Author’s response to reviews

Title: Is involvement in school bullying associated with increased risk of murderous ideation and behaviours among adolescent students in China?

Authors:

Puyu Su (supuyu@ahmu.edu.cn)
Geng-Fu Wang (wanggengfu123@foxmail.com)
Huan He (hhe7@jhu.edu)
Azhu Han (hanazhu0918@126.com)
Guobao Zhang (1435350643@qq.com)
Nuo Xu (1903845744@qq.com)

Version: 2 Date: 27 Feb 2019

Author’s response to reviews:

Dear Editor,

We are very pleased to learn from your comments for our manuscript titled “Are adolescent students involvement in school bullying associated with increased risk of murderous ideation and behaviors in China?” submitted to BMC Psychiatry, (#ID BPSY-D-18-00216R1). We appreciate your careful reading of our manuscript, kind comments and valuable suggestions very much. We have carefully considered the comments and revised the manuscript according to the revision comments.

Below are our point-to-point responses to Reviewers’ comments. The relevant changes have made in the original manuscript according to the comments of Reviewer. In addition, some grammar and spelling errors have also been corrected.

Technical Comments:

1. Please include 'Declarations' heading in the Declarations section.

Responses to point: Thank you for your kind suggestions. We have included 'Declarations' heading in the Declarations section.
Reviewer reports:

Jun Sung Hong (Reviewer 1): The authors did an excellent job with the revisions and the manuscript is acceptable for publication.

Responses to point: We appreciate your careful reading of our manuscript, kind comments and valuable suggestions very much.

Muyu Lin (Reviewer 3): 1. Page10 line24-32: I don't understand the purpose of the two examples providing here. If the authors want to state that juvenile crimes is prevalent, maybe it would be better to provide some data (e.g., prevalence of juvenile crime, school violence, etc.) instead of using two independent events where the murderers had already past age of 18 (especially these two events did not seem to be related to bullying)?

Responses to point 1: Thanks for your kind comments. We deleted those two examples, and provided the juvenile crimes occurrence in China based on the reports from National Bureau of Statistics of China.

Data the from National Bureau of Statistics of China showed that there was a total of 55,817 juvenile crime cases in 2013. In 2013, a study by Lu et al. surveyed a nationally representative sample including 990 juvenile offenders and revealed that 2/3 of juvenile offenders were aged from 14 to 16 years old, and 6.6% of juvenile offenders were the crime of intentional homicide.

2. Page 12, line40-48: Hypothesis 2 : Secondly, we further examined the physical or behavior change due to school bullying and their association with murderous ideation and behaviors, due to that previous studies showed factors like depression and poor sleep quality occurred more frequently after experienced certain types of school bullying. —— Maybe I have missed this, but I don't think the study measured any physical or behavior changes due to school bullying?

Responses to point 2: Thank you for concern. We have rewritten this expression in the revised manuscript.

Secondly, we further examined the association between numbers of involved in school bullying and murderous ideation and behaviors, due to that previous studies showed that depression and poor sleep quality occurred more frequently after experienced multiple types of school bullying.

3. Similar to Reviewer 2, I am also surprised by the number "7.2%" of attempted murder. It would be better to have a real juvenile violence rate in similar area to compare with and
interpret the data. Could it be any misunderstanding of the item (d) (Page 15 line 1-2) ? I think the author tried to access whether there was any "action of murder", but the item reads like any "trying" of murder would count (maybe overlapping with preparation or threaten)?

Responses to point 3: Thank you for your kind concern. We carefully checked our results and found that some inconsistent findings occurred between Table 1 and Result section. In fact, the prevalence of murderous ideation, plans, preparation, and attempts among our study participants were 9.9%, 2.8%, 1.3%, and 0.6 %, respectively. We feel deeply sorry for our negligence. We have revised those typo errors in the revised manuscript.

We provided the juvenile crimes occurrence in China based on the reports from National Bureau of Statistics of China in the Introduction section. However, we cannot obtain a real juvenile violence rate in China. Two main reasons were as follows: (1) we are unable to get the accurate total number of juvenile populations in China; and (2) most middle and high students aged below 18 years old, some violence events might not be included in the reports if those events did not cause severe consequences.

We have described the “attempts” in the questionnaire given to the students.

The questions for measuring adolescent murderous ideation and behaviors (i.e. ideation, plans, preparation, and attempts) were as follows: (a) “Have you ever thought to end someone’s life in the past six months (i.e. have the thoughts to take someone’s life)?” (b) “Have you ever planned to end someone’s life in the past six months (i.e. carefully thought some specific way or step to take someone’s life)?” (c) “Have you ever prepared to end someone’s life in the past six months (i.e. have prepare some specific tool or goods to end someone’s life)?” (d) “Have you ever attempted to end someone’s life in the past six months (e.g. poisoning, stabbing with a sharp knife, strangling)?”

Additionally, we recruited 156 middle and high school students to participate in a test-retest of the Murderous Ideation and Behaviors Questionnaire before the survey began. The items assessing murderous ideation and behaviors showed suitable reliability, with the Cronbach's alpha values calculated for the 156 students sample ranging from 0.79 to 0.92 and the Kappa values ranging from 0.81 to 0.87. Thus, we considered that the middle and high school students could understand the survey items.

Further, we aimed to access whether there was any "action of murder" in this sample of middle and high school students. The questions assessing murderous ideation and behaviors were completed by self-reported. Due to the investigation was anonymous, the participants didn’t afraid any legal consequences when they complete the questionnaire. Additionally, the participants who were all present students, thus the prevalence rate of murderous attempts (i.e., 0.6%) refer to those participants who had murderous attempts experiences but not actually murder, and didn’t make severe legal consequences. In fact, it was similar to the analysis of suicide attempts in general population, which had taken suicide attempts experiences but didn’t
successes. Of course, if those who had suicide of murder attempts successfully, they wouldn’t have been investigated and they have beyond the range of a general sample research. A method combined the registered-based and self-reported data sources are needed to better understand the true rate of murderous ideation and behaviors among adolescents.

4. Statistical Analysis, page 17: I suggested adding more details of the statistical methods, e.g., what were the predictors of MLR, did authors conduct a set of MLR, or did several predictors enter the model together.

Responses to point 4: Thank you for your kind suggestions. We added more details of the statistical methods in the Statistical Analysis Section.

Multivariate logistic regressions contained a single predictor were preformed to explore the association between school bullying and murderous ideation and behaviors with the adjustment of covariates. Each type of school bullying perpetration (yes vs. no) and victimization (yes vs. no), the number of penetration and victimization types involved (categorical variable or continuous variables), the frequency of penetration or victimization (categorical variable or continuous variables) and role of involvement in school bullying were coded as predictors in each of single predictor model.

5. I agree with the reviewer#2, point 3, that it is very unlikely there will be a causal-consequence relationship between bullying and homicide. Since that the authors also discuss this in the limitation section, I further suggested the author to revise other interpretation in the discussion which hints such relationship. E.g. "(abstract/conclusion) Prevention towards school bullying might have an impact on reducing adolescent murder intention and behaviors." "(page22 line24-30) The study results indicating that involvement in school bullying …, which may lead to murders if lack of interventions." Or (page25 line40-54) such implications are also questionable. etc.

Responses to point 5: Thank you for your kind comments. We have rewritten those expressions in the revised manuscript.

6. Judged from the numbers reported in table 2-4, it seems that bullies and bully-victims has a stronger association with homicidality than pure-victims? Maybe this could be an interesting point to discuss?
Responses to point 6: Thank you for your suggestions. It is interesting to find that bullies and bully-victims have a stronger association with murderous ideation and behaviors than pure-victims. We have discussed this interesting point in the Discussion Section.

Both bullies and victims have increased odds of all four types of murderous ideation and behaviors, and these associations are amplified in those who both conducted bullying and received bullying. Previous studies suggested that adolescents who are involving in bullying have deficiencies in social information processing patterns. Both bullies and victims are tended to interpret others’ languages and behaviors as hostile and bully-victims tend to act like a bully rather than as a victim. Further, victims may carry weapons for self-protection, whereas bullies may carry weapons to intimidate others. Studies also suggested that bully-victims are at the highest risk of carrying weapons compared with bullies or victims. However, the underlying mechanisms of the role played in bullying and murderous ideation and behaviors were complex. We will explore those mechanisms in the future.

7. Please proofread the article to enhance the readability.

Responses to point 7: Thank you for your kind concern. We have revised our manuscript carefully for many times, at the same time we asked a native speaker to revise the article.