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Indigenous social determinants of health measurement for health and social services: A systematic review protocol following a hermeneutic approach

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ADMINISTRATIVE INFORMATION

Support - Mustimuhw Information Solutions; Digital; Mitacs Accelerate Internship Project; Trinity Western University.

Review Stage at time of this submission - Data extraction.

Conflicts of interest - Mustimuhw Information Solutions (2023) is an industry partner for this review who could benefit from the results. Reilly Baldwin is contracted by Mustimuhw Information Solutions.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 July 2023 and was last updated on 20 July 2023.

INTRODUCTION

Review question / Objective 1) What are the relevant domains, indicators, and measures of Social Determinants of Health (SDOH) to inform culturally affirming health and social services in Indigenous communities?

2) What are recommended practices for use and digital integration of SDOH data to inform policy, investment, clinical, and service actions in Indigenous communities?

Rationale This Indigenous-initiated review focuses on Indigenous SDOH domains, indicators, and measures as prioritized by the Indigenous peoples. Many health care providers were unaware of or have ignored the power of social determinants of health and their impact on the health of Indigenous patients (Hyett et al, 2019, Butler et al, 2019). Further, it is important to ensure that the needs, concerns, and perspectives of Indigenous peoples are accurately and comprehensively measured in ways that are culturally safe, useful (actionable), and appropriate. This is particularly important for

addressing health inequities experienced by indigenous communities who have experienced historical and ongoing colonization and research atrocities (Hyett et al, 2019).

No systematic reviews about SDOH frameworks with Indigenous people were found. Butler et al. (2019) ask pertinent questions about QOL domains but not SDOH domains. This systematic review will address this gap and contribute to the development of an Indigenous SDOH measurement framework and offer guidance and strategies for collection, reporting, and interpretation of SDOH measures to inform policy, investment, clinical, and service actions. The synthesized findings will inform the development of a digital platform ecosystem that will skillfully engage community members in creating meaningful solutions to issues that pertain to their context and relevant SDOH.

As part of the overarching Indigenous Digital Health Ecosystem (IDHE) project, the results from this review will be used to develop an Indigenous SDOH measurement framework for integration into a culturally supportive digital platform for health

and social services in Indigenous communities. Further information on the IDHE can be found on the Digital website (Digital, 2022). The Truth and Reconciliation Commission Report (2015) and the Missing and Murdered Indigenous Women and Girls Report (2019) provide important context about the ongoing devastating effects of colonialism and of past Indigenous research atrocities for lensing any new work regarding Indigenous peoples. The First Nations Information Governance Centre developed the OCAP® principles (1998, 2014; Schnarch, 2004), which help researchers approach their endeavors with an eye to ensuring appropriate ownership, control, access, and possession procedures and protections are in place when working within an Indigenous context. Further understanding of the contemporary context of racism in Healthcare in British Columbia is outlined in the In Plain Sight Summary Report (Turpel-Lafond, 2020). These seminal documents are essential for anyone working alongside Indigenous populations, individuals, or interests and will inform this review.

Condition being studied The World Health Organization (WHO, 2022) describes social determinants of health (SDOH) as non-medical factors that influence health outcomes. These factors include the contributing environments where people are born and advance into adulthood and thereafter such as socio-economic policies and health and political systems, societal norms, and development agendas, that encompass their everyday lives. Health equity is also embedded in these dynamics or domains of health, which are imbued with power differentials that influence access to care (WHO, 2022). In their seminal study, Bethune et al. (2019) identified protective determinants of health (e.g., education and income) and riskier determinants of health (e.g., residence location). This review focuses on extracting such information to create a framework that service providers to understand and track how SDOH domains are currently affecting Indigenous peoples and their access to equitable health and social services.

METHODS

Search strategy The establishment of the literature sample for this review will be iterative and guided by the hermeneutic literature review approach described by Boell and Cecez-Kecmanovic (2014). The emerging body of knowledge will be considered, and the original search strategy reviewed and refined on an ongoing basis following the “analysis and interpretation” and “search and acquisition”

phases of the hermeneutic circle to find new relevant sources (Boell & Cecez-Kecmanovic, 2014, p. 264).

Initial searches were conducted on November 17-28, 2022. The keywords and standardized search terms for the concepts of a) “Social Determinants of Health” and b) “Indigenous” were identified, combined using Boolean operators, and applied to the PSYCHINFO, CINAHL, PubMed (with MEDLINE content included), and Social Science Citation Index (using the Web of Science interface) databases. Rieger et al.’s (2023) search string for Indigenous terms was used to ensure capturing more inclusive ways of describing Indigenous peoples. The local and standardized search terms for “Indigenous” and “Social determinants of health” or “SDOH” or “SDH” were included in the searches.

Hand searching of select Indigenous academic journals, those not captured in the databases, will be conducted using the phrase “social determinants of health.” For journals with no immediate results, tables of contents from 2015 onwards will be hand searched for relevant results. Grey literature will be identified by searching relevant sources from individual First Nations and Indigenous organizations (e.g., websites) for content related to Indigenous SDOH, as well as Google Scholar. Other search strategies will include literature recommended by team members and stakeholders. The grey literature search aims to fill epistemic gaps in knowledge due to colonial structures that privilege academic, Westernized bodies of knowledge over Indigenous bodies of knowledge (Sinclair et al., 2021). It is crucial that Indigenous bodies of knowledge are equally and respectfully used to inform the IDHE measurement framework.

Participant or population The population of interest in this study comprises Indigenous peoples from four geographical regions: Canada, the USA, Australia and the Torres Strait, and New Zealand. The term “Indigenous” includes the meaning of Aboriginal, which means the first known people to live on a given land. Queen’s University Indigenous Ways of Knowing Guide 2019 website (2022) describes “Indigenous” as “an umbrella term for First Nations... Metis, and Inuit” peoples in Canada. However, this study uses the term broadly to denote Indigenous peoples of all geography areas of focus. Adrienne Keene describes Indigenous peoples as being from a place where they have intrinsic ties to their lands and communities that establish their Indigeneity (Keene, 2021).

Intervention This review does not investigate a specific intervention.

Comparator This review does not include a comparator.

Study designs to be included COMMERCIAL OR ACADEMIC LITERATURE: This review will include qualitative, quantitative, or mixed-methods research studies and systematic reviews. We will also include book chapters, discussion papers, and opinion papers. GREY LITERATURE: We will scan websites for materials such as health and annual reports, strategic plans, community newsletters, and nation-specific legal documents. Domains, indicators, and measures may be presented as community-driven priorities or concepts in academic language that express Indigenous ways of knowing. Government-created documents will be included.

Eligibility criteria INCLUSION CRITERIA: PARTICIPANTS. We will include literature that focuses on Indigenous persons (see Item 12) as the primary focus and/or primary population. GEOGRAPHICAL CONTEXT. Our search will include literature from the four geographical regions of Turtle Island (Canada and the USA), Australia and the Torres Strait, and Aotearoa (New Zealand). Indigenous peoples in these countries have similar experiences with colonization and the combining of these geographical regions has numerous precedents in Indigenous health literature conducted in the English language (Butler et al, 2019; Gall et al., 2021; Kurtz et al., 2018). CONCEPT. We will include literature (studies, discussion papers etc.) focusing on the domains, indicators or measures of Indigenous SDOH. INCLUSION CATEGORIES: During the screening process, included literature will be sorted into three categories: 1) Include as Relevant for SDOH data extraction, where identifying domains, measures, or indicators of SDOH is the central focus of the document; 2) Include as Related, where the document identifies domains, measures, or indicators of SDOH but it is not the main focus of the document; and 3) Unsure for SDOH data extraction, where after eight minutes of reading the document, the reader is still unsure whether it identifies domains, measures, or indicators of SDOH. Items in the first and then the second category will be prioritized for data extraction. EXCLUSION CRITERIA: Literature will be excluded if: 1) the document is not written in English; or 2) the focus is on non-Indigenous peoples, a particular disease or health condition, or a particular healthcare service (e.g., dental care, maternity care, prison health).

Information sources Included databases for this search are described in Item 11. Hand searching for the search term “Social Determinants of Health” will be conducted in several Indigenous academic journals relevant to our study.

For the grey literature search, we will scan websites of different communities across Canada (e.g., The six Indigenous partner entities of the Digital Technology Cluster: Cowichan tribes, Cowessess First Nation and Chief Red Bear Children’s Lodge, Sioux Lookout First Nations Health Authority, First Nations Health and Social Secretariat of Manitoba, and First Nations Digital Health Ontario) for materials such as health department reports, annual reports, strategic plans, community newsletters, community constitutions, and nation-specific legal documents. We will also search Google Scholar. Additional websites may be explored as suggested by our project team members and stakeholders.

Main outcome(s) We are not predetermining any measured outcome as the focus of the review is not on effectiveness of an intervention.

Additional outcome(s) Not applicable.

Data management Available abstracts of the initial results will be randomly sorted into batches for screening from all search results, using EPPI Reviewer software (Thomas et al., 2022). The titles and abstracts of each citation will be randomly assigned for independent screening against our inclusion criteria by two members independently from one another using EPPI Reviewer software tools and an artificial intelligence-facilitated approach. Disagreements will be resolved by consensus. Other uncertain results may require input from additional members of the research team for include/exclude decisions. The same method will then be used for full text screening to confirm eligibility. Study screening is designated for the period March 2023-June 2023, and machine learning will be utilized to assist with screening. A PRISMA flowchart will be used to report the search and screening results.

All documents that have been screened and included will undergo data extraction using the EPPI Reviewer platform. Detailed study-level information will be included in a final report. We will extract data about Indigenous SDOH domains, indicators, and measures, as well as the type of literature (qualitative study, quantitative study, discussion paper, etc.), and location (which geographical region, and/or specific Indigenous Nation). The following domains will initially be included and subsequently iteratively refined: economic stability, education, access and quality,

health care access and quality, neighborhood and built environment, social and community context. We will also inductively identify other Indigenous domains, which will be added to during the data extraction work then be sorted into main themes via iterative team discussions. Full data extraction will also include categories for practical implications for or applications to health and social services for Indigenous peoples.

Quality assessment / Risk of bias analysis

Quality assessment will cover Indigenous engagement in creating each piece of literature. We adapted the Aboriginal and Torres Strait Islander Quality Appraisal Tool by Harfield et al. (2020) for wording inclusive of our four geographical regions. This tool assesses several focused areas relevant for Indigenous peoples such as respect for community cultural contexts and protocols, use of Indigenous research paradigms, and safeguarding of intellectual and cultural property rights (Harfield et al., 2020).

Strategy of data synthesis

Guided by the hermeneutic literature review approach (Boell & Cecez-Kecmanovic, 2014), analysis and synthesis will be an iterative and participatory process with input on emerging results sought through ongoing focus groups and interviews with Learning Alliance members, which has representation from Indigenous organizations and communities in Canada (see Item 27). The Learning Alliance involves individuals knowledgeable in Indigenous Ways of Knowing (e.g., Elders) and health and social services professionals working in Indigenous communities.

The data analysis codebook will include the extraction categories mentioned in Item 20 and a section to identify visual representations of SDOH frameworks, indicators, and measures so that these can be more easily accessed during synthesis of the final SDOH measurement framework. Information extracted will be combined into categories using content analysis, to address the review questions, each with descriptions and representative examples. A summary of relevant SDOH domains, indicators and measures will be generated, supported by tools from EPPI Reviewer software. The synthesized findings will be reviewed with attention to a strengths-based approach and discussed with the Learning Alliance members. The main outcome of our collaborative synthesis will be an Indigenous SDOH measurement framework of culturally relevant domains, indicators, and measures.

Subgroup analysis Not applicable.

Sensitivity analysis Not applicable.

Language restriction Only documents written in English are included in the synthesis because comprehensive language translation services are not available to this research team.

Country(ies) involved Canada (School of Nursing, Trinity Western University, Langley, BC, Canada).

Other relevant information

STAKEHOLDER ENGAGEMENT AND PARTICIPATORY ACTION RESEARCH, Mustimuhw Information Solutions (MIS) is a Nation-based company that is fully owned by Cowichan Tribes, and the lead partner organization for the Mitacs accelerate application (which provided additional funding). Plans for Indigenous communities' access, use, and governance of resulting knowledge/data will be managed by MIS. The research was launched in response to an invitation from MIS for Trinity Western University (TWU) to join as a research partner with the overarching Indigenous Digital Health Ecosystem project. The research will include collaboration throughout the project with a Learning Alliance including representatives from MIS customers Cowichan Tribes (British Columbia), Cowessess First Nation (Saskatchewan), Sioux Outlook First Nations Health Authority (Ontario), and First Nations Health and Social Secretariat of Manitoba (Manitoba).

We will engage with the Learning Alliance to facilitate iKT focused on the initial phases of the Knowledge-to-Action Cycle (Gagliardi et al., 2016; Graham & Tetroe, 2010). The Learning Alliance will include two tables comprised of (a) people who can represent the perspectives of Indigenous communities in their geographic locations such as Elders and knowledge keepers, and (b) a range of health and social service providers who use MIS products. Via focus groups and interviews, the members of the Learning Alliance will be invited to provide their own perspectives regarding collection, reporting, and use of SDOH data. This information will help to contextualize and adapt research findings on SDOH as they relate to Indigenous communities.

Keywords Indigenous; Social Determinants of Health; Health Services; Digital Health.

Dissemination plans Results will be made freely available online via the <http://www.healthyqol.com> website. SDOH systematic review results will be compiled in a manuscript submitted to international peer-reviewed journals as well as presented at conferences and webinars. Dissemination of the results of this systematic

review will occur collaboratively with MIS and the Learning Alliance. We will collaborate with Indigenous communities to present our findings in ways that are meaningful and strategic to their own stated priorities.

Contributions of each author

Author 1 - Kathleen Lounsbury - Designing the review, preliminary analysis to inform development of the protocol, writing the protocol, data collection and management, data analysis and interpretation, writing the review manuscript.

Author 2 - Monica Friesen - Preliminary analysis to inform development of the protocol, editing the protocol, data collection and management, critical revision of data analysis and interpretation, editing the review manuscript.

Author 3 - Ayumi Sasaki - Editing the protocol, data collection and management, critical revision of data analysis and interpretation, editing the review manuscript.

Author 4 - Reilly Baldwin - MIS and Learning Alliance liaison, editing the review protocol, editing the review manuscript.

Author 5 - Paul Foth - Coordinating review planning, liaison for all IDHE project partners, editing the protocol, editing the review manuscript.

Author 6 - Kendra L Rieger - Research lead, coordinating the review, editing the protocol, editing the review manuscript.

Author 7 - Rick Sawatzky - Research lead, liaison for all IDHE project partners, coordinating the review, editing the protocol, editing the review manuscript.

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