

Article details: 2020-0081	
Title	Cannabis-related driving and passenger behaviours among high school students: results from a cross-sectional survey
Authors	Melissa Carpino MSc, Donald Langille MD MHSc, Gabriela Ilie PhD, Mark Asbridge PhD
Reviewer 1	Name withheld
Institution	Ontario, Canada
Reviewer comments and author response	<p>INTRODUCTION:</p> <p>1. Page4, line5: Could the authors add when Canada legalized recreational cannabis? This may help set the scene for the readers. <u>Response:</u> Canada legalized recreational cannabis in October 2018. Words "in 2018" have been added (first sentence of paragraph 1, page 3).</p> <p>2. Page4, line8: The reference that the authors provide to express that cannabis use may increase among youth (Ref #1), has been contested due to Monitoring the Future not being state representative. Since its publication, two further studies have used state-representative data to show that cannabis use has either remained stable or decreased (see Midgette & Reuter 2019 - Has Cannabis Use Among Youth Increased After Changes in Its Legal Status? A Commentary on Use of Monitoring the Future for Analyses of Changes in State Cannabis Laws; Dilley et al., 2019 - Prevalence of Cannabis Use in Youths After Legalization in Washington State). I believe the point the authors raise is still valid, there are definite concerns that legalization will increase use, but perhaps add that it is still early in the US regarding recreational legalization and findings are currently limited and mixed. <u>Response:</u> A sentence acknowledging 1) the mixed evidence in the U.S. regarding the effects of recreational legalization on the prevalence of cannabis use, and 2) the unknown long-term effects of recreational cannabis legalization on the prevalence of its use and DUIC among Canadian youth has been added (paragraph 1, page 3). The two recent studies which used state-representative data to examine the effects of recreational legalization on the prevalence of cannabis use have been cited within the text and added to the Reference section (References #3 and #4).</p> <p>3. Page4, line12: For the prevalence estimate, is this use within the last year? All time? Please clarify. <u>Response:</u> The prevalence estimate provided in paragraph 2 (15%) is the prevalence of past-year cannabis use in 2017, according to the Canadian Tobacco, Alcohol and Drugs Survey. The sentence about the prevalence of past-year cannabis use among Canadians has been removed from the text for the sake of brevity.</p> <p>4. Page4, line17: Please add one sentence to explain what THC is, to connect THC with cannabis. <u>Response:</u> A sentence defining THC and explaining its connection to cannabis and its effects on driving ability has been added (beginning of paragraph 2, page 3).</p>

5. Page4, line21: Could the authors provide an example of ‘appropriate variables’?
Response: **Words "appropriate variables" have been replaced by examples of appropriate variables including age, sex, race, and blood alcohol concentration (page 3).**

6. Page4, line 48: Please add ‘prior to legalization’ or similar, to clarify for readers the context of the objectives.
Response: **Words "prior to legalization" have been added to the end of our primary objective statement (bottom of page 3).**

METHODS:

1. Page5, line50: Was there an option for ‘Don’t know’ for DUIC?
Response: **No. Response options for DUIC were: "No, never", "Yes, in the last 30 days", and "Yes, more than 30 days ago".**

2. Page7, line36: I thank the authors for stating their process for handling missing data. Did the authors test to see if there were any socio-demographic differences between the participants with missing data and without?
Response: **Yes. No statistically significant sociodemographic differences were noted between participants with missing data and those without.**

RESULTS:

1. Page7, line48: Could the authors add in the ‘n’ next to the % of participants in the results section? For example, “Nearly 10% (n=XXX) of senior students...”
Response: **Sample sizes (n) have been added next to the % of participants who self-reported past-year DUIC and RWCD, and who self-reported perceiving great risk versus no risk of regular cannabis use (bottom of page 6).**

2. Could the authors present AORs within the text for all the findings in the results section? As a reader, I would like to see the statistics for all the results that the authors chose to present within text.
Response: **ARRs and corresponding 95% CIs for all results presented in Tables 2 and 3, including results for all covariates (sex, school grade, rural location, province, and autonomy score) have been added within the text (page 7).**

INTERPRETATION:

1. Page9, line14: May I suggest writing out the acronyms in their first use in the interpretation. If a reader is skimming the paper and jumps to the interpretation, it will be easier to understand.
Response: **Abbreviations DUIC and RWCD have been replaced by the full terms "driving under the influence of cannabis" and "riding with a cannabis-impaired driver" (page 8).**

	<p>2. Page9, line31 onwards: Are there any other examples of education/public health campaigns that have changed youth risk perception of cannabis? Perhaps in Colorado?</p> <p><u>Response:</u> An example of an educational initiative launched in Colorado in 2015 (<i>The Good to Know</i> campaign) which has shown to be effective at increasing risk perceptions of cannabis among residents and visitors has been added to bolster our point that education is the best practice for changing people's risk perceptions of cannabis (page 8).</p> <p>3. I would highlight the interpretations within the context of legalization. Or clearly state that these results are prior to legalization and what this may mean going forwards post-legalization.</p> <p><u>Response:</u> Our interpretations have been modified to clearly state that the results are prior to legalization (page 8).</p> <p>4. I recommend the authors add social desirability biases to the limitations. Recreational cannabis use at the time of the study was illegal, and even after legalization, use in their age group would still not be legal. This may have affected answers provided.</p> <p><u>Response:</u> Social desirability bias has been added as a limitation (see subsection "Limitations and Strengths", page 9).</p>
Reviewer 2	Name withheld
Institution	Ontario, Canada
Reviewer comments and author response	<p>1. I have concerns about the importance and relevance of this article. A cross-sectional survey cannot establish causality and a survey may not be descriptively valid. The results are dated since the responses derive from years ago (2016-2017) whereas cannabis legalization occurred more recently (2018) and was accompanied by substantial public education efforts. The study does not specify the background information already present or the specific added education that might be appropriate. The effect size is a bit ambiguous due to potentially false reports whereas the primary finding is already understood.</p> <p><u>Response:</u> We acknowledge that data collected during this brief period (pre-legalization) may not reflect the patterns of cannabis-related driving and passenger behaviours that may ensue post-legalization in Canada and therefore, have added it as a limitation (see subsection "Limitations and Strengths", page 9). Also, an example of an educational initiative launched in Colorado in 2015 (<i>The Good to Know</i> campaign) which has shown to be effective at increasing risk perceptions of cannabis has been added to our interpretation to bolster our point that education is the best practice for changing people's risk perceptions of cannabis (page 8).</p>