Reviewer's report

Title: Psychological, Cultural and Neuroendocrine Profiles of Risk for Preterm Birth

Version: 2 Date: 4 May 2015

Reviewer: Chunfang Qiu

Reviewer's report:

Summary:
As the reviewer understood according to the text: It’s a prospective observation study design. In 515 Mexican American pregnant women, psychological, cultural and neuroendocrine measures were done at 22-24 weeks gestations. While 57 (11.1%) participants developed preterm births. The 515 cohort were carrying singleton and did not have pre-existing chronic disorders, except all had a history of preterm births (page 7, please confirm). A latent profile analysis of risk for preterm birth using structural equation modeling (SEM) was conducted. The data-driven risk profile is positively associated with increased subsequent PTB risk.

A few concerns remained:
1. Why did authors refer the study as a cross-sectional design, what’s the distribution of gestational age at delivery for those PTBs?
2. If it’s a prospective design, will it change the sample size calculation estimation?
3. As authors indicate in page 10-11, LPA were constructed based on 18 psychological only variables (4 BDI, 2 mastery, and 12 brief coping sub-scales)). Does the author also take into account of cultural components or neuroendocrine measures (CRH) (page 10-11) in the LPA; if not, please revise the title, abstract accordingly. The introduction objective is more accurate (page 6).
4. Have the authors took a look at the utilization of prenatal care (especially start of prenatal care etc). Prenatal care may simply serve as a marker for higher socioeconomic status, more conscientious health behaviors, or other factors that truly predict lower risk of preterm birth. Maybe it can be added to the predicting risk profile.
5. What’s the proportion of medically-induced preterm births (PTB)? The risk profile might be different in spontaneous PTB and medically-induced PTBs.
6. If the author can show a figure with standardized regression weights for paths associated with the best fit model (SEM)?

Other minor checkup:
1. please check the % for GDM in Table 3, they are unusually high.
2. Figure 2 legend – please add the note for the green column

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

**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