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EVALUATION OF MATERNAL HEALTH SERVICES AND THEIR UTILIZATION IN URBAN AREAS OF ROHTAK, HARYANA

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Abstract:
Introduction: Pregnancy and childbirth are special events in a woman's life but during this period they are more vulnerable to disease and death. Every day, approximately 800 women die from preventable causes related to pregnancy and childbirth among which 99% of all maternal deaths occur in developing countries only.
Aims & Objectives: To assess utilization of antenatal, intra-natal and postnatal services provided in urban area of Rohtak and to study the socio-cultural practices during antenatal, intra-natal, postnatal period and aving a bearing on the same.
Material & Methods: A cross-sectional study was carried out among all women who delivered during the study period. Deliveries were traced down telephonically and with the help of Anganwadi worker and health workers they were interviewed using pre-designed pretested interview schedule. Categorical data was analysed using Chi square test.
Results: Mean age of mother at the time of first pregnancy was 22.6 $\pm$ 2.38 years. Majority (46.5%) of the women were registered in the first trimester. It also shows that about two-third of study population (67.8%) had more than four visits in the whole duration of pregnancy, 96.8% of deliveries were attended by skilled birth attendants out of them majority (82.7%) of deliveries were conducted by doctor.
Conclusion: There is a clear need for targeted interventions, strategies, and policies to address the identified limitations and enhance the accessibility, quality, and utilization of maternal health services in urban areas of Rohtak.

Keywords: Maternal, Health Services, Utilization

Introduction:

Pregnancy and childbirth are special events in a woman's life. But during this period they are more vulnerable to disease and death. The primary aim of antenatal care is to achieve, at the end of pregnancy, a healthy mother and a healthy baby.[1]
Every day, approximately 800 women die from preventable causes related to pregnancy and childbirth. 99% of all maternal deaths occur in developing countries. Adolescents face a higher risk

of complications and death as a result of pregnancy than older women. Skilled care before, during and after childbirth can save the lives of women and newborn babies.[2]

The WHO notes that in 2014 the major direct causes of maternal deaths globally were severe bleeding/haemorrhage (27%), infections (11%), unsafe abortions (8%), high blood pressure during pregnancy (pre-eclampsia and eclampsia) (14%), obstructed labour (9%), blood clots/embolism (3%) and pre-existing conditions (28%). Majority of these deaths can be prevented just by care during pregnancy, delivery and postpartum.[2]

The World Health Organization (WHO) recommends a minimum of four antenatal care visits. However, global estimates indicate that only about half of pregnant women receive this recommended amount of care. [3]

According to DLHS-3 75% mothers received any antenatal check-up and 45.3% had ANC check-up in first trimester. 51% of mothers had three or more antenatal check-ups and only 19% had full antenatal check-ups. Around 47% of mothers consumed 100 IFA tablets and only 18.8% of pregnant women in India had full antenatal care, which includes at least three visits for antenatal check-up, one tetanus toxoid (TT) injection received and 100 iron and folic acid (IFA) tablets or adequate amount of syrup consumed. [4]

According to National family Health Survey (NFHS-3), only 40.8% deliveries were institutional deliveries and less than half of the deliveries had access to skilled birth attendants. Urban average of complete utilization of antenatal care is 23.7%, where as in urban slums the complete utilization is 11%. [5]

Postnatal care has not received adequate attention until recently and National Family Health Survey (NFHS-III) records only a small percentage of children and women being visited by a health worker during the first month of life. Home Based Post Natal Care (HBPNC) programme in India was started in 2009 as Norway India Partnership Initiative (NIPI), provider includes Anganwadi Worker (AWW), Auxiliary Nurse Midwife (ANM) and the Medical Officers. [6]

In order to improve maternal and new born care there is an urgent need to educate and motivate not only the health workers but also the mother and family members. Co-ordinated efforts of government, health workers and community will definitely improve the status health of mother and newborn. With this view, the current study was planned **t**o assess utilization of antenatal, intra-natal and postnatal services provided in urban area of Rohtak and to study socio-cultural practices during antenatal, intra-natal, postnatal period and having a bearing on the same.

Material and Methodology:

A community based, descriptive cross-sectional study was conducted in an urban area of Rohtak to assess antenatal, intra- natal and postnatal care of pregnant women and the socio –cultural factors having a bearing on the same. All pregnant women who delivered during the study period were included in the study.

The population of the area as on March 31st 2012 was 23997(at the time of plan) and considering the birth rate of 17.2 per thousand population, 412 live births were expected during the study period. Therefore the minimum sample size of 412 pregnant women was proposed for the study.

A list of all pregnant women, who delivered, during the study period was made with the help of ANC registers available at the Urban Health Centers and with the help of Anganwadi workers. Those who agreed to participate were included in the study and an informed consent was taken. Deliveries were traced with the help of health workers, AWWs or telephonically. The families were visited within 43-45 days of child birth and the mother or caretaker was interviewed using a predesigned and pretested semi-structured interview schedule.

Data was coded and entered in SPSS Version -20 (Statistical Package for Social Studies) software and appropriate statistical tests were applied wherever applicable

Results

Majority (96%)of study subjects were Hindu by religion. Out of 426 study participants 46.7 % were of general category. Majority (54.9%) had 6-9 members in their household followed by 1-5 members (34.7%). Nearly two-fifth (40.4%)of study participants had a monthly family income of 10,000-20,000. Ninety one percent of study subjects were literate. Out of them 25.1% were educated upto senior secondary, 14.6% upto matric level and only 9.2 % were illiterate. Out of 426 subjects, 83.8 % were housewives while 16.2% were working women.

Majority (71.1%) of study subjects were of the age group 20-25 years at the time of first pregnancy followed by 25-30 years (18.1%) followed by 9.2% of less than 20 years. Only 1.6% had age $\geq$30 years at the time of first pregnancy. Mean age of mother at the time of first pregnancy was 22.6 $\pm$ 2.38 years. 44.1% of study subjects had parity two followed by 35.7% who had parity one and only 0.5% belonged to para five. Only 7.3% faced abortions during previous pregnancies.

Most (29.3%) of the women complained of swelling of hands and feet, followed by increase in blood pressure (20.7%), fever(21.2%) and others which constitute 13.4% include convulsions, oligomenorrhoea decreased foetal movements etc. 71.1% had history of anaemia during pregnancy. Among the anaemic mothers, 61.1% of study subjects had moderate, 32.0% had mild and 6.9% had severe anaemia.

Most (46.5%) of the women were registered in the first trimester. It also shows that about two-third of study population (67.8%) had more than four visits in the whole duration of pregnancy, while 32.2% had less than one visit. Education and category of women had significant association with number of antenatal visits.

Out of 426 pregnant women 84.7% had received two doses of tetanus toxoid injection while only 5% had not received a single dose of tetanus toxoid injection.

87.8% of women had received 100 days of IFA while only 35.2 % had taken 61-100 tablets and 27.5% did not take a single tablet during the whole pregnancy. Education of female and number of ANC visits was significantly associated with completion of iron folic acid therapy.

Majority (90.4%) were vaginal deliveries. Most of the deliveries (91.3%) were institutional deliveries and majorities (62.0%) of them were conducted in a government institute.

Majority (96.8%) of deliveries were attended by skilled birth attendants out of them majority (82.7%) of deliveries were conducted by doctor followed by Staff Nurses /ANM (8.7 %), trained dais (5.4%), untrained dais (2.1%) and 1.1% by relatives. Out of 426 delivered women 44(10.3%) had some type of intranatal complications during labour.

Most important (36.4%) complication during delivery was premature onset of labour followed by slow progress of labour (20.5%). Others constituted 15.8% of total complications and include entanglement of cord around neck, raised blood pressure/convulsion during delivery, bleeding etc.

Majority, 87.7% of mothers were discharged before 24 hours out of which 57.9% were discharged less than 12 hours. Only 12% were discharged after 24 hours and only 4.2% were discharged after 48 hours. Only 35.4% of study population were given home visits in post natal period. Majority 64.9% were given single post natal visits. None of the mothers and new borns were given more than 3 visits. Nothing specific information was provided in those mothers.

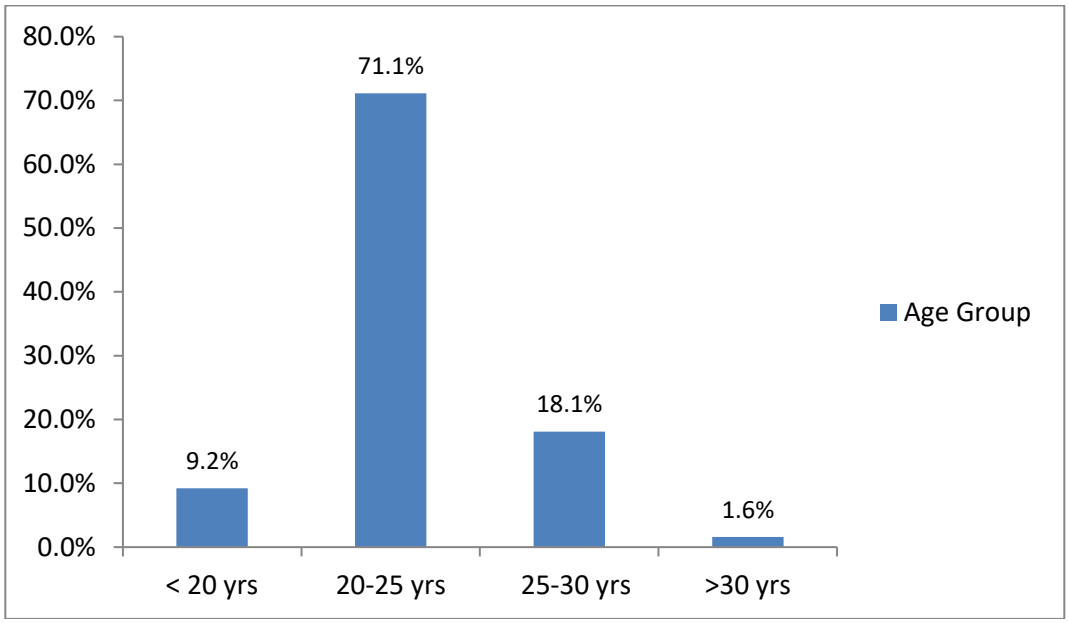

Figure 1: Distribution of study subjects according to age group at the time of first pregnancy

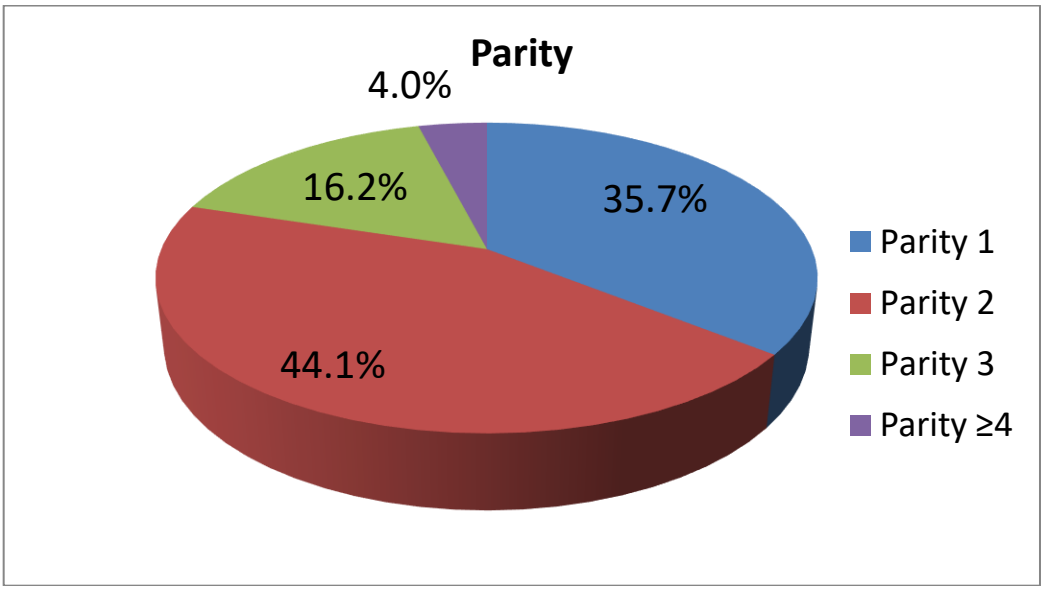

Figure 2: Distribution of study subjects according to Parity

Discussion

In our study 67.8% of women had four or more antenatal visits comparable to findings of NFHS 3 where 62.4% of urban mothers had four or more antenatal visits (NFHS 3).[5] According to World health statistics 2014, about 50% of women in India had four or more antenatal visits in 2013[7]. A study conducted in Belagum by Paudel et al also had similar findings (63.1%), although in rural areas[8] .

In our study 87.8% women received 100 days of IFA but 72.5% women had consumed it and among them only 21.1 % of women had completed their minimum 100 days course of IFA comparable to NFHS 3 in which only 23 % pregnant women completed minimum recommended course of IFA.[5] Thakur et al in their study among lactating mothers in a resettlement urban slums in Ganda Community in Chhattisgarh found that only 29 % mothers had completed their prescribed course. [9] A study by Roy et al in rural areas of Lucknow also found significant association of education of mother, timing of registration and number of antenatal visits with completion of iron folic acid course.[10]

The prevalence of anaemia observed in our study was 71.1%. Among the anaemic mothers, 61.1% of study subjects had moderate, 32.0% had mild and 6.9% had severe anaemia. In accordance with our study similar results were obtained in a study conducted by Kapil et al (78.8%) in three urban slums of Delhi.[11] Mahashabde et al in their study in a tertiary care institute reported overall prevalence as 63%.[12] Prevalence of severe anaemia was 7.0% and 4.1% by Viveki et al and Ranganathan et al almost comparable to our results.[13, 14]

In our study majority (91.3%) of deliveries were institutional while home deliveries were only 8.7%. Very high percentage of institutional deliveries was also reported by Kotecha et al (91.7%) and Rangnathan et al (99.4%) in accordance with our study. DLHS 4 also reported that 84.2% of deliveries were institutional in Rohtak which was comparable to our study.[15,14] Punia A in her study observed 74 % institutional and 26 % home deliveries in urban area of Rohtak.[16] Most common reasons cited for home deliveries in our study were; considered it not necessary (67.6%), economic constraints (59.5%) and better care at home (43.2%). In a study by Khan et al in two urban slums of Aligarh most common reason for home delivery was tradition (35.8%) followed by economic constraints (29.8).[17] According to DLHS-3, 34.4% of females stated that they did not consider it necessary to go to hospital for deliveries followed by economic constraints (21.0%) comparable to results of our study.[4]

Majority (62.0%) of institutional deliveries were conducted at government institutions. Similar results were obtained by More et al (61.0%) in their study in low income group population of Mumbai.[18] Khan Z et al also reported that out of the total woman who had institutional deliveries, majority (73.3%) preferred government institutes which was comparable to our study. [17]

In the present study 97% of deliveries were attended by skilled birth attendants out of which majority (82.6%) were conducted by doctors, 9.6 % by staff nurses, 4.5 % by trained dais, 2.1% by untrained dais and 1.2% by relatives. Our results were in accordance with DLHS 4 where 95.4% of deliveries were attended by SBA.[19] Koetcha et al also found that 96.6% of institutional deliveries were conducted by doctors. [15] In the study by Puri et al in Chandigarh 98.2% of deliveries were attended by SBA comparable to our findings.[20]

In our study prevalence of intra-natal complications was 10.3%. In our study prevalence of complications during delivery was very low as compared to some other studies. This might be attributed to different study methodologies and study settings. Other reasons might be high number of institutional deliveries and presence of skilled birth attendant in majority (97.0%) of deliveries.

Recommendations

1. **Enhance Accessibility of Services:**

- **Mobile Health Units:** Introduce mobile health units to reach remote and underserved areas within urban Rohtak, ensuring that pregnant women can access prenatal and postnatal care conveniently.
- **Transportation Facilities:** Improve transportation links to healthcare facilities to ensure that pregnant women can reach health centers easily, particularly during emergencies.

2. **Quality of Care:**

- **Training and Capacity Building:** Conduct regular training programs for healthcare providers to update their skills and knowledge in maternal health care, including emergency obstetric care.
- **Equipment and Infrastructure:** Upgrade and maintain essential medical equipment and facilities to ensure the provision of quality maternal health services.
- **Clinical Protocols:** Implement and enforce standardized clinical protocols and guidelines for maternal health care to ensure consistency and quality of care across all health facilities.

3. **Awareness and Education:**

- **Health Education Programs:** Organize community-based health education programs to raise awareness about the importance of maternal health care, early antenatal care, and birth preparedness among urban residents.

- **Counseling Services:** Offer counseling services for pregnant women and their families to address their concerns, provide information, and encourage the utilization of maternal health services.

4. **Financial Support and Incentives:**

- **Subsidized Services:** Introduce subsidized or free maternal health services for economically disadvantaged women to reduce financial barriers to accessing care.
- **Incentive Programs:** Develop incentive programs for healthcare providers to encourage them to offer quality maternal health services and improve patient outcomes.

5. **Community Engagement and Participation:**

- **Community Health Workers:** Train and deploy community health workers to promote maternal health services, identify pregnant women in the community, and facilitate their access to healthcare facilities.
- **Community Outreach Programs:** Organize community outreach programs and awareness campaigns to engage with the local community, address their concerns, and promote the utilization of maternal health services.

6. **Monitoring and Evaluation:**

- **Health Information System:** Establish a robust health information system to monitor the utilization of maternal health services, track maternal health indicators, and identify areas for improvement.
- **Feedback Mechanism:** Implement a feedback mechanism to collect feedback from pregnant women and their families about their experiences with maternal health services and use this feedback to make continuous improvements.

7. **Collaboration and Coordination:**

- **Intersectoral Collaboration:** Foster collaboration between healthcare providers, government agencies, non-governmental organizations, and community stakeholders to coordinate efforts, share resources, and improve the delivery of maternal health services.
- **Public-Private Partnerships:** Explore opportunities for public-private partnerships to leverage the strengths of both sectors and enhance the accessibility, quality, and utilization of maternal health services in urban Rohtak.

Limitations:

1. **Data Limitations:**

- **Incomplete Data:** The availability and quality of data on maternal health services utilization may be limited, making it challenging to assess the actual utilization rates and identify gaps in service delivery.

2. **Accessibility Challenges:**

- **Geographical Barriers:** Despite being urban areas, certain pockets of Rohtak may still face geographical barriers, making it difficult for pregnant women to access maternal health services timely.
- **Transportation Issues:** Inadequate transportation facilities and infrastructure may hinder pregnant women's ability to reach healthcare facilities, especially during emergencies.

3. **Quality of Care Concerns:**

- **Inadequate Infrastructure:** Some healthcare facilities may lack essential medical equipment, facilities, and trained personnel to provide quality maternal health services.
- **Human Resource Constraints:** Shortages of skilled healthcare providers and support staff may limit the capacity of health facilities to deliver timely and quality maternal health care.

4. **Socio-cultural Factors:**

- **Cultural Beliefs and Practices:** Deep-rooted cultural beliefs, traditions, and practices may influence pregnant women's and their families' perceptions and attitudes towards maternal health services, affecting their utilization.

- **Gender Norms:** Gender norms and inequalities may restrict women's autonomy and decision-making power regarding their healthcare needs and access to maternal health services.

5. **Awareness and Education Gaps:**

- **Lack of Awareness:** Limited awareness and knowledge about the importance of maternal health care, early antenatal care, and birth preparedness among urban residents may contribute to underutilization of maternal health services.
- **Inadequate Health Education Programs:** Insufficient or ineffective health education programs and counseling services may fail to address the informational needs and concerns of pregnant women and their families.

Conclusion

In conclusion, the evaluation of maternal health services and their utilization in urban areas of Rohtak, Haryana, reveals a complex landscape characterized by both opportunities and challenges. While there have been efforts to improve the accessibility and quality of maternal health services, several limitations persist, hindering the optimal utilization of these services by pregnant women in urban Rohtak.

Key findings from the evaluation highlight data limitations, accessibility challenges, quality of care concerns, socio-cultural factors, health system bottlenecks, awareness and education gaps, policy and governance issues, and external factors as significant barriers to the effective delivery and utilization of maternal health services.

Despite these challenges, there is a clear need for targeted interventions, strategies, and policies to address the identified limitations and enhance the accessibility, quality, and utilization of maternal health services in urban areas of Rohtak. Collaborative efforts involving healthcare providers, government agencies, non-governmental organizations, community stakeholders, and the local community are essential to overcome these barriers and improve maternal and neonatal health outcomes.

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