Reviewer’s report

Title: Determinants of suicidal ideation and suicide attempts: parallel cross-sectional analyses examining geographical location

Version: 3
Date: 17 June 2014

Reviewer: Kelly L Green

Reviewer’s report:

• Major Compulsory Revisions
  1. The edits made to the statistical procedures to correct for multiple tests is unclear. Please specify the specific correction used; it appears to be Bonferroni, but this was not stated. Additionally, the section can be read a couple different ways and it would be beneficial to clarify exactly how and how many tests were run both in the text and by delineating each test in the associated tables (this appears to be done in the case of scenario 1). My reading suggests two potential scenarios:
   a. The authors ran 4 logistic regression analyses per outcome (i.e., lifetime ideation, 12-month ideation, and lifetime attempts) that grouped variables together in one step by type (i.e., demographics, physical health, mental health, and recent health service use). This is what appears to be described in the last paragraph of p13 (that continues on p14). If this scenario is correct, the p value correction using Bonferroni should account for the number of tests, rather than the number of variables in each test, as it appears was done. For example, using Bonferroni, the p value for running 4 logistic regression analyses would be set to .013.
   b. The authors ran separate logistic regression analyses for each single variable (i.e., 17 separate logistic regressions), but corrected the p value based on categorical groupings of variables rather than number of tests on one outcome. On p14, second paragraph, the authors state that “in practice, each exposure variable was included in a separate logistic regression, controlling for these three covariates”, which contradicts scenario 1. If this scenario is correct, the appropriate correction would be for number of tests for a given outcome (i.e., the “family” of tests), not number of tests by independent variable category type. For 17 tests using Bonferroni, the p value would then be .003.

• Minor Essential Revisions
  1. In the first paragraph on page 5, please edit to include lifetime suicide attempts as an outcome variable that was investigated.
  2. Please report test statistics and p values for the significant group differences in terms of percentages reported in the beginning pages of the results section (p15-16).
  3. It would be helpful to include confidence intervals for AORs in logistic
regression tables.

4. On page 20, the authors introduce “Table 70”; likely they mean Table 7. Also, please specify the test run for univariate analyses in this section.

5. In the discussion, the authors state that the main determinant across outcomes is psychiatric disorder. However, the AORs for general psychological distress tended to be higher than for psychiatric disorders specifically, suggesting that the level of distress may be more important than simply the presence of disorder. It would be helpful to add this to the discussion.

- Discretionary Revisions
  None

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

**Quality of written English:** Acceptable

**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.