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Running head: Sexual health promotion for SGM in primary care

Sexual Health Promotion for Sexual and Gender Minorities in Primary Care: A Scoping Review Protocol

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ABSTRACT

Introduction: Sexual and gender minorities (SGM) face health disparities related to systemic discrimination and barriers to sexual health. Sexual health promotion encompasses strategies that enable individuals, groups, and communities to make informed decisions regarding their sexual well-being. Our objective is to describe the existing sexual health promotion interventions tailored for SGMs within the primary care context.

Methods and analysis: We will conduct a scoping review and search for articles in eleven medical and social science academic databases on interventions that are targeted towards SGM in the primary care context in industrialized countries. We defined sexual health interventions in the inclusion framework as 1) promote positive sexual health, or sex and relationship education; 2) reduce the incidence of STIs; 3) reduce unintended pregnancies; or 4) change prejudice, stigma, and discrimination around sexual health, or increase awareness surrounding positive sex. Two independent reviewers will select articles meeting inclusion criteria and extract data. Participant and study characteristics will be summarized using frequencies and proportions. Our primary analysis will include a descriptive summary of key interventional themes from content and thematic analysis. Gender-based Analysis Plus (GBA+) will be used to stratify themes based on gender, race, sexuality, and other identities. The secondary analysis will include the use of the Sexual and Gender Minority Disparities Research Framework to analyze the interventions from a social-ecological perspective.

Ethics and dissemination: No ethical approval is required for a scoping review. The protocol was registered on the Open Science Framework Registries (https://doi.org/10.17605/OSF.IO/X5R47). The intended audiences are primary care providers, public health, researchers, and community-based organizations. Results will be communicated through peer review publication, conferences, rounds, and other opportunities to reach primary care providers. Community-based engagement will occur through presentations, guest speakers, community forums and research summary handouts.

Strengths and limitations of this study

- The research question was kept broad to capture the diversity of sexual health promotion in primary care.
- Focuses on interventions that can inspire and be utilized by primary care providers for sexual and gender minority patients.
- Includes both peer-reviewed and grey literature, with the intention of keeping the scope broad.
- Narrow definition of sexual health promotion interventions and definition of primary care.
- Focuses on only developed countries according to the United Nations Report 2019, leading to exclusion of studies and may reduce generalizability to other care contexts.

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INTRODUCTION

The term "sexual and gender minorities" encompasses identities such as Two-Spirited, lesbian, gay, bisexual, transgender, queer, questioning, intersex and asexual (2SLGBTQQIA+) individuals that represent a diverse group of people and communities with intersecting identities such as race, socioeconomic status and others[3]. These intersecting identities and backgrounds define unique identity locations that influence experiences of stigma and discrimination in the healthcare system[13]. Sexual and gender minority individuals face health disparities[1], including access to health care, discrimination by health providers, postponing or not attempting to seek care, and access to health insurance[2,3]. Furthermore, minority stress theory suggests that sexual minority individuals face more exposure to social stress related to stigma, prejudice and discrimination and therefore are at greater risk for negative physical and mental health outcomes, compared to their heterosexual counterparts[14].

Sexual health remains a significant public health challenge around the world and continues to impact Western industrialized countries[4]. Approximately one million people around the world acquire a STI every day, and the resulting morbidity and mortality compromises individual quality of life as well as overall sexual and reproductive health[15,16]. Though many definitions of sexual health have been proposed[17], the most cited and widely accepted is the World Health Organization definition: "a state of physical, emotional, mental, and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction, or infirmity."[18] Sexual and gender minorities face varying sexual health issues. For example, sexual minority women are more likely to report sexually transmitted infections (STIs) and unintended pregnancies compared to their heterosexual counterparts[19]. Cis- and transgender gay, bisexual, and other men who have sex with men (GBMSM) are at particularly high risk for acquiring HIV[20] . Transmasculine individuals have a significantly reduced odds of undergoing cervical cancer screening as compared to cis-women[21,22]. To reduce the global burden of STIs, WHO's *Global Health Sector Strategy on Sexually Transmitted Infections* Report points to the need to adopt appropriate interventions aimed to promote sexual health[16].

Sexual health promotion encompasses strategies that enable individuals, groups, and communities to make informed decisions regarding their sexual well-being[18]. These strategies often focus on intervening at the individual level, through the provision of educational, peer-based, motivational, or skills-based programs[5]. From social-ecological perspective, sexual health and sexual behaviour change takes place within five nested, interacting environmental levels with the individual at the centre[24–26] . The individual and the surrounding microsystem represent the most immediate environment and factors that drive health disparities and unmet care needs[26]. The mesosystem is the relationship between the health provider and patient and the ecosystem encompasses health system policies, decisions made among health providers and insurance[26]. The macrosystem is the broader cultural environment that influences stigma and discrimination and the chronosystem describes how location in time and place impacts the individual[26]. It is important to examine sexual health promotion interventions that move beyond the individual level to address multiple domains as they have the potential to further improve sustainable behaviour change and positive sexual health outcomes[27].

Primary care is uniquely situated to address many environments to positively influence sexual health of sexual and gender minority individuals; ranging from patient-level interaction,

community-based interventions to targeted policy changes. Researchers advocate that primary health care environments are important settings for delivering routine sexual health promotion services [28]. Yet, though sexual health is recognized as an important topic within primary care, it is often overlooked in practice[29]. Specifically, Khan *et al.* (2008)[30] reported that many primary care providers do not discuss sexual health with their patients due to challenges integrating sexual health into their practice, citing heavy workloads, lack of time, and inadequate training as barriers[9]. In the context of sexual and gender minority patients, lack of knowledge and understanding is cited as a barrier to ask about a patient's gender, sexuality and sexual health[26].

The objective of this scoping review is to synthesize what evidence currently exists regarding sexual health promotion interventions for sexual and gender minorities in the primary care context, to examine the landscape of the literature and to map out existing and promising areas of priority, improvement, and future research.

METHODS AND ANALYSIS

Our scoping review approach is informed by frameworks proposed by Arksey and O'Malley (2002)[6], Levac *et al.* (2010)[7], and the Joanna Briggs Institute[8]. These researchers outlined six stages involved in conducting a rigorous scoping review: 1) identifying the research question; 2) identifying relevant studies; 3) selecting relevant studies; 4) charting data; 5) summarizing and reporting findings and 6) an optional consultation exercise. In addition, we utilize the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist in developing this protocol as it the most used and widely accepted standard of reporting scoping reviews[31–33]. The scoping review protocol was registered on the Open Science Framework Registries (DOI: 10.17605/OSF.IO/X5R47)

Patient and public involvement

No patients were involved in this scoping review.

Eligibility Criteria

Participants

Our focus will be on studies involving interventions targeted towards youth and adult sexual and gender minorities, including but not limited to those who identify as Two Spirit, lesbian, gay, bisexual, transgender, transsexual, queer, questioning, intersex, and asexual. We will include studies that targeted sexual and gender minorities populations who may also benefit from the intervention. Conversely, we will exclude studies that included sexual and gender minority individuals along with other groups of interest or the general population without clear targeting or intention to focus on sexual and gender minorities. We will exclude interventions targeting children under the age of 12.

Concept

This review will be inclusive of studies that examine a wide range of sexual health promotion interventions based in the primary care contexts. For this review, we will adapt the definition of sexual health promotion employed by Thompson et al. (2008)[9], wherein the term encompasses, but is not limited to, any activity that: 1) promotes positive sexual health, or sex and relationship education; 2) reduces the incidence of STIs (including HIV); 3) reduces unintended pregnancies;

4) changes prejudice, stigma and discrimination, or increases awareness surrounding positive sex.

Context

Our context is the primary care setting, which includes "first-contact services" such as general practitioners or family medicine clinics, pharmacies, tele-health, outpatient clinics, community or venue-based clinics, sexual health clinics, and other clinical settings that does not consider patients as "inpatients"[10]. We will include research based in both "general practice" and "family medicine" since these terms are synonymous with primary care and may be used interchangeably in literature[34]. We will restrict our focus to studies conducted in "economically developed" nations, as defined by the 2019 United Nations World Economic Situation Prospects report classifications (Appendix 1, Table 1)[35].

Types of studies

Studies using any study design will be eligible, including but not limited to systematic reviews, randomized controlled trials, quasi-experimental trials, cohort studies, case control studies, and cross-sectional studies. Mixed methods research and qualitative study designs such as phenomenological and ethnographic studies will also be included. For feasibility reasons, only articles published in English were included. We will restrict the review to articles published between the year 2000 to 2022, to maximize relevance to the current healthcare context. We will include conference articles, editorials and commentaries to better capture the scope of health promoting intervention.

Search strategy and Information Sources

The search strategies will be developed iteratively by the team and carried out by an experienced medical librarian (CZ), utilizing a comprehensive range of medical subject headings and keyword each terms corresponding to our population (sexual and gender minorities), concept (sexual health promotion), and context (primary care in high income countries). The search strategies will be adapted for each database and will be limited English language articles published from 2000 to the present. In total, eleven databases will be searched for this review: Medline (Ovid), Embase (Ovid), PsycINFO (Ovid), CINAHL (EBSCOhost), the Cochrane Database of Systematic Reviews (Ovid), Cochrane Central Register of Controlled Trials (Ovid), Web of Science (Science Citation Index, Social Sciences Citation Index, Conference Proceedings Citation Index Science, Conference Proceedings Citation Index- Social Science & Humanities), Gender Studies Database & LGBTQ+ Source (EBSCOhost). The complete Ovid Medline search strategy is available in Appendix 2. All search strategies, exactly as run, will be made available upon publication of the final review. Additional search strategy that will be employed is cited reference searching of the systematic reviews that meet inclusion criteria.

Study selection

Search results from each database will be compiled in EndNote and duplicates removed, then subsequently imported into the Covidence® software, software where any additional duplicate citations will be removed. Two reviewers will independently review titles and abstracts of each citation against the inclusion criteria. Conflicts will be resolved through discussion until consensus is reached or bringing in a third reviewer if necessary. Articles meeting the inclusion criteria will then move on to full text review by two independent reviewers. We will record

reasons for excluding articles. Disagreements between the reviewers at the full text review process will be resolved through consensus where possible, or by the decision of a third reviewer if not. Articles that meet inclusion/exclusion criteria upon full text review will be imported into Covidence®. The results of the search and study selection process will be reported using a PRISMA flow diagram.

Data Extraction Process

One reviewer will independently extract data, including article type, description of intervention, themes and subthemes, and participant descriptors, from the final eligible articles. We will pilot a draft extraction table on the first five eligible articles; table modifications will be made iteratively. A second reviewer will validate the accuracy of data extraction from the entire set of articles extracted by the first reviewer. Discrepancies will be discussed between the two reviewers until consensus is reached or by arbitration of a third reviewer, if necessary. Reviewers will attempt to contact study authors by email up to three attempts per article, to request missing or additional information if required.

Data Analysis and Presentation

We will describe key characteristics of the included studies, including participants' gender, sexuality, race/ethnicity, age range, country of study. Results will be summarized as Tables and/or figures in the final scoping review article. After data extraction, we will conduct thematic analysis to identify major content area categories, themes, and subthemes of the interventions. We will use the Sexual and Gender Minority Disparities Research Framework from the NIH[12] to analyze the interventions from a social-ecological perspective in terms of individual, community, and policy, for example. We will apply Gender-based Analysis plus (GBA+)[11] to characterize gender, race, and sexuality data presented in the articles. These results will be quantified and presented in graph and tabular formats in the final review. Themes and sub-themes identified will be described in greater detail in narrative summaries.

Ethical Approval

No ethical approval is required since our scoping review methods do not involve animals or human participants.

Discussion

To our knowledge, this will be the first scoping review to describe the landscape of sexual health promotion based in primary care setting tailored to sexual and gender minorities. Primary care represents a key setting of inquiry because it captures many social-ecological levels of influence for positive and sustainable sexual health outcomes, ranging from individual and relational to policy[24–27]. Findings can ground the implementation and scale-up of evidence-based interventions and the development of novel interventions to support and foster positive sexual health in sexual and gender minorities communities.

Our scoping review approach has several strengths. Our comprehensive search strategy includes a wide range of primary research modalities using quantitative, qualitative, and mixed methods.

Studies included in secondary research, e.g., systematic reviews, that fit the selection criteria will also be included. Additionally, our search parameters and definitions of primary care and sexual health promotion are broad to better capture the diversity of the literature. Our analysis strategy is similarly comprehensive and multi-faceted with analysis of themes and content, the participants, such as gender, sexuality, and race/ethnicity as well as a socio-ecological levels. This analysis will offer rich insights into the different dimensions of potential research findings of the content, context, and participants.

Nevertheless, there are limitations. Our restriction to studies in economically-developed countries may limit generalizability to low-income settings. Similarly, by restraining the scope to interventions that operate within or in close connection to primary care, we may select for more biomedical interventions such as STI and HIV testing. This may exclude studies that focus on sexuality, relationships, and behaviour-based change when these may operate in settings outside of primary care (e.g., community-based organizations, bath houses, and private counselling).

Conclusion and Dissemination

Primary health care environments are well suited for creative and effective strategies for sexual health promotion that are tailored to sexual and gender minorities. The narrative descriptions, results and findings of this scoping review will help to identify areas of priority, improvement, and scale-up. By summarizing outcomes and success of interventions across key content themes results from our scoping review are expected to be of particular interest to primary care providers in high-income country settings. Public health policy experts and practitioners with a public health focus may find the anticipated results relating to the levels of interventions instructive. Community-based organizations that engage in sexual health promotion may benefit from new ideas suggested by the scoping review, or alternatively confirmation that existing strategies are evidence-based. Finally, gaps identified by the scoping review will provide opportunities for further work by researchers in the field, including development and trialing of new interventions within primary care environments for sexual and gender minorities.

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AUTHOR'S CONTRIBUTIONS

PH and RT contributed equally to this paper as co-first authors. All contributing authors have seen and approved the final submitted version of the manuscript. The contribution of work is as follows: ANB, DHST, and JG developed the study question; JG and RT designed the protocol with ANB and DHST; CZ for the data acquisition by creating and implementing the search strategy; PH, RT, JG, DHST and ANB wrote the original draft of the manuscript; all authors provided input and approved the final version of the manuscript.

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COMPETING INTERESTS

PH, RT, JG, CZ, CF, AY, and ANB have no conflicts of interest. D.H.S.T.'s institution has received investigator-initiated research grants from Abbvie, Gilead and Viiv Healthcare. D.H.S.T. is a Site Principal Investigator for clinical trials sponsored by GlaxoSmithKline.

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Appendix 1

Table 1: Developed Countries According to the United Nations 2019 Report

North America	Europe (European Union)	Other Europe	Asia and Pacific
Canada United States	Austria Belgium Denmark Finland France Germany Greece Ireland Italy Luxembourg Netherlands Portugal Spain Sweden United Kingdom Bulgaria Croatia Cyprus Czech Republic Estonia Hungary Latvia Lithuania Malta Poland Romania Slovakia Slovenia	Iceland Norway Switzerland	Australia Japan New Zealand

Appendix 2

Medline search strategy

Ovid MEDLINE: Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE® Daily and Ovid MEDLINE® <1946-Present>

1	exp "Sexual and Gender Minorities"/	12718
2	bisexuality/ or exp homosexuality/	33767
3	transsexualism/	4269
4	Gender Identity/	20626

5 Transvestism/ 643
6 Gender Dysphoria/ 787
7 (two spirit* or twospirit* or 2spirit* or 2-spirit* or gender non conforming or gender nonconforming or LGBT* or GLBT* or GSM or MSM or WSW or lesbian* or gay* or bisexual* or homosexual* or transgender* or transsexual* or trans gender* or trans sexual* or trans spectrum or transspectrum or queer* or intersex* or asexual* or pansexual* or omnisexual* or genderqueer or genderfluid or gender fluid or third gender or fourth gender or double sex or doublesex or twin spirit* or twinspirit* or sexual* minorit* or pangender* or non binary or nonbinary or bigender* or agender* or trigender* or pan gender* or bi gender* or tri gender* or mixed gender* or nonheterosexual* or non heterosexual* or gender dysphori* or lesbigay* or bicurious or cross sex or crossgender or cross gender or gender change or gender identi* or gender reassign* or gender transition* or gender variant or men who have sex with men or same gender loving or same sex attracted or same sex couple* or same sex relations or sex change* or sex reassign* or sex transition* or gender minorit* or sexual identit* or sexual orientation or trans man or transman or transmen or trans men or trans male* or transmale* or trans female* or transfemale* or trans woman or transwoman or trans women or transwomen or transpeople or transperson* or trans people or trans person* or FTM trans* or female to male trans* or MTF trans* or male to female trans* or F2M or transvestite* or women loving women or women who have sex with women or females who have sex with females or males who have sex with males).tw,kf. 79667
8 1 or 2 or 3 or 4 or 5 or 6 or 7 102717
9 Primary Health Care/ 88098
10 Comprehensive Health Care/ 6753
11 exp General Practice/ 77507
12 Community Health Centers/ 7444
13 Community Health Services/ 32807
14 Child Health Services/ 21242
15 Community Mental Health Services/ 18946
16 exp Maternal Health Services/ 55680
17 exp Community Mental Health Centers/ 3306
18 Maternal-Child Health Centers/ 2335
19 Physicians, Family/ 16968
20 General Practitioners/ 9723
21 Physicians, Primary Care/ 4185
22 Ambulatory Care Facilities/ 21260
23 Outpatient Clinics, Hospital/ 15838
24 Outpatients/ 19655
25 Preventive Medicine/ 12012
26 primary care.tw,kf. 134345
27 primary healthcare.tw,kf. 8273
28 primary health care.tw,kf. 31426
29 Family practice*.tw,kf. 8926
30 family medicine.tw,kf. 12686
31 general practitioner*.tw,kf. 54979
32 family physician*.tw,kf. 15836
33 family doctor*.tw,kf. 5019

34 Community Health Centre*.tw,kf. 1099
35 Community Health Center*.tw,kf. 3609
36 Community Healthcare.tw,kf. 1145
37 Community Health Care.tw,kf. 1320
38 Community Health service*.tw,kf. 2040
39 ((outpatient* or ambulatory or community) adj4 (clinic or clinics or healthcare or health care or centre* or centers)).tw,kf. 79763
40 (Family Health Group* or Family Health Network* or Family Health Organization* or Family Health Team* or integrated delivery network* or Integrated Health Network* or integrated physician network* or Integrated Service Delivery Model* or Physician Integrated Network* or family Health Center* or Family Health Centre* or Family Medicine Unit*).tw,kf. 1298
41 (medical home or medical homes).tw,kf. 3671
42 exp Pharmacists/ 20219
43 Pharmacies/ 9149
44 (pharmacist* or pharmacy or pharmacies).tw,kf. 80590
45 or/9-44614862
46 8 and 45 3614
47 Sexual Health/ 2035
48 exp Sexual Behavior/ 117936
49 exp Sexually Transmitted Diseases/ 367290
50 sexual partners/ 19519
51 Pregnancy, Unplanned/ 2327
52 exp Abortion, Induced/ 41794
53 Reproductive Health/ 4569
54 exp infertility/ or reproductive tract infections/ or exp sexual dysfunction, physiological/ 103470
55 exp Papillomavirus Vaccines/ 9492
56 sex counseling/ or sex education/ 9962
57 Papanicolaou Test/ 7071
58 exp Contraception/ 28691
59 exp Contraceptive Devices/ 26611
60 exp Reproductive Behavior/ 10003
61 exp Intimate Partner Violence/ 12071
62 exp Sexual Dysfunctions, Psychological/ 29078
63 family planning services/ 25924
64 exp Fertility/ 44610
65 exp climacteric/ or exp reproduction/ 1267049
66 Libido/ 4959
67 Reproductive Rights/ 1079
68 Rape/ 6707
69 Sex Offenses/ 10671
70 Sex Workers/ 2770
71 exp Sex Reassignment Procedures/ 1216
72 Health Services for Transgender Persons/ 187
73 exp Hormone Replacement Therapy/ 26077

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Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	Click here to enter text.
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	Click here to enter text.
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	Click here to enter text.
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	Click here to enter text.
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	Click here to enter text.
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	Click here to enter text.
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	Click here to enter text.
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Click here to enter text.
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	Click here to enter text.
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	Click here to enter text.
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	Click here to enter text.
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	Click here to enter text.

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	Click here to enter text.
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	Click here to enter text.
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	Click here to enter text.
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	Click here to enter text.
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	Click here to enter text.
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	Click here to enter text.
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	Click here to enter text.
Limitations	20	Discuss the limitations of the scoping review process.	Click here to enter text.
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	Click here to enter text.
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	Click here to enter text.

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMAScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi: 10.7326/M18-0850.

BMJ Open

Sexual Health Promotion for Sexual and Gender Minorities in Primary Care: A Scoping Review Protocol

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Secondary Subject Heading:	General practice / Family practice
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Running head: Sexual health promotion for SGM in primary care

Sexual Health Promotion for Sexual and Gender Minorities in Primary Care: A Scoping Review Protocol

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SGM health promotion in primary care

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Running head: Sexual health promotion for SGM in primary care

ABSTRACT

Introduction: Sexual and gender minorities (SGM) face health disparities related to systemic discrimination and barriers to sexual health. Sexual health promotion encompasses strategies that enable individuals, groups, and communities to make informed decisions regarding their sexual well-being. Our objective is to describe the existing sexual health promotion interventions tailored for SGMs within the primary care context.

Methods and analysis: We will conduct a scoping review and search for articles in eleven medical and social science academic databases on interventions that are targeted towards SGM in the primary care context in industrialized countries. Searches were conducted on July 7, 2020 and May 31, 2022. We defined sexual health interventions in the inclusion framework as 1) promote positive sexual health, or sex and relationship education; 2) reduce the incidence of STIs; 3) reduce unintended pregnancies; or 4) change prejudice, stigma, and discrimination around sexual health, or increase awareness surrounding positive sex. Two independent reviewers will select articles meeting inclusion criteria and extract data. Participant and study characteristics will be summarized using frequencies and proportions. Our primary analysis will include a descriptive summary of key interventional themes from content and thematic analysis. Gender-based Analysis Plus (GBA+) will be used to stratify themes based on gender, race, sexuality, and other identities. The secondary analysis will include the use of the Sexual and Gender Minority Disparities Research Framework to analyze the interventions from a social-ecological perspective.

Ethics and dissemination: No ethical approval is required for a scoping review. The protocol was registered on the Open Science Framework Registries (https://doi.org/10.17605/OSF.IO/X5R47). The intended audiences are primary care providers, public health, researchers, and community-based organizations. Results will be communicated through peer review publication, conferences, rounds, and other opportunities to reach primary care providers. Community-based engagement will occur through presentations, guest speakers, community forums and research summary handouts.

Strengths and limitations of this study

- The research question was kept broad to capture the diversity of sexual health promotion in primary care.
- Focuses on interventions that can inspire and be utilized by primary care providers for sexual and gender minority patients.
- Includes both peer-reviewed and grey literature, with the intention of keeping the scope broad.
- Narrow definition of sexual health promotion interventions and definition of primary care.
- Focuses on only developed countries according to the United Nations Report 2019, leading to exclusion of studies and may reduce generalizability to other care contexts.

Running head: Sexual health promotion for SGM in primary care

INTRODUCTION

The term "sexual and gender minorities" encompasses identities such as Two-Spirit, lesbian, gay, bisexual, transgender, queer, questioning, intersex and asexual (2SLGBTQQIA+) individuals that represent a diverse group of people and communities with intersecting identities such as race, socioeconomic status and others[1]. These intersecting identities and backgrounds define unique identity locations that influence experiences of stigma and discrimination in the healthcare system[2]. Sexual and gender minority individuals face health disparities[3], including access to health care, discrimination by health providers, postponing or not attempting to seek care, and access to health insurance[1,4]. Furthermore, minority stress theory suggests that sexual minority individuals face more exposure to social stress related to stigma, prejudice and discrimination and therefore are at greater risk for negative physical and mental health outcomes, compared to their heterosexual counterparts[5].

Sexual health remains a significant public health challenge around the world and continues to impact Western industrialized countries[6]. Approximately one million people around the world acquire a STI every day, and the resulting morbidity and mortality compromises individual quality of life as well as overall sexual and reproductive health[7,8]. Though many definitions of sexual health have been proposed[9], the most cited and widely accepted is the World Health Organization definition: "a state of physical, emotional, mental, and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction, or infirmity."[10] Sexual and gender minorities face varying sexual health issues. For example, sexual minority women are more likely to report sexually transmitted infections (STIs) and unintended pregnancies compared to their heterosexual counterparts[11]. Cis- and transgender gay, bisexual, and other men who have sex with men (GBMSM) are at particularly high risk for acquiring HIV[12] . Transmasculine individuals have a significantly reduced odds of undergoing cervical cancer screening as compared to cis-women[13,14]. To reduce the global burden of STIs, WHO's *Global Health Sector Strategy on Sexually Transmitted Infections* Report points to the need to adopt appropriate interventions aimed to promote sexual health[8].

Sexual health promotion encompasses strategies that enable individuals, groups, and communities to make informed decisions regarding their sexual well-being[10]. These strategies often focus on intervening at the individual level, through the provision of educational, peer-based, motivational, or skills-based programs[15]. From social-ecological perspective, sexual health and sexual behaviour change takes place within five nested, interacting environmental levels with the individual at the centre[16–18] . The individual and the surrounding microsystem represent the most immediate environment and factors that drive health disparities and unmet care needs[18]. The mesosystem is the relationship between the health provider and patient and the ecosystem encompasses health system policies, decisions made among health providers and insurance[18]. The macrosystem is the broader cultural environment that influences stigma and discrimination and the chronosystem describes how location in time and place impacts the individual[18]. It is important to examine sexual health promotion interventions that move beyond the individual level to address multiple domains as they have the potential to further improve sustainable behaviour change and positive sexual health outcomes[19].

Primary care is uniquely situated to address many environments to positively influence sexual health of sexual and gender minority individuals; ranging from patient-level interaction,

community-based interventions to targeted policy changes. Researchers advocate that primary health care environments are important settings for delivering routine sexual health promotion services [20]. Yet, though sexual health is recognized as an important topic within primary care, it is often overlooked in practice[21]. Specifically, Khan *et al.* (2008)[22] reported that many primary care providers do not discuss sexual health with their patients due to challenges integrating sexual health into their practice, citing heavy workloads, lack of time, and inadequate training as barriers[23]. In the context of sexual and gender minority patients, lack of knowledge and understanding is cited as a barrier to ask about a patient's gender, sexuality and sexual health[18].

The objective of this scoping review is to synthesize what evidence currently exists regarding sexual health promotion interventions for sexual and gender minorities in the primary care context, to examine the landscape of the literature and to map out existing and promising areas of priority, improvement, and future research.

METHODS AND ANALYSIS

Our scoping review approach is informed by frameworks proposed by Arksey and O'Malley (2002)[24], Levac *et al.* (2010)[25], and the Joanna Briggs Institute[26]. These researchers outlined six stages involved in conducting a rigorous scoping review: 1) identifying the research question; 2) identifying relevant studies; 3) selecting relevant studies; 4) charting data; 5) summarizing and reporting findings and 6) an optional consultation exercise. In addition, we utilize the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist in developing this protocol as it the most used and widely accepted standard of reporting scoping reviews[27–29]. The scoping review protocol was registered on the Open Science Framework Registries (DOI: 10.17605/OSF.IO/X5R47)

Patient and public involvement

No patients were involved in this scoping review.

Eligibility Criteria

Participants

Our focus will be on studies involving interventions targeted towards youth and adult sexual and gender minorities, including but not limited to those who identify as Two-Spirit, lesbian, gay, bisexual, transgender, transsexual, queer, questioning, intersex, and asexual. We will include studies that targeted sexual and gender minorities populations who may also benefit from the intervention. Conversely, we will exclude studies that included sexual and gender minority individuals along with other groups of interest or the general population without clear targeting or intention to focus on sexual and gender minorities. We will exclude interventions targeting children under the age of 12.

Concept

This review will be inclusive of studies that examine a wide range of sexual health promotion interventions based in the primary care contexts. For this review, we will adapt the definition of sexual health promotion employed by Thompson et al. (2008)[23], wherein the term encompasses, but is not limited to, any activity that: 1) promotes positive sexual health, or sex and relationship education; 2) reduces the incidence of STIs (including HIV); 3) reduces unintended pregnancies; 4) changes prejudice, stigma and discrimination, or

increase positive attitudes surrounding positive sex, often referred to as "sex positivity", will be defined as "an ideology that promotes, with respect to gender and sexuality, being open-minded, non-judgmental and respectful of personal sexual autonomy, when there is consent."[30] This may be applied to improving wellbeing and relationships to embracing one's own sexuality.

Context

Our context is the primary care setting, which includes "first-contact services" such as general practitioners or family medicine clinics, pharmacies, tele-health, outpatient clinics, community or venue-based clinics, sexual health clinics, and other clinical settings that does not consider patients as "inpatients"[31]. We will include research based in both "general practice" and "family medicine" since these terms are synonymous with primary care and may be used interchangeably in literature[32]. We will restrict our focus to studies conducted in "economically developed" nations, as defined by the 2019 United Nations World Economic Situation Prospects report classifications (Appendix 1, Table 1)[33].

Types of studies

Studies using any study design will be eligible, including but not limited to systematic reviews, randomized controlled trials, quasi-experimental trials, cohort studies, case control studies, and cross-sectional studies. Mixed methods research and qualitative study designs such as phenomenological and ethnographic studies will also be included. For feasibility reasons, only articles published in English were included. We will restrict the review to articles published between the year 2000 to 2022, to maximize relevance to the current healthcare context. We will include conference articles, editorials and commentaries to better capture the scope of health promoting intervention.

Search strategy and Information Sources

The search strategies will be developed iteratively by the team and carried out by an experienced medical librarian (CZ), utilizing a comprehensive range of medical subject headings and keyword each terms corresponding to our population (sexual and gender minorities), concept (sexual health promotion), and context (primary care in high income countries). The search strategies will be adapted for each database and will be limited English language articles published from 2000 to the present. In total, eleven databases will be searched for this review: Medline (Ovid), Embase (Ovid), PsycINFO (Ovid), CINAHL (EBSCOhost), the Cochrane Database of Systematic Reviews (Ovid), Cochrane Central Register of Controlled Trials (Ovid), Web of Science (Science Citation Index, Social Sciences Citation Index, Conference Proceedings Citation Index Science, Conference Proceedings Citation Index- Social Science & Humanities), Gender Studies Database & LGBTQ+ Source (EBSCOhost). The complete Ovid Medline search strategy is available in Appendix 2. All search strategies, exactly as run, will be made available upon publication of the final review. Additional search strategy that will be employed is cited reference searching of the systematic reviews that meet inclusion criteria.

Study selection

Search results from each database will be compiled in EndNote and duplicates removed, then subsequently imported into the Covidence® software where any additional duplicate citations will be removed. Two reviewers will independently review titles and abstracts of each citation against the inclusion criteria. Conflicts will be resolved through discussion until consensus is

reached or bringing in a third reviewer if necessary. Articles meeting the inclusion criteria will then move on to full text review by two independent reviewers. We will record reasons for excluding articles. Disagreements between the reviewers at the full text review process will be resolved through consensus where possible, or by the decision of a third reviewer if not. Articles that meet inclusion/exclusion criteria upon full text review will be imported into Covidence®. The results of the search and study selection process will be reported using a PRISMA flow diagram.

Data Extraction Process

One reviewer will independently extract data, including article type, description of intervention, themes and subthemes, and participant descriptors, from the final eligible articles. We will pilot a draft extraction table on the first five eligible articles; table modifications will be made iteratively. A second reviewer will validate the accuracy of data extraction from the entire set of articles extracted by the first reviewer. Discrepancies will be discussed between the two reviewers until consensus is reached or by arbitration of a third reviewer, if necessary. Reviewers will attempt to contact study authors by email up to three attempts per article, to request missing or additional information if required.

Data Analysis and Presentation

We will describe key characteristics of the included studies, including participants' gender, sexuality, race/ethnicity, age range, country of study. Results will be summarized as Tables and/or figures in the final scoping review article. After data extraction, we will conduct thematic analysis to identify major content area categories, themes, and subthemes of the interventions. These results will be quantified and presented in graph and tabular formats in the final review. Themes and sub-themes identified will be described in greater detail in narrative summaries.

We will use the Sexual and Gender Minority Disparities Research Framework from the NIH[34] to analyze the interventions from a social-ecological perspective in terms of individual, community, and policy, for example. For our analyses, this framework has been adapted from The National Institute on Minority Health and Health Disparities (NIMHD) framework [35] and is intended to be used for primary research and as a tool to analyze existing research [36]. It has been adapted to analyze different axes of health disparities including mental health [36], and vaccine hesitancy [37]. A recent study by Chuang and colleagues [38], used the NIMHD framework to evaluate the literature on disparities in End-of-Life outcomes for Black patients and families. To the best of our knowledge, our scoping review represents its first application of the NIMHD framework for sexual health interventions in primary care among SGM communities.

We will be using the GBA+ framework [39] as an intentional approach to investigate differences in primary care according to sex, gender, sexual orientation, race and ethnicity. For articles containing quantitative analyses, we will consider whether analyses were stratified by sex, gender, or sexual orientation and if so, recording the results for each group and whether results differ significantly or not between groups. For studies with a qualitative component, we will consider whether themes emerge separately for each group. For all articles, we will examine whether the discussion section includes implications separately for each group. We will use the GBA+ framework to ensure that we discuss the results and implications of our scoping review

intentionally incorporating the elements of GBA+ principles. The GBA+ framework has been used in previous studies examining Canadian programs and policies. To our knowledge, there is one other scoping review by Eichler *et al.* (2021) [40] who utilized the GBA+ framework [39] to analyze research and government resources about military to civilian transition.

Planned Dates

The initial search was conducted on July 7 2020, and updated on May 31 2022, analysis is ongoing and completion of thematic analysis is anticipated for April 2023.

Ethical Approval

No ethical approval is required since our scoping review methods do not involve animals or human participants.

Discussion

This is a novel review of sexual health promotion interventions for sexual and gender minorities specifically within primary care settings. This review fits into broader work, including scoping reviews around general healthcare for adolescent sexual and gender minority populations in primary care [41], integration of sex and gender considerations in health policy making [42], care of SGM populations in the Emergency Department [43], and how COVID-19 impacted sexual health for marginalized groups, including sexual and gender minorities [44]. Primary care represents a key setting of inquiry because it captures many social-ecological levels of influence for positive and sustainable sexual health outcomes, ranging from individual and relational to policy[16–19]. Findings can ground the implementation and scale-up of evidence-based interventions and the development of novel interventions to support and foster positive sexual health in sexual and gender minorities communities.

Our scoping review approach has several strengths. Our comprehensive search strategy includes a wide range of primary research modalities using quantitative, qualitative, and mixed methods. Studies included in secondary research, e.g., systematic reviews, that fit the selection criteria will also be included. Additionally, our search parameters and definitions of primary care and sexual health promotion are broad to better capture the diversity of the literature. Our analysis strategy is similarly comprehensive and multi-faceted with analysis of themes and content, the participants, such as gender, sexuality, and race/ethnicity as well as a socio-ecological levels. This analysis will offer rich insights into the different dimensions of potential research findings of the content, context, and participants.

Nevertheless, there are limitations. Our restriction to studies in economically-developed countries may limit generalizability to low-income settings. Similar efforts should be done for low- and middle-income countries, such as in India where there is significant work being done to improve care for sexual and general minority communities in primary care. In addition, by restraining the scope to interventions that operate within or in close connection to primary care, we may select for more biomedical interventions such as STI and HIV testing. This may exclude studies that focus on sexuality, relationships, and behaviour-based change when these may operate in settings outside of primary care (e.g., community-based organizations, bath houses,

and private counselling). Furthermore, we acknowledge the contributions of medical fields outside of primary care settings that engage in work with SGM communities that are not captured in our review and represent important collective work.

Conclusion and Dissemination

We will publish our results of the review in an open access journal. The results will be presented at family medicine/health policy conferences at the local, national and international level, as well as community organizations and healthcare provider associations including the undergraduate medical level. Primary health care environments are well suited for creative and effective strategies for sexual health promotion that are tailored to sexual and gender minorities. The narrative descriptions, results and findings of this scoping review will help to identify areas of priority, improvement, and scale-up. By summarizing outcomes and success of interventions across key content themes results from our scoping review are expected to be of particular interest to primary care providers in high-income country settings. Public health policy experts and practitioners with a public health focus may find the anticipated results relating to the levels of interventions instructive. Community-based organizations that engage in sexual health promotion may benefit from new ideas suggested by the scoping review, or alternatively confirmation that existing strategies are evidence-based. Finally, gaps identified by the scoping review will provide opportunities for further work by researchers in the field, including development and trialing of new interventions within primary care environments for sexual and gender minorities.

AUTHOR'S CONTRIBUTIONS

PH and RT contributed equally to this paper as co-first authors. All contributing authors have seen and approved the final submitted version of the manuscript. The contribution of work is as follows: ANB, DHST, and JG developed the study question; JG and RT designed the protocol with ANB and DHST; CZ for the data acquisition by creating and implementing the search strategy; CF contributed to the design and drafting of the methods; AY provided substantial input and edits throughout the preparation of the paper; PH, RT, JG, DHST and ANB wrote the original draft of the manuscript; all authors provided input and approved the final version of the manuscript.

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COMPETING INTERESTS

PH, RT, JG, CZ, CF, AY, and ANB have no conflicts of interest. D.H.S.T.'s institution has received investigator-initiated research grants from Abbvie, Gilead and Viiv Healthcare. D.H.S.T. is a Site Principal Investigator for clinical trials sponsored by GlaxoSmithKline.

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Appendix 1

Table 1: Developed Countries According to the United Nations 2019 Report

North America	Europe (European Union)	Other Europe	Asia and Pacific
Canada United States	Austria Belgium Denmark Finland France Germany Greece Ireland Italy Luxembourg Netherlands Portugal Spain Sweden United Kingdom Bulgaria Croatia Cyprus Czech Republic Estonia Hungary Latvia Lithuania Malta Poland Romania Slovakia Slovenia	Iceland Norway Switzerland	Australia Japan New Zealand

Appendix 2

Medline search strategy

Ovid MEDLINE: Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE® Daily and Ovid MEDLINE® <1946-Present>

1	exp "Sexual and Gender Minorities"/	12718
2	bisexuality/ or exp homosexuality/	33767
3	transsexualism/	4269
4	Gender Identity/	20626

5 Transvestism/ 643
6 Gender Dysphoria/ 787
7 (two spirit* or twospirit* or 2spirit* or 2-spirit* or gender non conforming or gender nonconforming or LGBT* or GLBT* or GSM or MSM or WSW or lesbian* or gay* or bisexual* or homosexual* or transgender* or transsexual* or trans gender* or trans sexual* or trans spectrum or transspectrum or queer* or intersex* or asexual* or pansexual* or omnisexual* or genderqueer or genderfluid or gender fluid or third gender or fourth gender or double sex or doublesex or twin spirit* or twinspirit* or sexual* minorit* or pangender* or non binary or nonbinary or bigender* or agender* or trigender* or pan gender* or bi gender* or tri gender* or mixed gender* or nonheterosexual* or non heterosexual* or gender dysphori* or lesbigay* or bicurious or cross sex or crossgender or cross gender or gender change or gender identi* or gender reassign* or gender transition* or gender variant or men who have sex with men or same gender loving or same sex attracted or same sex couple* or same sex relations or sex change* or sex reassign* or sex transition* or gender minorit* or sexual identit* or sexual orientation or trans man or transman or transmen or trans men or trans male* or transmale* or trans female* or transfemale* or trans woman or transwoman or trans women or transwomen or transpeople or transperson* or trans people or trans person* or FTM trans* or female to male trans* or MTF trans* or male to female trans* or F2M or transvestite* or women loving women or women who have sex with women or females who have sex with females or males who have sex with males).tw,kf. 79667
8 1 or 2 or 3 or 4 or 5 or 6 or 7 102717
9 Primary Health Care/ 88098
10 Comprehensive Health Care/ 6753
11 exp General Practice/ 77507
12 Community Health Centers/ 7444
13 Community Health Services/ 32807
14 Child Health Services/ 21242
15 Community Mental Health Services/ 18946
16 exp Maternal Health Services/ 55680
17 exp Community Mental Health Centers/ 3306
18 Maternal-Child Health Centers/ 2335
19 Physicians, Family/ 16968
20 General Practitioners/ 9723
21 Physicians, Primary Care/ 4185
22 Ambulatory Care Facilities/ 21260
23 Outpatient Clinics, Hospital/ 15838
24 Outpatients/ 19655
25 Preventive Medicine/ 12012
26 primary care.tw,kf. 134345
27 primary healthcare.tw,kf. 8273
28 primary health care.tw,kf. 31426
29 Family practice*.tw,kf. 8926
30 family medicine.tw,kf. 12686
31 general practitioner*.tw,kf. 54979
32 family physician*.tw,kf. 15836
33 family doctor*.tw,kf. 5019

34 Community Health Centre*.tw,kf. 1099
35 Community Health Center*.tw,kf. 3609
36 Community Healthcare.tw,kf. 1145
37 Community Health Care.tw,kf. 1320
38 Community Health service*.tw,kf. 2040
39 ((outpatient* or ambulatory or community) adj4 (clinic or clinics or healthcare or health care or centre* or centers)).tw,kf. 79763
40 (Family Health Group* or Family Health Network* or Family Health Organization* or Family Health Team* or integrated delivery network* or Integrated Health Network* or integrated physician network* or Integrated Service Delivery Model* or Physician Integrated Network* or family Health Center* or Family Health Centre* or Family Medicine Unit*).tw,kf. 1298
41 (medical home or medical homes).tw,kf. 3671
42 exp Pharmacists/ 20219
43 Pharmacies/ 9149
44 (pharmacist* or pharmacy or pharmacies).tw,kf. 80590
45 or/9-44614862
46 8 and 45 3614
47 Sexual Health/ 2035
48 exp Sexual Behavior/ 117936
49 exp Sexually Transmitted Diseases/ 367290
50 sexual partners/ 19519
51 Pregnancy, Unplanned/ 2327
52 exp Abortion, Induced/ 41794
53 Reproductive Health/ 4569
54 exp infertility/ or reproductive tract infections/ or exp sexual dysfunction, physiological/ 103470
55 exp Papillomavirus Vaccines/ 9492
56 sex counseling/ or sex education/ 9962
57 Papanicolaou Test/ 7071
58 exp Contraception/ 28691
59 exp Contraceptive Devices/ 26611
60 exp Reproductive Behavior/ 10003
61 exp Intimate Partner Violence/ 12071
62 exp Sexual Dysfunctions, Psychological/ 29078
63 family planning services/ 25924
64 exp Fertility/ 44610
65 exp climacteric/ or exp reproduction/ 1267049
66 Libido/ 4959
67 Reproductive Rights/ 1079
68 Rape/ 6707
69 Sex Offenses/ 10671
70 Sex Workers/ 2770
71 exp Sex Reassignment Procedures/ 1216
72 Health Services for Transgender Persons/ 187
73 exp Hormone Replacement Therapy/ 26077

74 (sexual* health* or sexuality or sex* education or sex* counsel* or sex* therap* or sexual relations* or sex* partner* or sexual dysfunction* or sexual violence or sexual wellbeing or sexual well being or sexual behavior* or sexual behaviour* or sexual risk* or risk* sex* or sexual satisfaction or sexual pleasure or sexual* assault* or sexual problem* or sex work* or sex* offen* or rape or raped or sex reassign* or sexual communication or reproductive health* or reproductive behavior* or reproductive behaviour* or hormone replacement or hormone therapy or affirmative care or gender affirming care or Intercourse or contraception or contraceptive or condom or condoms or safe* sex* or unsafe sex* or unplanned pregnanc* or unintended pregnanc* or unwanted pregnanc* or abortion* or birth control or fertility or infertil* or family planning or intimate partner violence or menopause or andropause or sexually transmitted infection* or sexually transmitted disease* or STI or STIs or STD or STDs or HIV or AIDS or Human immunodeficiency virus or Acquired immune deficiency syndrome or Pre-Exposure Prophylaxis or Preexposure Prophylaxis Hepatitis A or Hepatitis B or Hepatitis C or chlamydia or Gonorrhea or gonorrhoea or pelvic inflammatory disease or Trichomoniasis or papillomavirus infection* or papillomavirus vaccin* or HPV vaccin* or syphilis or herpes genitalis or Chancroid or granuloma inguinale or condylomata accuminata or Bacterial Vaginosis or Cervical cancer or cervical neoplasm* or cervical intra-epithelial neoplasia or uterine cervical dysplasia or dyspareunia or erectile dysfunction).tw,kf. 1135473
75 or/47-74 2352976
76 46 and 75 2909
77 exp canada/ or exp united states/ or europe/ or austria/ or belgium/ or europe, eastern/ or Bulgaria/ or exp baltic states/ or croatia/ or czech republic/ or hungary/ or poland/ or romania/ or slovakia/ or slovenia/ or exp france/ or exp germany/ or exp united kingdom/ or greece/ or ireland/ or exp italy/ or luxembourg/ or mediterranean region/ or mediterranean islands/ or cyprus/ or malta/ or netherlands/ or portugal/ or exp "scandinavian and nordic countries"/ or spain/ or switzerland/ or exp australia/ or iceland/ or new zealand/ or exp japan/ 3252008
78 (Australia* or Austria* or Belgium or Belgian* or Canada* or Canadian* or Czech* or Denmark or Danish or Estonia* or Finland or Finnish or France or French or German* or Greece or Greek or Hungar* or Iceland* or Italy or Italian* or Japan* or Latvia* or Lithuania* or Luxembourg or Malta or Maltese or Netherlands or Holland or Dutch or New Zealand* or Norway or Norwegian* or Poland or Polish or Portugal or Portuguese or Slovak* or Slovenia* or Spain or Spanish or Sweden or Swedish or Switzerland or Swiss or United Kingdom or UK or England or British or Ireland or Irish or Scotland or Scottish or Wales or Welsh or United States or America* or USA or Bulgaria* or Croatia* or Cyprus or Romania*).tw,kf. 2515782
79 african americans/ or american native continental ancestry group/ or alaska natives/ or indians, north american/ or inuits/ or oceanic ancestry group/ or asian americans/ or exp indigenous peoples/ or exp hispanic americans/ 119364
80 (canad* or "british columbia" or "Colombie britannique" or alberta* or saskatchewan or manitoba* or ontario or quebec or "nouveau brunswick" or "nova scotia" or "nouvelle ecosse" or "prince edward island" or newfoundland or labrador or nunavut or nwt or "northwest territories" or yukon or nunavik or inuvialuit).tw,kf. 189983
81 77 or 78 or 79 or 80 4544737
82 76 and 81 1778
83 exp Africa/ or exp caribbean region/ or exp central america/ or latin america/ or exp south america/ or exp asia, central/ or exp asia, northern/ or exp asia, southeastern/ or exp asia,

	western/ or exp china/ or exp korea/ or exp mongolia/ or exp taiwan/ or exp USSR/	1396125
84	76 not 83	2536
85	82 or 84	2593
86	limit 85 to (english language and yr="2000 -Current")	1956

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	Click here to enter text.
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	Click here to enter text.
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	Click here to enter text.
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	Click here to enter text.
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	Click here to enter text.
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	Click here to enter text.
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	Click here to enter text.
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Click here to enter text.
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	Click here to enter text.
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	Click here to enter text.
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	Click here to enter text.
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	Click here to enter text.

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	Click here to enter text.
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	Click here to enter text.
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	Click here to enter text.
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	Click here to enter text.
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	Click here to enter text.
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	Click here to enter text.
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	Click here to enter text.
Limitations	20	Discuss the limitations of the scoping review process.	Click here to enter text.
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	Click here to enter text.
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	Click here to enter text.

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMAScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi: 10.7326/M18-0850.