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How and why do participatory women's groups (PWGs) improve the quality of maternal and child health (MCH) care? A systematic review protocol

Robyn Preston,[1,2] Sam Rannard,[3] Catrina Felton-Busch,[4] Sarah Larkins,[2] Karla Canuto,[5,6] Karen Carlisle,[2] Rebecca Evans,[2] Michelle Redman-MacLaren,[7] Judy Taylor,[6] Nalita Nungarrayi Turner,[6] Lee Yeomans,[8] Emma Sanguineti,[8] Megan Passey,[9] Jane Farmer[10]

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For numbered affiliations see end of article.

Correspondence to
Dr Robyn Preston;
r.preston@cqu.edu.au

ABSTRACT

Introduction Community-based Participatory Women's Groups (PWGs) have proven to be an effective intervention to improve maternal and child health (MCH) outcomes in low/middle-income countries (LMICs). Less is known about how PWGs exert their effects in LMICs and virtually nothing is known about the contextual issues, processes and power relationships that affect PWG outcomes in high resource settings. The aim of this systematic review is to synthesise and critically analyse the current evidence on how and why PWGs improve the quality of MCH care. We aim to demonstrate how PWGs function and why PWG interventions contribute to social and health outcomes.

Methods and analysis The protocol will follow Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols guidelines. The databases Medline (Ovid): Cumulative Index to Nursing and Allied Health Literature (Ebsco); Informit health suite Scopus, Australian HealthInfoNet, the Cochrane Library and other sources will be searched under broad categories: intervention, context and outcomes to 30 June 2019.

Ethics and dissemination As only secondary data will be analysed; ethical approval is not required. The review will be disseminated to relevant organisations and presented in peer-reviewed papers and at conferences. This will be the first attempt to summarise the current available evidence on the characteristics, contextual influences and mechanisms that are associated with the outcomes and effectiveness of PWGs.

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Strengths and limitations of this study

- Our systematic approach will be the first attempt to summarise the current available evidence on the characteristics, contextual influences and mechanisms that are associated with the outcomes and effectiveness of Participatory Women's Groups (PWGs); that is how and why PWGs improve the quality of maternal and child health care, focusing on implications likely to inform Aboriginal and Torres Strait Islander PWGs.
- A further strength of this study is that it will search both the peer-reviewed and grey literature.
- A limitation of the study is the difficulty in synthesising evidence from studies of uneven quality, the complexity of terminology and the variety of study methodologies.
- A further limitation is that study designs and reporting may focus on health outcomes rather than discuss the contextual, relational and process issues that we wish to synthesise.
- Limiting the reviews to those in English may miss important evidence from other settings, and furthermore we may not have access to some government or non-government organisation reports.

INTRODUCTION

Participatory Women's Groups (PWGs) are community-based organised groups of women who are using participatory learning and action to mobilise individual and or community action for health or social outcomes. The groups might be working in partnership with a health service which initiated the group, or they might be self-mobilised.[1] There is persuasive international research evidence illustrating the effectiveness of these community-based groups in improving maternal and child health (MCH) outcomes via new learning, women's empowerment and improved quality of care.[2 3] There is less information from systematic reviews about the process of PWGs and how they exert their influence.[4] This gap in the literature is the focus for this review exploring how PWGs function and why PWG interventions contribute to social and health outcomes.

Most systematic reviews of literature reporting improvements in MCH associated with PWGs are set in low/middle-income countries, for example, the reviews by Marston *et al*,[5] Prost *et al*[1] and Sharma *et al*.[6] In

these settings, interventions were described as 'community participation' but all involved some type of women's group, operating formally or informally, in a community and engaging in participatory cycles of action and learning. Participants were generally volunteers (non-remunerated) and the countries' health systems were weak with limited provision of comprehensive primary healthcare by state health agencies.

The systematic review by Marston *et al*[5] examined the effectiveness of community participation interventions in maternal and newborn health, asking: Did participation improve outcomes? Ten papers about community participation interventions from 1990 onwards were extracted and synthesised using a theoretical framework that considered context, outcomes and relational, material and symbolic factors. These factors were used to explore how the intervention sought to address and change the social context. Community participation produced largely positive impacts on maternal and newborn health with PWGs undertaking a range of activities, but all included raising community awareness of maternal and newborn health problems.

Marston *et al*[5] noted that, using the same methodology and approach to community participation, the approach was successful in Nepal and India but in Bangladesh and Malawi, there were no recorded effects of community participation on the outcomes of interest.[5] The researchers involved in the trials in these two countries did not report on any local contextual factors that might have mediated the effects of the PWGs.

Another systematic review and meta-analysis by Prost *et al*[1] included randomised controlled trials of PWGs with a four-phase participatory learning and action cycle, conducted in Bangladesh, India, Malawi and Nepal. The review considered the population-level predictors of effect on maternal mortality, neonatal mortality and stillbirths. Seven trials met the inclusion criteria, and exposure to PWGs was associated with a 23% non-significant reduction in maternal mortality (OR 0.77, 95% CI 0.48 to 1.23); a 20% reduction in neonatal mortality (OR 0.80, 95% CI 0.67 to 0.96) and a 7% non-significant reduction in stillbirths (OR 0.93; 95% CI 0.82 to 1.05).[1] Overall, the review synthesised data to suggest that women's groups practising participatory learning and action are a cost-effective strategy to improve maternal and neonatal survival in low-income settings.

Eleven studies were included by Sharma *et al*[6] in a review on the effectiveness of community interventions in improving MCH outcomes in South Asia. Electronic databases were searched to June 2017, and randomised or cluster-randomised studies in communities within rural/remote areas of Nepal, Bangladesh, India and Pakistan were included. Data were analysed as risk ratios (RR) or ORs, and effects were adjusted for clustering. Meta-analyses were performed using random-effects and evidence quality was assessed. The review concluded that community-level mobilisation rather than healthcare messages at the district level, improved the numbers of women giving birth at healthcare facilities (RR 1.09, 95% CI 1.06 to 1.13; one study). Maternal healthcare knowledge scores improved in two community-based interventions, one involving education of male community members. Sharma *et al*[6] observed that women's education interventions may improve the number of women seeking birth at healthcare facilities, but the evidence was of low quality.

One of the few systematic reviews to consider studies conducted in high-income settings, Hoon Chuah *et al*[7] reaffirmed the understanding that community participation is a complex process that is strongly influenced by the context in which it occurs and that power relations must be carefully considered. These authors also concluded there is a need for more robustly designed studies to improve the theorisation of community participation and to draw out a better understanding of how tangible and intangible elements (eg, power) influence community participation and its outcomes. The Hoon Chuah *et al*[7] review is about general, non-disease-specific health initiatives rather than MCH specifically. There is, however, information about the use of theories to inform community participation and the study of contextual drivers and relational issues that influence community participation.

In reporting health-related findings from quantitative studies, Marston *et al*[5] noted a need for qualitative investigation alongside randomised-controlled trials and other quantitative studies to understand complex interventions in context, describe predicted and unforeseen impacts, assess potential for generalisability and capture the less easily measurable social and political effects of encouraging participation. Rifkin[8] argued that researchers involved in trials of participation to improve maternal and newborn health should disaggregate the processes of participation. This would involve considering transformations of attitudes and behaviours and power and control.

The findings of this systematic review are highly relevant for, and will help inform, the WOmen's Action for Mums and Bubs (WOMB) trial which the authors are involved in implementing. This trial will consider the maternal and child health improvements and the quality of maternal and child healthcare associated with PWGs as well as the group processes themselves. (Bubs is a colloquialism for babies in Aboriginal English.) The methodology for the WOMB trial is a non-randomised stepped wedge implementation trial of PWGs to improve the health of Aboriginal and Torres Strait Islander mothers and children in Australia. The trial will take place in primary healthcare services where most of their patients identify as Australian Aboriginal or Torres Strait Islander. These services have self-nominated to be part of the study. The PWGs will be facilitated by at least one local Aboriginal or Torres Strait Islander woman and go through a participatory action learning cycle implementing and reviewing community-initiated interventions.

Objectives

The aim of this systematic review is to synthesise and critically analyse the currently available evidence on the

characteristics, contextual influences and mechanisms that are associated with the outcomes and effectiveness of PWGs; that is how and why PWGs improve the quality of MCH care, focusing on implications likely to inform Aboriginal and Torres Strait Islander PWGs.

Review questions

In meeting the above aim, the following questions will guide the review analysis:

1. What are the characteristics, contextual influences and mechanisms that are associated with the outcomes and effectiveness of PWGs?
2. What are the theoretical and conceptual approaches to PWGs?
3. What are the implications likely to inform Aboriginal and Torres Strait Islander PWGs?

METHODS AND ANALYSIS

This protocol will follow the definition of 'systematic review' in the Preferred Reporting Items for Systematic Reviews and Meta-analyses for Protocols guidelines.[9] An initial scan of the literature has informed the design of this protocol. This study is registered with PROSPERO.[10] The systematic review will be conducted from July 2019 to October 2019.

Patient and public involvement

This systematic review protocol has been developed in partnership with organisations involved in the WOMB study. Those consulted include staff from state peak bodies that support Aboriginal Community Controlled Health Organisations (ACCHOs) and staff from ten ACCHOs/Primary Health Care (PHC) services who work directly with clients. The proposed protocol was presented by RP at a WOMB face-to-face meeting on 22 October 2018. All participants were invited to be involved and to give feedback on the aims and direction of the review. Two researchers from a state peak body, the Queensland Aboriginal and Islander Health Council (QAIHC), LY and ES, will be involved in the systematic review. The process and outcomes of this review will be reported at WOMB monthly meetings, at annual face-to-face meetings and in WOMB newsletters and closed social media sites. During the review process, feedback will also be sought from all WOMB project participants through these meetings, newsletters and social media channels. Results will be disseminated to all organisations and participants involved in the WOMB project.

Search strategy and definitions

For this review, PWGs are defined as community-based organised groups of women who are using participatory learning and action to mobilise individual and or community action for health or wellbeing outcomes. The groups might be working in partnership with a health service, which initiated the group, or they might be self-mobilised. Peer-reviewed and grey literature from all time periods will be included as PWGs have been implemented as an intervention since the 1970s. Non-peer reviewed literature will be valuable given most PWG interventions are located in low-resource settings or implemented outside of academic institutions (eg, in non-government organisations).

A systematic search of the following electronic databases and online search registers will be conducted in: Medline (Ovid): Cumulative Index to Nursing and Allied Health Literature (Ebsco); Informit health suite, Scopus, Emcare (Ovid) and the Cochrane Library to 30 June 2019.

Grey literature and reports will be searched through Google Scholar, and websites of organisations such as the WHO, the World Bank and government international assistance departments. In addition, websites from Ministries of Health in countries where PWGs have been identified from the literature will be explored. Furthermore, online grey literature depositories including Analysis and Policy Observatory (www.apo.org.au) and Australian HealthInfoNet will be searched. The authors will contact key experts in the field for other unpublished work or research, including grey literature or internal, reports, field notes and any other publicly available data that cover processes that authors can share. Hand searches will also be conducted and searches of journal alerts, emails, social media and conference proceedings to identify new unpublished reports. See table 1.

Search terms

Search terms will include the following broad categories outlined in table 1 related to population, intervention and context. Outcomes (health and other) will be incorporated in data extraction. All populations will be included. Methley *et al*[11] found, in conducting qualitative systematic reviews, that Population, Intervention, Context and Outcomes terms provided greatest sensitivity for identifying all relevant articles.

Inclusion and exclusion criteria

Once the search strategy has identified relevant literature, studies will be excluded if they: (1) do not produce empirical data; (2) are opinion pieces or normative statements; (3) are in a language other than English; (4) the intervention was not a PWG; (5) the setting was in a hospital or tertiary setting (except where the actions take place in a community) and (6) there are no reported outcomes or a focus on outcomes unrelated to MCH. Table 2 provides a summary of the inclusion and exclusion criteria.

Quality assessment of studies

The Joanna Briggs Institute Critical Appraisal Tools for assessing quantitative and qualitative studies will be used to assess study quality.[12] For qualitative studies, this will include assessing levels for 'meaningfulness'[13] and assessing relationship between the research methodology and the research question. The authors will accommodate the significant potential for bias when synthesising studies of variable quality through scoring them using the Joanna Briggs Institute tools. Authors will also assess

Table 1 Search terms

Concept	New search—MeSH	New search—keywords	New search—CINAHL
Mothers and children	child, preschool/ or exp infant/ or child health/ or infant health/ or infant welfare/) AND (mothers/ or women/ or pregnant women/ or reproductive health/ or exp women's health/ or maternal health/ or exp Maternal Health Services/ or maternal welfare/)	(mother* or mum* or mom* or women* or woman*) adj2 (group* or class* or circle* or club* or committee or facilitat* or meeting* or program*) AND (antenatal or bub* or baby or babies or prenatal or maternal or playgroup* or play or birth* or child* or infant* or neonat* or newborn* or pregnan* or postnatal) OR (antenatal or bub* or baby or babies or prenatal or maternal or playgroup* or play or birth* or child* or infant* or neonat* or newborn* or pregnan* or postnatal) adj2 (group* or class* or circle* or club* or committee or facilitat* or meeting* or program*) AND (mother* or mum* or mom* or women* or woman*)	(((MH 'Women') OR (MH 'maternal welfare') OR (MH 'Mothers+') OR (MH 'Reproductive Health') OR (MH 'Women's Health')) AND ((MH 'Child') OR (MH 'Child welfare') OR (MH 'Child, Preschool') OR (MH 'Infant') OR (MH 'Child Health') OR (MH 'Child Health Services'))) OR (MH 'Maternal-Child Health') OR (MH 'Maternal-Child Welfare')
Participatory women's groups	community health services/ or community networks/ or community participation/ or Stakeholder Participation/ or exp Peer Group/ or Self-Help Groups/ or Group processes/ or group structure/	AND (stakeholder* or community or network* or peer* or self-help) AND (participat* or empower* or engag* or involv*)	(MH 'Support Groups') OR (MH 'Group Processes') OR (MH 'Peer Group') OR (MH 'Community Networks') OR (MH 'Community Health Services') OR (MH 'Community Role') OR (MH 'Consumer Participation') OR (MH 'Stakeholder Participation')

CINAHL, Cumulative Index to Nursing and Allied Health Literature; MH, maternal health; MeSH, Medical Subject Headings.

a checklist adapted from Haldane *et al*[14] to address meta-bias and compare across studies.

Data extraction

All resources obtained through our search of databases, websites, reports and other sources will be imported into EndNote and duplicates removed. All publications that meet the inclusion criteria from title and abstract review or those that cannot be excluded will have the full text retrieved. Full-text review will involve two team members independently reviewing the full text of the paper. Any discrepancies will be resolved by discussion or arbitration by a third team member. The quality appraisal and data extraction for full text included articles will be divided up and completed by four reviewers. Approximately 20% of each reviewer's data extraction and quality appraisal will be checked by another reviewer for consistency. Any discrepancies will be resolved through consensus-based discussion or a third reviewer.

Two reviewers will contact authors, research groups and PWGs to obtain grey literature or internal, reports, field notes and any extra publicly available data that cover processes or mode of working of community-based PWGs.

The following data extraction categories will be incorporated into an Excel spreadsheet:

- Study details (author, year of publication).
- Country and community.
- Context: type of health service and the political, institutional and community factors affecting the PWG.
- Initiator of the PWG, reasons for group emerging and length of time operating.
- PWG processes including style of facilitation, membership, decision-making and relationships.
- Any theoretical or conceptual base to the study.
- Assessment of the conceptual approach to participation: contributions, instrumental, empowerment or developmental.[15]
- Level of evidence or quality of study based on Joanna Briggs approach.

Table 2 Inclusion and exclusion of studies

Inclusion criteria PICO headings	Inclusion	Exclusion
Population	Studies involving community women's groups in any country.	Studies that do not involve a community women's group or groups that also include men.
Intervention	A programme/ intervention involving any aspect of community women's group planning, acting, learning and reviewing MCH improvements.	Studies in which women's groups are not involved in any aspect of planning, acting, learning and reviewing MCH care.
Outcome	Studies reporting PWGs were a component of (1) MCH outcomes or (2) improvements in the quality of MCH care or (3) improvements in socioemotional well-being of mothers and/or children.	No reporting of (1) MCH outcomes or (2) improvements in the quality of MCH care or (3) improvements in socioemotional well-being of mothers and/or children.
Context	The primary focus of interventions must be in community-based or primary healthcare settings.	Hospital or tertiary settings except where planning might be initiated in a hospital, but the women's group actions take place in a community.
Process	Includes some description of the process of participatory women's groups or any factors influencing the process.	No description of process or factors influencing process.
Time period	All time periods.	N/A
Language	English	Languages other than English.
Study design	All types of quantitative and qualitative study designs involving primary research and data collection.	Expert opinion pieces, letters (unless they include data), editorials, systematic reviews.

MCH, maternal and child health; N/A, not applicable; PICO, Population, Intervention, Context and Outcomes; PWG, Participatory Women's Group.

- Participatory women's group maternal and child health, quality of healthcare or socioemotional well-being outcomes.

Data synthesis

Strategy for data synthesis

To answer the review questions, we will use dimensions of participation framework developed by Cohen and Uphoff.[16]

The dimensions for synthesis will include:

- What type of participation? The kinds of participation in decision-making, implementation, evaluation and planning will be assessed. In addition, the time-point at which participation occurs and the frequency of participation will be included.
- Who participates? This heading will include themes about participants including their location in the community as local residents, local leaders, health professionals or other agency personnel. The diversity dimensions of the group will be examined, for example, 'representativeness' of different cultural or interest groups.
- How the process of participation takes place? This includes style of facilitation, the initiator and sponsor of the PWGs, the levels of involvement, empowerment process, extent of task accomplishment, motivations and the sustainability of the group.
- The contextual issues that affect the participatory women's group. Themes here will show the health service, political, institutional, organisational or community structural issues that affect the PWGs.

The themes will be examined to answer the research question 'how and why do PWGs improve MCH?'

Ethics and dissemination

As only secondary data will be analysed; ethical approval is not required.

The results of this study will be disseminated to participating organisations, and findings will also be written as a systematic literature review and submitted to a peer-reviewed journal for publication and as an abstract for presentations at relevant national conferences. The findings from this review could identify potential factors that lead to successful interventions or barriers to the successful implementation of PWG programme to improve MCH and how these might apply in different settings. In this way, review findings may also serve as a policy guide to the design and implementation of effective PWG strategies in a variety of settings.

The systematic review will fill a gap in the literature in understanding what is known about the mechanisms by which PWGs exert their effect in a range of different settings and the ways in which local contextual factors might influence how they work. Outcomes will be used to inform the development of the WOMB study. Specifically, it will help develop our methodology for exploring how and why various components of the PWG intervention exert any effects and indicators of how the intervention works to deliver outcomes.

Author affiliations
[1]School of Health, Medical and Applied Sciences, Central Queensland University, Townsville, Queensland, Australia

[2]College of Medicine and Dentistry and Anton Breinl Research Centre for Health Systems Strengthening, James Cook University, Townsville, Queensland, Australia
[3]Library and Information Services, James Cook University, Townsville, Queensland, Australia
[4]Mt Isa Centre for Rural and Remote Health and Anton Breinl Research Centre for Health Systems Strengthening, James Cook University, Mount Isa, Queensland, Australia
[5]South Australian Health and Medical Research Institute, Adelaide, South Australia, Australia
[6]College of Medicine and Dentistry, James Cook University, Townsville, Queensland, Australia
[7]College of Medicine and Dentistry and Anton Breinl Research Centre for Health Systems Strengthening, James Cook University, Cairns, Queensland, Australia
[8]Queensland Aboriginal and Islander Health Council, Brisbane, Queensland, Australia
[9]University Centre for Rural Health, School of Public Health, The University of Sydney, Lismore, New South Wales, Australia
[10]Centre for Social Impact, Swinburne University of Technology, Melbourne, Victoria, Australia

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Contributors RP, SR, JT, KCan and KCar initiated and designed the study. RE, CF-B, SL, MR-M, NNT, LY, ES, JF and MP participated in study design. RP, SR and JT drafted the manuscript. All the authors contributed to the revision of the manuscript and approved the final version.

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