



Non-Medical Determinants of Access and Quality of Maternal Health Services in India—Protocol for a Scoping Review

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Abstract

Introduction The Maternal Mortality Rate (MMR) is one of the most important health indicators of a country. In India, MMR has decline from 130 to 113 per 100,000 live births between 2014 and 2018, however, there are wide disparities in utilization of maternal health services (MHS) among different states and across different socioeconomic groups within the states. Although the government is providing MHS through various health programs in India, there are several non medical factors leading to the underutilization of MHS services.

Objective To map and summarise the non-medical determinants of access and quality of MHS in India.

Methods We are conducting a scoping review of the published literature from 2000 till date in databases such as PubMed, Cochrane, Science Direct and CINAHL by including eligible qualitative as well as quantitative studies conducted in India. Data extraction and analysis will be conducted through a narrative integrative synthesis approach to summarize the non-medical determinants of access and quality of MHS in India and understand their mechanisms of influence.

At the third SPINE20 summit 2022 which took place in Bali, Indonesia, in August 2022, 17 associations endorsed its recommendations.

Results We will summarise the non-medical determinants that influence the access and quality of MHS.

Conclusion This scoping review would help to understand and summarise the existing non-medical determinants of access and quality of MHS, highlight the research gaps and suggest potential modalities for improvement of access and quality of MHS.

Keywords Non-medical determinants · Maternal health services · India · Social determinants · Scoping review

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Introduction

The maternal mortality rate (MMR) is considered one of the significant health indicators of a nation whose etiological factors are preventable and treatable. Globally, MMR has shown a 38% reduction, i.e. from 342 to 211 per 1 lakh live births between 2000 and 2017 [1, 2]. Nevertheless, reducing MMR remains a great hurdle for low–middle-income countries [3] that are contributing to 94% of maternal deaths [1]. Young adolescent pregnant women, i.e. women of age 10–14 years, are at higher risk of complications and death [1].

In India, MMR has been reduced from 130 in 2014–2016 to 113 per 1 lakh live births in 2016–2018 as per the Sample Registration System [4]. In 2015, one-fifth of the global maternal deaths occurred in India; however, there was a huge disparity in inter- and intra-state deaths. For instance, Assam, Uttar Pradesh and Rajasthan (northern states) have

recorded more maternal deaths than Kerala and Tamil Nadu (southern states). Similarly, a huge disparity was reported in the utilization of maternal health services among different states and across different socio-economic groups within the states. For example, institutional deliveries are recorded more in states like Kerala and Puducherry, i.e. 99.4 and 99.0%, respectively, whereas Jharkhand, Chhattisgarh, Meghalaya and Uttar Pradesh recorded low institutional deliveries: 17.7, 18.0 and 24.5%, respectively [5].

Maternal health mainly includes health during preconception, pregnancy, childbirth and the post-partum period [5]. It is a known fact that basic maternal health services could prevent most of maternal deaths. Nevertheless, socio-economic disparities exist in the utilization of maternal health services. Studies reported that women's literacy, household income, age, caste, religion and age at marriage are key determinants of maternal health. Women belonging to marginalized social strata were reported to show poorer utilization of maternal health services. It is also reported that social determinant's interactions at the micro-level generate a difference in healthcare utilization significantly [6].

Literature recommends exploring more about the sub-categories among social determinants of health status and behaviour, to identify the need and set more accurate targets, which may aid in enhancing the efficiency of healthcare utilization promotion programmes [6].

The most common cause of maternal deaths is reported to be haemorrhage contributing 38% of deaths followed by 11% due to sepsis, and 5% due to obstructed labour. These can be prevented easily through proper utilization of antenatal care, institutional delivery and post-natal care to improve maternal mortality and morbidity. Studies conducted in India reported that determinants like socio-economic and service delivery settings influence the utilization of maternal health services. It is supported by a study conducted in India where institutional deliveries were reported to be only 13% among women belonging to low wealth quintiles [7]. Another study conducted in India used the "Three Delay" model pertaining to the emergency obstetric care to identify the sociocultural barriers associated with maternal death and observed that type-1 (delay in seeking care) and type-2 (delay in reaching first-level health facility) delays were major contributors to maternal mortality. Type-1 delays include lack of awareness regarding danger signs, illiteracy and ignorance, delay in decision making, no birth preparedness, beliefs and customs, and non-availability of healthcare professionals. Type-2 delays are reported as delay in getting transport, delay in mobilizing funds and not reaching the appropriate facility on time. Type 3 delays (delay in receiving adequate care in the facility) were delay in initiating treatment, substandard care in the hospital, and lack of blood, equipment and drugs [8].

Utilization of maternal health services is also said to be influenced by the disparities in the facilities and providers

between urban and rural settings. Other vital challenges to delivering maternal health care are facility and money, absence of clinical care guidelines, under-utilization of clinical care and provider vacancy. Therefore, it is recommended to provide patient-centred healthcare for improved psychological health, better curative services and efficient healthcare utilization. Although studies reported high levels of patient satisfaction in the utilization of health services, provided through patient-centred healthcare, it has come up with certain barriers at the provider level, facility level and systems level. At the provider level, patients are facing challenges in obtaining appropriate information regarding treatment, and a lack of empathy, respect and compassion from healthcare providers. A few women also reported slapping and pinching by attending medical staff (nurses, ANM, clinicians, etc.), who attended delivery, in response to their screaming. At the facility level, patients documented a lack of privacy, inadequate amenities and overcrowded rooms in public sector facilities which would demoralize the patient/women in utilizing maternal health services. At the system level, often healthcare services are not focused on Indian population needs, as these are adopted from the healthcare system of western countries. Hence, marginalized groups, minorities and youth are neglected and these populations do not show a willingness to visit health facilities for utilization of health services. Experts also informed that inadequate resources (manpower, infrastructure, time and supplies) are barriers to patient-centred health care to meet the growing healthcare needs [9].

The current review aims to summarize the different types of non-medical determinants that are identified in the literature in the Indian context. This may help us to understand the gaps in the current maternal healthcare services available in India and also helps us to plan strategies to overcome the barriers. Future studies may be planned based on the findings of this scoping review of literature.

Research Question

The research question of this scoping review is "what are the Non-medical determinants that affect the access and quality of maternal health services provided in India?"

Objective

To map and summarize the non-medical determinants of access and quality of maternal health services in India.

Methodology

This protocol is for a systematic scoping review of literature reporting on non-medical determinants of access and quality of maternal health services available in India.

A scoping review method was selected as it aims to outline different types of evidence in the area of interest and identify the gaps for further research. The proposed review will be guided by the methodological framework proposed by the Joanna Briggs Institute's manual for scoping reviews [10]. Thus, the following five steps will be followed in this scoping review: (1) Author information, (2) Developing the title, objective and question, (3) Background, (4) Inclusion criteria, (5) Search strategy, (6) Extraction of the results and (7) Presentation of results. This protocol is registered through the Open Science Framework (OSF) (<https://doi.org/10.17605/OSF.IO/M84ZJ>).

Selection of Eligible Studies

Title and abstract screening will be guided by the population concept context (PCC) framework (Table 1). The studies will be included based on the eligibility criteria relevant to the research question.

Inclusion Criteria

- Studies published on women who sought maternal healthcare services (antenatal, perinatal and immediate post-partum).
- Both qualitative and quantitative studies as well as mixed method studies conducted at the country level, state level and district level in India.
- Quantitative studies include cross-sectional study, case-controlled or retrospective studies, cohort studies or longitudinal study, experimental studies (like RCTs, non-randomized or quasi) that determined factors influencing the utilization of maternal health services, in terms of access and quality, in India.
- Qualitative studies that explored factors influencing the utilization of maternal health services, in terms of access and quality, in India
- Multi-centric studies conducted globally where Indian data is published on maternal healthcare services.

Exclusion Criteria

- Publications that do not include study participants of interest.
- Studies where full-text articles are not available.
- Studies published in non-English languages.
- Studies published before 2000.

Search Strategy

The search strategy for scoping review will be comprehensive to identify both published and unpublished (grey literature) literature, primary studies as well as reviews. The current scoping review will consider published articles from three different databases like PubMed, Science Direct, Cochrane and CINAHL.

We have divided the objective into four key concepts— Concept-1: Non-medical determinants; Concept-2: Quality of services Concept-3: Maternal health services; and Concept-4: India. Further, the Medical Subject Headings (MeSH) terms used in the search strategy are (i) "Quality of Health Care"[Mesh], (ii) "Maternal Health Services"[Mesh] and (iii)"Quality of Health Care"[Mesh]. Synonyms or keywords used for concept 1 are "Non-medical determinant" OR "social determinant"; for concept 2 are "standard" OR "grade" OR "nature", and for concept-3 are "antenatal care" OR "maternal health care" OR "obstetric care" OR "maternal health". The search strategy was piloted and further validated by an external expert (librarian) for the appropriateness of keywords with respect to each database.

The refined search strategy is "maternal health" OR "maternal health care utilization" OR "maternal health services" OR "reproductive health" OR "antenatal care" OR "postnatal care" OR "skilled delivery" OR "skilled attendance" AND "Nonmedical determinant" OR "social determinant" OR "non-medical determinants" OR education OR cast OR ethnicity OR religion AND "Quality of Health Care"[Mesh] OR standard OR grade OR nature AND India.

The electronic database search will be recorded in a table as given in Table 2.

The detailed search strategy results will be portrayed in a Preferred Reporting Items for Systematic Review and Meta-Analyses extension for scoping review

Table 1 Population concept context framework

Criteria	Determinants
Population	The population of this study will be women who are seeking maternal healthcare services (antenatal, perinatal and immediate post-partum)
Concept	Quality and access to maternal healthcare services (antenatal, perinatal and immediate post-partum)
Context	Indian context The current review focuses mainly on studies conducted in India

Table 2 Electronic database searches

Database used	Search terms	Where	Keywords	Date of search	Number of studies retrieved
PubMed	Search: (((((((("maternal health*" [tw]) OR "maternal health care utilization*" [tw]) OR "maternal health services*" [tw]) OR "reproductive health*" [tw]) OR "antenatal care*" [tw]) OR "postnatal care*" [tw]) OR "skilled delivery*" [tw]) OR "skilled attendance*" [tw])) AND (("Nonmedical determinant*" [tw] OR "social determinant*" [tw] OR "non-medical determinants*" OR (education*[tw] OR cast*[tw] OR ethnicity* [tw] OR religion))) AND ("Quality of Health Care"[Mesh] OR standard*[tw] OR grade*[tw] OR nature*[tw])) AND (India)		Text word		

(PRIMA-ScR) flow diagram in the concluding scoping review. Initially, the titles and abstracts will be screened by two independent reviewers according to the desired criteria to decide whether the study should be included in the scoping review or not. Subsequently, full-text articles of all the included studies will be retrieved. If full text is not freely available, all attempts will be made to contact the corresponding authors. Two independent authors will review the full texts of all included studies, separately, based on the inclusion criteria. Reasons for exclusion of studies in the scoping review will be documented. A consensus will be made through a discussion regarding any discrepancy in the inclusion of studies. If consensus is not made, then an opinion of the third reviewer will be obtained on the same. All the articles that meet the eligibility criteria will be uploaded and processed into Eppi reviewer software and Microsoft Excel after removing the duplicates.

Charting of Results

Extraction of results will be performed using the data charting form. The charting form may be further modified and revised during the review stage/data extraction according to the driving need of the scoping review. A narrative report will be produced to summarize the extracted data. For the current scoping review, extracted data from each eligible study will include the fields listed in Table 3.

The reference lists of the included studies will be screened for their titles, abstracts and full texts based on the current scoping review inclusion and exclusion criteria.

Presentation of the Results

The study maps the existing evidence available on the non-medical determinants of maternal health services and will summarize the findings identified in a diagrammatic or tabular form, as applicable or as narrative synthesis.

Table 3 Data charting form

S. no	Data charting form	
1	Author(s)	
2	Title of the study	
3	Year of publication	
4	Country of origin	
5	Aim/Purpose of the study	
6	Study population	
7	Sample Size	
8	Study design	
9	Data collection methods	
10	Data analysis	
11	Conclusion	
12	Outcome	Study findings relevant to the study objective
13	Most relevant findings	Identification of non-medical determinants of maternal health services
14	Comments	

Conclusion

The current scoping review would help us to map the various determinants that affect the access and quality of maternal health services in India. It would also point out the gaps in knowledge and propose strategies or recommendations on interventions required to enhance maternal health services quality and access. Based on the literature available, primary research may be initiated on implementation gaps identified. This important information will help us improve the sustainable maternal health services in India.

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Authors Contributions YPK, APS and AS contributed to development of protocol, PP contributed to literature search, and APS and RAG revised and provided suggestions. All authors have read and approved the final manuscript.

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Declarations

Conflict of interest The authors declare no conflict of interest.

Ethical Statement This article does not contain any studies with human or animal subjects performed by any of the author's.

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