Barriers and facilitators to preconception care implementation and provision in low-and-middle income countries: a systematic review of qualitative evidence

Background

Preconception care (PCC) consists of interventions and services provided to individuals or couples during their reproductive years prior to the first or subsequent conception to optimize their health and well-being, to improve pregnancy outcomes and the future child's health (WHO, 2013; Khekade et al., 2023). In Ghana, notable preventable adverse pregnancy outcomes, for example, maternal deaths, are attributed to hemorrhage, hypertensive disorders, obstetric complications, and abortions (GSS, GHS, ICF, 2018) could be reduced with PCC.

Using Ghana, a low-and-middle income country (LMIC) as an example, the country has seen significant declines in its Maternal Mortality Ratios (MMRs) over the decades, from 310 (GSS, GHS, ICF, 2018) to 263 (WHO, 2023) per 100,000 live births in 2017 and 2020, respectively. These, however, fall short of the Sustainable Development Goal (SDG) target 3.1 of less than 70 maternal deaths per 100,000 live births by 2030 (Save the Children/ Healthy Newborn Network, 2024). Ghana has observed a decline in neonatal mortality rates from 25 (GSS, GHS, ICF, 2018) to 21 (UNICEF, 2024) per 1,000 live births in 2017 and 2022, respectively. Under-five mortality rates have also declined from 52 (GSS, GHS, ICF, 2018) to 42 (UNICEF, 2024) per 1,000 live births in 2017 and 2022, respectively. These indicators are still far from the SDG target 3.2 on neonatal and under-five mortality, 12 and 25 deaths per 1,000 live births (United Nations [UN], 2023). Member states of the UN are required to strive towards improving maternal and child health outcomes, which are key global health objectives of the SDGs (UN, 2023).

Though its adequate provision is known to improve conception rates, pregnancy outcomes, and child health (Stephenson et al., 2018), PCC is one of the “most neglected” maternal and child health (MCH) interventions (Bialystok, Poole, and Greaves, 2013) in LMICs. Preconception care delivery is not available to most in LMICs, it is known to improve maternal and newborn outcomes, and ultimately improve the outcomes of SDG targets 3.1 and 3.2 – based on these premises, our review seeks to synthesize relevant contextual evidence to facilitate its implementation and provision. A preliminary search across the JBI ES, Cochrane Library, PROSPERO and PUBMED among others produced no such review in publication.

Objective

To synthesize the available evidence on barriers and facilitators that influence implementation and provision of preconception care by the healthcare system in low-and-middle income countries.

Inclusion criteria

Population – The review will include studies focusing on healthcare system actors and women of reproductive age.

Phenomenon of interest – The review will consider studies that report on the experiences of implementating or providing any variants of preconception care.

Context – The review will consider studies that were carried out in the community or in health facilities in LMICs

Types of studies – The review will primarily consider studies that are qualitative in nature including, but not limited to, methodologies such as action research, ethnography, feminist research, grounded theory, and phenomenology. Mixed methods studies that contain relevant information presented in a qualitative form will be included in the review.

Methods

The review will be in accordance with the JBI methodology for systematic reviews of qualitative evidence. (Lockwood et al., 2020)

Search strategy

The three-step search strategy will be employed to locate both published and unpublished studies. MEDLINE (PubMed) and CINAHL (EBSCO) will be initially searched to identify articles on the topic. Secondly, a full search strategy adapted for each of the relevant databases will be developed employing text words and index terms in the titles and abstracts of earlier identified articles. Finally, the reference list of articles selected for inclusion in the review after appraisal will be screened for additional studies.

Studies published in the English language from 1990 will be included. Preconception care as a concept evolved in the early 1990s (Freda, Moos, and Curtis, 2006).

The databases to be searched include MEDLINE, CINAHL, SCOPUS, Public Health Database, Maternity and Infant Care, PsycINFO, EMBASE, Web of Science.

Unpublished studies will be search across the following sites WHO library, Google scholar, Social Science Research Network and ProQuest Open Access Dissertations and Theses (PQDT).

Study selection

Citations of all identified studies from the search will be collated and uploaded into the EndNote version 21 referencing software and duplicates removed. The citations will now be uploaded into the JBI SUMARI from where title and abstract followed by full-text screenings will be performed by two independent reviewers. Reasons will be provided for papers excluded after full-text screening and reported in the systematic review. Disagreements that arise during screening will be resolved through discussion, or with an additional reviewer. The results of the search and screening process will be reported in

full in the final systematic review and presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) flow diagram.

Assessment of methodological quality

Two independent reviewers will critically appraise eligible studies from the full-text screening for methodological quality using the standard JBI Critical Appraisal Checklist for Qualitative Research (Munn et al., 2019). Where necessary, authors of papers will be contacted for additional information. Disagreements in the appraisal process will be resolved through discussion, or with the help of a third reviewer. Critical appraisal results will be reported in a table and narrative form.

All studies, regardless of the results of their methodological quality, will undergo data extraction and synthesis. Results of the critical appraisal will be employed in assessing the confidence of findings.

Data extraction

Two independent reviewers will extract data from critically appraised studies using the standardized JBI data extraction tool (Munn et al., 2019). The data extracted will include specific details about the populations, context, culture, geographical location, study methods and the phenomena of interest relevant to the review objective. Qualitative findings, and their illustrations, will be extracted verbatim and assigned a level of credibility. Disagreements that arise between the reviewers will be resolved through discussion, or with the help of a third reviewer. Authors of papers will be contacted to request missing or additional data, where required.

Data synthesis

Findings will be pooled using JBI SUMARI with the meta-aggregation approach. Only unequivocal and credible findings will be included in the meta-aggregation.

Assessing the confidence of findings

The final synthesized findings will be graded as per the ConQual approach for establishing confidence of qualitative research synthesis and presented in a Summary of Findings table with narrative.

Anticipated outcomes

Synthesized evidence on barriers and facilitators to implementation and provision of preconception care in LMICs. This will draw attention to contextual issues including barriers and facilitators influencing preconception care implementation and provision in low- and middle-income countries. These would guide policies, and interventions to incorporate the approach into relevant maternal and child health programs and services in LMICs.

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