Reviewer's report

Title: Association between substance use and psychosocial characteristics among adolescents of the Seychelles

Version: 1 Date: 2 March 2011

Reviewer: Karla Wagner

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Overall Comments

This report extends research done on risk and protective factors associated with adolescent substance use by assessing these factors in an understudied population – adolescents in the Seychelles. The paper is well written, adequately conceived, and theoretically grounded. It could be improved if the solid theoretical framework presented in the introduction were more explicitly carried through into the analytic strategy and discussion.

Major Compulsory Revisions

1. Methods paragraph 4 – the authors state that the variables were dichotomized so that the “less health category includes no more than a third of all respondents, or on the basis of definitions used by prior studies on risk behaviors.” It is unclear whether this definition was used for the three risk outcomes (use of cigarettes, alcohol, and cannabis), or whether the definitions immediately following this statement supersede it. If this definition is, in fact, applied to the risk behavior outcomes, it seems that there might be a better way to dichotomize. By dichotomizing into “healthy” and “not healthy”, this definition relies more on the distribution of responses than on the actual health implications of the behavior. If this definition was not applied to the risk behaviors, it would be helpful to clarify which variables were dichotomized in this way.

2. Methods paragraph 5 – Three questions from the mental health module that were used to assess “psychological characteristics.” More information could be provided about why these three items were selected. Were they part of a larger scale? If they were selected from a larger set of items, what were the criteria for their selection? The discussion describes them as depression – what was the rationale for not using all the items from a standard depression scale? Were items measuring other “psychological characteristics” besides depression considered?

3. Methods paragraph 6 – Similarly, three questions were used to assess “perceived parental monitoring and bonding”. Again, were these part of a larger scale? If so, what were the criteria for their selection? They appear to be similar to standard parental monitoring items used in studies such as Cohen (1994) [Cohen, D. A., Richardson, J., & LaBree, L. (1994). Parenting Behaviors and the Onset of Smoking and Alcohol Use: A Longitudinal Study. Pediatrics, 94(3),...
But I’m unclear about the reference to “bonding” – are these items designed to measure both monitoring (i.e., keeping track of one’s child) and bonding (i.e. attachment)? The question about understanding problems is more reminiscent of communication items (also used by Cohen).

4. Given that several of the explanatory variables appear to be taken from various scales, it is a bit unclear why the authors decided to use individual items rather than the entire scale or, if there is justification for using the smaller number of items, why they did not use the results of the factor analysis to create summary indices rather than entering each individual item into the regression. This could use additional description/justification.

Minor Essential Revisions

1. Methods paragraph 8 – The methods section should include a description of the regressions that were done for each risk behavior independently – currently it only appears to describe the regression model for the summary index. However, see comment #3 under “discretionary revisions” below.

2. Discussion paragraph 5 – the last few sentences of this paragraph are a bit confusing. For example, it says “our results indicate that while parental support and good parent-child communication may protect against the adoption of risk behaviors, knowing the whereabouts of one’s child is the strongest protective characteristic…” However, it does not appear that the results of this study suggest that parental support and communication were protective – they were not included in the final model.

3. Methods paragraph 8 – The introduction sets up a nice theoretical model of the interplay between risk and protective factors. However the analysis section and the subsequent results section seem to lose this theoretical grounding. Given the clear outline of the theoretical perspective, I was expecting an analysis strategy and reporting of results that attempted to highlight the different roles of the risk and protective factors included in the explanatory variables. The use of backwards elimination seems to rely on statistical significance exclusively and to be rather atheoretical. Similarly, the discussion could maintain the theoretical approach from the introduction, differentiating between risk and protective factors.

Discretionary Revisions

1. Methods paragraph 2 – it would be helpful to provide the proportion of the sample falling in each age category, in addition to the numbers.

2. Results paragraph 1 – It would be useful to report the results of significance testing for the differences between boys and girls, or to provide a rationale for not conducting it.

3. Results paragraph 4 – The results of the 3 regression models for the separate substances are quite interesting, but it is unclear whether the reporting of the regression results from the overall model (using the composite risk behavior
score) adds significantly to the findings or to the overall conclusions. Could consider deleting this.

4. Discussion paragraph 5 – Could also see some additional references on the association between various family functioning or parental behavior characteristics and adolescent substance use in the United States, particularly when both communication and monitoring are modeled simultaneously:


**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.