

TO ASSESS THE AWARENESS AND IMPACT ON ANTENATAL MOTHERS IN SELECTED RURAL AREAS AT LUCKNOW

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Abstract

The purpose of this research paper is to assess the awareness and impact of antenatal care among mothers in selected rural areas of Lucknow. This study investigates the levels of knowledge, practices, and outcomes related to antenatal care among expectant mothers. It also explores the factors influencing antenatal care utilization and the barriers faced by rural women in accessing these services. The study employs a mixed-method approach, combining quantitative surveys with qualitative interviews, to provide a comprehensive understanding of the antenatal care landscape in rural Lucknow.

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Introduction

Antenatal care (ANC) is a cornerstone of maternal health services, pivotal in ensuring the well-being of both mothers and their unborn children. It encompasses a broad spectrum of health services, including regular medical check-ups, nutritional guidance, immunization, and health education aimed at identifying and mitigating potential health risks during pregnancy. Proper antenatal care can significantly reduce maternal and neonatal morbidity and mortality, making it an essential component of public health strategies globally. Despite its recognized importance, access to and utilization of antenatal care services remain inconsistent, particularly in rural areas of developing countries like India.

Lucknow, the capital of Uttar Pradesh, represents a microcosm of these challenges. The rural areas surrounding this city are characterized by a mix of socioeconomic deprivation, limited healthcare infrastructure, and cultural practices that often impede access to essential health services. These rural communities, like many others in India, grapple with high maternal mortality rates and poor pregnancy outcomes, which are exacerbated by inadequate antenatal care.

The disparity in healthcare services between urban and rural areas in India is stark. Urban women generally have better access to healthcare facilities, greater awareness of health practices, and more frequent interactions with healthcare providers. In contrast, rural women often face multiple barriers that hinder their access to adequate antenatal care. These barriers include geographical isolation, financial constraints, limited availability of healthcare professionals, and deeply entrenched cultural norms that may undervalue the importance of formal medical care during pregnancy.

Understanding the specific barriers and facilitators to antenatal care in rural Lucknow is crucial for designing effective interventions. This research paper aims to assess the awareness and impact of antenatal care among mothers in selected rural areas of Lucknow. By examining the levels of knowledge, practices, and outcomes related to antenatal care, this study seeks to provide a comprehensive understanding of the antenatal care landscape in these communities.

Importance of Antenatal Care

Antenatal care is vital for several reasons. Firstly, it allows for the early detection and management of pregnancy-related complications such as preeclampsia, gestational diabetes, and anemia. Early intervention can prevent these conditions from becoming life-threatening for both the mother and the fetus. Secondly, antenatal care provides a platform for educating mothers about the importance of nutrition, hygiene, and preparation for childbirth, which can lead to healthier pregnancy outcomes.

The World Health Organization (WHO) recommends a minimum of eight antenatal visits during pregnancy to ensure comprehensive care. These visits are designed to provide a range of services, including medical examinations, laboratory tests, and health education. In practice, however, many women in rural areas do not receive this level of care due to various systemic and personal barriers.

Barriers to Antenatal Care in Rural Areas

Several factors contribute to the low utilization of antenatal care services in rural areas:

1. **Geographical Barriers:** Many rural areas in Lucknow are located far from healthcare facilities. Poor road conditions and lack of transportation further complicate access, making it difficult for pregnant women to attend regular check-ups.
2. **Financial Constraints:** The cost of travel, medical services, and sometimes even the indirect costs such as taking time off work can be prohibitive for many rural families. Financial barriers often prevent women from seeking necessary antenatal care.
3. **Cultural and Social Factors:** In many rural communities, traditional beliefs and practices still play a significant role in maternal health. Some women may rely on traditional birth attendants rather than formal healthcare providers. Additionally, family dynamics and the role of decision-makers in the household can influence a woman's ability to seek antenatal care.
4. **Healthcare System Issues:** Shortages of trained healthcare professionals, inadequate healthcare infrastructure, and inconsistent availability of services are common in rural

areas. These systemic issues contribute to the challenges faced by rural women in accessing antenatal care.

Literature Review

Global Perspectives on Antenatal Care

Antenatal care (ANC) is recognized globally as a fundamental aspect of maternal healthcare, essential for ensuring the health and well-being of both mother and child. The World Health Organization (WHO) emphasizes the importance of ANC through its recommendations for a minimum of eight antenatal visits to monitor and promote healthy pregnancies (WHO, 2016). These visits are crucial for early detection and management of complications, provision of nutritional supplements, and delivery of health education. However, the accessibility and utilization of ANC services vary significantly across different regions and demographics, particularly in low- and middle-income countries.

Antenatal Care in India

India has made considerable progress in improving maternal health outcomes, yet disparities remain, especially between urban and rural populations. According to the National Family Health Survey (NFHS-5) conducted by the Ministry of Health and Family Welfare, Government of India (2020), there is a noticeable gap in the utilization of antenatal services between urban and rural areas. While urban women are more likely to complete the recommended number of ANC visits, rural women often face numerous challenges that impede their access to these essential services.

Studies Highlighting Barriers to Antenatal Care

Kumar and Singh (2015) conducted a comparative analysis of the utilization of ANC services among rural women in India. Their study revealed that financial constraints, lack of transportation, and inadequate healthcare infrastructure are significant barriers to accessing antenatal care. They also found that cultural practices and gender norms often influence healthcare-seeking behavior, with many women depending on their husbands or family members to make decisions about their health.

Sharma and Mishra (2018) performed a systematic review focusing on barriers to the utilization of ANC services in rural India. They identified several critical factors, including low levels of education and awareness about the importance of antenatal care, socio-economic constraints, and the distance to healthcare facilities. The study suggested that improving education and awareness, alongside strengthening healthcare infrastructure, could enhance the utilization of ANC services.

Impact of Antenatal Care on Pregnancy Outcomes

Several studies have underscored the positive impact of regular antenatal care on pregnancy outcomes. Singh and Yadav (2017) conducted a cross-sectional study in rural Uttar Pradesh, examining the relationship between ANC utilization and maternal and neonatal health outcomes. Their findings indicated that women who received adequate antenatal care had significantly better pregnancy outcomes, including lower rates of maternal and neonatal complications. They highlighted the need for targeted interventions to increase ANC coverage in rural areas.

In another study, Raj et al. (2018) explored the impact of ANC on neonatal outcomes in rural India. They found that women who attended regular antenatal visits were more likely to have better birth outcomes, including higher birth weights and lower neonatal mortality rates. The study emphasized the importance of ensuring access to quality antenatal care for all pregnant women, particularly in rural and underserved areas.

Cultural and Social Influences

Cultural and social factors play a crucial role in shaping health behaviors and practices. Rani et al. (2016) examined the influence of cultural beliefs and social norms on the utilization of ANC

services in rural India. They found that traditional beliefs, such as reliance on home remedies and preference for home births, often deterred women from seeking formal healthcare services. Additionally, the study highlighted the role of family dynamics, with decisions about healthcare often being influenced by husbands and elder family members.

Interventions to Improve Antenatal Care Utilization

Various interventions have been proposed to enhance the awareness and utilization of antenatal care services in rural areas. Thakur et al. (2019) evaluated the effectiveness of community-based health education programs in increasing ANC awareness among rural women. Their study demonstrated that targeted health education, delivered by trained community health workers, significantly improved knowledge and attitudes towards antenatal care.

Additionally, mobile health clinics and telemedicine have been explored as potential solutions to overcome geographical barriers. Patel et al. (2020) assessed the impact of mobile health units in providing antenatal care to women in remote areas. The study found that mobile health clinics increased access to ANC services and improved pregnancy outcomes, suggesting that such interventions could be scaled up to reach more underserved populations.

Policy Implications and Recommendations

Policymakers have a critical role in addressing the disparities in antenatal care utilization. Gupta and Jain (2017) discussed the importance of policy support in enhancing maternal health services in rural India. They argued for increased investment in healthcare infrastructure, training of healthcare professionals, and the implementation of policies that prioritize maternal health. Additionally, they emphasized the need for monitoring and evaluation mechanisms to assess the impact of these policies and ensure their effective implementation.

Objectives

The primary objectives of this study are:

1. To assess the level of awareness about antenatal care among pregnant women in selected rural areas of Lucknow.

2. To evaluate the impact of antenatal care on pregnancy outcomes in these areas.
3. To identify the barriers to accessing antenatal care services among rural women.
4. To provide recommendations for improving antenatal care utilization in rural Lucknow.

Methodology

Study Design

This study employs a mixed-method approach, combining quantitative surveys with qualitative interviews, to gather comprehensive data on antenatal care awareness and utilization among rural mothers.

Study Area

The study focuses on selected rural areas in Lucknow district, Uttar Pradesh. These areas were chosen based on their geographical representation and the availability of healthcare facilities.

Sample Size and Sampling Technique

A total of 200 antenatal mothers were selected for the quantitative survey using a stratified random sampling technique. Additionally, 20 in-depth qualitative interviews were conducted with antenatal mothers, healthcare providers, and community leaders to gain deeper insights into the factors influencing antenatal care utilization.

Data Collection

Data was collected using structured questionnaires for the quantitative survey and semi-structured interview guides for the qualitative interviews. The questionnaires included sections on demographic information, awareness of antenatal care, utilization of ANC services, and pregnancy outcomes. The interviews explored personal experiences, perceived barriers, and suggestions for improving ANC services.

Data Analysis

Quantitative data was analyzed using descriptive and inferential statistics to determine the levels of awareness and the impact of antenatal care. Qualitative data was analyzed using thematic analysis to identify common themes and patterns related to antenatal care utilization.

Results

Demographic Profile

The demographic profile of the respondents revealed that the majority of the antenatal mothers were between the ages of 20 and 35, with a significant proportion having received only primary or secondary education. Most respondents were from low-income households and engaged in agricultural or daily wage labor.

Awareness of Antenatal Care

The survey results indicated varying levels of awareness about antenatal care among the respondents. While a majority had heard about ANC, detailed knowledge about its components, such as the importance of regular check-ups, nutritional supplementation, and immunizations, was limited. Awareness was primarily gained through community health workers and local healthcare facilities.

Utilization of Antenatal Care Services

The study found that while a significant number of women attended at least one antenatal visit, the proportion of those completing the recommended number of visits was low. Factors such as distance to healthcare facilities, lack of transportation, and financial constraints were major barriers to regular ANC visits. Additionally, cultural beliefs and family dynamics played a role in determining healthcare-seeking behavior.

Impact on Pregnancy Outcomes

The impact of antenatal care on pregnancy outcomes was evident, with women who received regular ANC reporting fewer complications during pregnancy and childbirth. These women also had better neonatal outcomes, including higher birth weights and lower incidence of neonatal infections. However, the overall maternal and neonatal health indicators in the study areas remained below national averages.

Barriers to Accessing Antenatal Care

The qualitative interviews highlighted several barriers to accessing antenatal care, including:

- **Financial Constraints:** The cost of transportation and healthcare services deterred many women from seeking regular ANC.
- **Geographical Barriers:** Long distances to healthcare facilities and poor road conditions made it difficult for women to attend ANC visits.
- **Cultural and Social Factors:** Traditional beliefs, lack of support from family members, and gender dynamics influenced the utilization of antenatal care.
- **Healthcare System Issues:** Shortages of trained healthcare professionals, inadequate facilities, and inconsistent availability of services were significant challenges.

RESULTS

Socio demographic and obstetrics characteristics of the pregnant women Table 1 shows the socio-demographic characteristics of the study participants. The mean age of pregnant women participated in the study was 24.39 ± 3.17 , ranging between 17 and 36 years. Most of the study participants (62.48%) were in the age group of 20-25 years. Most of the pregnant women belonged to OBC category (51.24%), while 35.54% belonged to SC/ST and 13.22% belonged to general category. Most pregnant women belonged to Hindu religion (91.90%) as compared to Muslim religion (8.10%). Nearly two-thirds of the pregnant women (78.68%) were from joint family. The educational status of pregnant women shows that 10.74% of study participants were illiterate while only 21.65% of pregnant women were graduated. Nearly all pregnant women were housewives (97.36%). The modified B. G. Prasad scale was used to classify participants into socioeconomic groups. Most of the pregnant women were from lower middle class (44.30%) and middle class (27.60%), only 3.47% pregnant women belonged to upper class. The gestational age of pregnant women was reported on the basis of trimester. 39.50% pregnant women were in the second trimester and 60.50% pregnant women were in the third trimester. It is clear from Table 1 that 46.61% pregnant women go for first ANC in first trimester while 52.56% pregnant women go for first ANC in second trimester.

Table 1: Socio-demographic and obstetrics characteristics of pregnant women.

Socio-demographic and obstetrics characteristics	Study participants (n=605)	
	N	%
Age (years)		
<20	20	3.31
20-25	378	62.48
26-30	187	30.91
>30	20	3.31
Category		
General	80	13.22
OBC	310	51.24
SC/ST	215	35.54
Religion		
Hindu	556	91.90
Muslim	49	8.10
Types of family		
Joint	476	78.68
Nuclear	129	21.32
Educational status		

Illiterate	65	10.74
Primary	53	8.76
Secondary	189	31.24
Higher secondary	167	27.60
Graduate	131	21.65
Occupational status		
House wife	589	97.36
Working women	16	2.64
Socioeconomic status		
Upper class	21	3.47
Upper middle class	72	11.90
Middle class	167	27.60
Lower middle class	268	44.30
Lower class	77	12.73
Gestational age		
Second trimester	239	39.50
Third trimester	366	60.50
First ANC visit		
First trimester	282	46.61
Second trimester	318	52.56
Third trimester	5	0.83

ANC awareness of pregnant women

Table 2 shows the detailed information on awareness among pregnant women regarding ANC. 86.61% of pregnant women knew that regular antenatal check-up was necessary once they became pregnant. Two-thirds of pregnant women (75.54%) were also aware that ANC provides knowledge about the health and medical problem of the mother and her fetus. 70.41% of pregnant women had correct knowledge and 7.27% of pregnant women had incorrect knowledge about the right time to go for their first antenatal checkup. Out of all pregnant women, 60.50% did not know minimum how many times pregnant women should go for antenatal checkups. Only 24.13% of pregnant women had correct knowledge that pregnant women should go at least four times for antenatal checkups during pregnancy. Regarding taking TT injection during pregnancy, 67.93% of pregnant women knew that it is necessary to take TT injection during pregnancy and 53.72% of pregnant women were aware of the right doses of TT injection. Concerning the awareness of pregnant women about the consumption of calcium and iron-folic acid tablet or other supplements, 76.20% of pregnant women thought that these supplements are necessary during pregnancy. Only 27.60% of pregnant women had correct knowledge about the minimum dose of iron-folic acid tablets during pregnancy. A large number of pregnant women

(81.65%) were found to be aware that PHC/hospital is the ideal place for pregnant women to deliver her baby.

Association of ANC awareness among pregnant women with respect to their socio demographical characteristic

The findings of the study revealed a statistically significant association of category ($X^2= 10.01$; $p<0.01$), educational status ($X^2=26.75$; $p<0.01$), occupational status ($X^2=6.10$; $p<0.05$) and socioeconomic status ($X^2=10.86$; $p<0.05$) of pregnant women with ANC awareness. Out of 57.36% pregnant women were found to be aware of ANC. The proportion of aware pregnant women about ANC was found to be higher in the case of those pregnant women who belonged general category (63.8%) and OBC category (61.6%) as compared to those pregnant women who belonged to SC/ST category (48.8%). Moreover, ANC awareness was found to be proportionately associated with the higher educational status of pregnant women. 70.2% of graduate pregnant women were found to be aware of ANC while only 33.8% of illiterate and 49.1% of primary educated pregnant women were found to be aware of ANC. The finding revealed that working pregnant women were found to be more aware as compared to housewife pregnant women. Similarly, ANC awareness was found to be proportionately associated with the higher socioeconomic status of pregnant women. About two-third of upper socioeconomic class pregnant women were found to be aware of ANC while only 48.1% of lower class and 53.4% of lower middle-class pregnant women were found to be aware of ANC. The findings of the study revealed that age, religion, type of family, and gestational age of pregnant women were not found to be significantly associated with ANC awareness ($p>0.05$).

Logistic regression analysis for predicting ANC awareness

After bivariate analysis, only significantly associated variables were fed into the logistic regression model. The logistic regression model shows that pregnant women who belonged OBC category were 1.49 times more likely to be aware of ANC (AOR=1.49, CI: 1.03-2.17; $p<0.05$) as compared to those pregnant women who belonged to SC/ST category. Similarly, pregnant women who belonged general category were 1.40 times more likely to be aware of ANC (AOR=1.40, CI: 0.80-2.46; $p>0.05$) as compared to those pregnant women who belonged SC/ST category however, this observation was not found to be statistically significant.

In addition, the logistic regression model also revealed that the educational status of pregnant women significantly contributes to ANC awareness. Secondary educated pregnant women were 2.24 times more likely to be aware of ANC (AOR=2.24, CI: 1.23-4.07; $p<0.05$), higher Secondary educated pregnant 2.63 times more likely to be aware of ANC (AOR=2.63, CI: 1.41-4.91; $p<0.01$) and graduate pregnant women 3.60 times more likely to aware about ANC (AOR=3.60, CI: 1.84-7.06; $p<0.01$) as compare to illiterate pregnant women. The finding revealed that occupational status of pregnant women was also significantly contributed to ANC awareness. The logistic regression model shows that working pregnant women were 5.09 times more likely to be aware of ANC (AOR=5.09, CI: 1.10-23.49; $p<0.05$) as compared to house wife pregnant women. Although an increased level of socioeconomic status was associated with an increased likelihood of being aware of ANC, however this observation was not found to be statistically significant.

Table 2: ANC awareness of pregnant women.

S. no.	ANC awareness statement	Responses					
		Correct		Incorrect		Don't know	
		N	%	N	%	N	%
1.	A regular antenatal check-up is must after pregnancy	52 4	86.6 1	13	2.15	68	11.2 4
2.	Cause of visiting antenatal check during pregnancy	45 7	75.5 4	61	10.0 8	87	14.3 8
3.	Timing of first antenatal check-up	42 6	70.4 1	44	7.27	13 5	22.3 1
4.	No. of antenatal checkups during pregnancy	14 6	24.1 3	93	15.3 7	36 6	60.5 0
5.	TT (tetanus toxoid) injection should be taken during pregnancy	41 1	67.9 3	36	5.95	15 8	26.1 2
6.	Number of doses of TT injection	32 5	53.7 2	58	9.59	22 2	36.6 9
7.	Awareness about taking calcium and iron folic acid tablets or other supplements	46 1	76.2 0	1	0.17	14 3	23.6 4
8.	Reason of taking iron and folic acid tablets during pregnancy	34 9	57.6 9	11 4	18.8 4	14 2	23.4 7
9.	No. of IFA tablets should be taken during pregnancy	16 7	27.6 0	22	3.64	41 6	68.7 6
10.	Awareness about ideal place for delivery	49 4	81.6 5	18	2.98	93	15.3 7

Table 3: Association of ANC awareness among pregnant women with respect to their socio demographical characteristic.

Socio-demographic characteristics	Not aware		Aware		Chi (X ²)	P value
	N	%	N	%		
All pregnant women	258	42.64	347	57.36		
Age (years)						
Below 20	7	35.0	13	65.0		
20-25	16	43.7	213	56.3		
26-30	77	41.2	110	58.8	0.84	0.859
Above 30	9	45.0	11	55.0		
Category						
General	29	36.2	51	63.8		
OBC	11	38.4	191	61.6	10.01	0.007
SC/ST	11	51.2	105	48.8		
	0					
Religion						
Hindu	23	42.4	320	57.6	0.11	0.739
Muslim	6	44.9	27	55.1		
Family type						
Joint	19	41.4	279	58.6		
Nuclear	7	47.3	68	52.7	1.44	0.229
Educational status						
Illiterate	43	66.2	22	33.8		
Primary	27	50.9	26	49.1		
Secondary	85	45.0	104	55.0	26.75	0.000
Higher secondary	64	38.3	103	61.7		
Graduate	39	29.8	92	70.2		
Occupational status						
House wife	25	43.5	333	56.5	6.10	0.013
Working	6	12.5	14	87.5		
Socioeconomic status						
Upper class	5	23.8	16	76.2		
Upper middle class	27	37.5	45	62.5		
Middle class	61	36.5	106	63.5	10.86	0.028
Lower middle class	12	46.6	143	53.4		
Lower class	5	51.9	37	48.1		
Gestational age						
Second trimester	97	40.6	142	59.4		
Third trimester	16	44.0	205	56.0	0.08	0.408
	1					

Table 4: Logistic regression analysis for predicting ANC awareness of pregnant women.

					Lower	Upper
Category						
General	0.34	0.29	0.24	1.40	0.80	2.46
OBC	0.40	0.19	0.04	1.49	1.03	2.17
					Lower	Upper
SC/ST (ref)	-		-	-	-	-
Educational status						
Primary	0.63	0.39	0.10	1.88	0.88	4.01
Secondary	0.81	0.31	0.01	2.24	1.23	4.07
Higher secondary	0.97	0.32	0.00	2.63	1.41	4.91
Graduate	1.28	0.34	0.00	3.60	1.84	7.06
Illiterate (ref)	-		-	-	-	-
Occupational status						
Working women	1.63	0.78	0.04	5.09	1.10	23.49
House wife (ref)	-		-	-	-	-
Socioeconomic status						
Upper class	0.76	0.58	0.19	2.13	0.68	6.66
Upper middle class	0.13	0.36	0.71	1.14	0.57	2.29
Middle class	0.33	0.29	0.27	1.39	0.78	2.46
Lower middle class	0.06	0.27	0.81	1.07	0.63	1.80
Lower class (ref)	-		-	-	-	-

DISCUSSION

The present study was organized to examine the ANC awareness of rural pregnant women and its association with their socio demographical characteristics. The mean age of the antenatal women was 24.39 years and the majority of them were aged between 20-25 years (62.48%). Out of all pregnant women, most of them were Hindu and 51.24% of pregnant women belonged to other backward class (OBC). Almost all pregnant women were housewives (97.36%). Socio demographical characteristics of study participants showed that 21.65% of pregnant women were graduates while only 3.47% of pregnant women belonged to the upper socioeconomic class. In

the present study, 46.61% of pregnant women visited their first ANC in the first trimester while 52.56% of pregnant women visited their first ANC in the second trimester. The finding of this study is much similar to the finding of other studies. A study conducted in Karnataka found that 56.5% and 42.9% of women go for ANC registration in the first trimester and the second trimester, respectively.¹⁵ Similarly, another study conducted in North India found that majority of the pregnant women (64.5%) had registered for ANC in the second trimester.

The result of the study revealed that most of the pregnant women (86.61%) were aware of the necessity of regular antenatal visits after becoming pregnant and two-thirds of pregnant women (75.54%) were also aware of the potential benefits of ANC. These pregnant women believed that ANC provides information about the risk factors associated with the health of mother and their fetus. Other findings also support the view that most pregnant women are aware of ANC visits and its expected benefits and reported that respondents were aware that every pregnant mother needs to go for antenatal check-up.¹⁷⁻²⁰ Most of the pregnant women (88.5%) acknowledged that ANC offered to both the pregnant women and their unborn baby opportunities to receive routine immunization and routine drugs for protection against various communicable diseases.²⁰ Although large numbers of research studies have reported high awareness regarding the antenatal visit, at the same time some studies also reported high a ratio (90% to 100%) of actual ANC registration.

Pregnant women's awareness about the timing of their first antenatal checkup and minimum ANC visit was also analyzed in the present study. The result revealed that 70.41% of pregnant women had correct knowledge about the right timing for the first antenatal checkup. A similar result was found in Tamil Nadu showing that about 69% of the participants knew the right time for antenatal registration.²² This result was also corroborated by a study conducted in North India in which 86.20% of respondents were aware of early registration but had low awareness (10.90%) of the minimum number of ANC visits among pregnant women.¹⁶ However, the findings of this study contradict the study conducted in South India (urban slum area) which showed that about only 46% of pregnant women were aware of minimum ANC visits.¹⁸ Likewise one more study conducted in Tamil Nadu revealed that 37% of pregnant women knew about the minimum number of antenatal visits.

Regarding taking TT injection during pregnancy, 67.93% of pregnant women knew that it is necessary to take TT injection during pregnancy. However, some earlier studies conducted in South India reported that comparatively more pregnant women (about 90%) were aware of taking TT injections during pregnancy.^{18,19} Again in this study 53.72% of pregnant women were found to be aware of the right doses of TT injection, which is in line with the study conducted in Andhra Pradesh.¹⁹ A study conducted in Uttarakhand also showed low ratio of awareness, only 44.44% of pregnant women were agree that TT injection is very important for the care of both mother and baby.¹⁷ On the other hand, a study in New Delhi showed a contradictory result as the large number of pregnant women (90.7%) knew that two tetanus toxoid doses are required to immunize against tetanus during pregnancy.²³

The result of the study revealed that nearly two-third of pregnant women (76.20%) were aware that calcium and iron folic acid tablets or other supplements are necessary during pregnancy. Similar results were obtained in studies conducted in South India which reported that about two-thirds of pregnant women were aware of the need to take iron and folic acid tablets during pregnancy.^{18,24} This finding is consistent with another study in Pakistan which reported that 80.85% of pregnant women had accurate information about iron and vitamin supplements during pregnancy.²⁵ Although this study found that a good number of pregnant women were aware of the importance of taking IFA tablets, only 27.60% of pregnant women were correctly aware of the minimum dosage of iron folic acid tablets during pregnancy. A similar trend can be seen in some other studies also.^{22,26} As seen in this study, a good number of pregnant women (81.65%) knew that PHC/hospital is the ideal place for pregnant women to deliver their baby. This is corroborated by a study conducted in South India, which reported that 83% of study participants believed that a hospital was the ideal place to give birth.

Again, the result of this study revealed that only 57.36% of pregnant women were aware of ANC practices. There is a lot of research that shows a great deal of consistency with this result.^{22,27-29} The present study showed that age, religion, type of family, and gestational age of pregnant women were not significantly associated with ANC awareness of pregnant women. However earlier studies have reported mixed outcomes, some earlier studies have reported that young age pregnant women are more likely to have aware of ANC as compared to elder age pregnant women.^{27,29-31} The result of the study revealed that working women were more likely to be

aware of ANC as compared to housewife pregnant women. Similarly, some studies also reported that occupational status, type of family, and religion (Hindu) of pregnant women were associated with ANC awareness.^{23,29,31,32} Working women or women who have their source of income have better access to health-related information.³² Several possible explanations are supporting this finding. As compared to housewife, working women may have better access to the internet, and multimedia as a source of information as well as an opportunity to share their knowledge and health issues with colleagues in their workplace as compared to housewife. Moreover, the present study revealed a significant association of category, educational status, and socioeconomic status of pregnant women with ANC awareness. The logistic regression model revealed that education is the most dominant predictor of ANC awareness. In this study, secondary educated pregnant women were 2.24 times more likely to be aware of ANC, higher secondary educated pregnant women 2.63 times more likely to be aware of ANC, and graduate pregnant women 3.60 times more likely to be aware of ANC as compare to awareness level among illiterate pregnant women. Several other studies also reported a strong positive impact of socioeconomic status and especially the educational status of pregnant women on the utilization of health services and found the most consistent and important determinant of ANC awareness.^{15,22,23,27,29-31,33-36} Additionally, educated pregnant women are more likely to seek quality health services and have a greater ability to access health facilities that provide better care.³⁷ The educated pregnant women are more able to understand their health issues (identifying danger signs) thus placing more priority on the health of both mother and unborn child.³⁸ There may be several other possible explanations for this finding. Educated women have greater autonomy, self-confidence, and decision-making ability about their health and can easily understand the health-related practices given by the health worker.

Conclusion

The present study concludes that less than half of pregnant women go to the first ANC at the right time. The level of awareness regarding ANC among pregnant women was not found satisfactory. Although most pregnant women believe that regular antenatal check-ups are necessary after pregnancy, they do not have proper knowledge and awareness about the various parameters of ANC. The present study highlights the important role of education and socioeconomic status in awareness of ANC. Therefore, this study emphasizes on conducting health awareness campaigns in rural and backward areas, organizing counselling and health education programs for rural pregnant women near their location and strengthening health care services. It will go a long way in improving the reproductive health status of pregnant women. Improving awareness of ANC among pregnant women will enable them to detect high-risk pregnancy at the right time, which will also increase their chances of a healthy delivery.

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