ABSTRACT

Introduction Limited research examines alcohol-related injury in the context of social determinants of health (SDoH) to guide effective intervention and prevention programmes. SDoH are non-medical factors that impact health such as income, housing and childhood environment. This scoping review aims to explore the role SDoH in childhood have in alcohol-related injury in young adults.

Methods and analysis The scoping review process will be guided by the methodology framework of Arksey and O’Malley and the Preferred Reporting Items for Systematic Reviews and Meta-analysis Protocols Extension for Scoping Reviews Guidelines (PRISMA-ScR). The PubMed and SCOPUS databases will be systematically searched. Studies of various designs and methodologies (published in English since 1 January 2000) that examine certain SDoH of interest in relation to alcohol-related injury in adults aged 18–25 years old will be considered for inclusion in this review. Two reviewers will screen all articles identified from the databases independently. Titles and abstracts will be reviewed based on the initial search and included if eligibility criteria are met. Duplicate articles will be removed and full texts will be examined to create a final list of included studies. Any disagreements on the inclusion of any articles will be resolved through discussion and consultation with a third reviewer if necessary.

Ethics and dissemination As this research does not involve human subjects, ethics approval is not required. The results of this study will be summarised quantitatively through numerical counts and qualitatively through a narrative synthesis. The results from this review will address an important literature gap and inform the development of targeted prevention programmes for alcohol-related injury.

Registration number This protocol is registered with Open Science Framework (https://doi.org/10.17605/OSF.IO/_MYEXA).

INTRODUCTION

Alcohol-related deaths have been referred to as a silent epidemic in Canada. In 2021, 3875 deaths related to alcohol use were recorded in Canada, an almost 18% increase since 2019. While the majority of Canadians drink alcohol regularly, nearly 25% exceed the level of consumption that puts their health at risk. Those diagnosed with an alcohol use disorder are more likely to be younger, from neighbourhoods of lower socioeconomic status and living in non-urban environments. Risky or harmful drinking has a significant impact on both individuals and society including unemployment, motor-vehicle collisions (MVC), driving while intoxicated and violence. Extensive literature exists on the relationship between alcohol use and increased injury risk. Alcohol is a risk factor for both intentional and unintentional injuries and increased blood alcohol level has been associated with almost all mechanisms and types of injuries (i.e., cycling, falls, MVC, violence). Injuries are one of the primary causes of mortality and one of the leading causes of hospitalisation in young adults. As the majority of injuries are preventable, prevention programmes informed by evidence are needed to address this burden. The success and cost-effectiveness of prevention programmes can be improved by tailoring programmes to specific targeted needs.

Reducing health inequities has been prioritised by health agencies including the WHO who state that little attention has been placed on understanding related issues in the context of social determinants of health. Social determinants of health (SDoH) are a broad category of social and economical

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This study is guided by the methodology framework of Arksey and O’Malley and will follow a systematic approach to data synthesis.
⇒ The review will be limited to studies published in English from 2000 onwards to capture the current health context of this topic.
⇒ Due to the design of the scoping review, included articles will not be assessed for risk bias nor critically appraised.
⇒ There may be little published work in this area, limiting the amount of data available for this review.
factors across the lifespan that influence an individual’s health, such as childhood housing, parental health status and community resources. SDoH in childhood are found to impact health status across the life course. Further, SDoH have a powerful role in alcohol-related injuries and deaths. Herttua et al found that socioeconomic status was more predictive of alcohol-related death and hospitalisation than the extent of alcohol consumption. Nickel et al found that individuals with alcohol use disorder had greater rates of premature mortality, hospitalisation, physician visits, contact with the justice system and having a child taken into protective care compared with those without alcohol use disorder. Roche et al noted alcohol use and related harms are strongly influenced by SDoH and harmful drinking itself acts as a determinant of future health. Therefore, alcohol use and alcohol-related injuries must be examined in the context of social determinants of health. By examining alcohol-related injury in young adults and SDoH from childhood, we can generate evidence that informs interventions targeted early in the life course, possibly modifying an individual’s future health and social outcomes.

**Objectives**

This scoping review intends to explore the following research question: what SDoH are associated with alcohol-related injury in young adults?

**METHODS AND ANALYSIS**

This scoping review will be prepared in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-analysis Protocols Extension for Scoping Reviews Guidelines (PRISMA-ScR). A scoping review is a systematic way of exploring a topic area where main concepts and knowledge gaps are identified within a developing field of research. A scoping review is appropriate for this topic due to the limited research and lack of synthesised knowledge in this area.

The review process will be guided by the five main steps set forth by Arksey and O’Malley: 1. Identify the research question. 2. Identify relevant studies. 3. Study selection. 4. Charting the data. 5. Collating, summarising and reporting the results.

**Step 1: Identify the research question**

Our research question is as follows: what SDoH are associated with alcohol-related injury in young adults? This research question is meant to be broad in keeping with the exploratory nature of scoping reviews.

**Step 2: Identifying relevant studies**

The PubMed and SCOPUS databases will be systematically searched. Our research team has identified 13 SDoH of interest that will be examined in this study (table 1). These SDoH of interest are based on previous work by our team, examinations of SDoH by the Manitoba Centre for Health Policy and a review of the literature. The SDoH that we will be examining in this study all pertain to child health, that is, social and economical factors that affect an individual early in their life course. These childhood SDoH include: low-income household; rural or remote location; family received income assistance; parent involved in the criminal justice system; parent did not graduate high school; lived in social housing; parent immigrated from another country; family with high residential mobility (ie, moved frequently); child of a teen mother; mental disorder as a child; mother with a mental disorder; mother with a physical disorder; and

<table>
<thead>
<tr>
<th>Social determinants of health</th>
<th>MeSH terms/keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-income household</td>
<td>“Income” (MeSH) OR “Poverty” (MeSH) OR “income assistance”</td>
</tr>
<tr>
<td>Rural or remote location</td>
<td>“Rural Population” (MeSH) OR “Rural Health” (MeSH) OR “rural occupations” OR “remote populations”</td>
</tr>
<tr>
<td>Family received income assistance</td>
<td>“income assistance”</td>
</tr>
<tr>
<td>Parent(s) involved in criminal justice system (as a victim, parent or accused)</td>
<td>“Criminal Law” (MeSH) OR “Criminals” (MeSH) OR “Criminal Behaviour” (MeSH)</td>
</tr>
<tr>
<td>Parent(s) did not graduate high school</td>
<td>“Education” (MeSH) OR “Educational Status” (MeSH)</td>
</tr>
<tr>
<td>Lived in social housing</td>
<td>“Public Housing” (MeSH) OR “Homeless Persons” (MeSH)</td>
</tr>
<tr>
<td>Child of parent who immigrated</td>
<td>“Emigrants and Immigrants” (MeSH) OR “Minority Health” (MeSH)</td>
</tr>
<tr>
<td>Child from family with high residential mobility</td>
<td>“Population Dynamics” (MeSH) OR “transient populations”</td>
</tr>
<tr>
<td>Child with mental disorder</td>
<td>“Mental Health” (MeSH) OR “Mental Disorders” (MeSH) OR “mentally ill”</td>
</tr>
<tr>
<td>Child of teen mother</td>
<td>“Pregnancy in Adolescence” (MeSH) OR “teenage pregnancy” OR “pregnant teen”</td>
</tr>
<tr>
<td>Child of parent with mental disorder</td>
<td>“Mental Health” (MeSH) OR ‘Mental Disorders” (MeSH) OR “mentally ill”</td>
</tr>
<tr>
<td>Child of mother with physical disorder</td>
<td>“Disabled Persons” (MeSH) OR “physical disability” OR “physical disorder”</td>
</tr>
<tr>
<td>Child in care</td>
<td>“Child Welfare” (MeSH) OR “Child Protective Services” (MeSH)</td>
</tr>
</tbody>
</table>

*A similar search will be carried out using the SCOPUS database (see online supplemental file 1).*
being placed in the care of another adult,11 21 22 (see Online supplemental file 1 for full search strategies).

For the PubMed database, MeSH terms and keyword terms for each of the 13 SDoH have been created (table 1) and will be combined with MeSH and keyword terms for injury and alcohol (table 2) using the AND operator. To narrow the search further, the MeSH term “Adult” will be added to the search using the AND operator to include studies looking at adult populations. The MeSH term “Aged” will also be added with the NOT operator to exclude studies looking at elderly populations. A similar search strategy using the same search terms will be carried out using the SCOPUS database. An example of the search strategy used in PubMed has been included (see online supplemental file 1). Additional social determinants and search strategies may be incorporated as the review progresses and any additions or changes will be documented.

### Step 3: Study selection

Two reviewers, HG and CC, will screen all articles identified from the databases independently. Titles and abstracts will be reviewed based on the initial search and will be included based on the eligibility criteria described below. Duplicate articles will be removed and full texts will be examined to create a final list of included studies. Any disagreements on the inclusion of any articles will be resolved through discussion and consultation with a third reviewer if necessary.

### Eligibility criteria

This scoping review will consider the following types of studies: quantitative; retrospective and prospective case control and cohort; cross-sectional; qualitative; mixed methods; case reports; meta-analyses; and systematic reviews. Studies to be included in this review must meet the following criteria (table 3): (1) published in English (may be from any geographical location); (2) published between January 1, 2000 and July 13, 2022; (3) examine a population of young adults (those aged 18–25) suffering physical injury related to alcohol use; and (4) examine at least one of the SDoH of interest in relation to alcohol-related injury. Additional SDoH of interest other than those already identified may be included in the review as the project progresses. Articles outside of those defined in the inclusion criteria will be excluded.

### Step 4: Charting the data

Data from identified studies will be collected and charted according to key themes. For each eligible article, charted data will include: authorship; title of publication; journal of publication; year of publication; general characteristics of the population studied; SDoH studied; study methods; and study results/key findings/strengths/limitations. A combination of Microsoft Excel and Covidence management software will be used to chart the data and manage the screening process.

### Step 5: Collating, summarising and reporting the results

Risk of bias will not be assessed as this is a scoping review only intended to provide an overview of existing literature and not to critically appraise the included articles. However, we will include a discussion of any strengths and limitations found in the body of evidence. The results of this study will be summarised both quantitatively and qualitatively; quantitatively through the highlighting of key numerical findings from each study included and qualitatively through a narrative synthesis. Tables will be used to summarise the study findings and a flow chart will be created to give an overview of the screening process. SDoH other than those already identified by our team will be considered for inclusion in this study as the project progresses. The discussion section of the study will be based on themes that emerge from the review.

### Patient/public involvement

There will be no patient or public involvement in this study.

### DISCUSSION

The results of this study will establish what is currently known about the role of SDoH in alcohol-related injury in young adults. To our knowledge, this scoping review is the first published review on this topic and will, therefore, address an important gap in the literature. Through this review, we hope to provide an understanding of which SDoH are associated with alcohol-related injuries...
in young adults. This information will generate evidence to inform the development of targeted alcohol-related injury prevention programmes for this population.

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Contributors RS is the guarantor. HG, CC, BC, JG, RS and SL drafted the manuscript and contributed to the development of the selection criteria. HG, CC and a university librarian developed the search strategy. All authors read, provided feedback and approved the final manuscript.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

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