Reviewer's report

Title: Barriers To Women's Participation In Inter-Conceptional Care: A Cross-sectional Analysis

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Reviewer: Sarah Brennenstuhl

Reviewer's report:

Major Compulsory Revisions

I think the additions made to the paper were very useful. However, I am not sure I was clear about my point regarding intervention intensity (and smoking). My point is that intervention intensity--defined as the total number of sessions prescribed to a client--should be controlled for in the modelling. This could be represented by one continuous variable (i.e., number of appointments assigned). I think this is important because, after addressing "all known barriers" to care, it may be that the only thing that matters for care uptake is the risk profile of the client, as reflected by the total number of sessions prescribed.

Based on the definition of intervention intensity provided above, I had also wondered if smoking was a proxy for intervention intensity b/c smokers had more risk factors and, thus, were assigned more sessions. It follows that smokers maybe be less likely to attend all the sessions because they have more sessions to begin with. One way to test this possibility is to control for intervention intensity as described above.

I am also not sure the authors have adequately addressed the issue of the selection of categories for the outcome variable. I realize they choose the categories "for conceptual understanding", but did the authors test alternative versions of the categories (e.g., by combining the middle two categories)? Due to the fact that only one variable was found to be significant (smoking) in the entire model, the authors could consider using fewer categories for the sake of parsimony. At a very minimal, the authors should acknowledge that their (seemingly arbitrary) categorization of a count-based outcome may be a limitation to their study.

Minor Essential Revisions

It is still unclear which version of the Andersen model is being used: the original (i.e., Andersen's behavioral model of health service use) or the revised model (i.e., Gelberg-Andersen Behavioral Model for Vulnerable Populations to Health Services)? Both are cited. Also, the model used should to be labelled consistently throughout (i.e., select one label - the following are used interchangeably throughout the paper: Andersen's Behavioral Model of Utilization of Care, Andersen Behavioral Model, the modified Andersen Behavior Model, ABM, the Anderson model, the Anderson and Gelberg Anderson models, and the
Andersen/Gelberg model

At the end of the dependent variable section the authors say that "these values were recoded into 4 categories for descriptive analyses". In fact, the values were recoded for all the analyses. Some justification for recoding should be provided.

The authors report that "Only Enabling factors as a group (income, social support, neighborhood safety and competing needs) offered significant predictive power (p=.058). (Table 3)"; however, the p-value is only of borderline significance - this fact should be emphasized. Indeed, the p-value for predisposing factors is also of marginal significance (p=.08).

The paper should be edited thoroughly. The following are some examples of editing problems that detract from the overall message of the paper:

• the independent variables section does not contain full sentences - did the authors mean to use bullet points? If so, bullet points should be added and periods should be removed from the end of sentences. Either way, the sentence before the measures of PENS are described should be made into a complete sentence.

• Capitalization and spacing are inconsistent throughout the paper (see independent variable section for example of cap problem, also the authors sometimes cap the PENS and other times do not; see last sentence in dependent variable section for example of a spacing problem)

• The tenses are inconsistent throughout

• There are grammar problems with a number of sentences, including the following:

"The goal of this analysis was to identify and validate specific factors that adversely impact on women’s ability to participate in interconceptionally delivered preterm birth prevention interventions, once all known barriers to care are addressed". (Methods section)

"The majority of the women were African American (84.%), had a mean age of 25 years, unmarried (88%), live in households with more than 3 people (69.3%), and had at least a high school education (66.6%). (Results section)

• The above sentence highlights another editing problem: inconsistent rounding. All figures reported should be rounded to a consistent decimal place (i.e., 1 or 2).

• The following run-on sentences should be addressed so that it is easier to understand:

"Studies delineating the barriers to PNC have evolved over time; from inclusion of a conglomeration of individual factors describing populations at risk (young, less educated, single, large family size),\textsuperscript{18,19} to models that included behavioral factors (substance use, stress, low social support),\textsuperscript{18,20,21,22,23} to more ecologic models that include factors which exist outside of the personal domain as predictors of utilization; e.g. contextual factors that influence women’s ability to get away from competing
demands (job demands, childcare needs), get to the health care site (transportation, income), and factors influencing the quality of treatment once in the health care site (provider availability, wait times, hours of operation, discrimination). " (discussion)

At least one abbreviation is not defined in the introduction or at the end of the manuscript (i.e., LB)

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