BMJ Open Cancer risk factors and access to cancer prevention services for people experiencing homelessness: a scoping review protocol

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ABSTRACT

Introduction Homelessness is a complex social issue that significantly impairs the health of those affected. People experiencing homelessness (PEH) have a higher prevalence of adverse health outcomes, including premature mortality, compared with the general population, with cancer being the second-leading cause of death. The objective of this scoping review is to map the evidence to assess the exposure of PEH to known cancer risk factors and identify barriers and facilitators PEH experience in accessing cancer prevention services. Methods and analysis This scoping review will be conducted in line with the Joanna Briggs Institute quidelines for scoping reviews. For a time window from the date of database establishment until 20 February 2023, the research team will create a detailed search strategy and apply it to the following databases: CINAHL, Embase, Global Index Medicus, PubMed, Scopus and Web of Science. In addition, we will search OpenGrey and Google for grey literature and contact non-governmental organisations to request relevant reports. In the first stage. eligibility criteria will be assessed through a blinded title/ abstract assessment, and following this assessment, a full-text screening will be performed. Subsequently, the research team will perform the data extraction and synthesise all relevant information in relation to the scoping review question.

Ethics and dissemination As this protocol does not involve gathering primary data, ethical approval is not necessary. The results of this review will be published in a peer-reviewed journal and on institutional websites.

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INTRODUCTION

Globally, cancer is a pressing public health issue affecting millions of people each year. 1–5 Although anyone can be impacted by cancer, specific population subgroups, such as people experiencing homelessness (PEH), face a higher risk of developing the disease. 6–8 Homelessness is a multifaceted social issue characterised by a lack of stable, safe or adequate housing resulting from various economic, social and health-related factors. 9–10 Higher prevalence of cancer and

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ In line with the Joanna Briggs Institute guidelines for scoping reviews, this protocol will serve as a guide for the different steps of the proposed research.
- ⇒ The scoping review will provide a broad overview of the evidence published in peer-reviewed as well as grey literature relevant to cancer prevention in people experiencing homelessness and will cover literature without a date limit.
- ⇒ The studies to be included in the scoping review will be selected without any restrictions on language.

higher rates of cancer-related mortality were observed among PEH compared with the general population. Several cancer risk factors may disproportionally affect PEH, particularly behavioural, environmental and healthcare-related factors.

Behavioural cancer risk factors include tobacco use, alcohol consumption and use of illicit substances, all of which are highly prevalent among PEH.¹² Environmental risk factors that are more common among PEH include exposure to the sun, pollutants or hazardous substances, as well as poor living conditions. 6 13 PEH may be exposed to poor living conditions, such as overcrowding, which can contribute to the spread of infections that, in further consequence, can lead to cancer.⁵ ¹⁴ Finally, healthcare-related risk factors include limited access to healthcare and insufficient healthcare utilisation, both of which can contribute to delayed diagnoses of cancer and poorer treatment outcomes. Barriers to healthcare access are pervasive among PEH, such as a lack of insurance, transportation or knowledge of available resources, which can result in the underutilisation of cancer screening and preventive care. 15 16 Additionally, it is crucial to acknowledge bias and stigma perpetrated





by healthcare providers, as well as the intersectionality of homelessness and racism—considering that PEH are more likely to be part of an already minoritised groups—leading to higher levels of healthcare service avoidance and thus more aggravated health issues.¹⁷

Often, behavioural, environmental and healthcare-related risk factors are interconnected. The use of illicit substances—which poses a cancer risk factor in itself—may also lead to risky sexual practices that can increase the risk of contracting sexually transmitted infections (eg, human papillomavirus infections) known to be associated with cancer. ^{18 19} Addressing these risk factors and ensuring adequate access to healthcare and cancer prevention services can reduce cancer risk among PEH. Thus, identifying risk factors in a timely manner is crucial in reducing the cancer burden and improving the overall health outcomes of this high-risk marginalised population. ²⁰

While PEH are more likely to develop cancer than those with stable and secure housing, ²¹ they disproportionately face challenges in accessing early and appropriate cancer preventive services, including primary prevention and diagnostic cancer screenings. ¹⁵ While these challenges may be a consequence of a lack of insurance coverage, transportation and financial ability, not accessing these services can result in delayed cancer diagnoses, leading to more advanced-stage cancer and poorer health outcomes, such as increased morbidity and mortality rates. ^{22–24} Moreover, PEH may face language barriers, stigma and a lack of trust in medical professionals, ²⁵ ²⁶ when the quality of cancer care they receive is often lower than that provided to the general population. ²⁷

Although research on cancer risk factors and access to cancer prevention services for PEH is still scarce, a few previous studies have suggested that PEH may face additional challenges when it comes to cancer prevention and care. ^{8 15} Given the paucity of research in this field and the research pointing to worse outcomes along the cancer care continuum in PEH, we aim to map the evidence on cancer risk factors and access to cancer prevention services for this population. For this purpose, a scoping review is an appropriate strategy to explore a broad range of literature, including both academic and grey literature, and summarise and synthesise the current state of knowledge on a particular topic. ²⁸

Objective

The objective of this scoping review is to map the available evidence to assess the exposure of PEH to known cancer risk factors and identify barriers and facilitators PEH experience to accessing cancer prevention services (ie, screening).

Research questions

1. What is the prevalence of known cancer risk factors among PEH (eg, smoking, obesity, sun exposure, alcohol consumption, age, cancer-causing substances, diet, hormones, immunosuppression, infectious agents, radiation)?

2. What are the barriers and facilitators to accessing cancer prevention services for PEH?

METHODS AND ANALYSIS

The scoping review builds on the methodology for scoping reviews proposed by the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis. ²⁹ A preliminary search of MEDLINE, the Cochrane Database of Systematic Reviews and JBI Evidence Synthesis was conducted to identify any current or underway reviews on the same topic. We found one review by Asgary from 2018¹⁵ that presents data on cancer incidence and mortality and the accessibility of cancer screening in PEH. We plan to include the latest research on cancer risk factors and access to cancer prevention services that has been published until the date of our literature search.

Eligibility criteria

We defined inclusion and exclusion criteria following the population, concept and context framework.²⁹ It allows for determining the group of individuals that are the focus of the study, the specific topic of interest as well as the environmental factors that may influence the population or concept.

Population

Inclusion criteria

- ▶ PEH are defined as the study population (including people living in supportive housing, transitional housing, unstable housing, inadequate housing and inappropriate housing).
- ➤ Study participants experienced homelessness at the time data were collected.
- ▶ PEH without a current or past cancer diagnosis.
- ▶ PEH 18 years old or over.

Exclusion criteria

- ▶ People not experiencing homelessness.
- ▶ PEH are among the studied population, but there are no specific data on outcomes or how homelessness influences cancer risk or access to cancer preventive services.
- ▶ PEH who were not homeless at the time of data collection. This is mainly due to the potential recall bias among participants who were formerly experiencing homelessness, as the recollection of their experiences may differ from the actual circumstances they faced during that specific period.
- ► PEH diagnosed with any type of cancer or who are cancer survivors.
- ▶ PEH under 18 years.

Concept

Inclusion criteria

- Cancer risk factors among PEH.
- ► Access (perceived and/or measured) for PEH to secondary cancer prevention services (ie, screening



for specific cancer types, such as breast, cervical, colon, lung, oral, prostate and skin cancer).

Exclusion criteria

- Access for PEH to curative/therapeutic healthcare services.
- Access for PEH to tertiary prevention services.

Context

Inclusion criteria

- Studies conducted in any setting/country/healthcare system.
- ▶ No limitations in terms of sex and gender.
- ▶ Original research and reviews (qualitative, quantitative and mixed-methods study designs).
- ► Grey literature.
- ▶ Time frame: from inception to 20 February 2023.

Exclusion criteria

► Any publication type that is not original research or a review (eg, posters, protocols, comments, editorials, conference proceedings).

Types of sources

The scoping review will encompass a range of study designs, including both experimental and quasi-experimental designs, such as randomised controlled trials, non-randomised controlled trials and pre-post studies. Prospective and retrospective cohort studies, case-control studies and analytical cross-sectional studies will also be included. In addition, descriptive observational studies, such as case series, individual case reports and descriptive cross-sectional studies, will be considered for inclusion.

In order to gain comprehensive insights beyond a quantitative point of view, we will also consider qualitative studies providing in-depth data on factors enabling or hindering access to cancer prevention among a vulnerable population such as PEH. Furthermore, reviews that meet our eligibility criteria will also be taken into account.

Search strategy

The search strategy aims to locate both published and unpublished studies. After an initial limited search of MEDLINE (PubMed) and Scopus (Elsevier) to identify relevant articles, the titles and abstracts of these articles, along with the index terms used to describe them, will be used to develop a comprehensive search strategy for CINAHL (Ebsco), Embase (Elsevier), Global Index Medicus (World Health Organization), MEDLINE (PubMed), Scopus (Elsevier) and Web of Science (Clarivate). The search strategy will be adapted for each database.

The search will cover the above databases without restricting the language or date range of relevant studies. To ensure comprehensive coverage, the journal 'Social Sciences & Humanities Open' will be searched manually as it is not indexed in any of the included databases. Sources of unpublished studies and grey literature, such as trial

registries and grey literature databases (eg, OpenGrey), will also be searched. Furthermore, we will assess the eligibility of references cited in articles considered relevant for our scoping review to determine their inclusion. The complete search strategy employed for the electronic databases, along with the search terms used for the grey literature search, can be found in online supplemental appendix.

Study and source of evidence selection

After the database search, all identified citations will be inserted into EndNote V.20 (Clarivate Analytics, Pennsylvania, USA), and duplicates will be removed automatically and manually. Then, two reviewers will screen the titles and abstracts for relevant sources with regard to the inclusion criteria and will retrieve the full texts of selected studies. Four reviewers will assess the full-text eligibility in groups of two, and discussion rounds will be held to resolve any conflicting decisions. The reasons for excluding sources and the final number of included results will be reported in the final scoping review and presented in a Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews flow diagram.³⁰

Data extraction

The data extraction tool will include information about source details, characteristics and results extraction, in accordance with the JBI methodology guidance for scoping reviews.²⁹ Specifically, the data extraction table will contain the following specific information:

- 1. Author(s).
- 2. Year of publication.
- 3. Type of evidence source.
- 4. Region where the study was conducted.
- 5. Study objectives.
- 6. Methodology/methods.
- 7. Study design.
- 8. Population and total sample size within the study or source of evidence.
- 9. Number of PEH included in the study sample.
- 10. Sample age, sex and gender.
- 11. Screening types and details of these.
- 12. Key findings that relate to the scoping review question.
 - a. Cancer risk factors.
 - b. Screening rates.
 - c. Barriers to accessing screening.
 - d. Facilitators to access screening.

The initial data extraction tool will be subject to modification and revision as needed during the data extraction process. In case of disagreements between reviewers during the data extraction process, they will be resolved through discussion or with the involvement of an additional reviewer. The data extraction tool will be used for both scientific literature and grey literature.

Data analysis and presentation

By analysing the data collected through the data extraction framework, we will obtain insights into the existing body



of research on cancer risk factors and the accessibility of cancer prevention services for PEH. Moreover, the analysis will identify knowledge gaps related to cancer prevention in PEH that have not received sufficient attention and may require additional research. The findings will be presented in an appropriate visual and aggregate format using a table to present descriptive results of the scoping review for each included source of evidence. In addition, we will provide a narrative synthesis of the findings and their relevance in connection with our specific objective and research questions.

Patient and public involvement

None.

Ethics and dissemination

Ethical approval is not required as this study is a retrospective review of publicly available evidence sources and does not involve collecting primary data. We will disseminate the findings of the scoping review through publication in a peer-reviewed journal and presentations at symposia and conferences. To ensure that the review findings reach the relevant stakeholders, a dissemination strategy will be developed later in the review process. The scoping review described in this protocol was registered in the Open Science Framework Registries (https://doi.org/10.17605/OSF.IO/X78AJ). 31

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Contributors MJ, TS and IG conceptualised the research; TS wrote the protocol; AG-S, LY, SH and FBS aided in developing the research question, eligibility criteria and study methods; all authors contributed to the drafting and editing of this protocol and approved the final manuscript.

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Competing interests None declared.

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REFERENCES

- 1 Richters A, Aben KKH, Kiemeney LALM. The global burden of urinary bladder cancer: an update. *World J Urol* 2020;38:1895–904.
- 2 Keum N, Giovannucci E. Global burden of colorectal cancer: emerging trends, risk factors and prevention strategies. *Nat Rev Gastroenterol Hepatol* 2019;16:713–32.
- 3 Rumgay H, Shield K, Charvat H, et al. Global burden of cancer in 2020 attributable to alcohol consumption: a population-based study. Lancet Oncol 2021;22:1071–80.
- 4 Arnold M, Ferlay J, van Berge Henegouwen MI, et al. Global burden of oesophageal and gastric cancer by histology and subsite in 2018. Gut 2020:69:1564–71.
- 5 de Martel C, Georges D, Bray F, et al. Global burden of cancer attributable to infections in 2018: a worldwide incidence analysis. Lancet Glob Health 2020;8:e180–90.
- 6 Baggett TP, Chang Y, Porneala BC, et al. Disparities in cancer incidence, stage, and mortality at Boston health care for the homeless program. Am J Prev Med 2015;49:694–702.
- 7 Holowatyj AN, Heath EI, Pappas LM, et al. The epidemiology of cancer among homeless adults in metropolitan Detroit. JNCI Cancer Spectr 2019;3:pkz006.
- 8 Lawrie K, Charow R, Giuliani M, et al. Homelessness, cancer and health literacy: a scoping review. J Health Care Poor Underserved 2020;31:81–104.
- 9 Fitzpatrick S. Explaining homelessness: a critical realist perspective. *Hous Theory Soc* 2005;22:1–17.
- 10 Tsai J, O'Toole T, Kearney LK. Homelessness as a public mental health and social problem: new knowledge and solutions. Psychol Serv 2017;14:113–7.
- 11 Aldridge RW, Menezes D, Lewer D, et al. Causes of death among homeless people: a population-based cross-sectional study of linked hospitalisation and mortality data in England. Wellcome Open Res 2019;4:49.
- 12 Taylor EM, Kendzor DE, Reitzel LR, et al. Health risk factors and desire to change among homeless adults. Am J Health Behav 2016;40:455–60.
- 13 Joseph A, Kindratt T, Pagels P, et al. Knowledge, attitudes, and practices regarding skin cancer and sun exposure among homeless men at a shelter in Dallas, TX. J Cancer Educ 2020;35:682–8.
- 14 Moffa M, Cronk R, Fejfar D, et al. A systematic scoping review of environmental health conditions and hygiene behaviors in homeless shelters. Int J Hyg Environ Health 2019;222:335–46.
- 15 Asgary R. Cancer screening in the homeless population. *Lancet Oncol* 2018;19:e344–50.
- 16 Asgary R, Garland V, Jakubowski A, et al. Colorectal cancer screening among the homeless population of New York City shelterbased clinics. Am J Public Health 2014;104:1307–13.
- 17 Weisz C, Quinn DM. Stigmatized identities, psychological distress, and physical health: intersections of homelessness and race. Stigma and Health 2018;3:229–40.
- 18 Williams SP, Bryant KL. Sexually transmitted infection prevalence among homeless adults in the United States: a systematic literature review. Sex Transm Dis 2018;45:494–504.
- 19 Caccamo A, Kachur R, Williams SP. Narrative review: sexually transmitted diseases and homeless youth-what do we know about



- sexually transmitted disease prevalence and risk Sex Transm Dis 2017;44:466–76.
- 20 Fazel S, Geddes JR, Kushel M. The health of homeless people in high-income countries: descriptive epidemiology, health consequences, and clinical and policy recommendations. *The Lancet* 2014;384:1529–40.
- 21 Drescher NR, Oladeru OT. Cancer screening, treatment, and outcomes in persons experiencing homelessness: shifting the lens to an understudied population. *JCO Oncol Pract* 2023;19:103–5.
- 22 Campbell DJT, O'Neill BG, Gibson K, et al. Primary healthcare needs and barriers to care among Calgary's homeless populations. BMC Fam Pract 2015;16:139.
- 23 Gelberg L, Andersen RM, Leake BD. The behavioral model for vulnerable populations: application to medical care use and outcomes for homeless people. *Health Serv Res* 2000;34:1273–302.
- 24 Hauff AJ, Secor-Turner M. Homeless health needs: shelter and health service provider perspective. *J Community Health Nurs* 2014;31:103–17.

- 25 Wen CK, Hudak PL, Hwang SW. Homeless people's perceptions of welcomeness and unwelcomeness in healthcare encounters. J Gen Intern Med 2007;22:1011–7.
- 26 Paisi M, Kay E, Plessas A, et al. Barriers and enablers to accessing dental services for people experiencing homelessness: a systematic review. Community Dent Oral Epidemiol 2019;47:103–11.
- 27 Sayani A. Socially based inequities in breast cancer care: intersections of the social determinants of health and the cancer care continuum. *Critical Studies* 2017;13:24–36.
- 28 Peterson J, Pearce PF, Ferguson LA, et al. Understanding scoping reviews: definition, purpose, and process. J Am Assoc Nurse Pract 2017;29:12–6.
- 29 Aromataris E, Munn Z. JBI Manual for Evidence Synthesis. JBI, 2020.
- 30 Tricco AC, Lillie E, Zarin W, et al. PRISMA extension for scoping reviews (PRISMA-SCR): checklist and explanation. Ann Intern Med 2018;169:467–73.
- 31 Jeleff M, Schiffler T, Gil-Salmerón A, et al. Cancer risk factors and access to cancer prevention services for people experiencing homelessness: a Scoping review: open science framework. 2023.