Reviewer's report

Title: Child maltreatment and hypertension among young adults

Version: 2
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Reviewer: David Bennett

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The authors address an important question, the extent to which child maltreatment is related to elevated blood pressure in adulthood. The authors use a large longitudinal data set and actual blood pressure data rather than self-reports of BP in addressing the question, examine multiple types of maltreatment, and examine gender differences. Specific comments follow.

Major Compulsory Revisions

Methods:
1. The authors state that participants’ medications were recorded, but it is not clear what was done with this information – were participants on BP medication included in the high BP group? Excluded from the data analysis?

2. The frequency of maltreatment items appears to cover a fairly broad range (e.g., 0 = never to 5 = more than 10 times). Can the authors provide a rationale as to why they used dichotomous variables rather than the more continuous measures of maltreatment (especially since, in addressing how findings differ from their study and that of Riley and colleagues in the Discussion section they note that Riley et al. found abuse frequency to be associated with a higher risk of hypertension)?

3. Similarly, covariates (e.g., current smoking; physical activity; alcohol use; obesity; depressive symptoms) were dichotomized rather than examined as continuous variables. Given that dichotomizing continuous variables often reduces predictive power, a rationale for doing so is needed.

Minor Essential Revisions

Introduction:
1. On page 4, the authors emphasize the importance of examining gender differences in the relationship between maltreatment and high BP due to differences in prevalence of child maltreatment as a function of gender. A more relevant rationale, however, would be citing any research that might indicate different physiological outcomes of maltreatment as a function of gender.

2. The authors state on p. 4 that prior research has not examined “whether health behaviors or depression, both of which are well documented outcomes related to childhood maltreatment and risk factors for hypertension, explain the relation between child maltreatment and hypertension.” Given that “health behaviors” is a
very broad construct, it would be useful if the authors could be more specific (e.g., focusing on the specific health behaviors assessed in the NLSAH). In addition, inclusion of citations for this sentence would be helpful.

3. On a minor note, the authors state that “We focus on abuse that occurred early in childhood, prior to age 11” but I believe their focus is on the broader construct of maltreatment given that they examine neglect.

4. A sentence explicitly stating that high BP in early adulthood is a risk factor for later cardiovascular disease is needed.

Methods:

5. The authors state that the mean participant age at wave 4 is 29; inclusion of the range and SD would be of interest (p. 5).

6. Are definitions of child maltreatment (e.g., child neglect = having parents or adult caregivers not taken care of their basic needs such as keeping you clean or providing food or clothing) summations of the actual questions or the verbatim text presented to participants (in which case putting the definitions in quotes would be helpful to identify it as the verbatim wording).

7. Can the authors present any data as to whether participants who were included in the wave 4 follow-up differed from those who did not participate on any of the earlier demographic or predictor variables?

Results:

8. The sentence (p. 8) reading “No statistically significant differences were noted on the relation between child Men who experienced neglect…” is confusing.

9. The authors present a number of findings in describing Figure 1, sometimes stating that a relation was significant, sometimes that differences were not statistically significant (but perhaps were trends?)(p. 8). Inclusion of p values would be helpful for readers to more fully interpret the study findings.

Discussion:

10. A brief, more explicit statement as to what the authors mean by “limited violence assessment” would be helpful (p. 10). Likewise, on p. 11 the authors refer again to “violence exposure” in the limitations section, though throughout the rest of the manuscript they refer to “physical maltreatment” - are the authors suggesting that their measure of physical maltreatment was limited in scope as a measure of physical maltreatment, or that it would also have been helpful to include a measure of violence exposure (which typically includes witnessing violence, not necessarily being a direct target of the violence)?

11. A brief discussion of clinical implications for the study findings would be of interest.

Discretionary Revisions

Discussion:
1. The equal prevalence of sexual abuse (5% for both genders) is somewhat inconsistent with most studies, which find a greater prevalence among females. Do the authors have any suggestions as to why the prevalence did not differ as a function of gender in their study?

2. I would suggest replacing “can” with “might”, etc., in the statement “...lack of an association in our study among men ... can be attributed to the difference in outcome measurements.”

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.