Systematic Reviews

PROTOCOL

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Measuring health and well-being from preconception to early life in Indigenous populations: a scoping review protocol

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Abstract

Background Indigenous Peoples face a notable absence of standardized equity indicators for non-communicable diseases. Existing measurement models are rooted in Euro-Western biomedical frameworks that overlook Indigenous worldviews, definitions of health, and relational approaches to wellness. These models remain narrow in scope—focused on disease-specific indicators and treatment pathways—and reinforce deficit-oriented perspectives rather than advancing holistic, strengths-based understandings of well-being. This scoping review aims to identify and synthesize research that utilizes, assesses, or validates measures of wellness, health, and supportive early environments in Indigenous populations.

Methods This review will use an Indigenous-informed scoping review study methodology, which grounds each stage of the review process in Indigenous values and community guidance. A systematic search of global academic and grey literature databases will be conducted to identify relevant literature. Selected studies will include those that assess or validate the measurement of health and wellness spanning from preconception through pregnancy, infancy, and early childhood within Indigenous populations in Canada, Australia, New Zealand, and the USA. Articles will be screened and assessed for eligibility by two reviewers. From eligible articles, data including author and year of publication; source country; target population; objectives; name(s) of instrument(s); type(s) of measure(s); development/adaptation/validation process; main outcomes; community engagement; quality assessment; and other descriptive variables will be extracted. A thematic analysis approach guided by an Indigenous Community Advisory Committee will be applied to synthesize the findings.

Discussion This scoping review aims to identify and synthesize the global literature on tools and instruments to measure health, well-being, and supportive early environments in Indigenous populations. This work aims to inform the development of Indigenous wellness indicators for the Indigenous Healthy Life Trajectories Initiative (I-HeLTI) Cohort Research Study funded by the Canadian Institutes of Health Research. Traditional population health monitoring methods, rooted in Western paradigms, have often perpetuated colonial biases and overlook unique contexts of Indigenous communities. This review seeks to bridge knowledge gaps in developing and validating Indigenous wellness indicators that align with Indigenous values and aspirations. The findings are expected to advance ethical approaches to health measurement in Indigenous populations, supporting data sovereignty and culturally inclusive wellness indicators.

Systematic review registration Open Science Framework https://osf.io/yfv8m.

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Keywords Scoping review, Indigenous populations, Health measurement, Early child development, Healthy life trajectories

Background

Health and wellness are widely used outcomes in health care research. The World Health Organization (WHO) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [1]. However, this definition of health is no longer universally accepted [2]. Over recent decades, scholarship and policy discourse in health and medicine have increasingly challenged the traditional view of health as merely the absence of disease, advancing more holistic and dynamic definitions that emphasize the ability to adapt, self-manage, and achieve one's vital goals within the context of overall well-being and capabilities [2–4].

In this context, it becomes imperative to recognize the importance of adopting a holistic approach that embraces diverse health models. While the Euro-Western biomedical health model has demonstrated efficacy in addressing an array of health issues, its dominance over alternative systems raises challenges regarding diagnosis, treatment, and prevention. The need for adaptability is evident, considering the biological, cultural, and social diversity present in society [5]. This discussion emphasizes the necessity of acknowledging and integrating multiple health perspectives to advance comprehensive and inclusive health care practices.

Health and wellness for Indigenous individuals

Across diverse Indigenous communities, values and beliefs may vary, yet many shared understandings of health and wellness exist. Rooted in the philosophies of many Indigenous cultures are profound beliefs about life, spiritual practices, the sustenance of wellness, and interconnected relationships with all aspects of creation, including the land, animals, and Mother Earth [6]. The teachings of the Medicine Wheel hold particular significance in the health and wellness approaches of numerous Indigenous cultures. These teachings, guided by principles of holism, emphasize the crucial balance between the mental, physical, emotional, and spiritual domains of humanity [7].

Indigenous perspectives on healing and wellness extend beyond the individual, encompassing the well-being of family, community, and connections with the land [8, 9]. In stark contrast to Euro-Western medicine's tendency to isolate and concentrate on specific aspects of health and illness, Indigenous views underscore the inseparability of health and wellness from the entirety of an individual's being. A foundational Anishinaabe phrase, *Mino Bimaadiziwin*, or "The Good Path" or "The Good Life," is integral to many Indigenous teachings. This principle embodies a lifelong commitment to following the rightful path by honouring all life and embracing cultural teachings that underscore respect for oneself, one's relations, and the entirety of creation [10].

Health and wellness across the life course: preconception through early life in Indigenous communities

In many Indigenous societies, the celebration of birth and the profound honour bestowed upon those bringing forth life-giving birth symbolize more than a mere biological event. This sacred ritual, intricately woven into the fabric of Indigenous cultures, carries with it a timeless emblem of resilience and cultural richness, embodying the spirit of generations past and the promise of those yet to come. However, the echoes of colonial policies reverberate through Indigenous Peoples' experiences, disrupting the tapestry of good health, parenting, and family life and leaving enduring imprints on the developmental journey of children [6, 11–15].

These disruptions extend beyond the visible threads, reaching into the very essence of children's social, emotional, and cardio-metabolic well-being. They shape collective life chances and opportunities, weaving a narrative of challenges and resilience [6, 15–21]. Today, non-communicable diseases (NCDs), comprising mental disorders, diabetes, and cardiovascular illnesses, stand among the most significant contributors to global disability and mortality, accounting for more than 50% of the global disease burden and over two-thirds of annual deaths [22]. For children globally, mental disorders have become the leading cause of disability, a stark reminder of the intricate interplay between health and well-being [23]. The emergence of the COVID-19 pandemic further heightened the risks associated with NCDs, particularly for children, by disrupting access to preventive and routine health care, increasing sedentary behaviours and screen time, worsening food insecurity, and contributing to stress, anxiety, and social isolation [24–26]. These cumulative pressures underscore the urgent need for comprehensive, life course approaches to health and wellness [27].

The developmental origins of health and disease (DOHaD) theory emphasizes the importance of critical windows—gametogenesis, conception, pregnancy, infancy, and early childhood—that shape long-term

health trajectories [28–33]. Despite national efforts and frameworks to measure health equity, there remain no standardized set of NCD-related equity indicators that reflect the realities, priorities, or worldviews of Indigenous Peoples [34, 35]. Existing frameworks often fall short, overlooking measures of profound significance to Indigenous Peoples, such as cultural identity, relationality, and a sense of control over their health and life circumstances, which transcend the confines of individual measures of well-being.

Challenges persist in the assessment of Indigenous Peoples' health, as mainstream approaches to health assessment remain narrowly focused on disease-related indicators, neglecting the broader social and structural determinants of health critical in Indigenous contexts [36–38]. This limitation is compounded by a tendency to concentrate on risk and poor health, disregarding the holistic Indigenous perspectives that encompass connections among body, mind, spirit, community, family, culture, and land [39, 40]. Telling stories of deficits within Euro-Western literature perpetuates stereotypes and problematizes Indigenous communities without exploring the root causes of health disparities [41, 42]. Indigenous Peoples respond to historic colonial processes with wisdom amassed over generations, possessing diverse and enduring healing traditions for promoting well-being.

To reset this narrative, Indigenous Peoples aim to showcase stories of leadership, strength, and resilience, highlighting the deep knowledge and commitments that communities hold to create new opportunities for the next generations. These stories are critical for rebuilding communities through research focused on optimizing healthy child development by reclaiming traditional ways of life. Within many Indigenous cultures, birth is a ceremony—a celebration introducing new life into the world with culture, language, and a connection to place.

While existing systematic reviews have explored the use and validation of different instruments and approaches to measuring health and well-being within Indigenous populations more broadly, gaps remain in addressing measures involving the DOHaD [39, 43, 44]. Measures related to preconception, pregnancy, infancy, and early childhood environments have not been adequately explored. In addition, these reviews often neglect the measurement of well-being across different environmental levels, including the natural environment, community level, primary household level, among parents-to-be, and children.

Existing systematic reviews examine how different instruments have been used and/or validated within Indigenous populations to measure health more broadly, also capturing Indigenous-specific measures that go beyond domains typically measured through a Euro-Western scientific lens to those concerning social and community domains as well as relating to culture, diet, and land use [39, 43, 44]. A recent review has mapped approaches to measuring wellness through Indigenous partnerships, identifying culturally grounded approaches to health measurement and cultural determinants of health [45]. Nevertheless, these reviews typically focus on measures of specific aspects of well-being, such as quality of life, mental health, or individual-level measures only. Moreover, they do not include instruments that aim to measure the DOHaD, specifically measures concerning preconception to pregnancy, infancy, and early childhood that emphasize supportive early environments and are grounded in Indigenous Knowledge. Such measures should perhaps include spiritual and cultural connection, community resources, social cohesion, kinship, connection to the land, parenting practices, parental adult experiences, preparation and supports for parenting, perceptions and knowledge of healthy child development, aspirations for parenting, parents' parenting history, communal experiences of pregnancy and parenting, child anthropometrics, developmental trajectories and milestones, and more. For example, many Aboriginal and Torres Strait Islander Australians prefer the term social and emotional well-being (SEWB) to refer to seven interconnected domains, including body, mind, and emotions, family and kinship, community, culture, country, and spirituality [46].

Sharma et al. [47] describe a review protocol aimed at identifying methods and approaches for adapting or developing health assessment tools specifically for Indigenous populations in clinical settings. This review aims to identify tools used for diagnosis, treatment, and illness management within Indigenous populations, contributing to a broader project focused on developing an informant-based functional assessment tool specifically for First Nations in Northern Ontario [47]. It is not intended to inform population-level measurements for policy-making, decision-making, or health service delivery to improve health outcomes and prevent NCDs.

Furthermore, the measurement of health and well-being in Indigenous populations has traditionally relied on quantitative approaches. Focusing on numerical data and statistical analysis, these methods often fail to capture the holistic and interconnected nature of health and well-being central to Indigenous perspectives. Such approaches may overlook the nuanced, culturally specific aspects that are vital to truly understanding well-being in these communities [48]. The complexity of Indigenous well-being, influenced by a diverse array of cultural, social, and historical factors, can be difficult to report and monitor through conventional quantitative

instruments and statistical analyses. As Drawson et al. [49] argue, "data analytic methods may lack the sophistication to account for complex relationships between variables." Given these limitations, Indigenous communities are increasingly adopting qualitative or mixed-methods approaches for assessing health and well-being over time. These approaches provide a more holistic and contextually relevant evaluation, better capturing the cultural and interconnected health and well-being aspects central to Indigenous perspectives. They integrate traditional knowledge and cultural practices, providing a richer, more comprehensive understanding that quantitative methods alone cannot offer. To our knowledge, no systematic reviews have explored the use of qualitative or mixed-methods approaches in assessing health and well-being over time within Indigenous populations.

This scoping review aims to identify and evaluate research that measures, assesses, and/or validates assessments of wellness, health, and supportive early environments in Indigenous populations. A preliminary search of PROSPERO, MEDLINE, the Cochrane Database of Systematic Reviews, and the JBI Evidence Synthesis was conducted, and no current or ongoing scoping reviews or systematic reviews on the topic were identified. The objective is to fill these gaps by comprehensively exploring the available literature to enhance our understanding of Indigenous health and wellness across the life course. The scoping review is undertaken as part of the broader Canadian Institutes of Health Research (CIHR)'s Indigenous Healthy Life Trajectory (I-HeLTI) Study in the Regional Municipality of Wood Buffalo, Alberta, which aims to advance Indigenous-led approaches to early life health and wellness.

Review questions

This review seeks to answer the following questions:

- Which instruments, measures, or assessments have been utilized, validated, adapted, or developed to measure health, wellness, and/or supportive early environments for Indigenous populations, encompassing stages from preconception to early childhood, and spanning various contexts and populations, including the natural environment, community, and household levels and among parents-to-be, immediate and extended family, and children?
- What are the general characteristics of these instruments or measures, such as their intended purpose, the process for development, adaptation, or validation, specific Indigenous populations and locations involved, and the nature of the study involving them?

Methods

Study design and Indigenous governance

The proposed scoping review will use an Indigenous-informed methodology that integrates Indigenous research approaches with Arksey and O'Malley's [50] framework for scoping reviews, as outlined by Phillips-Beck et al. [51]. This approach aims to weave together Indigenous and Western methodologies, ensure meaningful Indigenous representation, and include Indigenous perspectives throughout the analysis and presentation of findings.

To guide this process, we established a Community Advisory Committee (CAC) to support the I-HeLTI program of research, composed of Indigenous representatives from the Regional Municipality of Wood Buffalo, Alberta, Canada. The CAC includes Elders, Knowledge Keepers, Indigenous health and social service workers, researchers, and community members of Dene, Cree, and Métis descent, representing a diversity of ages, genders, and experiences. The CAC provides local direction, guidance, and accountability to ensure the review reflects community priorities and diverse Indigenous Ways of Knowing and Doing. Its roles include ensuring the search reflects Indigenous worldviews, terminology, and priorities related to wellness and early life environments, advising on data extraction and interpretation, co-defining research priorities, ensuring ethical and culturally grounded engagement, and shaping knowledge translation strategies. This governance structure aligns with the Indigenous-informed scoping review principles described by Phillips-Beck et al. [51], who highlight that Indigenous participation and leadership throughout the review process are essential to ensure that the synthesis reflects Indigenous values, priorities, and definitions of wellness.

The review will be reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines (Appendix A) [52].

Eligibility criteria

Participants

This review will consider studies involving Indigenous populations as defined by the World Health Organization (WHO). The WHO defines Indigenous populations as descendants of groups present in the area before modern states and borders were defined that live in distinct geographical territories and identify themselves as belonging to a cultural group separate from mainstream society [53]. The scope of this review is limited to Indigenous populations in Canada, Australia, New Zealand, and the USA (CANZUS nations). These countries are commonly viewed as natural comparators in Indigenous well-being

research. They share similar colonial histories and governance systems rooted in British colonialism, including processes of treaty making (except Australia), policies aimed at assimilation and protectionism, displacement from traditional lands, and loss of culture [54, 55]. They also represent jurisdictions with comparable reconciliation efforts and health policy contexts, allowing for meaningful cross-national synthesis [56].

Concept

This review will consider studies that employ instruments to assess holistic health, wellness, and/or supportive early environments from preconception to early childhood, incorporating stages such as pregnancy and infancy. These studies should cover assessments at various levels, including natural environments, communities, and primary household settings.

Context

Ultimately, this scoping review will inform the design and adaptation of culturally appropriate and community-driven wellness/health measures to measure how culturally rooted health promotion strategies: (i) foster supportive early environments to promote positive childhood experiences and disrupt intergenerational cycles of trauma, and (ii) foster epigenetic modifications that alter gene expression in ways that not only decrease health risks but also improve developmental outcomes, building strengths and enhancing wellness throughout individuals' lives and across generations.

Types of sources

This scoping review will include studies with quantitative, qualitative, and mixed-methods research designs. Literature reviews such as systematic reviews, meta-analyses, critical reviews, and narrative reviews will be included, along with grey literature. A hand search of the reference lists of all included articles will be performed to ensure comprehensive literature identification.

Search strategy

A four-step, Indigenous-informed search strategy will be followed to find published and unpublished literature. The search strategy is guided by the study's CAC and will include the following: (i) preliminary searches of MEDLINE (PubMed) and CINAHL (EBSCO) to identify relevant keywords and index terms. These, which will be refined in collaboration with the CAC, incorporate community-preferred concepts of wellness and culturally grounded indicators that may be absent from Western databases; (ii) development of a comprehensive search strategy for each electronic database with input from an experienced information specialist, ensuring inclusion of terms reflecting Indigenous perspectives on health; (iii) electronic and manual searches of reference lists of all included studies to identify additional studies for review and Indigenous-relevant evidence; and (iv) relational follow-up with authors and researchers involved in identified studies (e.g., the authors of the systematic review) to identify other studies, to gain access to instruments/measures, as well as to garner clarification on studies where needed. Additionally, we will connect with Indigenous organizations authoring reports on Indigenous health and well-being approaches and measures. This relational step aligns with Indigenous research principles by acknowledging community ownership of knowledge and ensuring accuracy through direct communication.

Articles published in English from 1990 to the present will be included. The databases to be searched include MEDLINE (Ovid), CINAHL (EBSCO), APA PsycINFO, Web of Science, Embase, and Cochrane CENTRAL. To identify unpublished or grey literature, targeted searches will be conducted in ProQuest Dissertations and Theses Global and Google Scholar (via Harzing's Publish or Perish), as well as on GreyLit.org and relevant Indigenous organizational or governmental websites. The final MEDLINE search strategy and search translations for all databases will be documented in an appendix to the completed review, in accordance with the PRISMA-ScR guidelines [52].

Study/source of evidence selection

Following the search, all identified records will be collated and uploaded into Covidence—a web-based systematic review platform for importing and independent screening of articles (Veritas Health Innovation, Melbourne, Australia)—and duplicates will be removed. Following a pilot test, titles and abstracts will then be screened by two independent reviewers for assessment against the inclusion criteria for the review. Potentially relevant papers will be retrieved in full. Two independent reviewers will assess the full text of selected citations in detail against the inclusion criteria. Reasons for exclusion of full-text papers that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at each stage of the selection process will be resolved through discussion or with a third reviewer. The results of the search will be reported in full in the final scoping review and presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses for Scoping Reviews (PRISMA-ScR) flow diagram [52].

Data extraction

In consultation with the CAC, we developed a draft data extraction framework to organize relevant information

from each article/document. This draft data extraction framework includes: (1) author and year of publication; (2) source country; (3) target population; (4) objectives of study; (5) name(s) of instrument(s); (6) type(s) of measure(s); (7) development/adaptation/validation process; (8) main outcomes; (9) community engagement process; (10) quality assessment; and (11) other descriptive variables.

As indicated by Phillips-Beck [51], a major distinction between standard scoping review practices and an Indigenous-informed scoping review methodology is the incorporation of an Indigenous perspective into the data extraction tool, which ensures the relevance of information captured from eligible articles to the community. The draft data extraction tool will be modified and revised as necessary during the process of extracting data from each included paper. Modifications to the data extraction tool will be detailed in the full scoping review. We will apply the data extraction framework when analyzing the articles and the grey literature. Authors of papers will be contacted to request missing or additional data, where required.

Data analysis and synthesis

Two independent reviewers will perform a quality assessment of papers included in the scoping review via Covidence using the data extraction tool. We will also use the Aboriginal and Torres Strait Islander Quality Appraisal Tool (ATSI QAT) to appraise the inclusion of Indigenous perspectives in the development, validation, and/or adaptation of instruments for measuring [57]. Any disagreements that arise between the reviewers will be resolved through discussion or with a third reviewer. Additionally, study quality will be assessed by one author using the COnsensus-based Standards for the selection of health status Measurement INstruments (COSMIN) checklist to evaluate the methodological quality of studies on measurement properties of health-related reported outcomes [58, 59]. Assessing the quality of studies is key to distinguishing between tools by the quality and rigour of validation processes in Indigenous populations. When studies on measurement properties have good methodological quality, findings concerning an instrument's quality, reliability, and validity in Indigenous populations may be more trustworthy [58, 59].

Data synthesis will follow Miles and Huberman's [60] qualitative thematic analysis, with open coding by authors and verification by senior researchers and a community partner. Thematic analysis will be further informed by principles of grounded theory [61]. In adhering to Phillips-Beck's Indigenous-informed scoping review study methodology [51], the synthesis and analysis of the data will incorporate both Indigenous and Western approaches to align with Arksey and O'Malley's [50] fifth stage of collating, summarizing, and reporting results. While the data extraction tool will follow Western methods as outlined by Arksey and O'Malley [50], the synthesis will go beyond summarizing literature themes. It will also include general commentaries, observations, and perspectives from the CAC, ensuring that Indigenous voices are represented in the reporting and discussion sections of our scoping review manuscript.

Discussion

The scoping review in this protocol will identify, collect, and synthesize available literature on tools and instruments used to measure and assess health, well-being, and supportive early environments in Indigenous populations. The CAC has directed us to undertake this work to inform the development of Indigenous wellness indicators for use in the I-HeLTI Cohort Study.

Population health monitoring, deeply embedded in Western epistemologies and scientific paradigms, has historically served colonial agendas when applied to Indigenous populations [62]. The dominance of these approaches, including those employed in epidemiology, has created notable issues. These include the perpetuation of colonial constructs of Indigenous identity, oversight of unique contexts influencing the health outcomes of diverse Indigenous groups, emphasis on risk to the detriment of comprehending strengths and resilience for pragmatic solutions via health services and policies, and neglect in measuring health indicators aligned with the priorities of Indigenous communities [62].

This scoping review will bridge the knowledge gap regarding developing, adapting, and validating Indigenous wellness indicators. We expect the outcomes to highlight the processes that ensure these indicators align with Indigenous values, culture, and aspirations. Moreover, we hope evidence from this review will support the advancement of the fields of population health and epidemiology by synthesizing ethical approaches to measuring health and well-being with Indigenous populations. We anticipate that the findings will be relevant to both Indigenous communities and researchers alike interested in asserting data sovereignty and designing culturally inclusive, self-determined wellness indicators.

Appendix A

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.	1
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.	1
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.	3-4
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.	4
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.	1
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.	4-5
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.	5
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	5
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	5
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.	5-6
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	6
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).	6
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	6
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.	TBD
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	TBD
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	TBD
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.	TBD
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	TBD
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.	TBD
Limitations	20	Discuss the limitations of the scoping review process.	TBD

Section	Item	PRISMA-ScR checklist item	Reported on page #
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.	TBD
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.	21

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 16 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

Abbreviations

WHO	World Health Organization
NCDs	Non-communicable diseases
DOHaD	Developmental Developmental Origins of Health and Disease
I-HeLTI	Indigenous Healthy Life Trajectories Initiative
SEWB	Social and emotional well-being
PRISMA-ScR	Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews
CAC	Community Advisory Committee
ATSI QAT	Aboriginal and Torres Strait Islander Quality Appraisal Tool
COSMIN	COnsensus-based Standards for the selection of health status Measurement INstruments checklist
CIHR	Canadian Institutes of Health Research

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The authors wish to acknowledge the input provided by the Wood Buffalo Healthy Families Program CAC and other Indigenous community members who are the drivers for this scoping review, which will be used to guide the evaluation of the Wood Buffalo Healthy Families Program and inform culturally appropriate and community-driven mental wellness measures that will be utilized in the larger I-HeLTI study to understand how social and biological processes and mechanisms, along with community-led programs, may be optimized for children's benefit, from preconception through pregnancy, infancy, and early childhood, in reducing NCDs.

Authors' contributions

Erynne Sjoblom and Stephanie Montesanti conceptualized the study and developed the research questions. Erynne Sjoblom designed the study methods and led the drafting of the protocol. Stephanie Montesanti and Barbara S.E. Verstraeten contributed to the drafting and editing of the protocol. All authors reviewed and approved the final protocol.

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Data availability

The final search strategy, extracted data, and any accompanying materials produced during the full scoping review will be made publicly available in a searchable repository with a DOI upon completion of the study. Until then, materials related to the planned methods (e.g., draft search strategy, data extraction framework) are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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