

Knowledge, Attitude and Practices regarding antenatal care services, its utilization and delivery practices among mothers (aged 15-49 years) in a Peri-Urban area of Delhi

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ABSTRACT

Antenatal care (ANC) is the care offered to pregnant mothers to ensure a healthy pregnancy and healthy babies. ANC has the potential to be one of the most effective health treatments for avoiding maternal morbidity and mortality, particularly in areas where women's overall health status is low. **Materials and Methods:** We conducted a community-based cross-sectional study in the peri-urban area of Qutub Vihar, Goyla Dairy, Southwest District, New Delhi between the period of June 2022 and August 2022 to explore the knowledge, attitude, and practices of mothers about ANC services and ANC utilization and delivery practices. **Results:** Out of the 121 study participants, about 34 of the mothers (28.1%) did not have any idea about antenatal check-ups whereas 47 of the mothers (35.5%) said 4 antenatal check-ups must be done during pregnancy. Roughly 93 mothers registered during the first trimester, 22 mothers registered during the second trimester, and just 7 mothers registered during the third trimester. Nearly 36 of the mothers went for 4 ANC check-ups during pregnancy whereas almost an equal number (34 mothers) went for 6 ANC check-ups. When mothers were asked about various danger signs during pregnancy which require referral to the hospital, only 12 mothers knew about emergency signs whereas 60 mothers were unaware of these, 98.2 percent of mothers received tetanus injections to prevent convulsions whereas 1.8 percent were not given injections during ANC check-up, 13.2 percent mothers did not consume IFA tablets during pregnancy whereas 86.8 percent taken medicines which were given during visits. **Conclusion:** The findings show that maternal knowledge is still an important factor in the effective utilization of antenatal services. The role of health workers in raising awareness about the significance of ANC and the danger signs of pregnancy among antenatal mothers in peri-urban areas should be strengthened.

Keywords: Antenatal care services, service utilization, mother health, pregnancy, and cross-sectional study.

INTRODUCTION

Every woman and adolescent girl should have access to quality healthcare services that will help them to survive their courteous pregnancy and childbirth as part of their satisfaction with their reproductive health, privileges, and living a dignified life [1]. The World Health Organization (WHO) envisions a world where "every pregnant woman and newborn receives quality care throughout the pregnancy, childbirth, and the postnatal period" [2]. ANC has a greater role in safe pregnancy and keeping the health of the mother in a healthy condition. Antenatal care (ANC) refers to the services provided to pregnant

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women in order to ensure a healthy pregnancy and newborn babies. ANC has the ability to be one of the most effective healthcare interventions for reducing maternal morbidity and mortality, particularly in areas where women's overall health is poor. The World Health Organization (WHO) recommends at least four prenatal visits, which include interventions such as tetanus toxoid (TT) immunization, infection screening, and treatment, and the detection of warning symptoms throughout pregnancy [3]. Within maternal deaths per 100,000 live births per year, lack of ANC contributes the most to the deaths of all mothers worldwide including in developed nations. WHO estimated that every day approximately 810 women died from preventable causes related to pregnancy and childbirth in 2017 worldwide. Most of these deaths (94%) occurred in low-resource settings, and most could have been prevented [4].

India has consistently tried to increase the indicators of maternal health including ANC services over a period through various policies and programmes. According to the most recent National Family Health Survey round five (NFHS 5) data, the proportion of Indian women aged 15-49 who received ANC increased from 84 percent in NFHS-4 (2015-16) to 94 percent in NFHS-5 (2019-2021), with 85 percent received ANC from a skilled provider. Seventy percent of women received their first ANC visit during the first trimester, and 59 percent received four or more ANC visits, up from 51 percent in 2015-16[5]. The ANC coverage in urban areas is low in comparison with the national average. In the NCT of Delhi, 77 percent of mothers had to have at least four antenatal care visits for their most recent birth[6]. However, when women receive antenatal care, they do not always receive all of the services required to monitor their pregnancy. More than 95 percent of women in the NCT of Delhi who received antenatal care for their most recent delivery received all of the ANC services to monitor their pregnancy, including having their weight taken (99%), blood pressure measured (98%), a urine sample taken (96%), a blood sample taken (97%), and having their abdomen examined (96%). In the five years before the survey, an ultrasound was done in 86 percent of pregnancies. Women with at least 10 years of education had a significantly higher chance of receiving an ultrasound than women with no formal education. In comparison to 79 percent of women with no formal

education, ninety-one percent of women with at least 12 years of education underwent an ultrasound. Women who were expecting a son had a much higher likelihood of getting an ultrasound than those who were not expecting one. For instance, among women with two children, those without sons (81%) had a significantly higher likelihood of getting an ultrasound during their subsequent pregnancy than those with at least one son (72%) did[7].

The survival and well-being of both the mother and the child depend on the availability of healthcare services during pregnancy, childbirth, and the postpartum period. Antenatal care (ANC) monitors pregnancies and checks for complications to lower the health risks for mothers and their infants. During labor and delivery complications and infections are less likely to occur when delivered in a medical setting with expert medical care and sanitary conditions[8]. With this cross-sectional study, we aimed to assess the knowledge, attitude, and practice of mothers (aged 15-49 years) about antenatal care services, their utilization, and delivery practices in a peri-urban area of Delhi. Understanding the numerous elements that influence maternity care usage throughout pregnancy, the appropriate programme may be executed more successfully to provide quality ANC services in peri-urban areas.

MATERIALS AND METHODS

A community-based cross-sectional study was conducted in a peri-urban area of Qutub Vihar, Goyla Dairy, South West district, New Delhi between the period of June 2022 and August 2022 to explore the knowledge, attitude, and practices of mothers regarding ANC services, utilization, and delivery practices. About twenty-five hundred of the population resides in this area. The study participants were mothers of children of age less than one year from different age groups, education levels, and diverse experience in immunization programmes.

Calculated using Stat Cal sample size calculator of Epi Info for simple random sampling in a population survey with the expected frequency of 17.7 percent, with a 5 percent acceptable margin of error, a design effect of one, and a 95 percent of confidence level, the sample size was estimated as 121.

The purposive sampling technique was used for gaining the desired numbers. The technique was followed in two steps: (1) identification of mothers of all the children of age 0-1 years from the ASHA registers in the Qutub Vihar area. (2) These participants were asked to give information about ANC-related information and so on. This was continued till all 121 mothers were identified and included in this study.

The protocol was approved by the IIMR Student Research Review Board.

After obtaining informed consent, data on socioeconomic characteristics, knowledge, attitude, and practices regarding ANC services were collected using a structured questionnaire designed through a google form. Socioeconomic status was assessed using the Modified Kuppaswamy Scale. The collected data were coded and analyzed with the help of STATA. Descriptive statistics and cross-tabulation were mainly used on data.

RESULTS

Table: 1 shows the socio-demographic profile of all 121 subjects. 110/121 (90.9%) of the mothers were between the ages of 20 and 30. Only 5 percent of the mothers were illiterate, whereas 37.2 percent had a high school diploma. In approximately 58.7 percent of the cases, there was just one earning member in the house. The Hindu family accounted for 78.5 percent of the population under study, whereas the Muslim family accounted for 20.7 percent.

Table 1: Socio-demographic characteristics

Socio-Demographic Data

Characteristics	Frequency	Percentage
<i>Age of Mother</i>		
Less than 20 years	2	1.65%
20-30 years	110	90.9%
More than 30 years	9	7.43%
<i>Education Status</i>		
Primary Education (below 5 th standard)	20	17.4%
High School (till 12 th)	45	37.2%
Graduation	24	19.8%
Post-Graduation	5	4.1%

Illiterate	6	5%
8 th standard	7	5.8%
9 th standard	4	3.3%
10 th standard	4	3.3%

<i>Earnings Members in the Family</i>		
1	71	58.7%
2	35	20.9%
3	6	5%
4	5	4.1%
5	4	3.5%

<i>The religion of the mother</i>		
Hindu	95	78.5%
Muslim	25	20.7%
Christian	0	0%
Sikh	0	0%
Jain	1	0.8%

Figure: 1 depicts knowledge about no. of ANC check-ups during pregnancy. About 34 of the mothers (28%) did not have any idea about no. of antenatal check-ups whereas 47 of the mothers (39%) said 4 antenatal check-ups must be done during pregnancy.

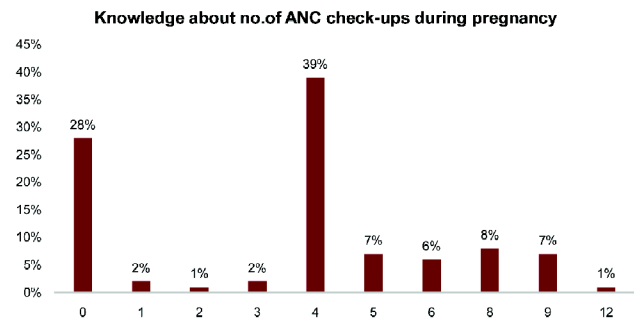


Figure 1 Knowledge about no. of ANC check-ups during pregnancy

Figure: 2 demonstrates that roughly 93 of mothers (77%) registered during the first trimester, 22 mothers (18%) registered during the second trimester, and just 7 mothers (6%) registered during the third trimester.

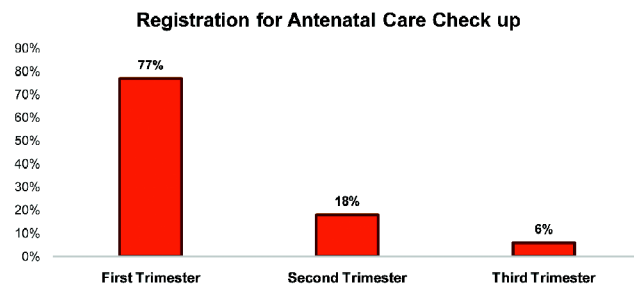


Figure 2 Registration for Antenatal care check-up

When mothers were asked about their practice of antenatal check-ups, nearly 36 of the mothers (30%) went for 4 ANC check-ups during pregnancy whereas an almost equal number of 34 mothers (28%) went for 6 ANC check-ups (Figure 3).

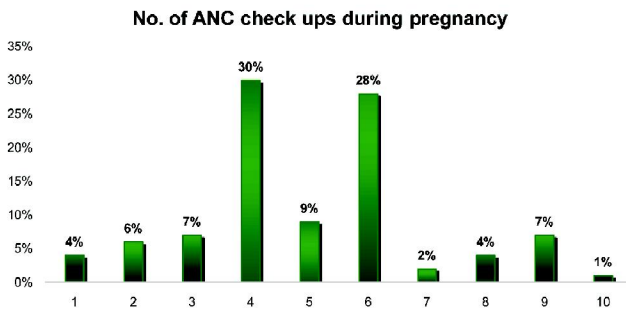


Figure 3: No. of ANC check-ups during pregnancy

When mothers were asked about various danger signs during pregnancy which require referral to the hospital only 12 mothers (10%) knew about danger signs where as 60 mothers (50%) were unaware of these (figure 4).

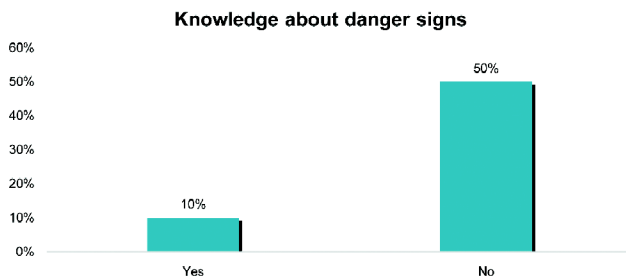


Figure 4: Knowledge about danger signs

When mothers were asked about tetanus injections (98.2%) of mothers received tetanus injections to prevent convulsions whereas (1.8%) were not given injections during ANC check-ups (Figure 5).

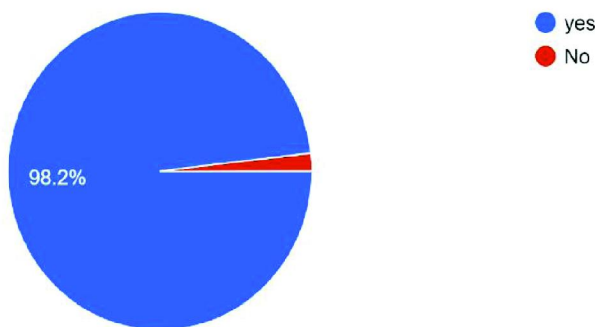


Figure 5: Mothers are given a tetanus injection.

When mothers were asked about IFA tablet consumption (13.2 %) mothers did not consume IFA tablets during pregnancy whereas (86.8%) did the consumption of IFA tablets which were given during ANC check-up visits. (Figure 6)

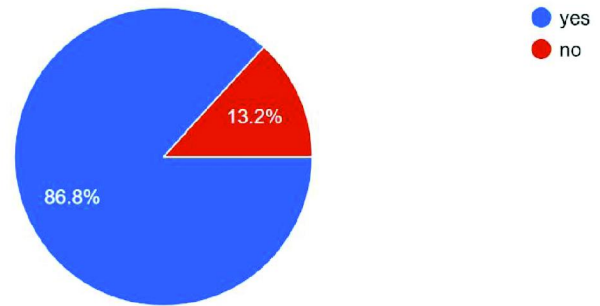


Figure 6 IFA tablets consumption

DISCUSSION

The objective of this research was to assess mothers' level of knowledge, attitude, and practice regarding ANC services, as well as to learn about ANC service utilization and delivery practices among them. This study shows that the respondents had adequate knowledge about ANC registration, IFA tablet supplementation, TT injection, and increased food intake, but they had limited knowledge about the number of ANC visits and the danger signs of pregnancy. The respondents' good knowledge of ANC services was most likely due to their higher levels of literacy, as only 5 percent of them were illiterate.

According to Rajiv Kumar Gupta et al., the most reliable and significant determinant of the use of infant and maternal health care services was mothers' education. Several other studies have found a strong positive impact of mothers' education on healthcare utilization [9,10]. Kishkin's rural-urban study in Alexandria concluded that urban women had a higher mean total score for ANC knowledge than rural women [11].

Our findings concur with those reported by Onasoga et al. [12] in their study in Osun State, Nigeria, where 83.3 percent of respondents were aware of the services provided at antenatal clinics and 79.4 percent stated that ANC helps to reduce maternal and neonatal morbidity and mortality. In terms of ANC registration status, the findings revealed that 95 percent had registered themselves, but 5 percent had not. The findings contradict the findings of the Karnataka study by Javali [13] and the rural Lucknow study by Roy [14], both of

which revealed 100 percent ANC registration. The most reasonable reason for suboptimal ANC registration in the current study is that many participants in the study gave birth a decade or two earlier when there were no accredited social health activist (ASHA) workers available through the National Rural Health Mission (NRHM). In the current study, 90 percent (93/121) of participants were in the first trimester, followed by 18.2 percent (22/121) and 5 percent (7/121) in the second and first trimesters, respectively. Our findings contrast with those of Javali[15], who reported 56.5percent and 42.9percent of women enrolled in ANC in the first and second trimesters, respectively, and Berhe[16], who reported 48percent, 42.4percent, and 1.8percent of women enrolled in the first, second, and third trimesters, respectively. Also, higher rates to the tune of 63.9percent were reported by Mumbare[17].

In the present study, 80.2percent(97/121) of respondents had >3ANC visits, while 17.3percent (21/121) had <3 ANC visits. In this study, 13.2percent of women did not use IFA (Iron Folic Acid) tablets during pregnancy, while 86.8percentconsumed medicines given during visits. ASHAs (Accredited Social Health Activists) play an important role in the community by raising awareness about ANCs and other pregnancy-related information. When moms were asked about numerous danger signals during pregnancy that necessitate hospitalization, only 12 knew about emergency indications, while 60 did not. According to this, knowing about harmful indicators is an important aspect of antenatal care services, both during and after pregnancy.

The reasons for inadequate knowledge are a lack of training of CHWs (Community Health Workers) about danger signs of pregnancy, during pregnancy, and after pregnancy, as well as inadequate utilization of ANC services in this study, such as financial constraints, less awareness, and a lack of transportation facilities, which are consistent with the findings of a similar study by Mumbare[18]. According to Onasoga et al., other factors such as affordability and the husband's acceptance of the services influence service utilization [19].

LIMITATIONS

Since the selection of subjects was based on purposive sampling, the size of the study may therefore not be large enough to generalize the results. Another weakness of this study is the recall bias of the study subjects. A

more advanced epidemiological design like a cohort study can better bring out the relationships (noncausal) between the predictor and the outcome variables.

CONCLUSION

Due to government policies, strategic implementation, and involvement of the community health workers, the ANC services and related knowledge have improved at the grass root levels. Several deliveries were made to government institutions. Most of the mothers who availed of ANC services in the first and second trimesters delivered their babies in healthcare institutions. It is critical to emphasize the importance of early registration for a continuum of care and institutional delivery. The mother's age, literacy level, socioeconomic status, and family type all have an impact on her use of ANC services. Policymakers must implement behaviour change communication, improve service delivery quality, and implement effective monitoring and evaluation to improve the effective utilization of ANC services particularly in peri-urban areas.

Author Contributions:

TS, JKR & SB conceptualized the study, collected the data, analyzed the results, and drafted the manuscript and SS analysed, edited, and drafted the final manuscript. All authors read and approved the final manuscript.

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