

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Exploring family-based immigrant youth substance use prevention programs: A scoping review protocol
<b>AUTHORS</b>	Li, Yiyang; Maina, Geoffrey; Pandey, Mamata; Amoyaw, Jonathan; Fang, Yiting

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Marchand, Kirsten The University of British Columbia, School of Population and Public Health
<b>REVIEW RETURNED</b>	29-Dec-2020

<b>GENERAL COMMENTS</b>	<p>Reviewer General Comments:</p> <p>Thank you for the opportunity to review the above-captioned manuscript, in which the authors have clearly described their planned scoping review protocol.</p> <p>There are a number of strengths to this planned scoping review in addition to those listed by the authors. In particular, the authors have described their plans to apply a community-based approach to this review, which will contribute to the significance of the reviews' findings and inform later development of family-based interventions. It also appears that the stated purpose of this review has been informed through consultations with stakeholders, which strengthens the review protocol's rationale and relevance. The authors have also provided adequate details about the scoping review's methods, with a few minor suggested revisions.</p> <p>In general, the main area for improvement is the study background. The authors have devoted a full page to summarizing problematic substance use in Canada. This leaves less room for the authors to delve more deeply into youth immigrant substance use patterns specifically (this may be due to a lack of Canadian data on this sub-group, but there may be evidence that can be drawn from countries other than Canada; e.g. Europe which has strong surveillance and monitoring systems), and the scope of prevention interventions targeting this population. This information would strengthen the rationale of the review and presumably complement those gaps identified through consultations with service providers.</p>
-------------------------	---

My specific comments are described below for each manuscript section.

Reviewer Specific Comments:

Background:

1. As currently written, the below sentences are an oversimplification of a very complex problem. There are many factors contributing to opioid use disorder (OUD) beyond being prescribed an opioid as not everyone who is ever prescribed an opioid develops OUD. If these sentences are kept in the revised background, I suggest the authors rephrase them based on some of the recent global epidemiological studies/reviews of OUD:

Strang J, Volkow ND, Degenhardt L, Hickman M, Johnson K, Koob GF, et al. Opioid use disorder. Nature Reviews Disease Primers. 2020;6(1):3.

Degenhardt L, Grebely J, Stone J, Hickman M, Vickerman P, Marshall BDL, et al. Global patterns of opioid use and dependence: harms to populations, interventions, and future action. The Lancet. 2019;394(10208):1560-79.

"...prescription opioids in the world caused by the over-prescription of these strong analgesics.[1] This over-prescription causes opioid use disorder, a problematic pattern of opioid use that leads to clinically significant impairment or distress and that impacts people's qualities of life, occupations and relationships.[2]"

2. As stated in my general comments, the first four paragraphs summarize the national prevalence estimates on opioids, alcohol, cannabis, methamphetamine, and associated economic burdens. Some of this data are for youth specifically; most is derived from the general population. I suggest the background focus more on youth and immigrant specific estimates to give a stronger understanding of the scale of the problem. If these data are limited in Canada, then perhaps other countries that have large immigrant populations and strong surveillance data (e.g. Europe's EMCDDA) could also be included.

3. As a reader without a strong familiarity with Canada's immigration patterns, I expected the below sentences from the fifth paragraph to be referenced (though this may be well known to those working in this specific field, the manuscript may be read by people without this expertise).

"Immigrants to Canada are expected to assimilate into Canadian culture. The prevailing socio-cultural climate of the destination country can impact how immigrants and newcomers acculturate themselves. One of the realities that immigrants are confronted with is the perversity of substances that may not be

	<p>available or legal in their countries of origin.”</p> <p>4. The scoping review will focus on prevention programs for immigrant youth in Canada, but the background does not summarize information about this particular segment of the population until the seventh paragraph. As stated in my general comments, the prior paragraphs could be significantly condensed so that more room can be given to summarizing the scale of the problem and interventions available for this sub-group specifically.</p> <p>5. Paragraph eight sets up the gaps in evidence and service provision. Of these gaps, I believe the author’s scoping review will focus on the final gap related to family-based interventions. This paragraph then closes with a few sentences about effective parenting strategies. I suggest that these sentences be moved to the next paragraph so the gaps are standalone and then the authors can transition into summarizing what is known about the interventions of interest in this review.</p> <p>6. Were the described consultations in paragraph eight undertaken by the study team as part of this scoping review protocol/review design? Could this be made more explicit if so?</p> <p>“Consultations with service providers at an immigrant settlement agency in a mid-sized prairie city in Canada revealed that most immigrants and newcomers, especially those with limited English language proficiency, need help to build capacity”</p> <p>7. The authors have used the word “significant” in the below sentence, which implies that there is an abundance of high-quality evidence from systematic reviews or experimental designs. While I am not familiar with the five cited studies, they appear to be single observational studies (i.e. a lower grade of quality). Furthermore, since family-based interventions are the central focus of this review protocol, I suggest the authors consider providing more detail about these studies that will convince the readers of their importance and support understanding of the rationale for this scoping review.</p> <p>“Significant empirical evidence demonstrates that effective parenting, characterized by parental warmth and close supervision of children, can delay or prevent substance use initiation.[27-29] In addition, parents' zero tolerance of and clear rules about substance use can prevent substance use initiation.[29-31]”</p> <p>8. Could the authors include a brief definition or a reference to support the definition of “culturally safe”? This is an increasingly important concept, but may not be well-known to all readers.</p>
--	--

	<p>“Family-based substance use prevention programs for immigrant youth need to be culturally safe and able to equip parents with effective strategies that can help their youth manage risks for substance use.[32, 33]”</p> <p>9. Paragraph nine uses “teenagers”, and up to this point, the authors have used adolescence, young adults, and youth to define this age period. Could the authors be consistent and ensure that the age range is defined?</p> <p>10. Similar to comment #7 above, the authors choice of words needs to carefully consider the available evidence. With the below sentence, I expected to find a meta-analysis or systematic review that has concluded a high quality of evidence supporting these skills. If such evidence is not yet available, then the authors should consider using less conclusive language (i.e. revise “must consider”).</p> <p>“A good family-based substance use prevention program for immigrant youth must consider skills and behavioral and cultural factors when developing or adapting it.[37]”</p> <p>Methods:</p> <p>11. The authors describe the development of a CAC who will guide this scoping review. Does this CAC involve any youth immigrant members? If so, this should be explicitly stated as it would be a great asset to the CAC and support the interpretation of the review’s findings.</p> <p>12. Could the authors briefly explain why the search will be limited to this 10-year time frame?</p> <p>“For this scoping review, only literature published from 2010 to 2020 will be included.”</p> <p>13. The inclusion criteria indicated that references will be included if they targeted “youth immigrants aged 12-17”. What is the rationale for narrowing the search to this developmental period? Could that be a limitation? The background information suggested that first-generation immigrants may face particular stressors as risks for substance-related disorders. Is it possible that these stressors extend to young adulthood, for which family-based interventions may still be a best practice?</p> <p>14. Regarding the study selection process, please clarify if this will involve a single (e.g. title/abstract only) or two-stage screening process (e.g. title/abstract, full text)?</p> <p>15. Regarding study screening and selection, please clarify what empirical study designs will be eligible (e.g. observational, experimental, reviews, qualitative studies).</p> <p>Discussion:</p>
--	--

	16. Under the 'Patient and Public Involvement' section, should the authors include information about the CAC? Would those "recent newcomers and immigrants" represent public involvement?
--	---

<b>REVIEWER</b>	Ashcroft, Rachelle University of Toronto
<b>REVIEW RETURNED</b>	22-Feb-2021

<b>GENERAL COMMENTS</b>	<p>Thank you for allowing me to review this manuscript detailing a scoping review protocol focusing on family-based immigrant youth prevention programs. Overall, the manuscript is well-written. There are some minor items that will strengthen the manuscript, and some further clarification needed for methods. Below are recommendations for the authors' consideration in revising the protocol:</p> <ul style="list-style-type: none"> <li>-Add subheadings in background</li> <li>-Background uses terms: adolescents, students, youths, children, &amp; young adults. It would add more cohesion to the background to be consistent in terms used. Add a definition for "youth".</li> <li>-I believe that this journal requires references to be superscript. Check to ensure that referencing is consistent with journal requirements.</li> <li>-Flipping paragraphs 8 &amp; 9 may improve readability &amp; flow. Thus paragraph on page 8, line 40 beginning "Family-based substances..." Should come before the paragraph on page 8, line 25 "Due to the increased risk...".</li> <li>-Heading "Aim and purpose" appears off centre.</li> <li>-Provide more clarification with methods. The methods indicate that a community advisory council (CAC) will guide this scoping review, and there are examples of potential members provided. Since the CAC is not yet developed, the CAC has not participated in the formulation of the research questions. If the CAC is participating in the identification and refinement of the research problem under investigation, then the protocol may be in a premature stage since the research questions may change. Or, if the scoping review is proceeding prior to the development of the CAC then make this clearing in Step 1: identify the research question.</li> <li>-Additionally, the 'identify relevant studies' search strategy for step 2 has not yet been developed. The protocol indicates that the research team, with the help of a librarian, will develop the search strategy. The protocol will be substantively stronger with the inclusion of the search strategy. Without it, the protocol is somewhat underdeveloped.</li> <li>-Explain how grey literature be searched</li> <li>-Step 3: states that the search results will be exported to a reference management system, yet earlier in Step 2, already indicated that all selected literature would be input into Covidence.</li> </ul>
-------------------------	---

## VERSION 1 – AUTHOR RESPONSE

Reviewer 1:

### 1. Background

As currently written, the below sentences are an over-simplification of a very complex problem. There are many factors contributing to opioid use disorder (OUD) beyond being prescribed an opioid as not everyone who is ever prescribed an opioid develops OUD. If these sentences are kept in the revised background, I suggest the authors rephrase them based on some of the recent global epidemiological studies/reviews of OUD:

Strang J, Volkow ND, Degenhardt L, Hickman M, Johnson K, Koob GF, et al. Opioid use disorder. *Nature Reviews Disease Primers*. 2020;6(1):3.

Degenhardt L, Grebely J, Stone J, Hickman M, Vickerman P, Marshall BDL, et al. Global patterns of opioid use and dependence: harms to populations, interventions, and future action. *The Lancet*. 2019;394(10208):1560-79.

"...prescription opioids in the world caused by the over-prescription of these strong analgesics.[1] This over-prescription causes opioid use disorder, a problematic pattern of opioid use that leads to clinically significant impairment or distress and that impacts people's qualities of life, occupations and relationships.[2]"

Response: Thanks for these useful references, and I have integrated them in the revised text and cited in 2 & 3.

See line 104-109 Changed to "... Canada has the second-highest consumption of prescription opioids in the world due to over-prescription and non-medical use of these strong analgesics [1-3]. The use of opioids for non-medical purposes for both licit and illicit drugs is a serious public health problem causing opioid use disorder, a problematic pattern of opioid use that leads to clinically significant impairment or distress, and significantly impacts people's qualities of life, occupations and relationships [2, 3, 4]."

2. As stated in my general comments, the first four paragraphs summarize the national prevalence estimates on opioids, alcohol, cannabis, methamphetamine, and associated economic burdens. Some of this data are for youth specifically; most is derived from the general population. I suggest the background focus more on youth and immigrant specific estimates to give a stronger understanding of the scale of the problem. If these data are limited in Canada, then perhaps other countries that have large immigrant populations and strong surveillance data (e.g. Europe's EMCDDA) could also be included. Response: See line 112 -115 Changed to "In Ontario, about 14% of teens have reported using prescription opioids for extra-medical use [7]. About 55% of vehicle accidents that involve youth are caused by alcohol or drugs, and car accidents and are the leading cause of youth death in Canada [8]"

See line 123 -126 Changed to "In 2017-2018, 23,580 hospitalizations among youth were caused by substance misuse [15]. Among these youth, about 17% of them had more than one hospitalization in the same year and about two-thirds of them had concurrent mental health issues [15]."

3. As a reader without a strong familiarity with Canada's immigration patterns, I expected the below sentences from the fifth paragraph to be referenced (though this

may be well known to those working in this specific field, the manuscript may be read by people without this expertise).

"Immigrants to Canada are expected to assimilate into Canadian culture. The prevailing socio-cultural climate of the destination country can impact how immigrants and newcomers acculturate themselves. One of the realities that immigrants are confronted with is the perversity of substances that may not be available or legal in their countries of origin."

Response: See Line 133-138, -Changed to "Although Canada pursues a multicultural policy, immigrants to Canada, especially the youth acculture at a higher rate than adults[19,20]. The prevailing socio-cultural climate of the destination country i.e. Canada, impacts how immigrants and newcomers acculturate [21]. One of the realities that immigrants are confronted with is the perversity of substance use that differs from their countries of origin [22]."

4. The scoping review will focus on prevention programs for immigrant youth in Canada, but the background does not summarize information about this particular segment of the population until the seventh paragraph. As stated in my general comments, the prior paragraphs could be significantly condensed so that more room can be given to summarizing the scale of the problem and interventions available for this sub-group specifically.

Response: Irrelevant sentences were deleted.

5. Paragraph eight sets up the gaps in evidence and service provision. Of these gaps, I believe the author's scoping review will focus on the final gap related to family-based interventions. This paragraph then closes with a few sentences about effective parenting strategies. I suggest that these sentences be moved to the next paragraph so the gaps are tandalone and then the authors can transition into summarizing what is known about the interventions of interest in this review.

Response: Those sentences have been moved to the next paragraph- see line 190-192, is "Studies suggest that parents are important resources for substance use prevention among immigrant youth."

6. Were the described consultations in paragraph eight undertaken by the study team as part of this scoping review protocol/review design? Could this be made more explicit if so?

"Consultations with service providers at an immigrant settlement agency in a mid-sized prairie city in Canada revealed that most immigrants and newcomers, especially those with limited English language proficiency, need help to build capacity"

Response: See line 177-182: Changed to "guided by principles of community-based research, and as such, the research focus was informed by community partners. Any intervention that will emanate from this review will also be selected by the community partners. Community consultation is essential in grounding this review to foster ownership of the process and the outcome[38]. Therefore, this consultation yielded the following objectives that guide the scoping review:"

7. The authors have used the word "significant" in the below sentence, which implies that there is an abundance of high-quality evidence from systematic reviews or experimental designs. While I am not familiar with the five cited studies, they appear to be single observational studies (i.e. a lower grade of quality). Furthermore, since family-based interventions are the central focus of this review protocol, I suggest the authors consider providing more detail about these studies that will convince the readers of their importance and support understanding of the rationale for this scoping review.

“Significant empirical evidence demonstrates that effective parenting, characterized by parental warmth and close supervision of children, can delay or prevent substance use initiation.[27-29] In addition, parents' zero tolerance of and clear rules about substance use can prevent substance use initiation.[29-31]”

Response: Based on this comment and a comment of reviewer 2. We changed two places.

See line 170-172: Changed to “Family-based substance use prevention programs can be implemented in group settings with active family participation through role-plays, curriculum-based approaches, videos and youth-parent collaborative activities [34-37].”

See line 191-195: Changed to “Studies suggest that parents are important resources for substance use prevention among immigrant youth. Effective parenting, characterized by parental warmth and close supervision of children, can delay or prevent substance use initiation [31,39,40]. In addition, parents' zero tolerance of and clear rules about substance use can prevent substance use initiation [39,41,42].”

8. Could the authors include a brief definition or a reference to support the definition of “culturally safe”? This is an increasingly important concept but may not be well-known to all readers.

“Family-based substance use prevention programs for immigrant youth need to be culturally safe and able to equip parents with effective strategies that can help their youth manage risks for substance use. [32, 33]”

Response: See line 166-170: Changed to “Cultural safety is underpinned by principles of social justice and is grounded in critical theoretical perspectives, and draws attention to the impact of racialization, culturalization, discrimination, and disparities in health and access to health care among marginalized communities [34,35].”

9. Paragraph nine uses “teenagers”, and up to this point, the authors have used adolescence, young adults, and youth to define this age period. Could the authors be consistent and ensure that the age range is defined?

Response: See line 185-187: Changed to “Although the definition of youth varies, for the purpose of this review, youth will be referred to those whose are range between 12-17 years of age.”

10. Similar to comment #7 above, the authors choice of words needs to carefully consider the available evidence. With the below sentence, I expected to find a meta-analysis or systematic review that has concluded a high quality of evidence supporting these skills. If such evidence is not yet available, then the authors should consider using less conclusive language (i.e. revise “must consider”).

“A good family-based substance use prevention program for immigrant youth must consider skills and behavioral and cultural factors when developing or adapting it.[37]”

Response: See line 195-197: Changed to “A good family-based substance use prevention program for immigrant youth need to consider skills and behavioral and cultural factors when developing or adapting it [38].”

#### 11. Methods

The authors describe the development of a CAC who will guide this scoping review. Does this CAC involve any youth immigrant members? If so, this should be explicitly stated as it would be a great asset to the CAC and support the interpretation of the review’s findings.



Response: See line 223-225: changed to "Immigrant youth will be involved in the knowledge event where the research team will present the results. Also, those youth will provide feedback regarding the review's findings."

12. Could the authors briefly explain why the search will be limited to this 10-year time frame?

"For this scoping review, only literature published from 2010 to 2020 will be included."

Response: See line 243-245: Changed to "Limiting publications in the past 10 years is because substance use dynamic and interventions are changing and interventions older than 20 years may not suitable for current situation."

13. The inclusion criteria indicated that references will be included if they targeted "youth immigrants aged 12-17". What is the rationale for narrowing the search to this developmental period? Could that be a limitation? The background information suggested that first-generation immigrants may face particular stressors as risks for substance-related disorders. Is it possible that these stressors extend to young adulthood, for which family-based interventions may still be a best practice?

Response: See line 265-266, changed to "Also, considering the development stage and needs to be supervised by parents, participants' age in this study will be between 12 to 17"

14. Regarding the study selection process, please clarify if this will involve a single (e.g. title/abstract only) or a two-stage screening process (e.g. title/abstract, full text)?

Response: See line 271-274: Changed to "The search results will be exported to a reference management system, Rayyan, and the inclusion and exclusion criteria will be applied. The research team will screen for title/abstract first to determine the suitability of the article to be included in the review."

15. Regarding study screening and selection, please clarify what empirical study designs will be eligible (e.g. observational, experimental, reviews, qualitative studies).

Response: See line 261: Changed to : "b) empirical studies except reviews;"

16. Discussion

Under the 'Patient and Public Involvement' section, should the authors include information about the CAC? Would those "recent newcomers and immigrants" represent public involvement?

Response: See line 351-355: Changed to "Since this review is guided by the principles of community-based research, community advisory committee (CAC) will be actively involved in all the phases of the study including knowledge translation and dissemination and selection of an intervention. The research team will share the findings of the study with the targeted community in the region by organising a one-day knowledge exchange event."

Reviewer 2:

1. -Add subheadings in background

Response: I added three subheadings:

Substance and addiction landscape in Canada: See Line 102

Immigrants and attitude towards substance use: See Line 128

Immigrant youth and risk of substance use: See Line 153

2. -Background uses terms: adolescents, students, youths, children, & young adults. It would add more cohesion to the background to be consistent in terms used. Add a definition for "youth".

Response: See line 185-187: Changed to "Although the definition of youth varies, for the purpose of this review, youth will be referred to those whose are range between 12-17

years of age.”

3. -I believe that this journal requires references to be superscript. Check to ensure that referencing is consistent with journal requirements.

Response: All references and citations had been formatted based on the requirements of BMJ OPEN.

4. -Flipping paragraphs 8 & 9 may improve readability & flow. Thus paragraph on page 8, line 40 beginning “Family-based substances....” Should come before the paragraph on page 8, line 25 “Due to the increased risk...”.

Response: Changed: see line 170

5. -Heading “Aim and purpose” appears off centre.

Response: Changed: see line 201

6. -Provide more clarification with methods. The methods indicate that a community advisory council (CAC) will guide this scoping review, and there are examples of potential members provided. Since the CAC is not yet developed, the CAC has not participated in the formulation of the research questions. If the CAC is participating in the identification and refinement of the research problem under investigation, then the protocol may be in a premature stage since the research questions may change. Or, if the scoping review is proceeding prior to the development of the CAC then make this clearing in Step 1: identify the research question.

Response: Changed: See line 218-222 “This scoping review started with the consultation with community partners involved in providing settlement and integration services for immigrants. These partners will later be constituted to a community advisory committee (CAC) and will oversee the completion of the scoping review, knowledge translation and development of an intervention suitable for the targeted community.”

Changed: See line 227-228, “Step 1: Identify the research question: Through community consultation, the search terms were suggested which contributed to the formulation of research questions.

7. -Additionally, the ‘identify relevant studies’ search strategy for step 2 has not yet been developed. The protocol indicates that the research team, with the help of a librarian, will develop the search strategy. The protocol will be substantively stronger with the inclusion of the search strategy. Without it, the protocol is somewhat underdeveloped.

Response: Changed: See line 234-239, “The research team, with the help of a health sciences librarian, has developed a strategy to search for published articles and grey literature. A concept map based on the following keywords has been developed to guide the search for relevant publications: “family,” “prevention,” “immigration,” “youth,” “substance use” and types of substances. Appendix 1 is a prototype of a concept map that will be used to guide the review.”

8.-Explain how grey literature be searched

Response: Changed: See line 252-254, “Searching for grey literature will be based on the keywords in the concept map, and specific steps will be adjusted based on the search engines’ results.”

9. -Step 3: states that the search results will be exported to a reference management system, yet earlier in Step 2, already indicated that all selected literature would be input into Covidence.

Response: Changed: See line 271-272, to “The search results will be exported to a reference management system, Rayyan, and the inclusion and exclusion criteria will be applied.”

## VERSION 2 – REVIEW

<b>REVIEWER</b>	Marchand, Kirsten The University of British Columbia, School of Population and Public Health
<b>REVIEW RETURNED</b>	10-Apr-2021

<b>GENERAL COMMENTS</b>	<p>Thank you for the opportunity to review the revised manuscript bmjopen-2020-046766.R1, entitled "Exploring family-based immigrant youth substance use prevention programs: A scoping review protocol".</p> <p>The authors have adequately addressed my prior comments. I have two outstanding minor suggestions:</p> <p>1) The authors indicate that they will follow PRISMA for reporting the final results. They could also consider following and citing the extension for scoping reviews:</p> <p>Tricco AC, Lillie E, Zarin W, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. <i>Ann Intern Med</i> 2018;169:467.</p> <p>2) Have the authors considered further registering their protocol (e.g. with OSF) beyond the publication of the protocol? As the Arksey and O'Malley stages are iterative and the authors are engaging in community-based work, this may further strengthen the transparency of the review and any potential changes that take place throughout.</p>
-------------------------	---

<b>REVIEWER</b>	Ashcroft, Rachelle University of Toronto
<b>REVIEW RETURNED</b>	13-Apr-2021

<b>GENERAL COMMENTS</b>	Revisions made have improved the quality & clarity of the methods. The manuscript is well-written and I agree with publication.
-------------------------	---