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Title: Assessing the prevalence and correlates of antenatal cannabis consumption in an urban Canadian population: a cross-sectional survey	
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Reviewer 1: Kathleen Chaput	
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Reviewer comments	**Author response**
The title is misleading - this is a cross sectional pregnancy survey. There is no analysis of cannabis use "while breastfeeding" there is onlya measure of intent to use, and intent to breastfeed, both of which can change. The wording should be changed to reflect that actual method, or leave out breastfeeding altogether.	Breastfeeding removed from title.
This is a cross-sectional study that calculated odds ratios - The conclusion statement in the abstract refers to both prediction and likelihood. This language implies that a predictive analysis was done, when it wasn't and should be termed as odds of the outcome. I would suggest ".. are associated with greater odds of in-pregnancy cannabis use" This same language appears throughout the paper and needs to be adjusted. No reference to effects or prediction should be made, given the methods employed.	Wording changed to reflect associations rather than predictions/effects/likelihood.
Line 47 - ensure it's clear that this is onlyCanada.	Clarified that this was inCanada.
Line 57 - this refers to prevalence, not a rate - none of the cited studies report rates, only prevalence estimates.	Changed wording to reflectprevalence.
Line 64 - again, this needs to be clear that it refers to "in Canada". There are many studies looking at post-legalization trends in the U.S.	Changed sentence andclarified "in Canada".
The authors state several times "Awareness of prevalence and correlates of in-pregnancy cannabis use would facilitate appropriate screening and counselling practices." But it is not clear how. A better linkage to the utility of the results to public health and clinical practice would strengthen the manuscript – both in the background and the interpretations section.	We added more specific ways in which our data couldinform clinical practice.
The population and sampling is not well described. How were clinics identified? Were all clinics in the area involved? What range of diversity is served by these clinics? How many served high risk versus low risk (obstetric risk) patients? Were they self-selected or randomized? How were patients informed of the study and invited? What method was uses to sample the women approached? Were all women equally likely to be recruited? These details are very important to a prevalence study, as we need to be able to evaluate	Physician clinics were university-affiliated. The midwifery clinic was approached due to an established working relationship. Four of six clinics in Hamilton were involved. The two obstetrician/gynecologist clinics served high- and low- risk patients. The family practice and midwifery clinicsserved low-risk patients. Clinics and patients were not randomized. All patients wereapproached by administrativestaff upon arrival to the clinics(during the dates/times that researchers were available toattend). All women were equally likely to be approached.

representativeness of the results.	
Line 98 is an incomplete sentence.	This sentence was removed.
The study population is the larger population from which you sample. The participants included in the study are the study sample - this should be changed (line 116), I.e. the heading should be "study sample".	Changed from "Study Population" to "Study Sample".
The representativeness of the sample is an incredibly important part of this study, particularly because it is a prevalence study. It's very important to thoroughly explore the demographics, and to present some evidence (perhaps a bar graph?) to the reader to be able to evaluate representativeness.	We added figures and a longer discussion of sample representativeness.
Re: representativeness of marital status, the marital status of the general population in Ontario is not the appropriate comparator for this. Pregnant women are expected to have a higher prevalence of married/common-law status, as well as partnered status, because the vast majority of pregnancies occur within a partnership. The proximity of conception to the survey means that we would expect a much higher proportion of married/common-law status in this survey than in the general population. You could add this, and reference some other Canadian cohort studies that have	Discussed in Appendix S1. Our study sample was compared to the Ontario Birth Study and the All Our Babies cohort.

demonstrated representativeness (I.e. the All our Families cohort in Alberta was recruited inmuch the same way (see McDonald SW, LyonAW, Benzies KM, et al. The All Our Babies pregnancy cohort: design, methods, and participant characteristics. BMC Pregnancy Childbirth 2013;13 Suppl 1:S2–S2.).	
The proportions of participant characteristics reported in the results section should be calculated using estimates of proportion, and should include 95 % confidence intervals so that the reader can evaluate the precision of the estimate. This is particularly important for the prevalence of prenatal cannabis use, which is the primary outcome.	This was done and added toTable 1.
The first line of the descriptives section is ambiguously worded. It needs to be clear whether this figure (11%) refers to use at any point within the current pregnancy (including prior to knowing about the pregnancy) or if the period before knowing about the pregnancy includes preconception. This is the primary outcome. It should be easy for the reader to know what the prevalence of any cannabis usein pregnancy is.	We changed the wording ofthe sentence for clarity.
You do not report the mean gestational age, nor the range of gestational ages of the respondents anywhere in the paper. This is important information for the interpretation of continued cannabis use. I.e. someone early in pregnancy might say they aren't using, but start using later - given this is cross-sectional, it's important to acknowledge that you have not captured the entire pregnancy for any of these women.	We added this into thelimitations.
Line 164 - in the correlates of cannabis use section - You did not analyze the effects of anything in this study - it is cross-sectional. The language throughout should be changed to association or correlation (if that is what was done). The use of causal language is misleading. Likewise, the term "significant predictors" soul be changed to say "were significantly associated…". There was no prediction modelling conducted in this analysis,and the language again implies causality.	Wording was changed throughout the manuscript toreflect this.
Table 2 - according to your analysis, you used "backward model selection, logistic regressions " I assume this means reverse stepwise elimination of variables that were not	Model selection is no longer used. The variables includedin the multivariate model arenow clearly stated in the footnotes of Table 2.

significant. If this is the case, it should be indicated what exactly was in the final model for each of the Ors presented in the table. (i.e. what was it adjusted for) - otherwise the final model should be stated so that readers can see that all variables were included, and that these are not bivariable associations.	
Line 177-180 - "Although trends suggested that these factors may be correlated with cannabis use, sample sizes of current cannabis users and those who were single/dating may have been too low to 180 detect an effect (Table 1)." While it may be true that your study was underpowered for this analysis, there was no significant association found. If you are recommending that it be studied further in largersamples, you should explain why you hypothesize that there may actually be associations, rather than relying on "trends" int he data. The fact that these associations weren'tsignificant means that we cannot interpret the trends int he data.	We agree. We no longer discuss trends in the data and only discuss significantassociations between independent variables and outcomes.
On this note, the precision of the significant estimates (Ors) shout be discussed more thoroughly. This was a relatively small study and the number of variable categories in the models was quite high. What does this mean for generalizability of these results?	We added this into thelimitations.
Line 181 - see above. You did not conduct any predictive modelling.	Wording changed throughoutmanuscript.
Interpretations - the causal language should be changed throughout. Any reference to predictors or effects should be changed.	Wording changed throughout.
The first paragraph simply restates the results. There should be more discussion - how does it compare to other literature from the U.S. or other Canadian studies (This is the first anonymous survey I have seen - all other prevalence estimates are from admin data which are drastic under-estimates.) what is the real contribution of this study? You should not be discussing differences that were not significant - these technically are not differences. (See comment above)	We added comparison toliterature from the United States and Canada. We added a strength toreflect this comment.
Line 194-194 - in what populations? You need to acknowledge the difference between the BORN data and yours. What makes this study better? What is it contributing? More detail and discussion of the representativeness and bias in these previous studies is needed here.	We added discussion to reflect that the BORN data were not anonymous, but rather relied on self-report tohealthcare providers.

Line 204 - you didn't measure likelihood, you measured odds. You should discuss in terms of odds, Also this statement should be referenced (there is literature on second-hand cannabis smoke raising blood levels of THC to levels similar to the smoker, when int he same room. It would be stronger to cite more evidence around this statement, rather than compare to tobacco smoke.)	We cited literature on second-hand cannabis exposure.
The Interpretations section falls drastically short - it basically is just the results section all over again. It has general statements about the study making important contributions but doesn't outline the importance. The whole rationale for this study and its methodology is lost. Further, it doesn't lead to next steps, or even contextualize the data in the existing evidence. This is the first anonymous study of prevalence of prenatal cannabis use in Canada that I have seen, We currently have NO valid estimate of prevalence of prenatal cannabis use in pregnancy following legalization (indeed, our previous population-based estimates are 40+ years old). There is a need for a much better understanding of the state of the evidence in Canada and how this study fits with it, and contributes new and important information. And the "so-what" message really needs developing.	We added substantially to theInterpretations to contextualize our findings in the existing data, outline theirimportance and suggest next steps.
The limitations section is too brief - the implications of these limitations should be touched on. Also the lack of mention of gestational age of the pregnancy anywhere in the study is a glaring omission. These surveys were completed at various stages of pregnancy - some perhaps very early on, and thus the prevalence of cannabis use reported might underestimate the actual prevalence (i.e. women who use later in pregnancy would be missed). Statements re vague - x, and y mightcause bias. How? What bosses? In which direction? To what magnitude do the authors suspect their findings are biased?	We expanded on the limitations of our study. We included a statement about gestational age, removed general statements about bias and used more specificlanguage.
NO strengths mentioned??? The authors are selling themselves a bit short. There are important limitations to the existing Canadian evidence in this area. The lack of contextualization and acknowledgement of how this study addresses them leaves this reviewer with a sense that the authors do not know or understand the current state of the evidence on the topic.	We added a Strengthssection.

Reviewer comments	Author response
Conclusions are not tethered to actual data. HOW will these results support the changes mentioned? How will including partners in prenatal discussions alter the risks of use? These are very broad general statements that are not really explained and currently not supported directly by the data as presented.	We added information about partner-focused intervention.
All mention of breastfeeding in the study needs to be grounded in the evidence. Why should women be counselled not to consume cannabis while breastfeeding? NO evidence is provided around these risks. I'm surprised that the conclusion doesn't mention that the demographic information from the study could be used to target education and intervention. The statements are too general and not grounded in the existing evidence as written.	We added information about cannabis and breastfeeding.
Appendix S1 is really not useful. It provides no added information and could be removed. (It seems to simply indicate the survey had skip-logic, which is standard for an electronic survey)	Appendix S1 was removed.

Reviewer 2: Daniel Bear	
Institution: Humber College, Toronto, Ont.	
Reviewer comments	**Author response**
Line 51. Fourth quarter 2019 stats indicate women at 15.1%. However, this increase is not necessarily about actual use increasing, but rather willingness to report using what was an illegal substance. Additionally, in Ontario, 16.3% of people reported past month use, and this is below the national average, potentially indicating that simply splitting national level use rates to men and women may not accurately portray what is occurring in the area where you sample resides.	The referenced statement serves as a general introduction to cannabis consumption post-legalization in Canada. We cite Ontario- based data about consumption in pregnancy to provide a more accurate portrayal of what might be occurring in the area where our sample resides.
Line 56. The authors point out that the literature is heterogeneous but only list studies showing adverse outcomes. They ignore other literature that shows no adverse outcomes. These include the The Ottawa Prenatal Prospective Study and The Maternal Health Practices and Child Development Study. This unbalanced literature review shows a lack of objectivity and bias towards people who use drugs.	We added a description of the cited studies that suggested no adverse outcomes associated with antenatal cannabis consumption.
Line 88. Excluding post-partum patients should require the paper to change the title to indicate that the authors did not actually study 'while breastfeeding', only 'intention to consume while breast feeding'.	Title changed to remove mention of breastfeeding.
Lines 124-131. The authors break down how their sample compares to Hamilton's average income, education, and other factors, but fail to do so when accounting for cannabis	We added information about partner cannabis consumption into our

consumption rates. The NCS has more precise data than was utilized and authors should seekit out.	representativenessdiscussion.
Line 147. Knowing what percent of women who used cannabis during their pregnancy is important, but breaking down the number who used before they knew they were pregnant vs those who used when they knew they were pregnant is very important in the context of this research. It does not appear that the question covering this topic in the survey allows for a breakdown of this important difference. As such the authors should make that limitation explicit very early on in the study. How many women in that sample stopped cannabis consumption the moment they found out they were pregnant. Furthermore, how many might not be current consumers, but once or twice during very bad morning sickness or other medical condition and turned to cannabis? The survey includes these missed opportunities and double-barreled questions and should have been reviewed more thoroughly. This survey was not written by drug policy experts who could have helped refine the questions to better capture data.	We added a limitation.
Page 33. The 'Are you currently smoking marijuana or using cannabis products' question is too vague. What does currently mean? This is why the NCS and others use more precise language. The follow up question about frequency of use somewhat alleviates that, but not fully. People may consider themselves current users in that they would use, or use too infrequently to meet the response options provided, but have not used frequently or recently.	Thank you for the feedback.