Reviewer's report

Title: Loneliness and health risk behaviours among Russian and U.S. adolescents: a cross-sectional study

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Reviewer: Bryndis Bjork Asgeirsdottir

Reviewer's report:

The aim of this study was to investigate the link between loneliness and health risk behaviours, including substance use, sexual risk behaviour and violence among U.S. and Russian adolescent boys and girls. The questions posed by the authors are quite well defined (see comments below on the lack of hypothesis). The study uses a cross-sectional design within a school setting. The methods of the study are appropriate, quite well described and the data seem to be sound. However, there are some important aspects of the methodology, measures and statistical analysis that need better clarification (for detail see comments below). Overall the writing is very good. The introduction gives a brief overview of the literature (see comments below on how the introduction could be improved by going into some more detail and putting the study in a more theoretical context). The discussion and conclusions are well balanced and main limitations are discussed. This is a study of public health interest.

Major Compulsory Revisions

Introduction

1. The theoretical underpinning of the study could be strengthened.

2. It seems from the literature that the link between loneliness and substance use has been established. Did these studies control for depression or other emotional problems? Furthermore, are there no studies on the link between loneliness and sexual health outcome or aggression/violence? None are cited in the introduction (at least not specified as such) but in the discussion chapter there are studies cited linking loneliness to aggression and weapon carrying. Those studies could be discussed more clearly in the introduction and preferably other studies/theories giving a reason to study these particular health risk behaviours.

3. How are the gender differences and country differences which have been observed (as mentioned in the introduction)? What would these results say about hypothesis for this study?

4. No hypothesis are put forward. Why is that? It would improve the introduction and sharpen the focus of the study if the introduction would lead to hypothesis.

Method

5. In the method it is stated that “data were collected from a representative sample”. How is the sample representative? Please explain in more detail.
6. Only measures of loneliness and depression are cited. From where are the other measures? There is no information on validity or reliability of the measures used in the study.

7. Why was the depression scale used with a cut of score? Is it not a screening instrument? Are the results the same if you use the depression scale as a dimension in models 3?

8. Why are these control variables selected? Reasons for this selection with citations to studies are needed.

9. How were the missing values of parental education handled in the logistic regression? Was it handled as the third category in a ranking order, i.e. low, high, missing?

10. How many missing cases were there for the main variables under study? They seem to have been close to 900, which is one third of the sample. Please explain and justify with some missing data analysis how these large missing numbers did not bias the analysis.

Essential Minor Revisions

Results

11. In second sentence and third there is no significant testing presented along with the interpretation of differences between groups (i.e. differences between US and Russia in background variables and gender differences).

Discussion

12. The second sentence in the discussion needs better clarification.

13. In paragraph three, line two needs more clarification. As mentioned above this literature also seems to be important for the introduction.

14. Potential problems with missing data should be added to the limitation chapter.

Discretionary Revisions

Abstract

15. In the abstract results for different kinds of substance use might be described more specifically. Also it would seem important to inform about that the other health risk behaviours were not sig. associated with loneliness (except for pregnancy among Russian)

16. In conclusion, it is stated that loneliness is associated with adolescent health risk behaviours among boys and girls in both Russia and US. This could be stated more clearly as health risk behaviours of substance use (this also relates to the conclusion chapter in the Discussion).

Discussion

17. The second sentence in the discussion needs better clarification.
18. In the discussion on differences between U.S. and Russia, why should there be differences between these cultures? Also, with regards to the result of lonely girls in Russia being more likely to having been pregnant, what can explain these results?

19. In the discussion on differences between U.S. and Russia, why should there be differences between these cultures? Also, with regards to the result of lonely girls in Russia being more likely to having been pregnant, what can explain these results?

20. Studies have indicated that depression and anger co-occur to a great extent and that if taken both into account; anger is a stronger predictor of externalizing risky behaviours including substance use than internalizing problems of depressed mood (Asgeirsdottir, Sigfusdottir, Gudjonsson & Sigurdsson, 2011; Pardini, Lochman, & Wells, 2004; Swaim, Oetting, Edwards, & Beauvais, 1989). Based on these findings it would be of importance to investigate if loneliness was a predictor of these behaviours after controlling for both anger and depression.

21. In the limitations, the authors mention that the results cannot be generalized countrywide, is it therefore not questionable to refer to U.S. adolescents and Russian adolescents through the whole paper?


Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests'