Author's response to reviews

Title: Predictors of onset of cannabis and other drug use in male young adults: Results from a longitudinal study

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Re-Revision of Manuscript for BMC Public Health

Dear Editor, dear Reviewers,

Thank you very much for the helpful comments and recommendations we received with regards to our revised manuscript “Predictors of onset of cannabis and other drug use in male young adults: Results from a longitudinal study”.
We have addressed all of your comments (see following pages) and revised our manuscript considering your suggestions.

We look forward to hearing from you.

Yours sincerely,

Severin Haug
Reviewer 1: Maria Neumann

As a discretionary revision I still think the manuscript would improve by reflecting on the gender aspect: Is substance use onset especially relevant for males? Is the sample male-specific only because there are no women in the army or is there also a rationale to focus on males? What are implications for further research?

Author Response:

As stated in the introduction section, the use of drugs such as cannabis, cocaine, amphetamines, and opiates is more prevalent among males than females. Because of this and because only young men have to visit the army recruitment centres, the sample is male-specific. Within the limitation section we stated that “...(1) that only men were included, as only young men have to visit the army recruitment centres, and that the results could not be generalised to young women,... “

At the end of the discussion section on page 14 we added the following sentence “Further research should address whether the predictors identified are male-specific or whether they could be generalised to young male and women.”
Reviewer 2: Peter Gates

Minor Essential Revisions
1) The importance of the gateway and common liability models is lost in the abstract and may help promotion of the results if these terms are used in the title or abstract.

Author Response:

Thanks.
Within the Background section of the abstract we added “Furthermore, we explored how far the gateway hypothesis and the common liability to addiction model are in line with the resulting prediction models.”
Within the Conclusions section of the abstract we added “The results provide evidence for both the gateway hypothesis and the common liability to addiction model and point to further variables like depressiveness or practising of religion that might influence the onset of drug use.”

2) The validity and/or reliability of the included measures is not provided. We are provided with references for some measures but it would be helpful if some information was provided in regards to the current study - at least test/retest reliability. Some measures are simply referred to as "a previously developed instrument". Overall I would hope for some greater information on the choice of the included measures (other than that they are what is used in the C-SURF) or information on the measure’s ability to accurately assess the chosen predictors.

Author Response:
If available, we included information on the reliability and validity of the instruments used (see section “Measures” on pages 6-10. However for some measures, no such data were available. Therefore, we added to the limitations section on page 15, 1st paragraph “…(5) that some of the instruments used have not been validated or for the sake of brevity short-forms or single items of validated instruments were used…”

3) In the methods, participants, section the authors should include the time periods of recruitment.

Author Response:
Thanks. In the methods, participants section we added “Enrolment in the study took place between August 2010 and November 2011.”
4) In the discussion section the authors need to make greater effort to express the importance of this study. As it stands all the reader is presented with is a repetition of the results and single lines on how the results are in line with previous study. Important information on how the results do and don’t reflect the gateway and common liability models is lost and only very briefly mentioned. Which model is best? Why? Maybe neither cover it?

5) Similarly, the discussion must make more of the predictive factors common to both cannabis and other illicit drug use and those which were individual to one or the other. This warrants some discussion other than the provided listing of results.

**Author Response to 4, 5 and 7:**
Within the discussion section on page 14 we added a paragraph on the implications of our study for targeted interventions and for the development of screening measures.

“To date, the majority of interventions for prevention of drug use of young people are provided on the level of the community, school, or school class and are not targeted to specific population groups [61, 62]. Only few interventions are targeted to specific risk groups, mainly defined by current cigarette, alcohol or cannabis use and therefore reflecting the risk factors defined by the gateway hypothesis or are targeted to ethnic minorities or socioeconomically disadvantaged groups. Taking into account the comprehensive set of variables investigated and the result that the explained variance of 11% of the final prediction models was relatively poor, there is still justification for non-targeted interventions. Based on our results there is also justification for using variables of substance use to target intervention measures. Among the variable categories considered, previous substance use in general and cannabis use in particular, showed the best predictive value for the onset of drug use other than cannabis with R2 = .08 and explains the majority of the variance of the overall model. However, for the prediction of onset of cannabis use, variables of the social context (R2 = .04) and personality factors (R2 = .04) seem to be equally important as substance use (R2 = .03). Consequently, personality and social context variables like sensation seeking, peer pressure, or parental divorce are variables which might additionally be considered in the development of screening instruments for persons at risk for cannabis use.

6) The authors should provide information on which predictor variables were most impacted by a loss of statistical power.

**Author Response:**
Within the limitations section (page 15, limitation No. 6) we added the following sentence: “The variables housing situation, religion, parental situation and alcohol use in the previous 12 months were most impacted by a loss of statistical power.”

7) Along with points 4 and 5, the authors should provide some discussion on available preventive measures for drug use and how these do or do not currently address the identified predictors. The brevity of the provided reference in the conclusions section undermines the importance of the study.
Discretionary Revisions

1) The common liability model is said to emphasise psychological and lifestyle characteristics but yet the authors mention that the framework has "no bearing on identifying youths who are at risk for drug consumption". How can this be?

Author Response:

Thanks. The meaning of the sentence was unclear. The sentence was rewritten as follows (page 4, second paragraph): “In this framework (the common liability model), the ‘gateway’ order of drug use onset is defined opportunistically by substance availability [23].”
Reviewer 3: Monique Delforterie

Minor Essential Revisions:
In the abstract, parental monitoring is still used, while this is changed into parental knowledge in the text, which is the best description for the measure that was used.

Author Response:

Thanks! We changed “parental monitoring” into “parental knowledge of peers and the whereabouts” in the abstract.