How to carry out participatory research that takes account of sex and gender issues: a scoping review of guidelines targeting health inequities

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Abstract

Objective Conducting participatory research (PR) aimed at improving health implies considering inequitable power relations, including those related to sex/gender (S/G). This necessitates specific skills and methods and may be challenging especially since guidelines are scarce. Our objective was to perform a scoping review to provide a typology of existing guidelines for researchers on how to take account of S/G in the context of PR in public health, with a focus on occupational and environmental health.

Methods All steps of the research were conducted with the collaboration of an advisory committee, following PR principles. Nineteen documents were retained from 513 references identified in nine scientific databases and grey literature between 2000 and 2020. Data on recommendations were extracted and coded qualitatively. Cluster analysis based on similarities in recommendations proposed in the documents identified four types: (1) empowerment-centered; (2) concrete action-centered; (3) macrosystem-centered; and (4) stakeholder-centered.

Synthesis Many sources gave pointers on how to include S/G during data collection and analysis or during the dissemination of findings, but there was a dearth of suggestions for building partnerships with stakeholders and producing sustainable S/G sociopolitical transformations. Occupational health PR showed less similarities with other public health subfields including environmental health PR. Power relationships with workplace stakeholders generated specific obstacles related to S/G integration that require further attention. Intersectionality and reflexive practices emerged as overarching themes.

Conclusion This review provides helpful guidelines to researchers at different stages of planning PR, ranging from familiarizing themselves with S/G approaches to anticipating difficulties in their ongoing S/G-transformative PR.

Résumé

Objectif Les recherches participatives (RP) visant l'amélioration de la santé doivent tenir compte de rapports de pouvoir inéquitables, incluant ceux liés au sexe/genre (S/G). Cela peut s'avérer difficile vu les compétences requises et la rareté de recommandations. Notre objectif consistait à réaliser une revue de portée menant à une typologie des recommandations existantes pour les chercheurs.euses sur l'intégration du S/G en contexte de RP en santé publique, particulièrement en santé environnementale ou au travail.

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Méthodologie Un comité d'encadrement a participé à chaque étape de l'étude. Nous avons retenu 19 documents parmi 513 références identifiées dans neuf bases de données scientifiques et la littérature grise (2000–2020). L'extraction et le codage qualitatif des recommandations a mené à une analyse de *clusters* basée sur les similitudes identifiant quatre types centrés sur : 1) pouvoir d'agir; 2) actions concrètes; 3) macro-système; et 4) parties prenantes.

Synthèse Plusieurs sources indiquaient comment intégrer le S/G pendant la collecte/analyse des données ou la diffusion des résultats. Peu de recommandations touchaient l'aspect S/G au niveau des partenariats avec des parties prenantes ou des transformations sociopolitiques durables. Les recommandations en santé au travail étaient moins similaires aux autres sous-domaines de santé publique. Les relations de pouvoir en milieu de travail engendrent des obstacles spécifiques liés à l'intégration du S/G et nécessitent une attention particulière. L'intersectionnalité et les pratiques réflexives sont apparues comme des thèmes primordiaux.

Conclusion Les recommandations repérées aideront des chercheurs.euses à différents stades de leur parcours d'intégration du S/G dans une RP en cours, allant de la familiarisation à l'anticipation de difficultés.

Keywords Sex and gender · Knowledge transfer · Participatory research · Research intervention · Inequities · Intersectional

Mots-clés Sexe et genre · transfert de connaissances · recherche participative · recherche intervention · inégalités · intersectionnalité

Introduction

Sustainable actions to counter persistent health inequities require the participation of underrepresented, vulnerabilized, and marginalized groups in research-intervention projects and imply considering inequitable power relations, including those related to sex and gender (S/G). From an epistemic justice perspective, non-dominant groups can suffer from standpoint biases or deficit in credibility (Fricker, 2007). To minimize power imbalances between researchers and populations experiencing health inequities, various types of participatory research (PR) that integrate knowledge users from the beginning and throughout the research process, especially those that include an intervention, have been shown to yield better results in terms of knowledge translation, health outcomes, and equity (Cacari-Stone et al., 2014; Coombe et al., 2020; Ward et al., 2018). Community-based PR involves all partners, academic and non-academic, and is based on principles involving reflexive processes, capacity building, and reciprocal benefits (Israel et al., 2010; Jull et al., 2017; Wallerstein & Duran, 2010), aligning with principles of epistemic justice (Fricker, 2007). Integrated knowledge translation is a fundamental part of truly participatory processes by which interactive activities are employed to share knowledge throughout a project (CIHR, 2016a; Cornwall & Jewkes, 1995; Gagliardi et al., 2016; Jull et al., 2017).

Health inequities may result from various sociodemographic factors and their intersection (Collins, 2019; Crenshaw, 1989). This study is the result of a participatory, reflexive process involving academic and non-academic partners aimed at identifying guidelines to overcome the specific challenges that arise when taking into account S/G issues in PR.

When PR systematically takes into account S/G issues, by involving multiple subpopulations in initiatives that address their diverse needs, it can improve a project's relevance and yield better outcomes in terms of sustainability and equity (Manandhar et al., 2018; Tannenbaum et al., 2016). Taking account of S/G issues in PR means considering power relations and normative social interactions among genders (women, non-binary, men) as they relate to macro-level structures, health behaviours, outcomes, access to health services, and people's engagement with integrated knowledge translation activities. It also means using a "S/G lens" in the analysis of systemic factors, health situations, individual characteristics, exposures, and the impacts of changes, including mechanisms that lead to detrimental health outcomes, reinforce stereotypes, or exacerbate S/G inequities in health (Tannenbaum et al., 2016). In sum, considering S/G in health studies has been shown to favour improved conditions for women, men, non-binary people, and society in general (Messing, 2021; Spitzer, 2005).

For the past 40 years, a Canadian research centre, CINBIOSE, specializing in occupational (OH) and environmental health (EH), has been conducting participatory action research integrating knowledge translation and using a S/G lens, directed toward improving health and reducing social inequities (Mergler, 2012; Messing, 2014, 2021). One of these studies, in OH, investigated the impacts of 12 PR projects that used a variety of strategies to consider S/G differences in workplaces. The authors found that such strategies resulted in improved S/G equity at the macrosystem level (e.g. laws, regulations, policies) and at the workplace level (e.g. adapted tools, improved working conditions) (Laberge et al., 2020). Some approaches used under the umbrella of EH, such as ecosystem approaches to health, recognize the need both to collaborate with a broad array of stakeholders, especially those most impacted by health injustice(s), and to apply a gender and social equity lens (Webb et al., 2010).

Despite its potential to reduce health inequities, researchers have found that integrating S/G in PR projects is complex and sometimes challenging, for example, in reaching consensus with stakeholders and in accessing techniques for collaborative knowledge construction (Gagliardi et al., 2016). Taking account of S/G adds a layer of complexity and supplementary obstacles, inducing resistance on the part of some stakeholders, uncertainty about how to use the proposed S/G frameworks, and methodological limitations when taking into account S/G (Gogovor et al., 2020; Laberge et al., 2020). In participatory OH research, for instance, workers and employers may have opposing interests and different views on gender issues (Messing, 2021). In EH, participatory approaches that integrate social as well as gender equity have been developed and are increasingly called for but are not yet the norm, in part due to the complexity of issues being studied and a dearth of training (Berbés-Blázquez et al., 2014; Mertens et al., 2005). Taking account of S/G can sometimes lead to conflicts with stakeholders or threaten strategies employed to maintain partnerships (Gogovor et al., 2020).

Thus, integrating S/G into health-related PR and associated integrated knowledge translation activities requires specific skills to engage simultaneously with two inseparable processes: the partnership process and the research process. The two are equally important since they enhance partners' capacity, promote reflexivity, contribute to building trust, encourage knowledge translation, yield better results, and, ultimately, have the potential to transform inequities and improve health and well-being (Bagnol et al., 2015; Friedson-Ridenour et al., 2019; Masuda et al., 2014; Ward et al., 2018). There are guidelines for successful partnership building in PR, providing recommendations on issues such as engagement, reflection on process and relationships, and collaboration (Drahota et al., 2016; Huang et al., 2018; Sarkies et al., 2017). There are also guidelines on how to consider S/G in research, from selecting theoretical approaches to collecting and analyzing data and planning end-of-grant knowledge translation activities (Day et al., 2017; Gendered Innovations, 2021; Hankivsky et al., 2018; Heidari et al., 2016; Morgan et al., 2016; Morgan et al., 2017; Tannenbaum et al., 2016; Tomás et al., 2015). However, having evolved separately, the literature is scant on guidelines combining S/G analysis and PR.

The present study is intended to produce a scoping review that provides an inventory and typology of existing guidelines for researchers on how to take account of S/G in the context of PR involving integrated knowledge translation and aimed at improving health, especially reducing health inequities. To our knowledge, it is the first time that such a typology of guidelines intended for researchers has been carried out on this subject.

Methods

As part of a participatory, inductive research design, this scoping review (Arksey & O'Malley, 2005; Pham et al., 2014) included studies from various subfields of public health (including OH and EH) and covering a wide range of designs and methodologies. Given the diversity of approaches, fields, and underlying conceptualizations covered, we built a typology through a mixed-method synthesis. The types emerged from a cluster analysis based on variables stemming from a qualitative analysis of the documents considered for this review. Each step of this project resulted from the combined efforts of a transdisciplinary advisory committee composed of academic and non-academic researchers as well as students from diverse public health domains and sociocultural/linguistic backgrounds. The participatory component of this project was collectively perceived as an essential reflection on our research processes. A total of 14 advisory committee meetings were held including workshops to identify main concepts; collective validation of analytical categories; and results interpretation, in addition to participation in several scientific conferences.

Literature search strategy

Broad concepts such as PR with integrated knowledge translation, S/G, and public health, with a focus on inequities, work, or environment, were searched in nine databases spanning a 20-year period (2000/01/01–2020/07/30; ABI INFORM, ERIC, GenderWatch, Sociological Abstracts, Medline, PsycINFO, GreenFILE, SCOPUS, and socINDEX) in English or French peer-reviewed journals (search strategy in Supplementary File S1). We also examined grey literature (non-peer-reviewed literature, e.g. research reports, training manuals, communication tools) by soliciting, via email, a network of 31 Canadian academic and non-academic researchers. The network included co-researchers and collaborators in the broad research initiative that funds our study as well as participants in a scientific seminar we organized with academics and practitioners. We also performed backward citation tracking to identify additional references. The original search returned 513 references, among which 108 were from the grey literature (see PRISMA flowchart, Fig. 1) (Tricco et al., 2018).

Screening and selection

To capture nuances of expression across public health domains, researchers from different public health backgrounds (public health, environmental health, occupational health, community health) and disciplines (ergonomics, psychology, sociology, economics, management) were involved in screening decisions. Inclusion and exclusion criteria were applied to both the grey and peer-reviewed references (Table 1).

Two researchers independently screened peer-reviewed and grey literature based on title and abstract, and then on full-text (see Fig. 1). All disagreements were resolved through consensus with a third researcher.

Among the 125 full-text documents assessed for eligibility, 106 were excluded due to a lack of generalizable guidelines analyzing PR in relation to S/G; or focused on a single gender (usually women) without examining issues such as power imbalances, inequities, or injustice. Nineteen documents met the selection criteria and were included in our review (PRISMA flowchart, Fig. 1) (Tricco et al., 2018).

Data extraction

A first data extraction tool was developed comprising five dimensions: document characteristics, intervention characteristics, attributes of actors, underlying conceptualization of key concepts, and recommendations related to partnership and S/G (Table 2).

Data were independently extracted from the 19 documents by two researchers and validated by a third researcher. During the extraction process, two sections were added to our extraction tool: one included a scale of gender integration (CIHR, 2016c) and the other characterized the recommendations as being either concrete or general.

Two subthemes also emerged. "Intersectionality" was attributed to documents that framed S/G in combination with other types of oppression based on class or racialization (Collins, 2019; Crenshaw, 1989). "Reflexive practices" took into account a specific type of recommendation that could include (1) awareness of one's own positionality in relation to others (power imbalances), (2) examination of the prominence of certain voices over others in a project and subsequent outcomes on actors, partners, and community, and (3) reflection on the research project itself and how decisions are made (see 19 extraction grids in Supplementary File S2) (Blanchet, 2009; Huang et al., 2018).

Mixed-method synthesis: qualitative coding and cluster analysis

We used type-building as a text analysis method to classify our complex and multidimensional data into patterns (Kuckartz & McWhertor, 2014). We conducted a mixed-method synthesis with a sequential design: step (1) qualitative analysis of the data in the 19 extraction grids; step (2) quantitative cluster analysis based on the qualitative coding to help us organize and classify the information collected on each document.

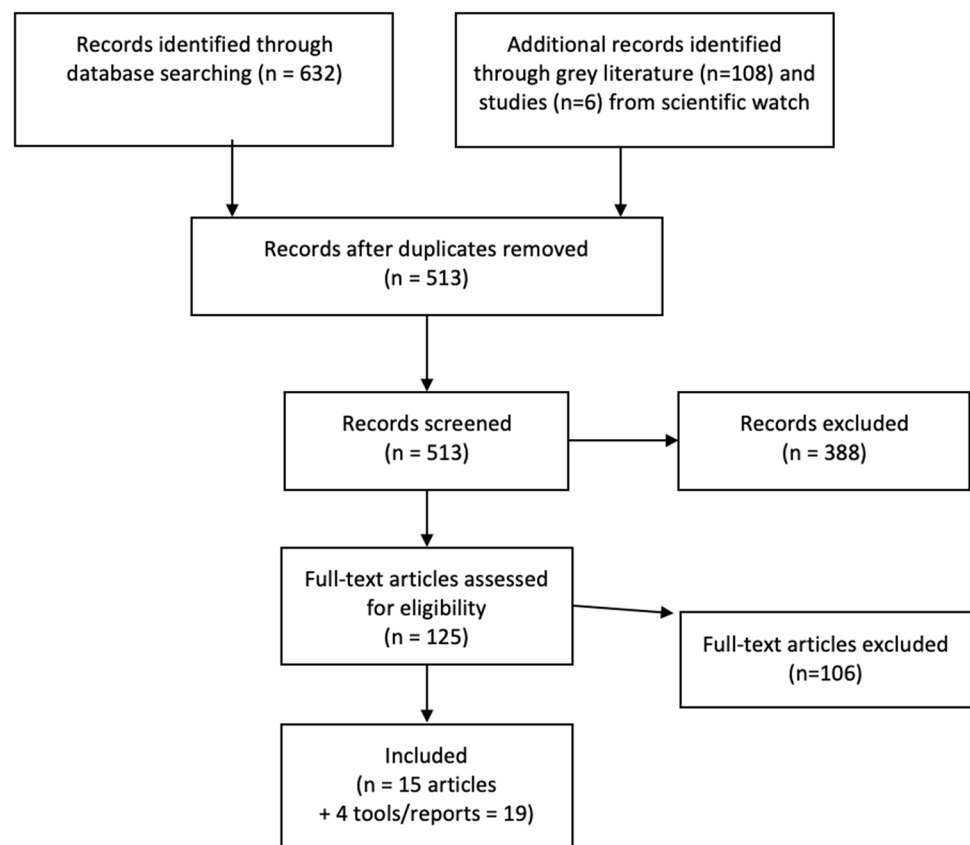**Fig. 1** PRISMA-ScR flow diagram (Tricco et al., 2018)

Table 1 Inclusion and exclusion criteria

Inclusion criteria

- Intended for academic and/or non-academic researchers in charge of planning and implementing research projects.
- Focused on one, or several, PR approaches.
- Aimed at improving human health issues related to inequities. The transformative approach could address health issues as a primary objective (e.g. transforming working/living conditions) or a distal objective (e.g. empowering women so as to improve their access to health information).
- Highlighted S/G issues, such as gendered power relations, gendered roles, stereotypes, or health differences between women, non-binary persons, and men.
- Provided recommendations (strategies, methods, or steps, all referred to as "how-tos" in this article) related to carrying out PR in public health while considering S/G issues.
- Published in English or French between January 1, 2000 and July 30, 2020.

Exclusion criteria

- Presented guidelines for actors in charge of implementing transformations without involving a research component.
- Presented only protocol designs, or methods and results of specific PR without providing recommendations or generalizable principles ("how-tos").
- Provided guidelines on how to perform research by focusing either on participatory, transformative action or S/G dimensions, without addressing how these aspects interact.
- Presented a participatory study focused on an exclusively female or male population, without questioning gender relations and the inequities that may result from them.

Qualitative coding of recommendations

Researchers agreed on the categories of extracted data that were most critical to typology development and that showed potential for characterizing types (Kluge, 2000; Kuckartz & McWhertor, 2014). The first step of this process was to interpret all extracted data related to recommendations ("how-tos"). We used directed qualitative content analysis following a deductive/inductive approach, to identify, in the corpus, any data related to predefined coding categories presented in Table 3 while allowing new categories to emerge (Assarroudi et al., 2018).

All data in the recommendations dimension of our extraction grids were coded using the following codes: (1) *PR codes* which were based on (a) seven temporal components ranging from building the partnership to dissemination and

Table 2 Dimensions of the data extraction tool

Dimension	Subdimensions
Document characteristics	First author's name, country, affiliation, year of publication
	Format (peer-reviewed article, toolbox, manual, or report)
	Approach (research-intervention approach, training tool with key messages, transversal approach with key messages, or theoretical approach)
	Dissemination mode (bibliographic database, government, or organization website)
	Document's objective
	Type of contribution to "how-tos" (more concrete (activities, checklists, steps to follow) or less concrete (general principles and prescriptions))
Intervention	Actor(s) who initiated the project
	Objective of the intervention and targeted issue
	Main content transferred by the intervention (knowledge, methods)
	Type of health impact (directly or indirectly targeted)
Actors	Target population for the intervention
	Partners involved in the project
Underlying conceptualization of key concepts	Sex/gender (intersectionality, when relevant)
	Sex/gender inequity (e.g. dynamics related to S/G)
	Partnership (e.g. participatory approach)
	Reflexive practice
How-tos related to...	How-tos related to participatory research (ex. partnership implementation, knowledge mobilization including who should be partner in a project)
	How-tos related to S/G integration (ex. methods to analyze S/G, to disseminate S/G results, or to integrate S/G into knowledge translation including in the partnership process)

Table 3 Synthesis coding categories for recommendations

Code related to	Codes and definitions	Theoretical background
Participatory research	*Codes related to participatory research phases* *1. Partnership building:* who to include, how to invite *2. Research framework development*: choice of theoretical underpinnings, concepts *3. Data collection and analysis*: methods to be used, software, who carries out field work *4. Interpreting data and drawing conclusions adapted to context:* co-creation of interpretations *5. Putting in place intervention/action plans*: who, when, where, how? *6. Monitoring knowledge mobilization*: what to measure, who keeps track? *7. Dissemination and large-scale application:* who communicates larger messages, to whom? *Codes capturing transversal aspects of participatory research* *8. Contexts of participatory research*: analysis of macro context, project's and partners' histories *9. Partnership processes:* considering who is in the partnership (individual characteristics) and how they interact (structure and relationships) including decision-making process and power relationships *10. Processes of knowledge construction throughout partnership:* continued co-learning, sharing processes	Created from the integration of four participatory research approaches in public health (PH), environmental health (EH), and occupational health (OH) (CIHR, 2016a; Lebel, 2003; St-Vincent et al., 2014; Wallerstein & Duran, 2010).
S/G	**1.**_Identify root causes of S/G inequities_: identifies gender norms, roles, and relationships and their potential impact on access/control over resources (ex. potential obstacles to actions) **2.**_S/G based approach_: includes partnership or research process design sensitive to S/G **3.**_S/G sociopolitical transformation_**:** includes strategies to foster long-term/structural transformations that promote health and gender equality (ex. policy design, implementation, evaluation, dissemination of results, empowerment)	Adapted from Hankivsky (2005) and CIHR (2016b)
Reflexive practice	**1.**_Reflexivity – positionalities_**:** reflecting on one's own positionality in relation to others (related to self-awareness of "Identity" and power relationships) **2.**_Reflexivity – project's outcomes_**:** whose voice is prominent in project's results and what are the impacts of the project on actors, partners, and community **3.**_Reflexivity – research process_**:** taking a step back from the way decisions are made, focusing on the research project itself rather than individuals	Adapted from Blanchet (2009) and Huang et al. (2018)
Intersectionality	This code was applied whenever underlying S/G conceptualizations or recommendations referred to the co-existing presence of various forms of oppression (racism, sexism, ageism) resulting in S/G or health inequities.	Based on Crenshaw (1989) and Collins (2019)
Descriptive characteristics of documents		
Gender scale	Four levels: gender aware, gender sensitive, gender responsive, gender transformative	Based on CIHR (2016c)
Concrete recommendations	More concrete (activities, checklists, steps to follow)	Binary variable (yes/no)

large-scale application, and (b) transversal aspects such as overall context (e.g. history of the partnership), partnership processes that span the duration of the project (e.g. how decisions are made), and macro-level processes of knowledge construction (CIHR, 2016a; Lebel, 2003; St-Vincent et al., 2014; Wallerstein & Duran, 2010); and (2) *S/G codes*, namely (a) root causes of inequities, e.g. underlying mechanisms, (b) gender-based approaches applied to PR processes, and (c) sociopolitical transformations (CIHR, 2016c; Hankivsky, 2005). *Reflexive practices* and *intersectionality codes* were assigned when these concepts were operationalized in recommendations (more details provided in Table 3) (Blanchet, 2009; Collins, 2019; Huang et al., 2018). Recommendations were coded independently by two researchers and differences were resolved by reaching consensus.

To illustrate how documents contributed to our research objective, we created a two-dimensional matrix with the S/G codes in rows and the PR codes in columns and displayed the 19 documents at intersections (Table 4). Each document could be displayed in several cells (or intersections) of the table, depending on the coding of the various recommendations extracted from the document. Recommendations that did not concern S/G or PR were eliminated as being outside of our scoping review objectives.

Cluster analysis

An unsupervised (without predefined classes) clustering approach in the form of a partitional clustering was then performed to provide a multivariate classification grouping the 19 documents into clusters. This method is widely used with nominal (categorical) variables (Macia, 2015; Saxena et al., 2017) and also common when building types with heterogenous attributes (Kuckartz & McWhertor, 2014).

All variables related to the characteristics of recommendations (S/G; PR; reflexive practice; intersectionality) were included in the cluster analysis so as to favour the emergence of types (Kluge, 2000). In addition to the recommendation-related codes, the cluster analysis took into account two other characteristics of the documents included in the extraction grids: four degrees of gender integration, from gender awareness to gender transformation (CIHR, 2016c); and the presence of concrete recommendations, namely action checklists, procedures, steps (*non-concrete* recommendations, which were not included in the cluster analysis, offered advice in the form of general principles or prescriptions).

Using nVivo12 software, the Jaccard coefficient was applied because it is well adapted to binary data (Macia, 2015; Saxena et al., 2017) to measure the level of similarity between each pair of documents. Documents were grouped using the complete linkage (farthest neighbour) algorithm. The number of clusters to be analyzed was based

on dendrogram graphic analysis (Supplementary File S3) and the interpretability of clusters as providing "meaningful classes" (Saxena et al., 2017).

Results

Document characteristics

Out of the 19 documents included in this scoping review, five were from the targeted subfields (OH=3; EH=2) and the remaining 14 covered various other public health domains (such as population and reproductive health, community health, minority health and health disparities, and women's health) (see detailed characteristics of 19 documents in Supplementary File S2).

Most of the documents were peer-reviewed articles (15 of 19). Their publication dates revealed stability of the topic over time: four to six documents were published within each 5-year period between 2000 and 2020; therefore, resources supplying ways on how to take account of S/G in PR have not increased despite repeated calls in the literature (Manandhar et al., 2018; Tannenbaum et al., 2016). Eight of the documents originated from Canada, five from the United States, and one from each of the following countries: Australia, Denmark, France, South Africa, the United Kingdom, and Zimbabwe.

Documents varied in the nature and amplitude of their contribution to the different intersecting PR and S/G subcategories of the coding matrix (Table 4). In particular, the coding density showed that the three categories of S/G integration (represented by the rows in Table 4) were not equally populated with recommendations from documents considered in our review. Where the documents resulting from our literature search provided guidance was especially in procedural aspects of implementing S/G-sensitive research and partnership processes. Our scoping review revealed a dearth of recommendations in identifying the *root causes of S/G inequities* (e.g. gender norms, roles, and relationships and their potential impact on access/control over resources). These were less frequently discussed in recommendations, except when the recommendations concerned data collection or analysis. In a reflexive exercise based on the guidelines identified in our scoping review and conducted in the context of our parallel participatory process, research partners reinforced the need for further guidelines to face related challenges.

We also noted that the three OH documents were comparatively silent in relation to many of the subcategories related to *S/G sociopolitical transformations*—which involved explicitly augmenting participants' agency and influencing policy design. *Dissemination and large-scale application* (PR subcategory) was an exception as it included,

Table 4 Sex/gender and participatory process synthesis matrix

TYPES OF HOW TO's PIR → Sex/Gender ↓	Project Phases							Transversal Dimensions		
	Establishment of partnership	Research framework development	Data collection and analysis	Data interpretation to draw conclusions adapted to context	Interventions or action plans implementation	Monitoring knowledge mobilization	Dissemination and large scale applicaton	Contexts *(history, resources,...)*	Partnership Processes *(stakeholder characteristics, power relations, decision-making)*	Processes of knowledge construction partnership
Root causes of gender inequities	*No references*	Gibbon Jost Lipscomb NativeWmn	Agenor Blanchard Chappert Guerin IDRC Jost Lipscomb Messing Poole	MacDonnell	Chigudu	*No references*	*No references*	IDRC Reid Singh	IDRC MacDonnell Singh	Guerin MacDonnell Messing NativeWmn
Summary	PH :0 (-%) OH : 0 (-%) EH : 0 (-%) Total :0	PH :2 (50%) OH : 1 (25%) EH : 1 (25%) Total : 4	PH :5 (56%) OH : 3 (33%) EH : 1 (11%) Total : 9	PH :1 (100%) OH : 0 (-%) EH : 0 (-%) Total : 1	PH :1 (100%) OH : 0 (-%) EH : 0 (-%) Total : 1	PH :0 (-%) OH : 0 (-%) EH : 0 (-%) Total : 0	PH :0 (-%) OH : 0 (-%) EH : 0 (-%) Total : 0	PH :3 (75%) OH : 0 (-%) EH : 1 (25%) Total : 4	PH :3 (100%) OH : 0 (-%) EH : 0 (-%) Total : 3	PH :3 (75%) OH :1 (25%) EH : 0 (-%) Total : 4
Gender-based Approaches	Chappert IDRC Katz-Wise MacDonnell Muhammad NativeWmn Penzhorn Poole Reid Singh	Blanchard Chappert Jost MacDonnell McCullagh Messing Muhammad Reid Singh	Agenor Blanchard Chappert Chigudu IDRC Jost Katz-Wise Lipscomb MacDonnell Messing Muhammad NativeWmn Penzhorn Reid Singh	Agenor Chappert Chigudu Guerin IDRC Jost MacDonnell Muhammad Reid	Chappert Chigudu Gibbon Guerin IDRC Jost MacDonnell Penzhorn	Chappert Chigudu IDRC Jost Katz-Wise Messing NativeWmn Reid Singh	Jost Katz-Wise Muhammad NativeWmn	IDRC Katz-Wise Messing McCullagh Penzhorn	Agenor Gibbon IDRC Jost Katz-Wise MacDonnell McCullagh Messing Muhammad NativeWmn Penzhorn Reid Singh	Blanchard Chappert Chigudu Guerin IDRC Jost MacDonnell McCullagh Muhammad Penzhorn
Summary	PH : 9 (90%) OH : 1 (10%) EH : 0 (-%) Total : 10	PH :6 (67%) OH : 2 (22%) EH : 1 (11%) Total : 9	PH :11 (73%) OH : 3 (20%) EH : 1 (7%) Total : 15	PH :7 (78%) OH : 1 (11%) EH : 1 (11%) Total : 9	PH :6 (75%) OH : 1 (12,5%) EH : 1 (12,5%) Total : 8	PH :6 (67%) OH : 2 (22%) EH : 1 (11%) Total : 9	PH :3 (75%) OH : 0 (-%) EH : 1 (25%) Total : 4	PH :3 (60%) OH : 1 (20%) EH : 1 (20%) Total : 5	PH :10 (77%) OH : 1 (8%) EH : 2 (15%) Total : 13	PH :8 (80%) OH : 1 (10%) EH : 1 (10%) Total : 10
Sociopolitical Transformations	Gibbon	Agenor Reid Singh	*No references*	Chappert Muhammad	*No references*	Guerin Poole	Agenor Blanchard Chappert Chigudu Gibbon Guerin IDRC Lipscomb MacDonnell Messing NativeWmn Penzhorn Poole Reid Singh	Agenor Muhammad	Gibbon IDRC Jost MacDonnell McCullagh Muhammad Poole Singh	Blanchard Gibbon Guerin IDRC Jost Katz-Wise MacDonnell Muhammad NativeWmn Poole Reid
Summary	PH :1 (100%) OH : 0 (-%) EH : 0 (-%) Total : 1	PH :3 (100%) OH : 0 (-%) EH : 0 (-%) Total : 3	PH :0 (-%) OH : 0 (-%) EH : 0 (-%) Total : 0	PH :1 (50%) OH : 1 (50%) EH : 0 (-%) Total : 2	PH :0 (-%) OH : 0 (-%) EH : 0 (-%) Total : 0	PH :2 (100%) OH : 0 (-%) EH : 0 (-%) Total : 2	PH :12 (80%) OH : 3 (20%) EH : 0 (-%) Total : 15	PH :2 (100%) OH : 0 (-%) EH : 0 (-%) Total : 2	PH :6 (75%) OH : 0 (-%) EH : 2 (25%) Total : 8	PH :10 (91%) OH :0 (-%) EH : 1 (9%) Total : 11

Legend

No of references	Cell shade	Abreviations (document name color)
1 to 4 references		PH (black): Public Health (subfields other than OH/EH)
5 to 9 references		OH (red): Occupational Health
10 and more ref		EH (green): Environmental Health

for instance, recommendations from Chappert et al. (2014) describing the impact of their research in inspiring changes in law so as to favour S/G equity in OH.

Typology: four clusters

The synthesis phase resulted in four clusters grouping documents by type (Fig. 2).

Type 1 includes three documents that focused strongly on participants' empowerment through the PR process. Type 2 comprised five documents offering the most concrete

recommendations with ready-to-use guidelines for researchers about to engage in S/G transformative PR. The documents in Type 3 addressed PH issues experienced by vulnerabilized or marginalized populations, putting forth intersectional approaches and a specific stance on reflexivity to reinforce links to large-scale spheres of actions. Documents in Type 4 described interventions that would have direct impacts on the health of the target population.

More details on the complete typology are found in Table 5 which refers to the variables used to constitute the clusters, complemented by characteristics of the documents

Fig. 2 Typology of documents

Type 1 **Empowerment-centered**	Type 2 **Concrete action-centered**	Type 3 **Macrosystem-centered**	Type 4 **Stakeholder-centered**
Gibbon (2000) Katz-Wise et al. (2018) Penzhorn (2005)	Jost et al. (2014) McCullagh et al. (2012) Native Women's Association of Canada (2010) Reid (2004) Singh et al. (2013)	Agénor (2020) Guerin et al. (2006) IDRC (2019) MacDonnell et al. (2017) Muhammad et al. (2015) Poole (2008)	Blanchard et al. (2017) Chappert et al. (2014) Chigudu (2007) Lipscomb et al. (2005) Messing & Lippel (2013)

and paraphrased excerpts (italic) from the recommendations identified during data extraction (see Supplementary File S2 for the complete data extraction grids).

Discussion

Our typology highlights two main loci where S/G transformational change arises in PR. While both can coexist in projects, the documents tend to emphasize one over the other. First, there are projects in which health and S/G inequity transformations are achieved with individuals and local scale groups throughout the implementation of the project (Type 1). Second, participatory projects can also serve to develop recommendations, policies, and tools that could ultimately lead to social change, thus reducing S/G inequities (Types 2, 3, and 4).

The documents clustered around other characteristics as well. Type 2 offers the most ready-to-use guidelines for researchers about to engage in PR integrating S/G. Type 3 provides recommendations for working with a diverse partnership composition (e.g. community and governmental agencies) to ensure micro- and macro-level actions on S/G. Finally, Type 4 delves into strategies at the stakeholder level for navigating S/G-related obstacles when directly targeting health outcomes. Researchers looking to integrate S/G into the specific steps of PR methodology (e.g. research framework development or data collection and analysis) can turn to most of the 19 documents in this review for recommendations. However, several blind spots were identified, indicating a need to generate guidelines and recommendations to complement those found in this review.

Gaps in knowledge

In line with our findings, we must first acknowledge the influence of our own positionalities as S/G scholars and practitioners on the identification of these gaps. Despite various career paths, socio/linguistic backgrounds, experience levels, and academic statuses, all authors have gravitated toward research networks where S/G integration is a central preoccupation. This common interest provides

fertile ground for us to explore these issues together in a non-confrontational context, without negative personal or professional consequence that can sometimes occur in academic and practice settings. Also, as OH and EH scholars, we delimitated our analysis to these widely interdisciplinary PH domains and, thus, oriented our reflections accordingly.

Availability of guidelines for researchers with differing levels of S/G or PR experience

The first gap is related to the usability of advice provided in the documents. We observed that Type 2's very concrete guidelines imply a readiness to integrate S/G in PR. As a matter of fact, this presupposes sufficient preliminary skills and knowledge about partnership processes, on the one hand, and S/G issues, on the other. For example, a document such as the Native Women's Association of Canada (2010) workbook, which offers applied and concrete steps, assumes a certain level of understanding of S/G with regard to participatory approaches. Further thought needs to go into the factors enabling the progression of knowledge and experience acquisition to tailor future tools to the needs of knowledge users from diverse disciplines and with varying levels of experience.

Guidelines covering all levels of S/G integration

Our review reveals a second gap, namely that not all of the S/G categories were equally provisioned with recommendations (Table 4). While the second category, that of research design, was largely covered by many documents, there is a need for more guidelines related to *Identifying root causes of S/G inequities* and *S/G sociopolitical transformations*. *Identifying root causes of S/G inequities*, the least supplied S/G category, could be reflected upon in more phases and transversal components of PR to avoid reproducing inequities within the partnership process itself and to ensure that knowledge translation addresses issues inclusively. *S/G sociopolitical transformations*, recommendations for which were found in relatively few guidelines except at the intersection of *Dissemination and large-scale application*,

Table 5 Typology of documents

Type 1: Empowerment-centered guidelines

PH domains of the references in this cluster

PH other than EH and OH:　　　　　　　　　　　　Gibbon (2000); Katz-Wise et al. (2018); Penzhorn (2005)

Topics covered by documents

Gendered identity (Katz-Wise et al. 2018)
Cumulative oppressions for marginalized Black women (Penzhorn, 2005)
Rurality (Gibbon, 2000)

Cluster specificities (*paraphrased excerpts from documents in italic*)

Guidelines focus on participants' empowerment through the PR process.	*Participatory tools [such as the health map described in the document] foster proximity to the problem and increase participants' ownership of the actions. (Gibbon, 2000)*
Emphasis is on PR as being an emancipatory process that has the potential to modify health inequities stemming from S/G dynamics.	Katz-Wise et al. (2018) and Gibbon (2000) contend that PR processes can contribute to empowering transgender youth and women, respectively, thus contributing to the sharing and mobilization of knowledge from marginalized groups.
Recommendations support the idea that people affected by the issue being examined need to be full partners in the research, leading to the development of PR skills.	*Process must have an educational component [such as] assisting participating women to develop skills in collecting, analyzing, and utilizing research information. (Penzhorn, 2005)*
Documents advocate for similar reflexive practices in which self-awareness, particularly for the researchers, is encouraged to prevent power imbalances with participants and partners in situations of vulnerability.	Examples include continuously examining and improving one's behaviour (Gibbon, 2000; Katz-Wise et al., 2018); engaging with participants in their social activities to build mutual trust and share power between researchers and participants (Penzhorn, 2005); and being open to feedback to make the project more useful to community members (Katz-Wise et al., 2018).
Participation occurred via local structures.	Caregiver-level: Katz-Wise et al. (2018) Prayer group-level: Penzhorn (2005) Village-level: Gibbon (2000)
Documents in this cluster adopt an intersectional perspective and offer primarily generalized principles.	Except for the part of the Gibbon (2000) article that suggests a step-by-step intervention to collectively build a "health map" with a series of four detailed steps on how to apply the approach.

Type 2: Concrete action-centered guidelines

PH domains of the references in this cluster

PH other than EH and OH:　　　　　　　　　　　　Native Women's Association of Canada (2010); Reid (2004); Singh et al. (2013)

EH　　　　　　　　　　　　　　　　　　　　　　　　Jost et al. (2014); McCullagh et al. (2012)

Topics covered by documents

Concrete guidelines to work with populations in situations of vulnerability:
Communities in low- and middle-income countries (Jost et al., 2014; McCullagh et al., 2012)
Indigenous women (Native Women's Association of Canada, 2010)
Women living in situations of poverty (Reid, 2004)
Transgender individuals (Singh et al., 2013)

Cluster specificities (*paraphrased excerpts from documents in italic*)

Mostly concrete recommendations are provided, meaning that documents provided ready-to-use guidelines to researchers about to engage in S/G transformative PR.	Two texts in this cluster present the components of feminist intervention models in detail: Feminist Action Research (Reid, 2004) and Feminist Participatory Action Research (Singh et al., 2013). The sample's only three "toolboxes" are in this cluster, providing lesson plans, concrete action lists, conceptual definitions, methodological recommendations, examples of data collection tools, best practices (Jost et al., 2014; McCullagh et al., 2012; Native Women's Association of Canada, 2010).

Table 5 (continued)

Recommendations are designed to support sociopolitical transformations at both the local and macro levels.	For example, the Native Women's Association of Canada's (2010) *Culturally Relevant Gender Application Protocol* workbook explains four concrete strategies for S/G sensitive knowledge translation with First Nations communities. These include taking special care in: (1) what is being communicated (e.g. accuracy, balance); (2) who is communicating it (e.g. women should play a central role); (3) to whom it is being communicated (e.g. adjust messages to target audience); and (4) from whose perspective it is being communicated (e.g. primary and secondary sources portraying Indigenous women's realities). Each strategy is accompanied by a list of specific actions to undertake, including tips, reminders, and an encouragement to reflect on what has been learned in the process.
	Another example relates to identifying S/G issues when becoming familiar with PR contexts: *Investigate gender issues with questions: Are there groups exclusively for women? Are there groups from which women are excluded and why? Are there groups separated along gender lines? Which trends impact women and men, boys, and girls differently? Are there differences in gender roles by ethnicity, class, etc.? (Jost et al., 2014)*
Reflexive practices are encouraged.	In Native Women's Association of Canada (2010), the reflexive practice proposed centers on PR as a learning process to ensure appropriate representation in terms of cultural and gender identities. Continual awareness of possible power issues or unconscious biases is encouraged by Jost et al. (2014), McCullagh et al. (2012), Reid (2004), and Singh et al. (2013). Concrete activities, such as reflexive journaling, are proposed as a means to achieve this self-awareness (McCullagh et al., 2012; Singh et al., 2013): *Be aware of our own position regarding gender inequities but also be able to adjust our behaviour in a way that promotes discussion. (Jost et al., 2014)*

Type 3: Macrosystem-centered guidelines

PH domains of the references in this cluster

PH other than EH and OH:	Agénor (2020); Guerin et al. (2006); IDRC (2019); MacDonnell et al. (2017); Muhammad et al. (2015); Poole (2008)

Topics covered by documents

Intersectional approaches are fairly dominant, which could be explained by the characteristics of the target populations:
Racialized immigrant women (Guerin et al., 2006; MacDonnell et al., 2017),
Multiple marginalized groups (Agénor, 2020),
Women in situations of vulnerability in low- and middle-income countries (IDRC 2019) or high-income countries (Poole, 2008)
Native and Black populations (Muhammad et al., 2015).

Cluster specificities (*paraphrased excerpts from documents in italic*)

Initiatives include the community as partners and most of them also include government institutions, thus engaging simultaneously with actions at the local and macro levels.	*Partners disseminate and translate research findings to help advance social justice and health equity (…) to achieve transformational social change. (Agénor, 2020)*
Recommendations emphasize the relevance of interdisciplinarity and mixed methods due to the complexity of addressing sensitive issues within these populations.	*Use mixed-method approaches from different disciplines to collect and analyze qualitative and quantitative data that explore and address multiple vulnerabilities and identities characterizing gender inequality. (IDRC, 2019)*
	MacDonnell et al. (2017) provide suggestions to help fight the root causes of inequities, such as building safe spaces for research communities to do critical research, establishing networks of marginalized groups, engaging in collective dialogue, and developing meaningful programs that would include a focus on racialization and colonialism.

Table 5 (continued)

Specific stance on reflexivity is to reinforce links to the large-scale sphere of actions proposed in the documents.	Poole (2008) emphasizes the importance of raising awareness surrounding the dialectic process of collective action, especially considering that participants' diverse perspectives are a resource for change: *Communities of practice as collective, emancipatory social learning environments have the potential to address key barriers to research utilization [in nursing]. (Poole, 2008)*
	In addition, the dual role of researcher-as-advocate (Guerin et al., 2006) and "working the hyphen" (e.g. being both researcher and community member) (Muhammad et al., 2015) demonstrates that a rethinking of traditional "researcher" roles is required.
	For researchers, participating with women in the community as an advocate is a good way to understand the subtleties of discrimination, the pressures and hassles of day-to-day life for many refugee women, and is a way of developing trust with them. (Guerin et al., 2006)

Type 4: Stakeholder-centered guidelines

PH domains of the references in this cluster

PH other than EH and OH:	Chigudu (2007); Blanchard et al. (2017)
OH	Chappert et al. (2014); Lipscomb et al. (2005); Messing and Lippel (2013)

Topics covered by documents

Workers' occupational health (Chappert et al., 2014; Lipscomb et al., 2005; Messing & Lippel, 2013)
S/G disparities in HIV/AIDS care and treatment (Chigudu, 2007)
Sex workers' intimate partner violence and reproductive health (Blanchard et al., 2017)

Cluster specificities (*paraphrased excerpts from documents in italic*)

Guidelines emphasize the importance of integrating key community partners to facilitate the meaningful inclusion of marginalized populations in efforts to transform the context from which health inequalities emerge.	Documents in this cluster provide recommendations on how to optimize the involvement of target populations that can be mediated by organizations (Blanchard et al., 2017; Chigudu, 2007), designated community members (Lipscomb et al., 2005), an employer and a government agency (Chappert et al., 2014), or unions (Messing & Lippel, 2013).
Recommendations are provided primarily via discussion of case studies and are of a more general than concrete nature.	Messing and Lippel's (2013) retrospective narrative of a series of PR projects conducted in the context of a university-union partnership provides very thorough observations of potential obstacles while carrying out data collection related to S/G dynamics in workplaces: *Some female workers prefer that gendered OHS issues remain invisible to avoid discrimination and they sometimes deny the existence of gender inequity and gendered division of work. (Messing & Lippel, 2013)*
Documents address *Root causes of S/G inequities (e.g. mechanisms of inequities)* differently than documents in other clusters.	Mostly by emphasizing the obstacles encountered in research and how to overcome them through participatory approaches. Many recommendations are formulated in the spirit of expressing *"what not to do"* instead of *"how-tos."*
	Several recommendations, however, describe how to involve participants, particularly in two phases of the project, namely *Research framework development* and *Data collection and analysis*.
	In Lipscomb et al.'s (2005) study, recommendations on how to be aware of participants' vulnerable positions take the form of carrying out activities to facilitate reciprocal knowledge translation for both community members and the academic community. This guideline echoes an example from another document: *The creation of space for a dialogue with multiple viewpoints enhanced the relevance, ownership, and applicability of results for shaping action. (Blanchard et al., 2017)*

Table 5 (continued)

Reflexivity is not explicitly addressed in this cluster.	Some recommendations implicitly suggest acknowledging power imbalances between community staff members and academic investigators (Lipscomb et al., 2005) or acknowledge that the lack of a request for S/G analysis by project stakeholders could be an obstacle to analyzing S/G issues (Chappert et al., 2014).
Guidelines in these documents contribute to our understanding of PR steps that entail negotiating with influential actors and strategically adapting communications with them to reduce resistance toward S/G integration.	*Any discussion of power relations (e.g. S/G relations) in the company could upset decision-makers. Strategically, language used during intervention and restitution is neutral, without an explicit feminist approach, and militant language should be avoided in the communication with all partners (workers, trade-unions, and employers). To avoid any suspicion of affirmative action, emphasis must be placed on the fact that gender analysis will help to improve working conditions for all (women AND men). (Chappert et al., 2014)*

requires moving away from end-of-grant knowledge translation as a dominant model. The relative scarcity of recommendations for this in other phases of PR reveals a need to help researchers in co-creating, with collaborators, enabling conditions for partners to carry out interventions that lead to S/G sociopolitical transformations from the partnership building phase until after project funding has ended. This could be a solution to challenges posed by grant timelines that, once finished, preclude fieldwork in which valuable knowledge necessary for effecting sustainable change could be mobilized. Such guidelines would offer tools to ensure that PR results have lasting impacts and do not inadvertently lead to negative consequences.

OH/EH specificity

In line with our objective to identify gaps in knowledge with a focus on EH and OH as subfields of public health, we observe that the OH documents (all in Type 4) are more distant from other public health subfields than EH documents appear to be. We interpret these differences in light of specific challenges involved in conducting PR in OH, namely that improving workers' health often depends on the willingness of an employer to grant access to its workplace. Participatory research in other public health subfields is more often requested by and for communities to which access may be difficult but is not mediated by a contractual relationship (e.g. employer-employee, union-management). OH researchers' power over the research process and its transformative outcomes on S/G issues can be fragile and may have influenced the type of guidelines that were provided. Indeed, one of the recommendations stemming from OH research was to adopt an implicit approach where the intention to tackle S/G issues was not revealed at the beginning of the process in order to maintain partnerships. In this strategy, S/G is brought up late in the process, when presenting relevant research results, and suggestions for organizational transformations remain universal (i.e. concern all workers). This approach

was not promoted by other subfields of public health, including EH, but was observed in a retrospective study of OH interventions by Laberge et al. (2020). Considerations of power issues within the partnership itself, especially those arising from social and gendered relations, were addressed in reflexive practice guidelines and are especially present in Types 1, 2, and 3, but rather absent from Type 4. This highlights the necessity to support OH researchers with additional guidance on how to prevent inequities within the PR process. OH research can nevertheless look to other public health subfields for recommendations—especially those related to intersectionality and reflexive practices. As for EH, the relatively small number of documents (2) points to a need for more guidelines on S/G and PR in this domain.

The role of intersectionality and reflexive practices in recommendations

Many of the documents in this review point to the complexity of engaging in a genuine S/G transformative process. Recommendations concerning intersectionality and reflexive practices are aimed at helping researchers and practitioners navigate this complexity. Increasingly, scholars are recommending that researchers state and analyze their own positions and adopt an intersectional approach that encompasses S/G, among other forms of marginalization (Hankivsky et al., 2018; Messing et al., 2022; Muhammad et al., 2015). All clusters but Type 4 give guidelines and recommendations on implementing a reflexive and intersectional approach. Most PR in our scoping review worked with populations in varied and often cumulative situations of vulnerability and marginalization. In some of these documents, S/G issues were not considered to any greater extent than other forms of inequities, which at times had the effect of obscuring S/G. For instance, the fact that S/G is sometimes mentioned at the beginning of a document without any further mention may give the impression that "how-tos," taken out of context, are

not S/G-related when, in fact, they are simply not focused on S/G more than any other form of injustice. Challenges related to the operationalization of intersectionality in PR have been identified as an obstacle to taking account of S/G (Manandhar et al., 2018; Tannenbaum et al., 2016). Our review supports the idea that "methods to integrate intersectionality into research and policy are still at an early development stage" (Gogovor et al., 2020, p. 8). Concrete guidelines are needed regarding analytical methods to capture cumulative oppressions without masking or losing sight of S/G issues.

As for reflexive practices, strong cases for their integration were made in three of the four clusters (Types 1, 2, and 3). A central aspect of reflexivity touches on S/G power relations among academic researchers, stakeholders, partners, and participants, each implying distinct dynamics. When working directly with communities, conventional power relations most often favour the researcher and, as proposed by Muhammad et al. (2015), it can be helpful to exchange explicitly about power relations during a project. In other words, it is within the "power" of academic researchers to contribute to rebalancing power relations, an effort that may involve considering the interaction between the academic researchers' own position (e.g. sex/gender, age, ethnicity, socioeconomic status) and that of partners, stakeholders, and participants. As for OH, the fact that none of the documents involved an explicit reflexive process raised a question among the advisory committee about whether that possibility is not always within reach, especially when researchers are bound by partners' willingness to allow access to workplaces and workers. While eliminating S/G power structures entirely might not be realistic for all contexts, in EH as well as OH, a reflexive process can still have benefits in attenuating some detrimental S/G power differentials. To that end, many guidelines in the documents most concerned with intersectional analysis provided precise ways to reflect on unconscious biases in the partnership process (Agénor, 2020; Muhammad et al., 2015). Muhammad et al. (2015) describe instances where stories are shared in confidence with researchers who are trusted as "one of the community" and that cannot later be used as data as they are deemed too sensitive. In light of these considerations, both general and practical guidelines are needed to develop reflexive strategies for each participatory project, according to its context.

Finally, several strong articles were excluded for this scoping review because they did not provide recommendations specifically addressing S/G power relations or inequities. This can occur in articles that take an intersectional perspective, as authors provide best practices for dealing with power differentials in general but do not necessarily refer to S/G specifically. Some of these articles could nevertheless serve as examples of useful guidelines (for example, in *EH*: Canfield et al. (2016); Downs et al. (2011); in *OH*: Di Ruggiero and Sharman (2011); *Men's health*: Schoenfeld

and Francis (2016); *other PH domains*: Andrews et al. (2012); Carrière (2008); Chang et al. (2016); Gregg et al. (2010); Mendes et al. (2016); Robertson-James et al. (2017); Samaras et al. (2014); Shea et al. (2013); Wuest et al. (2015)).

Strengths and limitations

This scoping review has several strengths. First, it is rare that public health subfields as traditionally siloed as OH and EH are both analyzed around S/G integration- and PR-related concepts. This fostered an original and fine-grained analysis through a continued dialogue at all phases of the scoping review, and especially when double-coding extracted data. Also, our scoping review followed a rigorous methodological process, i.e. systematic search of nine databases, coverage of the grey literature, and interjudge procedures. A mixed-methods approach, with participatory, qualitative analysis followed by a cluster analysis, allowed for a detailed and in-depth synthesis process.

The review also has limitations. First, the predominance of peer-reviewed articles in our sample may result from one of our inclusion criteria (recommendations had to be intended for people conducting research) and the fact that the grey literature is not indexed, complicating exhaustive searching. This may have influenced the nature of extracted recommendations. While toolboxes and training manuals are expected to share steps, activities, and best practices, authors of peer-reviewed articles, by academic tradition, may avoid endorsing their detailed and concrete methodologies, rather, making broad recommendations/reflections to be integrated by others in their own practice. For example, selection criteria for partners (education level, community or target population membership, availability) were often pointed to as important in the methodology, but were not systematically formulated as recommendations, Chigudu (2007) being an exception.

Second, the cluster analysis corresponds to an exploratory approach. Although it was based on a limited number (19) of documents, this quantitative method supported the analysis of a large number of attributes to build types (Kuckartz & McWhertor, 2014). Empirical and theoretical interpretation reinforce the validity of the dendrogram analysis and the distinct clusters that emerged from this analysis.

Finally, our "shared understandings" as a team may sometimes have differed from those of the authors of the documents that we analyzed. We tried to reduce the influence of our own positionalities on the results to a minimum through reflexive practices, such as addressing potential biases during our advisory committee meetings, and by mobilizing inclusive and transdisciplinary conceptualizations of our scoping dimensions. Given the relatively low socio-demographic diversity, including in terms of S/G, within the advisory committee, our analysis may be lacking in some dimensions.

Conclusion

Our review illustrates that the obstacles to integrating sex and gender in participatory research are not only related to the complexity of planning or implementing such projects (Gogovor et al., 2020) but also to the scarcity of guidelines. Guidelines related to epistemic justice and enmeshed in feminist ethics frameworks would ensure that researchers', participants', and stakeholders' standpoints are taken into account both in the participatory and the research processes, and could clarify how these two processes can support the reduction of health inequities, without masking S/G issues in relation with other types of vulnerabilities or marginalization (Fricker, 2007; Messing, 2021).

Data availability Not applicable

Code availability Not applicable

Declarations

Ethics approval Not applicable

Consent to participate Not applicable

Consent for publication Not applicable

Conflict of interest The authors declare no competing interests.

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