Reviewer's report

Title: Self-efficacy and self-rated oral health among pregnant Aboriginal Australian women

Version: 2  Date: 17 January 2014

Reviewer: Erin Masterson

Reviewer's report:

- Major Compulsory Revisions
1. Authors should address valid concerns about possible collinearity among the primary exposure (self-efficacy) and covariates (particularly the psychosocial and social cognitive measures). If collinearity is an issue in the data, authors should modify their analytic plan appropriately and describe these steps and decisions in the Methods section of their manuscript.

- Minor Essential Revisions
1. The authors should refer to their [logistic regression] estimates of association as prevalence odds (and prevalence odds ratio, POR) because the study design is cross-sectional. It should be clearly stated that these estimates do not reflect risk.
2. Authors should describe the analytic methods used to produce the prevalences and corresponding confidence intervals and p-values reported in Table 1 (columns 3 and 5).
3. Authors should explain in more detail how the conceptual model (figure) dictated the analytic approach. Specifically, they should describe why the order of model-building was chosen. For example, why was ‘fatalism’ not the first (or last) covariate to be adjusted so as to parse out the ‘self-efficacy’-specific influence from the broader “social cognitive” influence?
   a. Furthermore, authors should consider building the models additively, as they have suggested they have done in the manuscript text (“addition of” in last paragraph of the results section).
4. Authors should note in their Methods section the statistical package and procedures/functions used to complete the analyses.
5. Authors should bolster their discussion of potential mechanisms linking self-efficacy and oral health status. The authors describe the existing literature that provides supporting evidence for an association between self-efficacy and oral hygiene, but fail to mention alternative pathways that may exist. This discussion point seems particularly important in light of the fact that the present study results indicate that the self-efficacy association with poor self-reported oral health exists beyond the toothbrushing pathway.
   a. Discuss other potential pathways not included in conceptual model (figure), such as diet, professional care, etc. between self-efficacy and self-reported oral
health outcomes. Perhaps make recommendations for future studies.

6. Authors should include a discussion of potential measurement error in exposure and/or covariate measures and note the probable impact of such resulting biases in relation to the study results.

- Discretionary Revisions

1. The authors may consider articulating that their final model was built based on apriori selection of covariates according to the conceptual model shared (figure) rather than covariate selection based on the bivariate statistics presented in Table 1. In the present data, the sociodemographic measures and ‘fatalism’ do not appear (statistically) to be confounding factors.

**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