do not emphasize so much these differences.

Response: We fully agree with the reviewer that the results are not fully comparable because the NOR and AUS studies were designed as two separate studies, with variables assessed differently. Therefore, in the revised manuscript we have emphasised in several places that most variables are not easily comparable. In particular, we have re-written the results part where we describe the frequency of early drinking behaviours in both samples (abstinent, EOD and EOE), and emphasize that these measures are not directly comparable across samples in the strengths and limitation section (p. 15, lines 338-340, p. 22, lines 501-503). Moreover, on p. 16 we discuss in greater detail whether the AUDIT score in the two samples is comparable (see our response to point 4 for a detailed response). We have also made amendments in several other places in the
manuscript, so that this point becomes clearer (Discussion p. 19, lines 416-417, Strengths and limitations p. 22, line 499-501). Finally, we have added a note in all tables, stating that variables are measured differently in the Norwegian and Australian samples and values are therefore not directly comparable.

4) The question related to excessive drinking is different in both countries: 5 drinks in Norway and 6 drinks in Australia. When comparing the findings related to this variable and "drinking larger amounts" variable, the authors should discuss in more detail how this fact is influencing the findings. Are the results in both countries comparable?

Response: We agree with the reviewer that it is important to consider the potential impact of the different wording of one of the items in AUDIT in the NOR and AUS sample. We have addressed this issue in more detail in the revised manuscript. To examine whether the higher proportion of adolescents classified as “hazardous drinkers” in the NOR sample compared to AUS may be driven by the difference in wording we now also compare AUDIT scores between the NOR and AUS sample when excluding Item 3 from the AUDIT. The difference between the samples did not change substantially (mean score AUDIT 10 items: NOR: 7.59 versus AUS: 7.13; mean score AUDIT excluding item 3: NOR: 6.07 versus AUS: 5.68). Taken together, this indicates that the change of wording in the NOR sample is not alone responsible for the higher proportion of NOR late adolescents/young adults (46.8%) classified as “hazardous drinkers” compared to AUS late adolescents/young adults (38.9%). We have accounted for this in the revised manuscript (Results, p. 16, lines 343-347).

5) I suggest the authors to add a table summarizing the sample characteristics of the sample from Norway and the one from Australia.

Response: We agree with the reviewer that it is of value to include a table summarizing sample characteristics. We have done so in the revised manuscript; see Table 1. We have also described some of the results in the Results section (p. 15, lines 332-336).

6) As in table 1 the authors are estimating the prevalence of alcohol use, it would be advisable to include the 95% confidence intervals for each variable. It is possible that in some cases the differences are not statistically significant.
Response: We agree with the reviewer that it is of value to include 95% confidence intervals in Table 1. We have done so in the revised manuscript (see Table 2, and Results, p. 16, lines 342 – 343).

7) In table 2, there seem to be a wrong number in the Australia sample for the variable alcohol and drug use in the family.

Response: Thank you for pointing this out. We have corrected the number in the AUS sample for the variable alcohol and drug use in the family (Table 3).

8) In table 3, there is a word missing in the title. It should say "hazardous drinking".

Response: Thank you for pointing this out. We have added the missing word in the revised manuscript (Table 3, title).

9) I suggest combining tables 2 and 3 to have the crude and adjusted models in the same table and, therefore, facilitate the comparisons to the readers.

Response: We have combined Tables 2 and 3 in accordance to the reviewer’s suggestion (see Table 3).