Reviewer's report

Title: Individual and contextual factors associated with verbal bullying among Brazilian adolescents

Version: 1 Date: 26 December 2014

Reviewer: Rebecca Ang

Reviewer's report:

Review for BMC Pediatrics
Authors: Azeredo et al.
Title: Individual and contextual factors associated with verbal bullying among Brazilian adolescents

1. In this paper, the authors used a large Brazilian adolescent sample and examined the relative importance of contextual (city and school) factors and individual level factors to explain variance in verbal bullying. Overall, it is clearly written.

Major Compulsory Revisions

2. I will outline my key/major concerns here. The first is as follows.

I'm curious - why would authors decided to only study/report verbal bullying in this paper? Were there different types of bullying measured? If yes, then all types of bullying should be included in this study.

Authors built their entire case for support (please see literature review) around literature on bullying as a whole, not just verbal bullying - please see page 4 - 6. Bullying includes different forms of bullying, verbal, physical, etc. Let's take page 4 for a specific example. The studies authors' cited in the literature review looked at bullying in a more comprehensive manner. Therefore, in this paper, there is a disconnect between what this present study is examining (ie verbal bullying only) and the literature cited to support the case. Following from this point, authors are assuming that verbal bullying is synonymous with bullying as a whole, and that the risk factors and correlates of bullying are the same as the risk factors and correlates of verbal bullying, yet the study only examined verbal bullying.

This also has implications for discussion and generalizability. If authors only examined verbal bullying, then it is only logical that authors cannot generalize across bullying as they do presently.

Two questions for revision:

a. Does the PeNSE 2009 consist of items that tap into other forms of bullying? If yes, then all other forms of bullying ought to be included in the paper to be consistent with the current literature review. Analyses will need to be re-run and
discussion and conclusion may need to be adjusted accordingly.

b. If no, then authors need to adjust their literature review and discussion to more accurately reflect this. And authors need to be careful not to over-generalize beyond the limits of their data. Language needs to be correspondingly adjusted throughout.

3. My second key/major concern is as follows. I am wondering why authors chose to dichotomize continuous variables.

Authors have chosen to dichotomize continuous variables such as age and nutritional status. Age is a continuous variable but authors have created age ranges hence artificially dichotomizing the variable. For nutritional status, BMI/age z score is continuous but once again authors have decided to dichotomize them into categories. I understand that authors would like to use multi-level logistic regression analysis as would be appropriate for this study. But authors can still use this analysis with continuous IVs. So why dichotomize naturally occurring continuous variables? Authors should not dichotomize both variables.

Research suggests that dichotomization of naturally occurring dichotomous variables results in unnecessary loss of variance (MacCallum, Zhang, Preacher, & Rucker, 2002).


4. A third major/key concern is as follows. I refer to page 15. One important issue relates to the small contribution of contextual level (school, city) variables. One reason proposed for the lack of association between socioeconomic inequality and bullying is that inequality was not measured at the appropriate level. Assuming that this is true, then the problem lies with measurement - it, it is a measurement concern/problem - because authors do not have data to compare large cities/small towns, urban/rural areas and central/peripheral areas within cities. Therefore the inability to detect a contextual effect could be due to inadequate measurement and NOT due to the fact that these effects do not exist or are unimportant. Therefore, authors' conclusion that individual factors have greater explanatory power (see last 8 lines, page 15) is way too premature simply because we do not know and cannot rule out measurement concerns/issues. So this is a very serious limitation as it directly affects the conclusions that authors can or cannot draw from their data and findings. (See also page 18, conclusion).

Minor Essential Revisions
1. Please see Table 2 - title. Level 1 contains a typographical error, please fix this.

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

Yes, but I do not feel adequately qualified to assess the statistics.

While I have the expertise to review and assess logistic regression, I am not familiar with the multilevel aspects of the analysis.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.