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RAPID REVIEW

Towards Equity-Informed Approaches to Evidence Synthesis

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Key Messages

- Evidence synthesis is an important tool for informing public health decision-making to advance health equity across programs and policies.
- 'Evidence' takes many forms and extends beyond 'mainstream' sources, such as peer-reviewed journal articles and reports to lived experience, oral histories, sharing circles, storytelling, and lessons from the field. There are numerous evidence synthesis methods that are applied, depending on what is most appropriate to address the research question.
- A search of the peer-reviewed and grey literature found varied application of equity-informed approaches and considerations within and across evidence synthesis stages, with limited focus on anti-racist and anti-oppressive approaches to evidence synthesis.
- Results of this review are organized according to two concepts: (1) First, the ways of knowing broadly as they relate to evidence synthesis are discussed; (2) Second, the considerations for equity-informed approaches to evidence synthesis are presented. While there is no single approach to applying these considerations, equity-informed approaches to evidence synthesis are organized according to the steps in the synthesis process.
- Common considerations across reviewed records included: relationship building and meaningful engagement of equity-denied communities, rethinking what constitutes 'evidence', re-evaluating 'mainstream' approaches to evidence synthesis, engagement with equity theory in guiding interpretation, and unpacking the broader structural context which underpins health outcomes, opportunities, and access to resources.

Scope

This rapid review aims to address the following question: **What are equity-informed (including anti-oppressive and anti-racist) approaches and practices to conducting evidence syntheses?** The findings can be used by public health practitioners and researchers as a set of considerations for applying health equity across the evidence synthesis process.

To guide practitioners and researchers in the application of equity in the synthesis process, this rapid review aims to:

- Synthesize evidence synthesis methods, approaches, guidelines or frameworks related to equity, anti-racism and anti-oppression;
- Map equity considerations in the literature against generic evidence synthesis stages;
- Identify gaps in existing health equity considerations and identify implications for evidence synthesis and areas for future direction.

Research included documented knowledge in the form of peer-reviewed and grey literature databases. Records were also identified through consultations with partners. We focused on all evidence synthesis methods and approaches (e.g., frameworks, guidelines, strategies) and examples of their application related to equity research within health and social service organizations. Records in this review were published in English between 2013-2023, with applicability to all Organization for Economic Co-Operation and Development (OECD) countries. To maximize results, all study types were reviewed for relevancy, as long as content was specific to evidence synthesis and equity. Equity considerations for health research that extends beyond synthesis are outside the scope of this review.

For a summary of findings from this review, please refer to the companion document, Focus On: Overview of Equity-Informed Approaches to Evidence Synthesis. The Focus On serves as a quick and practical guide for public health researchers and practitioners and provides a summary of suggested tools, frameworks and examples to address equity considerations across the steps of evidence synthesis.

Background

Evidence is central to guiding public health planning, service delivery, and decision-making. As systematic summaries of relevant evidence on a health condition or outcome, evidence syntheses are used as a tool to prioritize informed-decisions on the design and implementation of public health programs and policies.[1] Syntheses are therefore valuable for identifying the acceptability, accessibility, feasibility, and affordability of such policies and programs,[2] including for specific communities, such as equity-denied communities and interventions that may risk increasing inequity as an unintended consequence.[3] Consequently, syntheses have wide-ranging impacts: they shape how public health practitioners and organizations make sense of and apply research findings, including how health equity is considered and applied to public health practice.

Advancing Health Equity

Advancing health equity is complex, context-dependent, and interactive "without clear-cut endpoints or obvious solutions".[4] Despite the shift in mainstream attention to health equity and its importance, progress on advancing health equity remains slow.[4] Health equity can be defined both as a means (process) and an ends.[5] As an ends, health equity is created when individuals have the fair opportunity to reach their fullest health potential. Achieving health equity requires reducing unnecessary and avoidable differences that are unfair and unjust.[6] This includes working to eliminate barriers from historical and ongoing inequities and meeting the unique needs of individuals, groups, and communities. Considering equity as a means requires working in a way that models dignity and justice without perpetuating or recreating harm in our structures, strategies, and working relationships.[5] This necessitates a collective movement towards systems thinking, including redistributing power dynamics,[4] and reframing public health action on context-specific structural determinants, including multiple, interlocking systems of oppression.[7]

Applying these principles to evidence synthesis can take multiple forms and can include unpacking the broader structural determinants, including racism, colonialism, and other forms of oppression that impact access to resources, opportunities, and health outcomes and engaging populations that may be denied equity as a result of system-level oppression.[8-10] This extends to impacted communities leading the evidence synthesis process, considering how we value evidence or knowledge, and reassessing mainstream approaches to evidence synthesis. Notably, evidence synthesis requires a reflexive and critical lens to meaningfully contribute to advancing health equity. It can entail intentional reflection and application of equity-focused theories, such as Critical Race Theory[11] and Intersectionality as a lens to unpack underlying context, assumptions, and effects on health equity, rather than solely using evidence synthesis as a means to describe a population and its 'burden of disease'.[10]

The Origins and Evolutions of Evidence Synthesis and Considerations for Health Equity

Evidence synthesis is a category of 'mainstream' research paradigms that constitutes one form of capturing, sharing, and disseminating knowledge that has tended to be rooted in Western worldviews. It is a method that has now evolved beyond a traditionally-positivist paradigm upheld by evidence-based medicine, in which the randomized controlled trial was privileged above other forms of evidence, subjecting it to critique.[12-16] Positivism is a perspective that holds there is a singular truth that can be realized via experimentation, with its methods aimed at objectivity and avoidance of bias.[17] Over time, a host of evidence synthesis approaches has expanded to address our evolving understanding of the nature of knowledge. Synthesis methods now range from integrative to interpretive; the more integrative end of the spectrum includes content analysis, case survey, qualitative comparative analysis and Bayesian meta-analysis, with the more interpretive methods including narrative summary, grounded theory, meta-ethnography, meta-synthesis, meta-study, realist synthesis and Miles and Huberman's data analysis techniques.[18]

In the context of any evidence synthesis, we need to be aware of its limitations, such as excluding and or failing to reflect diverse disciplines of knowledge, including but not limited to Indigenous and Afrocentric ways of knowing.[9] It also requires reflecting on our bias and assumptions about who holds knowledge, what is considered 'valid' evidence, and more broadly, what is considered evidence. More current conceptualizations of evidence in decision making acknowledge a wider array of forms alongside research evidence, such as community preferences and values, local issues, context and resources, all considered with a lens that accounts for practitioner expertise.[19] Beyond this, evidence also encompasses experiences, knowledge, storytelling, oral testimonies, amongst others.[20] While the nature of evidence prioritized for synthesis typically takes a linear, positivist perspective, which is incongruent and fundamentally at odds with approaches to understanding health equity,[4] more iterative evidence synthesis processes have emerged and have been applied (e.g., realist synthesis).

To shift from its positivist roots, scholars suggest the endpoint of evidence synthesis shifts towards knowledge discovery, through interpretation and critical reflection, rather than just knowledge replication.[9] Whilst the science of evidence synthesis is distinguishing between the different approaches, synthesis is also somewhat of an art in choosing the most appropriate synthesis method for the situation, and in executing good decisions during the synthesis in order to stay true to its principles. Internationally-recognized groups like the World Health Organization, Cochrane Health Equity group and Global Commission on Evidence all have an explicit focus on addressing equity in evidence synthesis.[21,22,23] The Cochrane Health Equity Methods group has worked over time to extend the guidelines (PRISMA) that enhance the reporting of evidence syntheses to include equity.[24]

Note on Positionality

While there is a common assumption that evidence syntheses are objective, the Public Health Ontario (PHO) authors acknowledge our positionality, which informs the assumptions, biases, and beliefs that we bring to this work.[25] We recognize that our inherent worldviews influence our evidence syntheses processes. We appreciate the diverse insights and contributions of those who reviewed this report, and we are committed to listening and continuous learning through relationship building and collaboration. While the authors and reviewers come from varied backgrounds, we recognize the privileged socioeconomic locations from which we originate.

We invite readers to reflect on a few questions when reviewing this report and engaging in the evidence synthesis processes:

- What social identities do I hold? What power do I or do I not hold because of my multiple identities?
- How does my positionality shape my assumptions, biases, and values as it relates to evidence synthesis?
- What is my role in working with partners and communities to (co)design and (co)conduct evidence synthesis to redistribute power and advance health equity?

Note on Terminology

Language is powerful. The language and terminology we use in evidence synthesis and the ways we shape narratives can exacerbate exclusion, stigmatization, stereotyping and other forms of harm toward people or groups we are working for and with.[26] We acknowledge that terminology and language are unique to an individual and communities. As researchers this requires ongoing learning, unlearning and consultation with impacted individuals and communities to determine preferred terms and language.[26] The literature we reviewed uses a variety of terms to describe specific population groups. For accuracy, this review uses the authors' original terms when discussing their work. Aside from this, we reflected on and applied the National Collaborating Centre for Determinants of Health (NCCDH) principles of asset-based, system focused, and person-first language, as a framing for how we presented the findings of this review.[27]

Methods

Umbrella review methods were used to systematically identify and assess published information.[28,29] An umbrella review (or 'review of reviews') is used to quickly assess large amounts of robust evidence and compare findings of previous reviews. This supports the identification of gaps, highlights where conclusions can be drawn, and where evidence is limited to create more intentional research.[28,29] This type of review is particularly useful in public health when a wide-ranging questions arise, or when evidence is required to establish a new policy or practice.[28]

A challenge with umbrella reviews is the 'missing' data and varied quality of data within reviews that were included.[28] To address this limitation, we explored and included primary studies and grey literature for areas where 'gaps' were identified. These gaps included decolonizing evidence synthesis, the role of theory in evidence synthesis, intersectional considerations for evidence synthesis, and literature published in both peer reviewed and grey literature sources after 2022.

To identify relevant evidence on this topic, Public Health Ontario (PHO) Library Services designed and executed searches of peer-reviewed and grey literature. The search for peer-reviewed literature was conducted on November 30, 2023, by PHO Library Services in the following bibliographic databases: MEDLINE, PsycINFO, ERIC, Health Policy Reference Centre, SocINDEX, Academic Search Premier, and Scopus. Grey literature searches were conducted on December 13, 2023, through targeted searches of the NCCDH website and hand searching of publications in the Cochrane Methods Equity Group Library. We also ran searches using the Google Canada search engine. Based on recommendations from PHO Library Services, the first 100 results of each search string were reviewed, given that relevance decreases after the first 50-100 results. The detailed search strategy, including specific search terms for both peer-reviewed and grey literature, is available upon request. In addition, we consulted with partners from PHO, Cochrane Collaboration Health Equity Methods Group, NCCDH, and Porcupine Health Unit for information about known published, unpublished, and ongoing studies on this topic.

Records were eligible for inclusion if they met the following criteria:

- Focused on evidence synthesis methods/approaches/guidelines related to equity, anti-racism, and/or anti-oppression;
- Addressed equity-denied groups;
- Were directly relevant to public health practice;
- Were published in English from 2013 to 2023; and
- Included all 38 Organization for Economic and Co-operation Development (OECD) countries. This ensure the inclusion of a broad range of jurisdictions and centre diverse ways of knowing.

Two reviewers independently screened titles and abstracts of peer-reviewed results using Covidence and grey literature results using a web browser. Reviewers met to discuss any discrepancies and to achieve consensus. Full text articles were retrieved and independently reviewed by two reviewers. Any disagreements about the inclusion of a record were resolved through discussion with a third reviewer. Relevant information was extracted by each article by two reviewers. Included reviews were assessed for quality using the Health Evidence Tool.[30] Primary studies were not assessed for methodological quality given resource and time limitations.

Results

Search Results

The peer-reviewed search identified 1,410 articles, from which 197 articles were included after title and abstract screening. Following full-text screening, 33 peer-reviewed records were identified for extraction. The grey literature search identified 737 records, after which 18 records were identified for extraction. An additional six records were identified through consultation with partners. In alignment with the umbrella review methodology identified above, six published reviews and one grey-literature review were identified for inclusion in the final set of records. Content gaps of the reviews were identified and filled with the remaining primary studies and grey literature records to avoid duplication of primary studies already included in the reviews. Authors met for consensus on which primary studies and grey literature records were to be included. A total of 21 records were included in the final set (17 peer-reviewed and four sourced from grey literature).

Characteristics of Included Records

Of the included records (N=21), seven were reviews, eight were peer-reviewed papers which contributed something unique not covered in the review literature, four were grey literature sources and one was a book. For both published and grey literature, 38% (8/21) of all records were from Canada, 29% (6/21) were from the United Kingdom (UK), 14% (3/21) were from Australia, 10% (2/21) were from the United States. The remaining 10% spanned multiple jurisdictions.

In terms of populations of focus, the included records mostly (n=10) focused broadly on equity-denied groups, with varying terminology used to label groups (e.g. ‘disadvantaged’ to denote disadvantage created by social, political, and legal structures, and processes; people experiencing socioeconomic inequities; or stratified by sociodemographic characteristics according to the PROGRESS-Plus framework). Four records focused on Indigenous or Aboriginal Peoples, including First Nations, Inuit, and Métis Peoples and Māori, and Aboriginal and Torres Strait Islander Peoples. Three records described engaging community members and people who access health services. The remaining records focused specifically on racialized groups, African Diaspora, and gender and sex reporting.

Records included a range of equity-informed approaches to evidence synthesis, including but not limited to guidelines, principles, and frameworks. Some records included multiple types of approaches. Of the included records:

- Six outlined *standardized method(s)* to access, collect, and use information on health equity or the social determinants of health in evidence synthesis, i.e. a checklist, survey, or standardized questions (e.g. PRISMA-Equity Extension).
- Six records included *guidance* on specific actions to embed health equity into the synthesis process (e.g. Chapter 16 of Cochrane's Handbook for Systematic Reviews of Interventions).
- Four records shared health equity, anti-racism, and/or anti-oppressive *principles* to guide the synthesis process (e.g. decolonizing scoping review methodologies).
- Two records provided *approaches,* i.e. a specific technique or method for synthesis linked to specific health equity theory (e.g. socioecological theories to guide methods, analysis, and approach).
- Three records were *frameworks*, a visual or written product meant to guide the user in applying health equity considerations throughout the synthesis process (e.g. Willie Ermine's Indigenous Framework, PROGRESS-Plus Framework).
- Three records identified *considerations* or areas to reflect on throughout the synthesis process or where the field might move towards based on gaps in how health equity is considered (e.g. Indigenous Knowledge and Knowledge Synthesis, Translation, and Exchange).

A summary of resources that were cited in the included papers is outlined in Appendix A. The Appendix contains selected tools and resources and does not represent a complete summary.

Results of this review are organized according to two concepts:

1. First, the ways of knowing broadly as they relate to evidence synthesis are discussed.
2. Second, the considerations for equity-informed approaches to evidence synthesis are presented. While there is no single approach to applying these considerations, equity-informed approaches to evidence synthesis are organized according to the steps in the synthesis process.

Centring Diverse Ways of Knowing in Evidence Synthesis

Four records highlighted the need to decolonize the evidence synthesis process and centre diverse perspectives, worldviews, epistemologies and the localized nature of knowledge, to reflect multiple knowing practices, including Indigenous,[9,20,31,32] and Afrocentric ways of knowing.[9] The included records do not reflect the multitude of ways of knowing in existence but aim to shed light on a small number of examples. When considering the application of diverse ways of knowing, a clear understanding remains: communities are not monoliths: knowledge is local, and different nations, communities and peoples have distinct methodologies for understanding what constitutes sources, storage, translation, sharing, and use of knowledge.[32]

Chambers and colleagues (2018) outlined decolonizing approaches to reconceptualise HIV research by, with, and for Indigenous Peoples and the African diaspora in Canada.[9] Underlying the approaches presented is the diversity within and between communities, including how community members self-identify. A decolonizing approach involves unravelling and challenging Eurocentric or Western discourses across systems and structures,[20] and integrating culturally responsive knowing practices within research methods.[9] A number of tensions between decolonizing knowing and Western ways of

conducting scoping reviews were identified including: ontological/epistemological differences, tensions with concepts and language, and relationships with the literature. A lack of fit between linear, Eurocentric, and reductionist scoping review methodologies, that create hierarchies of evidence and reduce included groups to a set of standard categories was also described.[9]

A participatory approach to enhancing Arksey and O'Malley's scoping review methodology to reflect Aboriginal and Torres Strait Islander ways of knowing, being, and doing was recommended for a more effective understanding of evidence important to Indigenous populations.[20] Given the long history of misuse of research involving Indigenous Peoples, there is a deep need to ensure that communities are at the forefront of the process and benefit from the evidence synthesis generated.[9]

This leads to the question of what constitutes 'evidence' and the sources from which evidence originates. Evidence takes many forms and extends beyond 'mainstream' sources, such as peer-reviewed journal articles and reports, to lived experience, oral histories, sharing circles, storytelling, and lessons from the field. The diverse knowledge systems of First Nations, Inuit, and Métis peoples have important differences and similarities to Western knowledge systems;[32] however, Indigenous knowledge does not have only one definition.[32] The National Collaborating Centre for Indigenous Health (NCCIH) highlights that Indigenous knowledge is rational and observational (connected to Western thought) but importantly, its vision is relational, participatory, interconnected/intergenerational, and holistic/unifying.[32] A relational literature review process "shifts the purpose of a literature review, not to extract data, establish a territory or find the gaps, but as an obligation to extend your relations, and therefore your work, for future generations".[31]

We end this section by highlighting the importance of critical self-reflection, humility, and accountability that is brought to this work, especially for those who are positioned as settlers. Strong ethics, values, building and maintaining trust, and cultural safety, alongside sharing power with community over decisions and governance is central to ensuring that diverse ways of knowing, including knowledge from community members, Elders, Knowledge Keepers, and traditional healers, is treated with respect and that knowledge will not be taken out of context.[32] We acknowledge here that it is important to consult with community members at large who may not hold specific titles or roles, and there is not a set role or status that is a pre-requisite for consultation. Where relevant, findings from this section are integrated throughout the review.

Considerations for Equity-Informed Approaches to Evidence Synthesis

To guide practical application of the findings, equity-informed approaches identified in the records are presented according to the broad steps of the evidence synthesis process in which they were reported in their original sources or in which we grouped them based on the broad steps.[33,34-36] The steps outlined below are those applied in our own evidence synthesis work, which is informed by the systematic review steps engaged in by the Cochrane Collaboration:[33] scoping, searching, screening, critical appraisal, data extraction, synthesis, and summary.

While the steps are presented in a sequential order, we acknowledge that evidence synthesis work calls for a more iterative process in many cases, for example, revisiting scoping after preliminary searching. As such, there is no single approach to applying these considerations. To move away from a linear and reductionist approach to these steps, we encourage readers to consider how these findings can be applied to multiple steps of evidence synthesis process and not limited to just one step.

Scoping

Thirteen (13) of the 21 records[9,11,37-45] outlined equity considerations for the scoping stage of the synthesis process. Often, this begins with setting the research agenda and formulating the research question.[40] However, prior to this, reflecting on positionality of the synthesis team provides valuable insights into how synthesis methods can be made a decolonizing research experience.[9] This includes creating space for reflection on the composition of the team, striving for diverse representation of experiences and perspectives, and planning for how people with lived experience on the topic can be engaged throughout the process.[42] Deliberate engagement of people with lived experiences from a range of intersecting categories should be rooted in mutual trust and reciprocity to ensure topics reflect the priorities of affected communities.[9,20,38]

Mechanisms for engagement identified in the records include the development of governance structures, such as Reference Groups or Advisory Groups to enable people with lived experience to inform scope, methods, and provide ongoing guidance.[20,13,17,46] Planning for adequate compensation for participation, meeting costs, and travel, and allocating resources for training both the synthesis team and community members can enhance the engagement process.[37] Training on power imbalances, implicit bias, and building trust and respect is key to creating an environment where the synthesis agenda can be collaboratively and reciprocally set.[38] Springs et al. (2019) designed community-engaged processes for evidence synthesis to inform public health policy and clinical practices through the identification and recruitment of Community Research Partners (CRPs).[41] Training and mentoring was provided to the CRPs to co-design, co-produce, and co-disseminate an evidence map of arts-based health interventions.[41]

Equity considerations to examine when setting the research agenda include: acknowledging the role of existing systems (social, political, cultural, and economic) and determinants of health on health outcomes, opportunities, and distribution of resources; exploring the root causes of inequitable availability/access to resources; unpacking differences in effectiveness of interventions between population groups, and identifying unintentional intervention-generated inequities.[46,40] When narrowing the scope to formulate the research question for equity-focused reviews, the Cochrane Collaboration identifies the following as important steps: (i) defining health equity; (ii) articulating hypotheses about equity; (iii) identifying appropriate study designs to assess equity; (iv) considering appropriate outcomes for equity; and (v) unpacking social, political, and cultural context in which interventions are planned and implemented.[39]

The PROGRESS-Plus (Place; Race/ethnicity/culture/language; Occupation; Out of Work, Gender and sex; Religion, Education, Socioeconomic status, Social capital) framework was identified in the literature as a means to identify and further refine specific factors related to the social determinants of health in the scoping phase.[40,43-45] Initially proposed in 2003 and subsequently expanded, PROGRESS-Plus factors are not exhaustive of all determinants of health. Recent records highlight PROGRESS-Plus should be interpreted contextually,[43] through an intersectional lens that recognizes the multi-dimensionality of social identities and forms of oppression that need to be considered in order to advance health equity.[44]

For example, the PROGRESS-Plus framework does not explicitly consider structural determinants of health, including racism,[11] colonialism and their impacts on health. As such, simply stratifying by PROGRESS-Plus factors to meaningfully understand and address the effects of inequity is not enough.[44] Javadi and colleagues (2023) describe that many reviews fail to explicitly acknowledge that racism, an imposed system of structures, values, and processes that serve to advantage one group over another, is at the root of racialized inequities.[11] This requires movement away from biomedical theories of disease distribution and rejecting biological interpretations of racialized inequities towards centring racism, not race, as a determinant of health.[11]

At this time, we did not locate a comprehensive evidence synthesis framework that was current and offered coverage across all health concepts, including the structural determinants of health.[44]

Searching

Six records highlighted equity-informed approaches to the searching stage of the synthesis process.[20,38,41,18] When developing a search strategy, three records recommended consulting with the established Governance/Advisory Group and research team to develop relevant search terms and identify relevant literature, including un-published, non-indexed or hard-to-locate evidence.[20,38,41] Key areas for reflection with the Advisory Group include discussing what is defined as 'research' and what constitutes 'high quality or credible evidence'.[14] Tynan and Bishop, two Aboriginal scholars, describe a relational approach to conducting literature reviews, which doesn't necessarily begin with literature, but rather begins with the research teams' own relationships to people, places and knowledge, which may (or may not) have a link with academic literature.[31]

Evidence related to populations experiencing inequities extends beyond the biomedical perspective[39] and as such, must draw on health, social, cultural, and political factors.[42] Considering a wide range of literature and databases, including non-health databases may be relevant, depending on the outcome of interest (e.g. educational, social and/or economic outcomes) and the determinants affecting that outcome.[42] Grey literature search engines are recommended to access non-published literature on equity,[20,39] which is a common means for publishing by community organizations given the systemic barriers to academic publishing, including funding and resources required. Turning to an Advisory Group to inform the search strategy and to support the identification of diverse sources and authors was identified as a means to enable the identification of sources from a cultural and/or social perspective that would be otherwise excluded by solely relying on grey literature and peer-review databases.[20]

Appropriate search strategies vary depending on the research question and the population and settings of interest, however, identifying keywords such as 'health equity'/'inequity', 'marginalization', as well as the structural determinants of health and PROGRESS-Plus factors can be used to further focus the search toward an equity perspective.[40] While searching keywords, databases, and advanced filters provide insight on the 'subjects of research', it is equally as important to understand the positionality of authors who led the research to better understand trusted sources and the directionality of research.[31] That is, reflecting on who the research was conducted with, and for[9] and to challenge dominant methods which may contribute to or perpetuate oppression and disempower communities.[20]

Literature specific to search filters was not included in this review, however, the Cochrane Guidebook notes that using standard search filters (i.e., those in the search interface of a database) for equity-related content carries risk, as many of the words describing the determinants of health or PROGRESS-Plus categories aren't indexed in major databases such as MEDLINE/PubMed.[39] When possible, identify validated filters, which consider sensitivity and specificity, and consult or work with a Library Services. The Cochrane Guidebook provides practical advice in Chapter 16 on term selection and search filters, which can be further referenced.[39]

Screening

Fewer records identified practices for screening when conducting an evidence synthesis through an equity lens. Screening entails reviewing the literature found in searches and applying pre-set inclusion and exclusion criteria to identify relevant literature.[40] Selecting theoretical frameworks to guide the synthesis can support the screening process, including the development of inclusion and exclusion criteria.[11,47] For example, theories formulated to explain population distributions of health inequities, particularly as it relates to racialized inequities mentioned in the records include Socioecological Theory, Critical Race Theory and Intersectionality.[11] When screening for equity, considerations include whether and how interventions may have different effects within and across population groups and whether a definition of health equity was included in records.[48]

It is recommended members of the research team (or advisory group) have some lived experience to appropriately consider the nuances, complexities, histories, and historical understandings of phenomena that might otherwise not be understood during the screening phase for complex screening questions.[20] Springs and colleagues described engaging CRPs to partake in the screening process, which was supported through the evidence synthesis training provided.[41] Further, Chambers and colleagues (2018) narrowed their inclusion criteria to focus on research/knowing practices that were by/with/for Indigenous and African diaspora communities, and not "on" them. In other words, records were not included if research on these groups was conducted by researchers representing the dominant culture with a colonial, Western science perspective.[9] This perspective entails moving away from persistent and inequitable power imbalances which can exist in evidence synthesis as a result of a lack of collaboration, reciprocity, and decentering diverse ways of knowing.

Critical Appraisal

While many critical appraisal tools and processes exist to assess the 'quality' of research to include in the systematic review process, few records identified specific critical appraisal processes and tools from an equity-perspective. Critical appraisal tools identified in the literature include the PRISMA-Equity Extension Criteria.[48], the Cochrane Risk of Bias tool[49], Grading of Recommendations Assessment, Development, and Evaluation (GRADE)[42], and the Aboriginal and Torres Strait Islander Quality Appraisal Tool (to guide extraction of data that is relevant to Aboriginal and Torres Strait Islander questions of interest[20]).

Analysis of findings pertaining to equity includes critical appraisal of who the evidence was conducted for and by,[9] study design factors (e.g., recruitment and attrition), and if and how populations experiencing inequities were included.[42] Engaging team members with a range of experiences and perspectives can help reduce bias[38] and assess impact during the critical appraisal process.[50] Reflection areas for reviewing and appraising the literature include:[38]

- What is considered 'expertise' on the topic of interest? Consider the many forms of 'expertise' that exist, including academic credentials and lived experience.
- Consider the positionality and power dynamics of those who wrote the publication and what the publication is about. Are there biases and motivations that could have impacted the conclusion?
- Which perspectives were included in the records? Were there any perspectives that were excluded from the synthesis, by virtue of the historical exclusion of certain groups or individuals who then could not participate in the research?
- When was the study conducted and published? Were there any historic or contextual issues informing the direction of the research (e.g., major legislative change)?

Data Extraction

Details such as title, author(s), date of publication, type of publication, number and type of included studies, settings and populations studied, outcomes measured, and results are commonly gathered during the data extraction phase.[40] An equity perspective can be included in an extraction tool to identify the differential effects of the intervention across or between population groups.[40] Similar to other stages of the synthesis process, ensuring an Advisory Group or Community Research Partner's input into the development of the extraction tool was identified as practice to ensure that the information collected from records was relevant and meaningful.[20]

Other important areas to consider when extracting from included records are:

- Whether and how authors define health equity;[51]
- Which groups or settings are likely to experience inequities as a result of the program or policy under consideration;
- Assess differences in baseline conditions across groups or settings that would result in differences in the absolute effectiveness of the intervention for groups facing marginalization. For equity-specific research questions, this includes assessing baseline across the social determinants of health or PROGRESS-Plus factors;[39]
- Changes in effect which occur differentially from populations experiencing inequities. The PROGRESS-Plus framework can be used to examine the differential effects of interventions across PROGRESS-Plus characteristics,[44] while also accounting for the structural determinants of health, including racism, colonialism, and other systems, processes, and practices that impact health outcomes and opportunities;
- Identify evidence of differences in access to or the quality of care for groups facing marginalization. Consider the implications of those differences for implementation to ensure that inequities are reduced if possible, and that they are not increased.[40]
- Contextual factors, including social, cultural, and political, and study processes may influence health equity outcomes and should be considered to help interpret the findings.[42]

Synthesis

The synthesis stage of the review process seeks to present an overview of all material reviewed and requires a consistent approach to reporting all findings.[20] This can include synthesizing and identifying positive effects on health equity, positive effects for identified population groups, no effects on health equity, or negative effects on health equity.[52] According to the Cochrane Handbook, analysis of findings of interventions from an equity perspective involves three steps:

- identifying through the research protocol which populations are likely to experience health equities;
- assessing whether the intervention results in important improvement, and
- assessing whether the identified populations achieve the same improvement in both absolute and relative effects of other populations.[39]

This also includes considerations for intersectionality within groups. To assess the impact of health equity on outcomes, authors should not only provide average results but also report differences in effect across populations of interest.[42]

To integrate Indigenous knowledge into the collation, summarizing, and reporting of results, Brodie and colleagues recommend a collaborative synthesis of findings to ensure accuracy, representative of experiences, and practical utilization, including knowledge translation and benefit for community. Aboriginal and Torres Strait Islander communication styles, such as thoughtful, deep listening, thinking, reflecting and considering were highlighted to facilitate collaboration and partnership. These processes take time and lead to ownership and control over Indigenous knowledge by Indigenous communities.[20] Similarly, Public Health Wales highlights that a greater degree of participation and meaningful engagement is needed in order to produce a synthesis that is contextually valid.[52]

Summary of Synthesis Findings

To incorporate findings about inequities in the summary of synthesis findings, authors may want to comment specifically on whether evidence was available for equity-denied populations, keeping in mind that not all evidence is applicable to all groups of the population.[42] Welch and colleagues (2022) suggest including health equity as an outcome; presenting separate tables for populations who experience health inequities to highlight important differences in relative effectiveness; creating different rows within a single table to highlight differences in baseline risk for specific populations; and assess indirectness of evidence for pre-identified populations who experience health inequity.[39]

Guidelines also were identified within the records to support the reporting of different study designs. These include PROGRESS-Plus, PRISMA-Equity, SAGER Guidelines, the International Committee of Medical Journal Editors (ICJME)[42], and instructions to authors published by leading journals such as JAMA.[11] While these frameworks are commonly used to identify and report on health inequities, extrapolating findings to equity denied populations should be interpreted in consultation with effected populations to understand whether findings are applicable, relevant, and to avoid perpetuating inequities through stigma.[42] Consulting with CRPs or advisory groups on preliminary findings can build on the evidence and offer a higher level of meaning, content expertise, and perspectives.[20] Critical engagement with theory can also provide insight on the interpretation of findings.[11,48] Further, acknowledging the limitations or critiquing what is presented in the literature is an important part of reflecting on how equity was (or wasn't) integrated throughout the process. This in turn has an impact on recommendations for future recommendations and practice.[11]

Lastly, a health equity impact assessment tool can be used to summarize findings using an equity perspective and to in turn map out the unintended potential health impacts of policy and program options on equity denied groups.[40] By identifying these impacts, research teams, in collaboration with community partners or advisory groups can make recommendations that mitigate negative impacts and maximize positive impacts of programs or policies.

Sharing

Sharing, also referred to as knowledge translation and dissemination, plays an important role in ensuring findings and recommendations inform systems, policy and practice change.[20,32,41] Consultation with Advisory Groups or CRPs is beneficial to determine preferences for presentation of findings.[32] Reflection on the appropriateness of knowledge exchange within communities,[32] ensures that findings are meaningfully shared and are of maximum benefit to community and partners. Examples include co-production of plain language summaries and infographics,[37] co-designed evidence maps,[41] and conversational approaches to prioritize diverse ways of communication and sharing.[20]

Principles for knowledge exchange within Indigenous communities which can be adapted to relevant contexts include: cultural responsiveness, inclusion of Indigenous community members, awareness of historical antecedents (e.g. impacts of colonialism and racism), empowerment (e.g. equal partnerships that are non-hierarchical), respect for Indigenous knowledge, and cross-cultural and long-term commitment.[32] Part of sharing includes transparency on the research team's process to conduct the synthesis and appraise results, including intersectionality within the team, identifying any missing perspectives and/or biases that team members may hold, and how these biases were mitigated.[38]

Limitations

When interpreting the findings of this review, there are some limitations to consider. First, while we attempted to embed an equity lens throughout the development of this review, we acknowledge the mainstream approaches to evidence gathering and synthesis used. In an attempt to strengthen our methods, partners were engaged at each stage of the review process (planning, searching, interpreting, and reporting). Further, with the umbrella review methodology used, many of the records included were review-level studies, which requires reliance on review authors' interpretation and reporting in order to make conclusions and recommendations. Because of this, it is possible some detailed nuances, perspectives, and recommendations from primary studies were missed.

Additionally, we acknowledge the equity considerations presented many not encompass or reflect all equity-denied groups, approaches, and perspectives. This reinforces the need to work closely with the individuals and populations that synthesis is being conducted with, and for. Lastly, while quality assessment (QA) was completed on included reviews, we recognize the limitations of using standardized approaches to QA, including limited appraisal of cultural relevance or context. To strengthen this approach in the future, leveraging resources and tools that are inclusive of diverse ways of knowing and sharing knowledge (e.g. the Aboriginal and Torres Strait Islander QAT), provides perspectives on diverse voices and epistemologies, while also offering guidance on assessing validity or contextual relevance.[53]

Despite these limitations, the available records provide insight on the possible challenges and suggestions to improve equity considerations and approaches to evidence synthesis. This review serves as a starting point to summarize considerations for syntheses with an equity approach involving varied and multiple types of evidence and ways of knowing.

Discussion

Health equity is a wicked problem requiring complex disruptions across structures and systems that shape how society is organized.[54] The available literature on synthesis and health equity offers a range of considerations for how equity can be embedded in and applied to, the evidence synthesis process. Applying these considerations requires personal reflexivity, relationship building with the communities one is doing research with and for, and ongoing examination of drivers and disrupters of inequities.

Definitions of health equity were explicit in six of the records and were consistent in the recognition that health inequities are systemic, avoidable, unjust and unfair differences in health. Where health equity wasn't defined, authors defined the approach or principles that supported advancing health equity in synthesis, including intersectionality, decolonization and community engagement. Five records did not define health equity or its' underlying values or principles, which has implications for the transparent and consistent understanding and application of an equity approach to evidence synthesis.

Health equity considerations drawn out in this review are consistent with the increased focus on knowledge user involvement and meaningful engagement in the evidence synthesis field.[55-58] The included literature offers increased and more specific direction around engaging with appropriate populations to understand whether findings are applicable.[42] Records also highlight engagement with theory in guiding interpretation[11,48] and increasing a focus on gaps and critique of literature in evidence synthesis.[11] A health equity impact assessment could be used to better understand potential health impacts of a policy, program or initiative on equity-denied groups and to summarize recommendations that mitigate negative and maximize positive impacts.[59] The ways in which this can be carried out, or extent to which an equity impact assessment is done, can vary across reviews. Decisions to balance health equity processes with responsiveness, may also vary, similar to the ways in which that balance is struck for rigour and responsiveness in rapid reviews.[60-62]

Considering the many forms of 'expertise' that exist in the health equity and evidence synthesis fields, there seems to be a less well-established and as yet, less broadly applied expertise in health equity specific to evidence synthesis. Specifically, we did not find what constitutes a threshold for synthesis to be able to claim syntheses have applied a health equity perspective 'adequately'. In general, positionality and power dynamics of authors were not described in most records, limiting the extent to which we could describe biases and motivations that could have impacted authors' proposed conclusions or recommendations. This also limited our ability to describe who was included and not included from authoring these types of documents. Attention to positionality, reflexivity, and the production of knowledge has been recognized as essential to conducting ethical and 'rigorous' research[25], and without clarity on this from the reviewed records, there are potential implications on who these records were developed by, and for.

While evidence synthesis finds its roots in a positivist research tradition, the synthesis approach has since branched out in a host of novel and emerging perspectives with which health equity aligns.[63-66] In some ways, evidence synthesis processes do not necessarily need to be transformed, but need to extend themselves to acknowledge current health equity considerations. Analysis of the literature demonstrated that broadening the synthesis process to incorporate relevant and diverse perspectives and principles requires time and engagement that is meaningful and reciprocal. Recognition of and reflection on the impact of the collaborative activities on the validity of the synthesis is also needed. Broadening the synthesis approach also refers to its critique and analysis (e.g., critically appraising for and by whom synthesis was conducted, study design factors, whether and how populations experiencing inequities were included).[42] The Cochrane Handbook provides general guidance on how to assess whether the synthesis is impactful from an equity perspective, and could be used as a guide.[39]

In terms of knowledge sharing as a later stage in evidence synthesis, the available literature around health equity's contributions aligns with advice from the knowledge utilization field for meaningful engagement, extending that advice to draw in intersectionality and the types and range of partners who should be included in the process. For example, knowledge exchange principles can acknowledge Indigenous ways of knowing and sharing. Knowledge exchange would arguably be even more successful if more conventional Western methods reach beyond the status quo in synthesizing and sharing evidence, which could involve revisiting what constitutes evidence. Gap areas may need additional attention and data sources to draw out their applications to health equity within evidence syntheses.

Despite the many records identified throughout this process, approaches to applying an equity-lens to evidence synthesis were inconsistently applied. This highlights the need to increase awareness of existing equity guidance to facilitate better uptake and application, which this review intends to do. There was a limited focus on anti-racist and anti-oppressive approaches for evidence synthesis in the available synthesis-specific literature, with many of the principles drawn from broader health research methodologies. Only one record focused explicitly on racialized health inequities, and noted the need for greater attention to the potential role of epidemiological reviews in promoting ignorance regarding the root causes of racialized inequities (i.e. not explicitly acknowledging racism and health).[11] That is, only 4% of 676 articles published in Epidemiologic Reviews between 1979-2021 included explicit text regarding racism and health, racial discrimination, and racialized inequities.[11] This underscores that what is not explicitly discussed or analyzed has implications for shaping future research and practice.

While reporting guidance, principles, and frameworks exist for using information on health equity or the social determinants of health as they relate to synthesis (e.g. PRISMA-Equity Extension, anti-racism, and/or anti-oppressive values, PROGRESS-Plus Framework) they do not offer comprehensive conceptual coverage and no single resource was sufficient to support the synthesis process for health equity. Despite this, much research has been done to advance health equity considerations in reviews. The

Cochrane Equity Methods Group has been foundational in developing tools and resources that were uncovered in this review, including PROGRESS-Plus, PRISMA-E Reporting Guidelines and Checklist, a dedicated Chapter (16) of the Cochrane Handbook, as well as capacity strengthening and learning opportunities to promote equity in the evidence base.[39]

Conclusion

This review identified and outlined a range of tools, considerations, frameworks, and guidance to incorporate equity into synthesis, rooted in co-design with communities and partners. There is a need for self-reflection and relationship building across all evidence synthesis steps to ensure that processes centre diverse knowledge sources and perspectives and are guided by community leadership. Health equity is constantly evolving and requires continued learning and unlearning among practitioners and researchers to unpack its inherent complexities and to create linkages with evidence synthesis processes. While this review does not offer a recipe card approach, applying health equity and evidence synthesis calls for appropriate application of the considerations and guidance highlighted available, with the acknowledgement that both fields and their intersections continue to evolve.

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Appendix A: Summary of Included Records

Author	Name of Resource	Specified population group	Location	Area of Focus	Name of equity framework/approach referenced
Brodie et al. (2023)	Enhancement of scoping review methodology to reflect Aboriginal and Torres Strait Islander ways of knowing, being and doing	Aboriginal and Torres Strait Islander Peoples	Australia	Enhancement of scoping review methods to incorporate Indigenous ways of knowing, being, and doing for more effective understandings of evidence of importance to Indigenous populations.	Adherence to the ways of working defined by the South Australian Aboriginal and Torres Strait Islander community
Chambers et al. (2018)	Decolonizing Scoping Review Methodologies for Literature With, for, and by Indigenous Peoples and the African Diaspora: Dialoguing With the Tensions	Indigenous Peoples and the African Diaspora	Canada	Decolonizing health research and discussions on debates and tensions related to scoping review methodology	Principles and approaches to decolonizing methodologies, including addressing Western imperialism/colonialism within research and integrating culturally responsive knowing practices within research methods
Dewidar et al. (2022)	Methodological guidance for incorporating equity when informing rapid-policy and guideline development	Populations experiencing inequities	Canada	Guidance for incorporating equity in rapid reviews	PRISMA-E Guideline, Cochrane Handbook on Health Equity, SAGER Guidelines, PROGRESS-Plus
Dobbins (2017)	Rapid Review Guidebook	Populations facing inequities	Canada	Provides guidance on the process of conducting rapid reviews to inform policy and program decision-making	PROGRESS-Plus

Author	Name of Resource	Specified population group	Location	Area of Focus	Name of equity framework/approach referenced
Javadi et al. (2023)	Systematic review of how racialized health inequities are addressed in Epidemiologic Reviews articles (1979-2021): a critical conceptual and empirical content analysis and recommendations for best practices	Racialized groups	US	Critical content analysis of how epidemiologic review articles do or do not address racialized health inequities and the impacts of racism	Recommendations for research and practice on reporting on the impacts of racism on health inequities
Harris et al. (2016)	How stakeholder participation can contribute to systematic reviews of complex interventions	Community members, patients, participants	UK	Describes how methods used in participatory research can be used to involve patients, clients, and providers across all stages of the review process	Participatory health research methods
Karran et al. (2023)	Using PROGRESS-plus to identify current approaches to the collection and reporting of equity-relevant data: a scoping review	Populations experiencing inequities	Systematic Review including, US, Australia, and others	Highlights approaches to the collection and reporting of equity-relevant data	PROGRESS-Plus
Knowledge Translation Program (2020)	Intersectionality and KT: Guide for Common Approaches to Assessing Barriers and Facilitators to Knowledge Use	-	Canada	Guide for expanding evidence synthesis methodology to include considerations and reflections on intersectionality	Intersectionality

Author	Name of Resource	Specified population group	Location	Area of Focus	Name of equity framework/approach referenced
Kunonga et al. (2023)	A systematic review finds a lack of consensus in methodological approaches in health inequality/inequity focused reviews	Groups facing inequities	UK	Critical analysis of publications that used a health equity methodological guide to support their review.	PROGRESS-Plus, PRISMA-Equity Checklist
Madden et al. (2016)	Consideration of health inequalities in systematic reviews: a mapping review of guidance	Groups facing inequities	UK	Mapping review to identify guidance documents to inform reviewers on whether and how to incorporate health inequalities considerations	Theory-based approach, stakeholder engagement, PRISMA-Equity 2012,
Madden (2017)	Use of programme theory to understand the differential effects of interventions across socio-economic groups in systematic reviews-a systematic methodology review	Groups across differing socioeconomic status (SES)	UK	Using program theory to inform considerations of if and how interventions may work across different SES groups	Program theory, logic models or theories of change
McCaul et al. (2022)	Resources supporting trustworthy, rapid and equitable evidence synthesis and guideline development: results from the COVID-19 evidence network to support decision-making (COVID-END)	Equity-deserving groups	Canada	Aimed to create resources to assist those supporting decision-making to find and use the best available evidence and resources.	PROGRESS-Plus and PRISMA-Equity

Author	Name of Resource	Specified population group	Location	Area of Focus	Name of equity framework/approach referenced
National Collaborating Centre for Indigenous Health (2014)	Indigenous Knowledge and Knowledge Synthesis, Translation, and Exchange	First Nations, Inuit, and Métis Peoples in Canada	Canada	Considerations for knowledge synthesis, translation, and exchange to improve the health of Indigenous Peoples in Canada	GRADE Approach, OCAP® Principles, Ermine's Indigenous Framework
Petovic et al. (2018)	Sex/gender reporting and analysis in Campbell and Cochrane systematic reviews: a cross-sectional methods study.	Research examining differences in outcomes across sex and gender	Canada	Highlight Cochrane systematic reviews which have considered/assessed sex and gender	PRISMA-E, Sex and gender Equity in Research (SAGER) Guidelines
SPOR Evidence Alliance (2021)	Patient and Citizen Engagement in Research	Individuals with personal experience of a health issue and informal caregivers, including family and friends; Representatives of the general public; Advocates and representatives from affected community and voluntary health organizations.	Canada	Considerations and meaningful practices for where patients and citizens can be engaged across stages of knowledge synthesis	CIHR Patient Engagement Framework, SPOR Evidence Alliance Patient Partner Appreciation Policy and Protocol
Springs et al. (2019)	Community-engaged evidence synthesis to inform public health policy and clinical practice	Community members and patients	USA	Case study describing Rhode Island Arts and Health Advisory Group which was convened to develop a set of policy, clinical practice, and research recommendations	Community Research Partners

Author	Name of Resource	Specified population group	Location	Area of Focus	Name of equity framework/approach referenced
Tynan et al. (2023)	Decolonizing the Literature Review: A Relational Approach	Indigenous Peoples	Australia	Apply teachings learned from Indigenous scholars to the literature review process	Decolonizing research methodologies, Relationality
Welch et al. (2023)	Chapter 16: Equity and specific populations. In: Cochrane Handbook for Systematic Reviews of Interventions (Version 6.4)	Populations experiencing inequities	United Kingdom	Considerations for undertaking systematic reviews from an equity perspective	PROGRESS-Plus; PRISMA-Equity Checklist to report findings from equity-focused systematic reviews; Cochrane and Campbell Equity Checklist for Systematic Review Authors for protocol planning

Authors

Taheera Walji
Senior Program Specialist, Health Equity
Health Promotion, Chronic Disease and Injury Prevention
Public Health Ontario

Kara Watson
Knowledge Synthesis Specialist
Health Promotion, Chronic Disease and Injury Prevention
Public Health Ontario

Shelly Simeoni
Research Coordinator
Health Promotion, Chronic Disease and Injury Prevention
Public Health Ontario

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Jenna Wilson
Indigenous Health Advisor
Porcupine Health Unit

Nandini Saxena
Knowledge Translation Specialist
National Collaborating Centre for Determinants of Health

Sue Keller-Olaman
Manager
Health Promotion, Chronic Disease and Injury Prevention
Public Health Ontario

Daniel Harrington
Director
Health Promotion, Chronic Disease and Injury Prevention
Public Health Ontario

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Email: hpcdip@oahpp.ca

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