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Exploring the operationalisation and implementation of outreach in community settings with hard-to-reach and hidden populations: protocol for a scoping review

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ABSTRACT

Introduction Outreach is regularly identified as an effective strategy to engage underserved, hard-to-reach and hidden populations with essential life-sustaining health services. Despite the increasing expansion of outreach programmes, particularly in HIV prevention and health promotion with youth, sex workers, people living with mental health and substance use challenges, and those affected by homelessness, there has been limited synthesis of the evidence concerning the core components of outreach programming or indicators of its successful implementation. Without this understanding, current outreach programmes may be limited in achieving the desired aims. The aim of this scoping review is to explore how outreach has been operationalised and implemented in various community settings with people underserved in current healthcare contexts. Understanding the state of knowledge pertaining to outreach as programming and as practice involving the engagement of people considered hard-to-reach will enable the identification of promising trends and limitations in the field.

Methods and analysis This scoping review follows the Arksey and O'Malley's framework. CINAHL, MEDLINE, PsycINFO and PubMed databases will be searched for peer-reviewed references focused on outreach with hard-to-reach and hidden groups from 1 January 2008 to 30 April 2020. Guided by explicit inclusion and exclusion criteria, three reviewers will independently assess references in two successive stages. Titles and abstracts will be reviewed followed by full-text assessment of papers meeting the review criteria. A descriptive overview, tabular and/or graphical summaries and a thematic analysis will be carried out on extracted data.

Ethics and dissemination Ethics approval was not required as the only data source was peer-reviewed documents. Outreach knowledge users who are members of the project team will participate in all aspects of study design, implementation and result dissemination strategies.

Strengths and limitations of this study

- This is the first scoping review to systematically examine the definitions, programme components and indicators of successful implementation of outreach activities, allowing the mapping of this area of research through the summarisation of volume, nature and characteristics of the available work and the identification of knowledge gaps.
- Although a comprehensive search strategy was developed in consultation with a health science librarian, enabling a nuanced and rigorous approach to literature sources, the populations, concept (outreach) and domain of interest (health and social inequities) were indexed using a variety of terms, which poses challenges to ensuring the breadth and depth of the search.
- Quality appraisal tools are integrated into data extraction to promote description of both the topics of interest and the quality of research undertaken in the topic area.
- This review is conducted by a multidisciplinary team including knowledge user experts, who can support the use of study findings in real-world applications across policy and health and social services.
- The methodology is capable of encompassing findings from a wider range of study designs and methods in comparison with a systematic review, but is only capable of generating a narrative or descriptive account of the available research and does not account for the relative weight of evidence.

INTRODUCTION

Outreach is regularly identified as a recommended strategy to provide support, address barriers to accessible healthcare and foster health-promoting practices among groups commonly described as hard-to-reach and hidden populations.[1 2] Although definitions of this term vary across the literature, hard-to-reach and hidden are defined in this study as populations that have uncertain parameters such as the size and geographical distribution of the population, experience intersecting

forms of stigma and discrimination, may conceal membership in a particular social group, and potentially distrust researchers or healthcare providers who they believe have contributed to stereotyping and unjust social policies and practices.[3–5] People situated within hard-to-reach and hidden populations regularly experience significant health inequities, defined as avoidable differences in health status and the determinants of health between population groups.[6] Women simultaneously affected by poverty and violence, for instance, experience multiple chronic illnesses, unstable housing and shorter life expectancy than other women in society.[7] People engaged in illegal drug use and those with mental health issues, homelessness and criminal justice involvement are exponentially more vulnerable to HIV and accidental overdose, situations exacerbated by structural inequities in resources necessary for health.[5]

The health inequities experienced by hard-to-reach and hidden populations are further reinforced through structural inequities (ie, poverty, discrimination) and exacerbated by barriers to appropriate, timely healthcare.[8–10] Such barriers include knowledge gaps concerning available services, competing needs to secure food and shelter, and the unavailability (eg, timing, location) of services necessary to meet their needs.[11–14] People considered hard-to-reach or hidden also regularly experience discriminatory interactions within healthcare encounters that result in unmet health needs and future reluctance to engage with these services.[9 11 15 16] Consequently, hard-to-reach and hidden populations are chronically underserved in current health services, thereby contributing to the urgent need to redress health inequities among such groups.[17 18]

Presently, outreach is increasingly employed by nurses, social workers and community health workers to enhance health service delivery with hard-to-reach and hidden populations.[1 2] Outreach programmes are also expanding throughout the world among varied hard-to-reach and hidden populations, including migrant populations, 'at risk' youth, sex workers, women experiencing violence, people who use illegal drugs and individuals who are homeless or experiencing mental health challenges.[1 2 19] These outreach programmes commonly occur within interdisciplinary, team-based, care provision contexts associated with primary care and/or community health clinics.[19]

While the importance of outreach to enhance healthcare delivery with hard-to-reach and hidden populations appears to be consistent across various practice contexts, it is unclear if the meaning of outreach is programme-specific or discipline-specific or if outreach varies based on the different populations served (eg, migrant populations vs homeless women). It is also unclear how outreach is implemented or operationalised into its core elements and subsequently evaluated for effectiveness. The consequences of oversights in examining the theoretical tenets and core elements of outreach contribute to significant challenges in developing and sustaining effective evidence-informed outreach programming. Programme evaluation to assess the effectiveness of outreach to meet programmatic aims in health service delivery may be seriously undermined. Moreover, without a shared understanding of the concept and core components, it is almost impossible to identify essential research priorities in advancing the empirical evidence to develop, implement and evaluate outreach programming. To our knowledge, it is not known to what extent outreach has been systematically defined, operationalised or implemented. Bringing this evidence together in a systematic scoping review has the potential to identify intersecting, disciplinary and population-specific dimensions of outreach that have been defined, implemented and empirically explored.

OBJECTIVE

This scoping review will systematically explore how outreach has been operationalised and implemented in diverse community settings with varied hard-to-reach and hidden populations and enable identification of promising trends and limitations in current research.

METHODS AND ANALYSIS

The scoping review methodology will employ the systematic framework developed by Arksey and O'Malley,[20] advancements from Levac and colleagues,[21] and best practices in reporting and conducting systematic reviews including the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols.[22] Consultation with knowledge users is an integral aspect of the usefulness of a scoping review. Given the interdisciplinarity of outreach work, encompassing nursing, social work and public health, our team composition reflects this interdisciplinarity inclusive of members from each of these applied disciplines with research and practice expertise. An iterative approach will be maintained during the screening of studies, data extraction and consultations with knowledge user experts, all of which will become more refined throughout the review. The authors will use NVivo for Teams V.12[23] to support the screening of studies, data extraction and analysis.

Stage 1: determine review aims

To understand how outreach is operationalised and implemented, the research questions were developed to support a wide-ranging description of the populations (ie, those considered hard-to-reach, hidden and underserved in current health services), the core activities being investigated (ie, outreach) and the context in which outreach services occur (ie, the health and social issues that precipitate the need for outreach services). Therefore, the questions addressed in the review are the following:

- How has outreach been *defined* within health-oriented programmes for people situated in hard-to-reach and hidden populations?

- How has outreach been *operationalised* as health-oriented programmes for people situated in hard-to-reach or hidden populations?
- How has outreach been *implemented* as health-oriented programmes for people situated in hard-to-reach or hidden populations?
- What outcomes from the implementation of outreach have been empirically measured or tested?

Answering these questions will help to identify limitations and strengths of the current state of knowledge and to generate recommendations for future research priorities.

Stage 2: identify relevant literature

The uncertain consistency in how outreach is defined, operationalised, implemented and evaluated across various groups and settings makes our proposed topic inherently complex and poses significant challenges to keyword selection. For instance, outreach as practice is carried out across diverse sectors of health and social services and the term may be used to represent different actions or goals depending on the disciplinary focus. Likewise, the language used to describe target populations that have historically been served by outreach has undergone significant shifts, for instance from 'addicts' or 'juvenile delinquents' to health-oriented and person-oriented language such as 'people with problematic substance use' or 'at-risk youth'. The language of health systems has also begun to shift from terms such as 'non-compliant' or 'difficult patients' to 'underserved', 'vulnerable' or 'marginalised populations and groups'.

Consequently, we developed a comprehensive search strategy that promotes consideration of this complexity while simultaneously enabling a systematic review of the existing evidence. Initially, we consulted with eight knowledge users who were practice experts working in outreach in various healthcare organisations. Accordingly, we gained insights into existing outreach programmes and practices and began to understand the assorted contexts in which outreach occurs. We also had extensive consultations with a health sciences research librarian at the University of British Columbia. From these consultations, we identified three intended domains for our search strategy: (1) the concept domain of outreach as a programme or practice; (2) the population domain (hard-to-reach and hidden groups); and (3) the context domain (health and social issues, for instance stigma, barriers to healthcare, homelessness and problematic substance use that precipitate the need for outreach services).

Four electronic databases, CINAHL, MEDLINE, PubMed and PsycINFO, were identified to optimise our ability to capture the breadth and depth of published scholarship pertinent to outreach programmes and practices. These databases are critical to the health and social science disciplines, thereby permitting exploration in an interdisciplinary context. To develop the appropriate keywords for the searches, initial search terms were first inputted into each database to determine corresponding indexed terms. For example, PubMed uses Medical Subject Headings (MeSH) terms, while CINAHL, MEDLINE and PsycINFO use subject terms. Each resulting indexed term (MeSH or subject term) was assessed by two authors (SJ and JK) to determine its utility in addressing our research questions. Indexed terms' scope notes—the database-specific definition it ascribed to the meaning and interpretation of that term—guided the assessment. Any assessment discrepancies between the authors or questions about term inclusion were brought to the larger team, who made decisions based on their expertise in the content area and insights from the previous consultations with knowledge users. This process resulted in search strategies for each of the four databases (see online supplemental 1 for the step-by-step process details of formulating a search strategy and online supplemental 2 for the precise search strategy for one of the databases, CINAHL). Boolean operators ('and', 'or', 'not') will be used to combine and refine search terms.

Stage 3: study selection

Study selection will include a two-stage process that incorporates predetermined assessment strategies and inclusion criteria developed collaboratively within the study team inclusive of knowledge users. In stage 1, the screening process will be piloted with 20 citations each from initial PubMed and CINAHL searches to test the criteria and reviewer agreement using both subject and MeSH terms. Then all four databases will be searched, and each title/abstract from the search results will be reviewed independently by two team members using eligibility criteria (SJ and JK). The reviewers' agreement will be assessed and a third reviewer (VB) will be consulted to reach consensus. A citation will be eligible for full-text screening if the title/abstract:

- Refers to outreach as a programme or practice.
- Is located in a community-based or primary healthcare setting including healthcare or social service delivery.
- Is about developing, implementing or evaluating outreach with hard-to-reach or hidden populations or in the context of health or social issues that precipitate the need for outreach, including barriers to healthcare, health and social inequities, stigma, and discrimination.
- Is geographically situated in countries with developed economies.
- Is a peer-reviewed article published in English between 1 January 2008 and 30 April 2020.

Only peer-reviewed articles, including empirical and discussion papers, will be considered. Grey literature will be excluded as the focus of this review is on the core components of outreach identified across the research literature, and empirical analysis of the implementation and evaluation of outreach. The publication period of approximately the last 10 years was decided on through various considerations. We wanted to include the most recent references, within the limits of the publication

process, to ensure relevancy. Lastly, the approximate 10-year window allows for the inclusion of a sufficient number of references for a robust analysis.

The second phase will include obtaining the full text of references meeting the inclusion criteria. Those included will be screened, sorted by study design and assessed using the corresponding Joanna Briggs Institute Critical Appraisal Tool (online supplemental 3).[24] With curated checklists specific to different study designs, the Joanna Briggs Institute Critical Appraisal Tools are an effective means of determining the quality of references across multiple reviewers. Two team members (SJ and JK) will independently appraise reference quality and screen them for a definition of outreach. The reviewers' agreement will be assessed and a third reviewer (VB) will be consulted to reach consensus. This process will enable quality references with a definition of outreach to be included for data extraction.

Stage 4: data extraction

The research team will use NVivo for Teams V.12[23] to organise references and delete duplicates. As recommended by Arksey and O'Malley, we will record key study details to organise the charting of the materials generated in the search in order to distil the most pertinent information to answer our research questions (table 1).[20] The authors (SJ, JK and AS) will pilot the data extraction and charting form with five references. The authors will then meet as a full team to discuss and adapt the form as needed.

Stage 5: collating, summarising and reporting the results

A descriptive overview of the eligible articles in graphical and chart form will be provided detailing study designs, geographical locations, and core elements of outreach programmes.[20] These studies and other literature sources will also be summarised by broader categories of varied population groups and health and social issues. Narrative summaries will accompany all graphs and charts to correlate these findings to the research questions. This initial analytic step will provide perspectives on the most common elements of outreach programmes and core operational definitions, and highlight similarities and differences that are population-specific. This will assist in identifying extant gaps in knowledge and practice that can be used to inform future research priorities.

Because we are concerned with understanding how outreach has been defined, implemented, and evaluated in healthcare contexts (inclusive of social services) for hard-to-reach and hidden populations, a thematic analysis will also be carried out on the included papers.[25] This will permit us to identify core elements of outreach programmes and practices as well as how definitions of outreach are operationalised in implementation and evaluation in the context of hard-to-reach and hidden populations. VB and AG will lead the thematic analysis as they have prior expertise in this area. Data will be imported into NVivo for Teams V.12,[23] which permits a multi-user approach. As is appropriate in thematic analysis, a coding

Table 1 Data extraction and charting

Domain/subdomain	Description
1. General document details	
1.1 Author(s)	Name(s)
1.2 Author(s)' discipline(s)	Author(s)' discipline(s) or professional credentials
1.3 Reference type	Empirical study, review, non-empirical
1.4 Publication location	Country of publication
1.5 Year of publication	Publication year
1.6 Research location	Country of research
2A. Empirical research study details	
2.1 Objectives	What was/were the stated research objective(s) or research question(s)?
2.2 Study design	What was the study design?
2.3 Outreach service providers	What group of service providers was providing outreach (e.g., nurses, peers, etc.)?
2.4 Outreach recipients	Who are the recipients of outreach? Can they be classified as hard-to-reach and hidden?
2.5 Setting	In what programme is outreach embedded (e.g., community healthcare, clinic, etc.)?
2.6 Methodology and methods	What methodology and methods guided the implementation of the study?
2.7 Study population	What were the eligibility/inclusion criteria? What was the primary population of focus?
2.8 Outreach definition	What was the definition of outreach used? Was it implicitly or explicitly defined?
2.9 Results	What were the main findings?
2B. Other reference types details	
2.1 Non-empirical type of article	Discussion, commentary, non-empirical report
2.2 Health or social issue	What is the health or social issue precipitating the need for outreach services?
2.3 Objectives	What was/were the stated objective(s) of the reference?
2.4 Outreach service providers	What group of service providers was providing outreach (e.g., nurses, peers, etc.)?
2.5 Outreach recipients	Who are the recipients of outreach? Can they be classified as hard-to-reach and hidden?

Continued

Table 1 Continued

Domain/subdomain	Description
2.6 Setting	In what programme is outreach embedded (e.g., community healthcare, clinic, etc.)?
2.7 Study population	What were the eligibility/inclusion criteria (if applicable)? What was the primary population of focus?
2.8 Outreach definition	What was the definition of outreach used? Was it implicitly or explicitly defined?
2.9 Key messages	What were the main messages or conclusions?

framework will be developed a priori and then applied by VB and AG independently. Results of the thematic analysis will be summarised, and if relevant, numerical summaries may also be used to provide additional context for the themes (e.g., number of elements of outreach, number of populations served, etc.).

Stage 6: consultation with knowledge users

In keeping with the iterative nature of the scoping review approach, consultation with knowledge users will occur throughout the entire project and culminate in finalising the results and planning for dissemination. This scoping review will produce evidence about outreach that can be used by health and social service providers, researchers and policy makers on how best to provide outreach with hard-to-reach and hidden populations. Nursing, public health and social work knowledge users with expertise in outreach will be involved in providing essential insights into the relevance and meaning of search terms and the implications of the review.[21] Knowledge users will participate in the analysis and in the dissemination of study results for policy and programme knowledge users.

PATIENT AND PUBLIC INVOLVEMENT STATEMENT

Researchers and knowledge users who are members of the clinical practice community are included in this scoping review, which is a product of ongoing collaborations. Knowledge users and researchers collaboratively identified the purpose and need for this scoping review while working to develop training resources for outreach staff. Knowledge users have participated in search term selection and will further contribute to the review through the analysis of results and the appropriate dissemination of review findings. Because the focus of the scoping review is on programming versus recipients of outreach, patients were not invited to contribute to the writing or editing of this document for readability or accuracy.

ETHICS AND DISSEMINATION

The scoping review protocol does not require ethics approval in accordance with the guidelines set forth by our institution for research with human participants. All data sources are peer-reviewed materials.

With the increasing focus on promoting health equity, the need for outreach services responsive to the healthcare needs of hard-to-reach and hidden populations is increasing. Understanding the theory, operational tenets and evaluation indicators may catalyse more effective outreach programming. To date, we are not aware of another scoping review that has explored the core elements of outreach programmes in community settings for hard-to reach and hidden populations.

The need for this review was identified through collaborations between researchers and knowledge users. Therefore, the dissemination strategy will include traditional academic avenues, such as open-access, peer-reviewed journals, as well as health service-oriented venues, including a community report-back event. The research team's network of outreach knowledge users will be employed to determine the most appropriate dissemination strategies to local service organisations.

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Contributors All authors participated fully in the design of the work, drafting and revisions of the manuscript, and are accountable for all aspects of the work. Each author approved the final version. JK, SJ and AS specifically coordinated project meetings and met with librarians to review the search strategy, prepared drafts of the search strategy and collated feedback from the project team. VB oversaw the entire project team, prepared drafts of the manuscript and finalised contributions of the team to prepare the manuscript for publication. AG and AAC as expert clinicians and researchers, contributed to determining search terms, data analysis approaches and identification of the role of knowledge users in dissemination and analysis.

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Online Supplementary 1: Step-by-Step Process of Formulating a Search Strategy

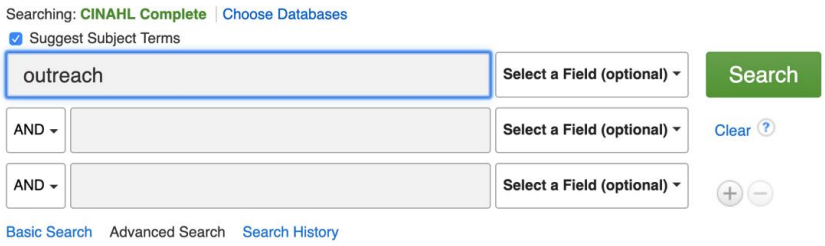
This supplementary addresses how we formulated a search strategy for the database CINAHL.

These are the initial search terms we used for the three conceptual domains of our search: outreach, population, and context. These terms were generated based on the insights of our practice experts.

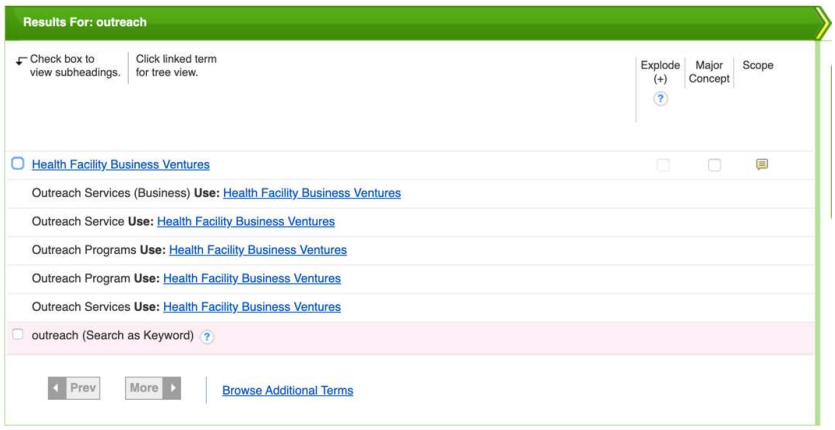
Conceptual domain	Initial search term used
Outreach	"outreach"
Population: Hard to reach and hidden	"hidden"; "hard to reach"; "homeless"; "vulnerable"; "marginalized"; "underserved"; "inequity"; "migrant"; "refugee"; "immigrant"
Context: Health and social issues	"sexual health"; "sexually transmitted infections"; "HIV"; "Hepatitis C"; "blood-borne infections"; "alcohol use"; "drug use"; "harm reduction"; "mental health"; "reproductive health"; "housing"; "violence"; "dental health"; "employment"; "social"; "income"; "legal"

Determining indexed terms and keywords for each conceptual domain:

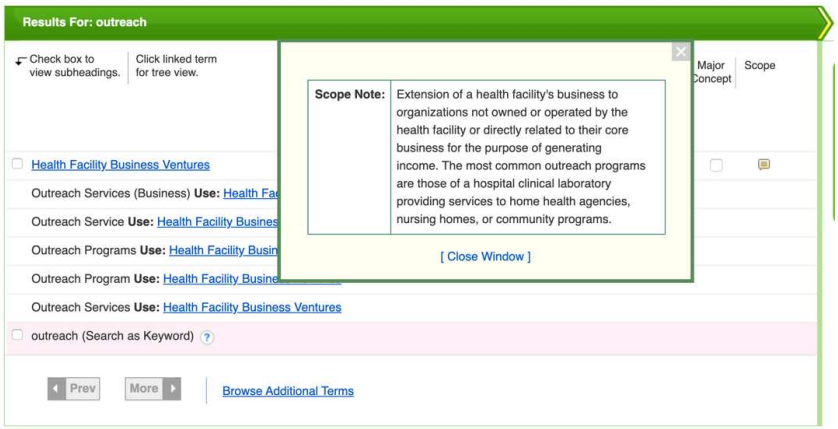
To address the conceptual domain of "outreach," the initial search term ("outreach") was inputted into CINAHL to generate corresponding indexed terms.



In this case, one indexed term was generated, which was "health facility business ventures."



We examined the scope note that corresponded to the indexed term "health facility business ventures."



We determined that this indexed term was relevant for the purposes of our search.

We then included the indexed term "health facility business ventures" and the initial search term "outreach" (as a keyword) in our search strategy to address the conceptual domain of "outreach."

To address the conceptual domain of "population," a similar process was used, where each of the initial search terms ("hidden"; "hard to reach"; "homeless"; "vulnerable"; "marginalized"; "underserved"; "inequity"; "migrant"; "refugee"; "immigrant") was inputted into CINAHL to generate corresponding indexed terms.

The relevancy of each indexed term was determined by reviewing its corresponding scope note. We then included the relevant indexed terms and the initial search terms (as keywords) in our search strategy to address the conceptual domain of "population."

For the conceptual domain of "population," we brainstormed variations on the initial search terms and also included these variations as keywords in the search strategy (e.g., for the initial

search term "underserved," in addition to including "underserved population" as a keyword, we also included "under served population" and "under-served population" as keywords.

To address the conceptual domain of "context," each of the initial search terms "sexual health"; "sexually transmitted infections"; "HIV"; "Hepatitis C"; "blood-borne infections"; "alcohol use"; "drug use"; "harm reduction"; "mental health"; "reproductive health"; "housing"; "violence"; "dental health"; "employment"; "social"; "income"; "legal") was inputted into CINAHL to generate corresponding indexed terms.

Again, after determining relevant indexed terms for each of these initial search terms, we included the relevant indexed terms and the initial search terms (as keywords) in our search strategy to address the conceptual domain of "context."

For the conceptual domain of "context," we also brainstormed variations on the initial search terms and included these variations as keywords in the search strategy (e.g., for the initial search term "harm reduction," in addition to including "harm reduction" as a keyword, we also included "harm minimization" and "risk reduction" as keywords.

For all conceptual domains, we added a "+" to each indexed term to use the "explode" function, which allows us to capture any articles that are indexed under sub-terms of the original subject term (e.g., the subject term "sexually transmitted diseases" was exploded to capture all articles indexed under "chlamydia," "gonorrhea," etc.).

We also used the truncation symbol * on keywords that may have variations (e.g., we used the keyword "substance us*" to capture both "substance use" and "substance using") without having to type each variation into the search.

Formulating a search phrase for each conceptual domain:

For each conceptual domain, we combined the relevant indexed terms and the initial search terms using the Boolean operator "OR" to generate a search phrase. We will search each indexed term as an *exact subject heading* and each initial search term as a *keyword*.

For example, for the conceptual domain "outreach," we generated the search phrase:
[(health facility business ventures+) as an e*xact subject heading*] OR [(outreach) as a *keyword*]

Formulating the overall search strategy:

We first conduct a search combining the search phrases for each of the conceptual domains using the Boolean operator "AND":

(search phrase for the conceptual domain "outreach") AND (search phrase for the conceptual domain "population") AND (search phrase for the conceptual domain "context")

We then conduct a search combining the search phrases for only the "outreach" and "population" conceptual domains using the Boolean operator "AND":

(search phrase for the conceptual domain "outreach") AND (search phrase for the conceptual domain "population")

Lastly, we conduct a search combining the search phrases for only the "outreach" and "context" conceptual domains using the Boolean operator "AND":

(search phrase for the conceptual domain "outreach") AND (search phrase for the conceptual domain "context")

Results from the three searches will be merged and duplicates will be removed.

This process was designed to ensure that the outreach domain is always accounted for. For example, we are not interested in the overlap between only the "population" and "context" conceptual domains.

Online Supplementary 2: Precise Search Strategy for One Database

The following is the search strategy we used for the database CINAH including our limiters.

Search line number	**Conceptual term of interest**	**Search algorithm**
S1	Outreach	MH Health Facility Business Ventures+ OR Outreach
S2	Sexual health	MH Sexual Health+ OR Sexual Health
S3	Sexually transmitted infections	MH Sexually Transmitted Diseases+ OR Sexually Transmitted Disease* OR Sexually Transmitted Infection* OR STD* OR STI* OR Sexually Transmitted Blood Borne Infection* OR STBBI*
S4	HIV	MH Human Immunodeficiency Virus+ OR Human Immunodeficiency Virus OR HIV
S5	Hepatitis C	MH Hepatitis C+ OR Hepatitis C OR HCV
S6	Blood-borne infections	MH Bloodborne Pathogens+ OR Bloodborne Pathogen* OR Blood-borne Pathogen* OR Bloodborne Infection* OR Blood-borne Infection*
S7	Alcohol use	MH Alcohol Drinking+ OR Alcohol Use Disorder* OR Alcohol-Related Disorder* OR Alcohol Drinking OR Alcohol Us* OR Alcohol Abus* OR Alcoholi*
S8	Drug use	MH Substance Use Disorders+ OR Substance Use Disorder* OR Substance Us* OR Drug Us* OR Drug Abus* OR Addiction* OR Drug Dependen* OR Substance-Related Disorder* OR Substance Abus*
S9	Harm reduction	MH Harm Reduction+ OR Harm Reduction OR Harm Minimization OR Risk Reduction
S10	Mental health	MH Mental Health+ OR MH Community Mental Health Services+ OR Mental Health OR Psychiatr*
S11	Reproductive health	MH Reproductive Health+ OR Reproductive Health
S12	Housing	MH Housing+ OR MH Public Housing+ OR MH Halfway House+ OR Housing OR Public Housing OR Halfway House* OR Social Housing OR Supportive Housing OR Shelter OR Single-Room Occupancy OR Single Room Occupancy OR SRO OR Rooming House
S13	Violence	MH Violence+ OR MH Exposure to Violence+ OR MH Domestic Violence+ OR MH Community Violence+ OR MH Gender-Based Violence+ OR MH Intimate Partner Violence+ OR MH Dating Violence+ OR Violence OR Domestic Violence OR Intimate Partner Violence OR Spousal Violence OR Dating Violence OR Gender-Based Violence OR Ethnic Violence OR Community Violence

		OR Battered Female* OR Exposure to Violence OR Physical Abuse
S14	Dental health	MH Dental Health Services+ OR Dental Health OR Oral Health
S15	Employment	MH Employment+ OR MH Employment of Women+ OR MH Employment, Supported+ OR MH Employment Assistance Programs+ OR Employ* OR Supported Employment OR Employment Support OR Vocation* Support
S16	Social	MH Social Welfare+ OR MH Economic and Social Security+ OR MH Social Work+ OR MH Social Work Service+ OR MH Social Service Assessment+ OR Social Welfare OR Welfare OR Social Security OR Social Service* OR Social Work Service* OR Social Work* OR Support Work*
S17	Income	MH Economic and Social Security+ OR MH Poverty+ OR Economic Security OR Social Assistance OR Income Assistance OR Person* with Disability OR PWD OR Employment Assistance OR Employment Insurance OR Poverty OR Impoverish*
S18	Legal	MH Police+ OR MH Criminal Justice+ OR MH Patient Advocacy+ OR Police OR Law Enforcement OR Criminal Justice OR Legal Service* OR Legal Aid OR Legal Advoca*
S19		S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18
S20	Hidden population	MH Special populations+ OR MH Indigenous peoples+ OR Hidden population*
S21	Hard-to-reach population	MH Health Services Accessibility+ OR Hard-to-reach population* OR Hard to reach population*
S22	Homeless	MH Homeless persons+ OR MH Homelessness+ OR Homeless
S23	Vulnerable population	MH Special populations+ OR MH Vulnerability+ OR MH Safety-net providers+ OR Vulnerable population*
S24	Marginalized population	MH Special populations+ OR MH Indigenous peoples+ OR Marginalized population*
S25	Underserved population	MH Medically underserved+ OR Underserved population* OR Under served population* OR Under-served population*
S26	Inequity	MH Healthcare disparities+ OR Inequit*
S27	Migrant Refugee Immigrant	MH Transients and Migrants+ OR MH Refugees+ OR MH Immigrants+ OR MH Immigrants, Illegal+ OR Migrant* OR Transient* OR Refugee* OR Immigrant* OR Newcomer*

S28		S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27
S29		S1 AND S19 AND S28
S30		S1 AND S19 NOT S28
S31		S1 AND S28 NOT S19
S32		S29 OR S30 OR S31

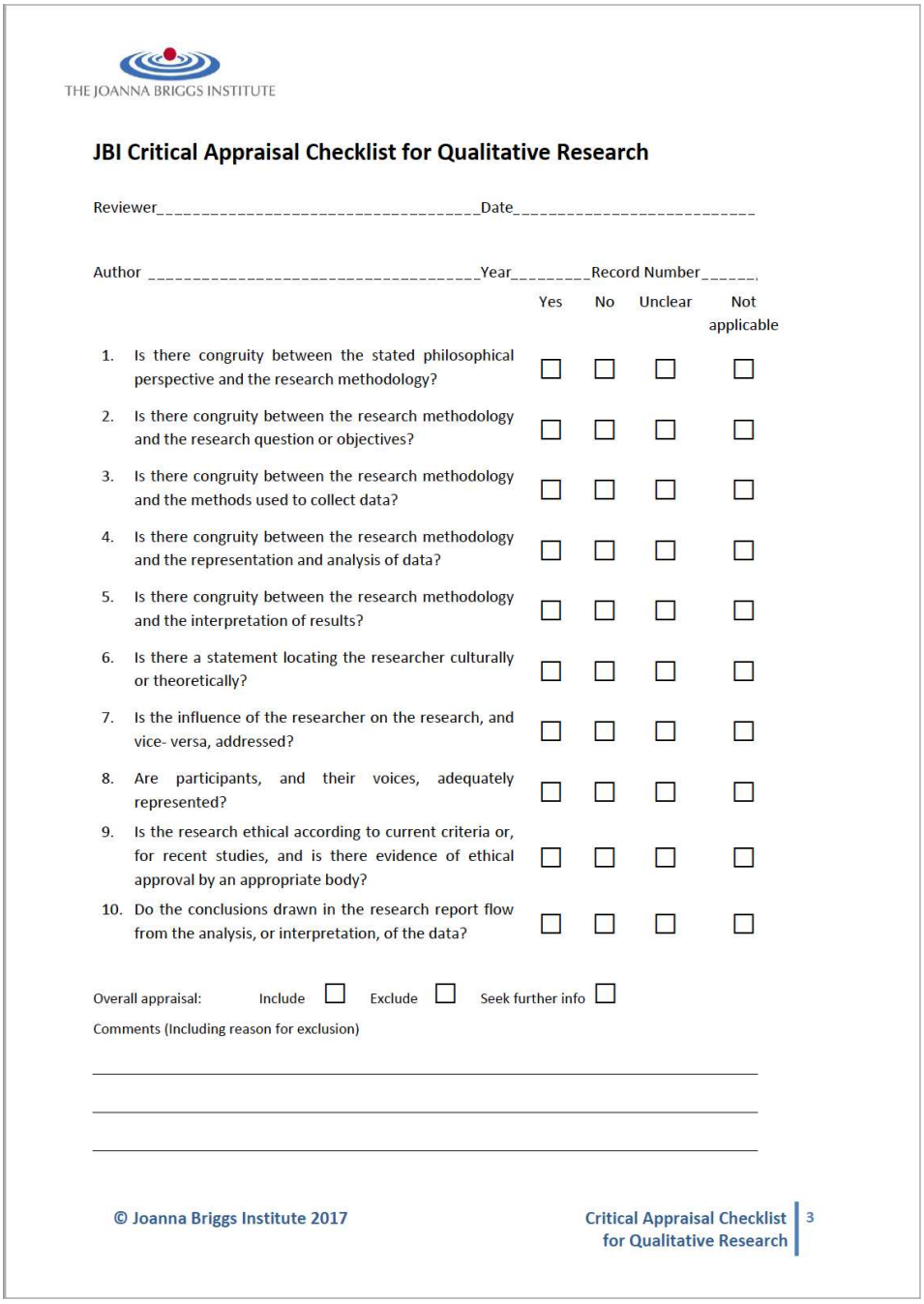
Our limiters for all searches
1. English language
2. 1/1/2008 to 04/30/2020
3. Peer-reviewed only

Online Supplementary 3: Joanna Briggs Institute (JBI) Critical Appraisal Tools

The Joanna Briggs Institute (JBI) Critical Appraisal Tools are an effective and efficient means of determining the quality of references across multiple reviewers. The checklists are organized according to study type with tailored questions of relevance particular to each type. For example, the "Checklist for Case Control Studies" asks "Were cases and controls matched appropriately?" while the "Checklist for Cohort Studies" asks "Were the exposures measures similarly to assign people to both exposed and unexposed groups?" These curated checklists enable the reviewers to appraise the articles across different study types in a critical and rigorous manner.

We have included an example of a Checklist below that we anticipate using in our review of the literature. Given the nature of the JBI Critical Appraisal Tools, the specific checklists we use will depend on the type of studies we encounter in the literature.

Example 1. Checklist for Qualitative Research, available at https://joannabriggs.org/sites/default/files/2019-05/JBI_Critical_Appraisal-Checklist_for_Qualitative_Research2017_0.pdf



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JBI Critical Appraisal Checklist for Qualitative Research

Reviewer_____Date_____

Author _____Year_____Record Number_____

		Yes	No	Unclear	Not applicable
1.	Is there congruity between the stated philosophical perspective and the research methodology?	☐	☐	☐	☐
2.	Is there congruity between the research methodology and the research question or objectives?	☐	☐	☐	☐
3.	Is there congruity between the research methodology and the methods used to collect data?	☐	☐	☐	☐
4.	Is there congruity between the research methodology and the representation and analysis of data?	☐	☐	☐	☐
5.	Is there congruity between the research methodology and the interpretation of results?	☐	☐	☐	☐
6.	Is there a statement locating the researcher culturally or theoretically?	☐	☐	☐	☐
7.	Is the influence of the researcher on the research, and vice- versa, addressed?	☐	☐	☐	☐
8.	Are participants, and their voices, adequately represented?	☐	☐	☐	☐
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☐	☐	☐	☐
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Comments (Including reason for exclusion)

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