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Antenatal Care and Birth-Preparedness among Rural Women in Bihar

Ayush Vardhan

PGDM Student, International Institute of Health Management Research, New Delhi, India

ABSTRACT

Background: The issue of maternal health is acute amidst rural Bihar, where the proportion of cases that lead to the use of antenatal care (ANC) and birth preparedness variables are lower than other countries and states.

Objective: This review article was conducted to conduct an examination on the association between ANC use and birth preparedness among rural women Bihar.

Methods: A search in PubMed Central and Google Scholar was performed whereby a literature review generated 676 records. Following the process of screening, 13 studies were to be synthesized in detail.

Results: Findings suggest that early ANC initiation is frequent but the results of covers and full visits of the service are suboptimal. ANC utilization is determined by education, socioeconomic status, mass media exposure and decision-making power of women. Culture, poverty, inadequate health infrastructure, and poor male engagement are significant obstacles towards ANC and preparedness. Although social programs that support women (i.e. Janani Suraksha Yojana (JSY) and Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)) have been established, there are still gaps in service quality, counselling and financial preparedness. The reinforcement of the position of frontline health workers (ASHAs and Anganwadi Workers) has demonstrated itself as a possible answer to enhancing the Awareness of danger signs and institutional deliveries.

Conclusion: ANC use greatly benefits birth preparedness through planning of safe delivery, facilitating safe delivery transportation, financial preparedness and managing complications. Structural and cultural barriers need to be overcome through locally structured, community based, preventive implementation to enhance maternal health problems in rural Bihar.

Keywords: Antenatal Care, Birth Preparedness, Complication Readiness, Maternal Health, Rural Bihar.

Address for correspondence :
Ayush Vardhan, PGDM Student, International Institute of Health Management Research, New Delhi, India
Email: avardhan399g@gmail.com
ORCID ID: https://orcid.org/0009-0009-2245-1420

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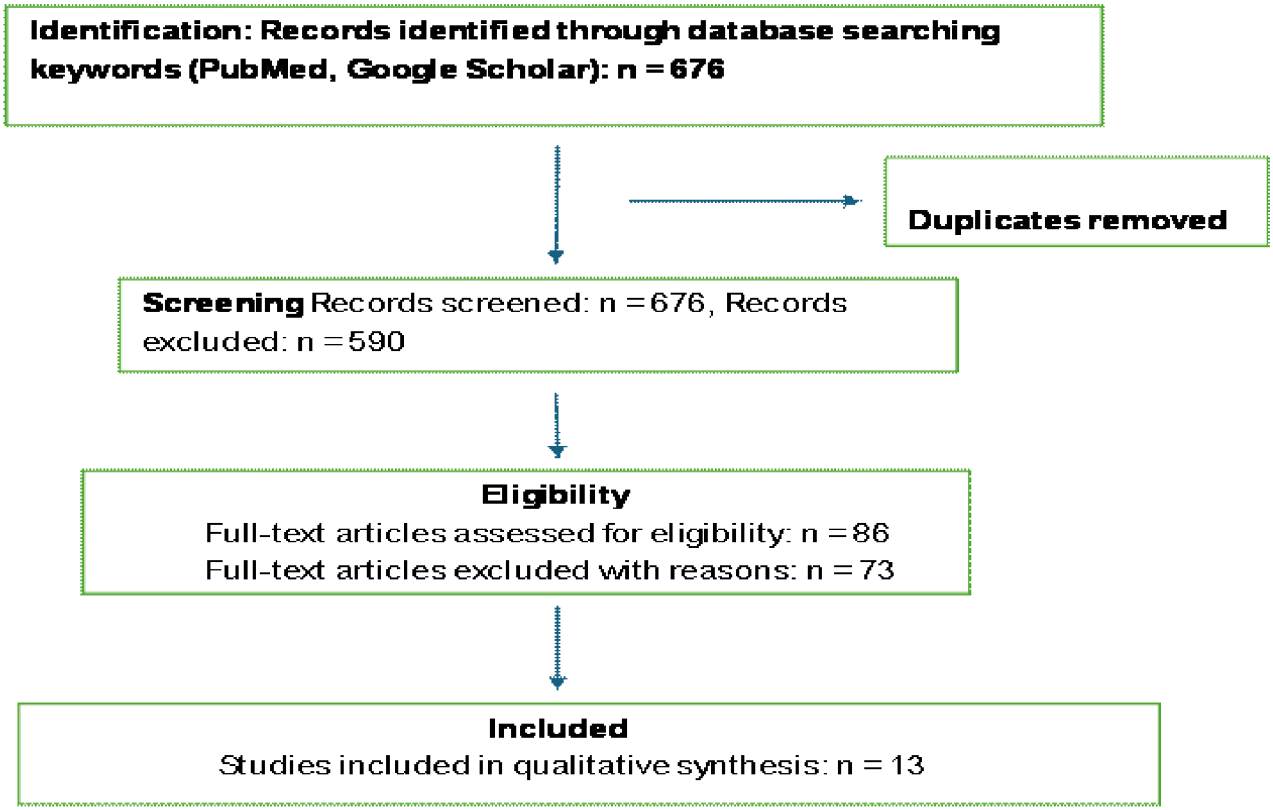
BACKGROUND:

In most of India, improving maternal health remains a challenge, particularly in rural and underdeveloped areas like Bihar. Childbirth and pregnancy can lead to poor pregnancy outcomes that can be hazardous, but risks may be minimized if there are proper healthcare services and preparations (1). Birth Preparedness and Complication Readiness (BPCR) and Antenatal Care (ANC) are two crucial steps in ensuring mothers' safety and well-being. Antenatal care includes regular medical check-ups of pregnant women. Supplying of the necessary supplements such as iron and folic acid, health counselling, necessary tests such as blood pressure tests, blood and urine tests, and assisting in the early diagnoses of complications (2). Ideally, all expectant mothers' ought to have atleast four ANC visits, yet in some of the states such as Bihar, most of the women get none or at most of subpar services (3). Only 9% of pregnant women in Bihar were receiving full ANC, or at least four agents, checking blood pressure, and testing blood and urine and taking iron-folic acid supplement (2). Comparatively, other, more developed states such as Kerala have much better coverage (4). Some of the factors that led to the low coverage in Bihar include a shortage of medical personnel, inadequate health facilities, long journeys by women to the clinics, and the lack of awareness of the women on the importance of ANC (4). Birth preparedness and complications readiness or BPCR is planning a safe birth with dealing to emergencies that might arise during pregnancy. This involves the choice of a local delivery centre, logistics, lowering the delivery costs, finding someone to be with the woman during labour and delivery, and guarding against any red flags. Females who have good ANC would be expected to be enlightened of these processes and prepare accordingly. According to research studies carried out in other regions of India, good ANC and increased birth preparation are tightly linked (5).

Early antenatal care (ANC) and regular checkups make a woman more likely to save money, choose a safe place to get deliveries and be ready to use the emergency services (6). The rural and underdeveloped regions record even a lower percentage of women who are well prepared to have a child compared to the rest of the country (7). ASHA workers, in other words, the community health workers, also play a big role in enhancing ANC and BPCR (8). When FLW counsel jointly with pregnant women, attendance at check-ups improves and there is increased knowledge on birth planning (9). Still, there are numerous obstacles (10). Many women face barriers to timely and comprehensive care, including low educational attainment, cultural beliefs, poverty, gender inequality, and a lack of decision-making authority (6). Poor pregnancy outcomes in women in rural Bihar occurred mostly due to poor access to quality antenatal care (ANC) and poor birth planning. Deficiency of good-quality ANC services, as well as insufficient preparation in connection to childbirth remained to be the key determiners of low outcomes during pregnancy in the area. Bihar was an exceptionally socio-economically disadvantaged state in India where maternal health indicators metrics like full ANC coverage, institutional deliveries, and emergency preparedness were found to be significantly lower than at the national level (NFHS-5, 2021). This had been underscored in previous research that had pinpointed the critical role of ANC in psycho-practically preparing the organizations and families regarding childbirth. ANC was demonstrated to help to achieve health literacy, screen high-risk conditions early, and motivate people to seek health (WHO, 2016). Nonetheless, a substantial number of women in rural Bihar could not obtain full and/or untimely ANC due to various factors, such as illiteracy, poor healthcare facilities, deeply held cultural practices, and a lack of positive influence of the frontline health workers. Not only did these constraints deny women the care that is required throughout pregnancy, but it also led to avoidable maternal morbidity and mortality. Though ANC and birth preparedness had been studied in many settings, Bihar (rural) had isolated and few evidence collected. With the peculiarities of the socio-cultural and health system specifics of this area, it was essential to conduct research locally and make interventions practical. It is against this background that the current study attempted to determine the number and the quality of ANC services to women across rural Bihar,

specifically the timing, sufficiency and content of ANC visits. It also reviewed the level of birth preparedness, such as delivery facility choice, transport mode, financial savings, birth companion selection and birth danger indicators awareness. Moreover, the contribution of frontline health workers, particularly, ASHAs to ANC utilization promotion and encouraging birth preparedness practices at the community level were assessed by the study. The research aimed to produce evidence addressing the above questions so that implementation of interventions on maternal health is informed by the schemes, like the Janani Suraksha Yojana (JSY), Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA), and Ayushman Bharat Health and Wellness Centres. It was anticipated that the findings will support the presence of ASHA workers in maternal health promotion and support community health systems that are based in the community through local context-specific manners.



MATERIALS AND METHODS

Study Design

This research covers a systematic literature review in order to identify and examine the existing literature on the topics of antenatal care (ANC) and birth preparedness of women in rural Bihar.

Search Strategy

A comprehensive literature search was performed across multiple databases, including PubMed Central and Google Scholar, the search targeted English-language publications released between 2010 and 2024.

Keywords used:

((“Antenatal care”[All Fields] OR “ANC”[All Fields]) OR (“Birth preparedness*”[All Fields] OR “BPCR”[All Fields])) AND bihar[All Fields] AND (“2020/01/01”[PubDate] : “2024/12/31”[PubDate])

Included studies

The inclusion criteria were that they had to take place in rural Bihar or similar low-resource districts in India, or otherwise related socio-economic environment, as well as be concerned with women of reproductive age (15-49 years). The studies that were considered were those that had analysed the use of antenatal care (ANC) and/

or birth preparedness. Furthermore, only peer-reviewed publications or government reports that came up with a well-described methodology and results were included.

Screening and Selection Process

The MeSHterms I used are ((“Antenatal care” OR “ANC”) OR (“Birth preparedness” OR “BPCR”)). Search results were organized using Endnote reference manager. After duplicate removal, I found total 676 articles, out of which I selected 86 for my study and included 13 most relevant paper in my evidence table.

Data Extraction and Synthesis

A structured data extraction sheet was used to collect key details: author, publication year, study location, sample size, design, population characteristics, ANC and BPCR indicators, findings, and limitations.

RESULTS

Factors Influencing ANC Utilization:

A variety of socioeconomic and demographic factors influenced women’s utilization of antenatal care services. ANC services were found to be used by women who were exposed to the media, had

higher education levels, had more decision-making authority, and belonged to families with more money. Utilization was also enhanced by residency in Southern India. However, women from Central and Eastern India who lacked decision-making authority and income were less likely to use ANC services. The utilization of ANC services may rise because of women’s empowerment, education, and the elimination of financial obstacles.

Low Completion of Suggested ANC Visits:

Despite the fact that most of the women sought antenatal care (ANC) early in gestation period, a small proportion of women attended the four visits as advised. The level of institutional delivery was rather high; however, the awareness of women on the danger signs of obstetric crisis was still insufficient. There were no plans in the form of blood donations or a place to give birth. The level of education proved to be a critical factor of readiness to delivery and intrapartum complications.

ANC Quality and Perceived Gaps:

The quality of the services provided during antenatal was very heterogeneous. Although the surveys show that patients were generally satisfied, an independent assessment showed that there are considerable shortcomings in the services including pharmaceutical supplies and diagnostic equipment. These discrepancies were detected by incorporating data which was obtained in different modalities, such as the patient interview and facility audit. These results reveal the inadequacy of surveillance systems and funding to facilities in the rural areas.

Knowledge and Financial Planning:

Role of Knowledge and Financial Planning Proactive acquisition of knowledge related to obstetric danger signs associated with improved emergency preparedness in participants. Over half of them had been setting aside savings to deliver, and levels of knowledge of governmental financial assistance schemes were associated with high birth preparedness indices. Subsequently, creating awareness of these initiatives could have a beneficial effect on maternal health outcomes.

Obstacles to Birth Preparedness and Complication Readiness (BPCR):

Prenatal and postnatal preparedness was adversely affected by such factors as socio-economic deprivation, lack of awareness, and no access to services. Women said that they were not very informed about blood donation choices and state support initiatives. Less interaction of partners and dominant cultural ideologies also weakened the levels of preparedness. Community education and family involvement of ANC protocols are expected to alleviate such impediments.

Iron and Folic Acid (IFA) Supplementation:

Females who took more than 100 IFA tablets were less likely to die during pregnancy and childbirth.

Additionally, the study raised concerns about an increase in cesarean sections and inadequate anemia management. In rural settings, maternal and child survival can be improved by having skilled health care workers and improved monitoring.

Importance of Education and Past Experience:

BPCR was more common among educated older women who had previously delivered in an institutional setting. This indicates the impact that healthcare access and prior positive exposure can have on maternal behavior today.

Urban Influence and Technology:

More independent women, such as single mothers, were better prepared in urban populations. However, working women lacked time to prepare. Familiar (non-institutional) support such as family or traditional birth attendants was preferred. Health tools had potential for enhancing awareness and support.

Gaps in Knowledge and Partner Participation:

The majority of pregnant women and their partners were unaware of warning signs, particularly during the postpartum and newborn periods. There was a lot of money to be saved, but not many people chose a place to deliver or hired help with the labor before the baby was born. Partners who were educated were also more likely to participate. Male participation in maternal health must be enhanced.

Implications for Policy:

Even in more well-endowed regions such as Delhi, vulnerable women did not get proper ANC. However, increased access to primary care increased ANC utilization in previously underserved regions. It is absolutely necessary to boost government programs that provide primary health services.

CONCLUSION AND WAY FORWARD

This review describes that there are close interconnections between antenatal care (ANC) and birth preparedness that play a significant role in determining maternal health outcomes in rural Bihar. Although there are a few state programs and community-based efforts, the ANC coverage and quality is still not sufficient, something that limits the possibility of women planning the safe birth and possible complications. Power on households to choose, education of oneself and the power of socio-economic security were identified as important facilitators of both ANC utilization and birth preparedness whilst poverty and cultural access limits, poor health infrastructure and limited male engagement remained one of the main challenges to success. In the future, interventions are to help reinforced ANC in providing services through availability of medicines, diagnostic, and counseling services in communities. No less significant is the necessity to sensitize women and families about the significance of ANC, awareness of the danger signs, and advantage of delivering first babies in a facility, and spread the range of the financial protection programs such as Janani Suraksha Yojana (JSY) and Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA). To enhance community outreach, frontline health workers especially ASHA and Anganwadi workers should have continuous training, supporting supervision and performance rewards. Preparedness can also be enhanced by having more men engaging in the antenatal visits and the house-level planning. Secondly, the incorporation of mobile health (mHealth) systems has potential to introduce new contextual relevant solutions to enhance adherence and knowledge spread in the rural environment. By combating structural socio-economic limitations with transport vouchers, conditional cash transfers and community-based savings groups, it will also be critical. In the end, it should be noted that local, evidence-based, and culturally sensitive strategies need to be implemented to minimize maternal morbidity and mortality in Bihar and work towards practically reaching the national and global maternal health targets.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

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