

MOTIVATIONAL FACTORS INFLUENCING UPTAKE OF ANTENATAL SERVICES AMONG PREGNANT WOMEN IN SECONDARY AND TERTIARY HEALTH INSTITUTIONS IN ILORIN METROPOLIS, KWARA STATE, NIGERIA

BY

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Abstract

This study investigates the motivational factors influencing the uptake of antenatal services among pregnant women attending secondary and tertiary health institutions in Ilorin Metropolis, Kwara State, Nigeria. Despite global efforts to improve maternal health, Nigeria continues to experience significant maternal and neonatal mortality rates, largely attributed to poor antenatal care (ANC) utilization. This research employed a cross-sectional design with a multistage sampling technique to select 260 pregnant women as respondents from three health institutions in the study area. Data were collected using structured questionnaires and analyzed using SPSS version 23. The study revealed a significant relationship between the regularity of ANC visits and motivational factors such as healthcare workers' attitudes, the availability of healthcare facilities, and family support. However, community interventions had minimal influence on ANC uptake. Based on the findings, it is recommended that continuous education and training be provided to healthcare workers, and that group antenatal care be adopted for efficiency. Future research should extend to rural communities to provide a broader understanding of ANC utilization.

Keywords: Motivational factors, Antenatal services, Healthcare utilization, Ilorin Metropolis, Maternal health.

Introduction

Antenatal care (ANC) refers to the comprehensive care provided to pregnant women, serving as a fundamental component of maternal healthcare from pregnancy through to post-delivery. ANC's significance lies in its ability to identify and address potential health risks, offer critical health education, and facilitate early detection and management of pregnancy complications (Firoz et al., 2018). Despite its proven potential to reduce maternal and neonatal mortality globally, its full benefits remain unrealized, particularly in low- and middle-income countries, due to poor implementation. Nigeria, which bears a heavy burden of maternal and neonatal mortality, is a notable example of this challenge (Goldenberg and McClure, 2015). Despite efforts to improve maternal health in Nigeria, the utilization of ANC services remains suboptimal. The 2018 Nigeria Demographic and Health Survey (NDHS) reported that only 61% of pregnant women attended at least one ANC visit, and just 43% completed the recommended four visits. The World Health Organization (WHO) advises at least eight ANC visits, beginning in the first trimester. However, many Nigerian women start ANC late, diminishing the impact of these interventions (Ekholuenetale, 2021). This delay is influenced by various factors, particularly in secondary and tertiary care settings, where motivating factors play a key role in ANC utilization.

In Ilorin Metropolis, challenges remain regarding the factors influencing ANC uptake in secondary and tertiary health institutions. Health facilities in this area face numerous obstacles, and understanding the determinants of ANC uptake is essential for developing interventions that improve maternal and neonatal health outcomes (Jones et al., 2017). Accessibility, both in terms of physical location and financial means, and knowledge of healthcare services are critical factors affecting ANC utilization. Poor access to healthcare services exacerbates morbidity and mortality rates, especially in rural areas where infrastructure such as roads, public transportation, and primary healthcare facilities are lacking. Beyond access, other motivational factors, including adherence to a balanced diet, regular physical activity, and avoiding harmful substances during pregnancy, also play a role in reducing pregnancy-related complications and

promoting fetal development. Addressing these factors is crucial for improving ANC uptake and ensuring better health outcomes for both mothers and infants.

This study aims to contribute to the development of evidence-based strategies to improve prenatal care access and reduce maternal and neonatal morbidity and mortality. By identifying factors that facilitate or hinder ANC utilization, policymakers, healthcare providers, and public health practitioners can design targeted interventions to overcome specific challenges faced by pregnant women in Ilorin Metropolis, Kwara State (Gebrekirstos et al., 2021). Additionally, examining ANC services in secondary and tertiary healthcare settings can offer insights into the quality of care provided and the barriers pregnant women encounter, providing a more comprehensive understanding of ANC utilization. Understanding the motivational factors influencing pregnant women's utilization of ANC services is critical due to the potential impact on maternal and child health (Konlan et al., 2020). Inadequate ANC leaves women at risk of complications such as preterm delivery, low birth weight, and maternal death. Additionally, infants born to women who do not receive ANC are more likely to experience negative outcomes, including neonatal mortality and developmental delays (Gamberini et al., 2022; Konlan et al., 2020).

General Aim and Objectives

The aim of this study is to identify the factors influencing the uptake of antenatal services among pregnant women in secondary and tertiary health institutions in Ilorin Metropolis, Kwara State, Nigeria. Specific objectives are to:

1. Identify motivational factors influencing ANC uptake in health institution in Ilorin metropolis.
2. Determine the level of awareness in ANC uptake in health institution in Ilorin metropolis.
3. Access healthcare system-related factors influencing ANC utilization.

Research Questions

1. What socio-demographic factors are associated with the uptake of antenatal care?
2. How do awareness and knowledge impact the utilization of antenatal care?
3. What healthcare system-related factors contribute to the uptake of antenatal care?

Methodology

Research design

This study utilized a cross-sectional research design to assess the motivational factors influencing antenatal care utilization among pregnant women in Ilorin Metropolis. The study was conducted in three health institutions: University of Ilorin Teaching Hospital (UIITH), Kwara State University Teaching Hospital (KWUTH), and Cottage Hospital Olorunsogo (CoHA)

Population of the Study

The target population will comprise all pregnant women aged 18 to 40 years attending ANC clinics in selected secondary and tertiary health institutions within Ilorin Metropolis, Kwara State, Nigeria. The metropolis is made up of three (3) LGA which are Ilorin East, Ilorin West and Ilorin South.

Inclusion Criteria

The inclusion criteria for this study are:

- All pregnant women within 18 years and 40years.
- All pregnant women who had registered and attending antenatal service at the desired health institution in the study area.

- Pregnant women who are in attendance on the day of data collection.
- Pregnant women that are living within Ilorin Metropolis at the time of study.
- Pregnant women at their second to third trimester stage of pregnancy that is 13 weeks and above.
- All pregnant women in the sample who also volunteer to participate.

Exclusion Criteria

The exclusion criteria for this study includes:

- I. Early pregnant woman below the age of 18 years
- II. Transit pregnant women who only come for antenatal once in a while
- III. Pregnant women that are not present as at the day of data collection
- IV. Pregnant women at first trimester (11-12 weeks) of pregnancy will be excluded

Sample Size Determination

The sample size was calculated using Cochran's Formula:

$$n = (Z^2 \times p \times q) / d^2$$

where:

n = desired sample size (for population > 10,000)

Z = standard normal deviate (1.96 at 95% confidence interval)

p = estimated population proportion (0.5)

q = 1 - p (0.5)

d = degree of freedom (0.05)

Calculation:

$$\begin{aligned} n &= (1.96^2 \times 0.5 \times 0.5) / 0.05^2 \\ n &= 3.84 \times 0.25 / 0.0025 \\ n &= 384 \end{aligned}$$

Adjustment for population < 10,000:

$$nf = n / (1 + n/N)$$

where:

nf = desired sample size (for population < 10,000)

N = estimated population (750)

Calculation:

$$\begin{aligned} nf &= 384 / (1 + 384/750) \\ nf &= 384 / 1.51 \\ nf &\approx 254 \end{aligned}$$

Rounded up to the nearest 10:

$$nf \approx 260$$

Therefore, the determined sample size for the study is approximately 260 respondents.

Sampling Techniques

Multistage sampling technique will be adopted in selecting the respondents. This technique will be used to select the patients that are available and accessible at the health facilities. A sample size of two hundred and sixty (260) respondents known as antenatal service utilizers will be selected on voluntary basis for the study. A ratio of 3:2:1 representing University of Ilorin Teaching Hospital (UIH), Kwara State University Teaching Hospital (KWUTH) and Cottage Hospital, Olorunsogo was adopted respectively. The data of each respondent or service utilizer using a pretested questionnaire consisted of four sections.

Research Instrument

The study employed a mixed-methods approach. The quantitative questionnaire consisted of four sections: socio-demographic details (age, gender, education, occupation, etc.), perspectives on antenatal care service utilization, knowledge and awareness of quality services, and motivational factors influencing service use. For qualitative data, Key Informant Interviews (KII) were conducted with randomly selected respondents to gather in-depth insights into their experiences and opinions regarding antenatal care services.

Research Instrument Validation

The study employed validity and reliability measures to ensure accuracy. Validity assessed whether the data collection instrument measured the intended outcomes. Reliability involved daily checks for completeness, consistency, and clarity, with prompt academic supervision.

Pre-testing and Reliability Calculation

A test-retest method with a one-week interval was conducted in Asa Local Government, using Pearson Product Moment Correlation Coefficient to calculate reliability.

Data Collection Procedure

Trained, educated female data collectors (minimum secondary school certificate) gathered information through: Qualitative Study: Open-ended questionnaires and Quantitative Study: Close-ended questionnaires, pretested for reliability and validity. Questionnaires were administered via face-to-face interviews with participants

Data Analysis

Qualitative data were analyzed using the standard procedure recommended by Dreifus et al. This involved collecting, collating, and coding the completed questionnaires. Quantitative data were analyzed using SPSS version 23, with results illustrated through bar graphs, pie charts, and frequency polygons.

Ethical Considerations

To ensure ethical standards, the study obtained necessary approvals and consents. Letters of introduction were obtained from the Department of Public Health and Postgraduate School of Al-Hikmah University. Ethical approval was secured from the Research Ethics Committee of Al-Hikmah University, Ilorin. Additionally, institutional approval was obtained from the Management of UITH and Kwara State Ministry of Health. Informed consent was also obtained from each respondent before their inclusion in the study, ensuring their rights and privacy were respected.

Results

Socio-Demographic Characteristics of respondents

Age at Time of First Birth: Most respondents (55%) had their first child between the ages of 25-34 years, with 45% being between 18-24 years. None were 35 years or older. UITH had the highest proportion of respondents (50%) while CotHA had the lowest (17.3%).

Present Age of Respondents: At the time of the study, 66.5% of respondents were between 25-34 years, followed by 24.6% aged 35 and above, and 8.8% between 18-24 years. UITH had the largest group of respondents aged 35 and above (16.2%).

Marital Status: The majority of respondents (93.46%) were married, with only 6.54% single. UITH had the highest proportion of married respondents (48.1%).

Educational Status: Most respondents (53.1%) held HND/BSc degrees, followed by 23.5% with NCE/OND, and 14.2% with M.Sc./M.A. Very few had only an SSCE (7.7%) or FSLC (1.5%).

Occupation: A large majority (66.5%) were self-employed, while 23.9% were government workers. Private workers (7.7%) and students (1.9%) were the least represented groups.

Ethnic Group: The vast majority of respondents (86.5%) were Yoruba, with a smaller percentage (13.5%) being Igbo. There were no Hausa participants.

Religion: Islam was the predominant religion, with 58.1% of respondents identifying as Muslim and 41.9% as Christian.

Number of Children: Most respondents (32.31%) had three children, followed by 31.92% with two children, and 14.23% with one child. Additionally, 10.4% were first-time mothers (primigravida).

Family Category: The majority (71.9%) of respondents came from monogamous families, while 28.1% were from polygamous families.

Respondent's General Perspectives on Antenatal Care Services.

What are the benefits of antenatal care service?

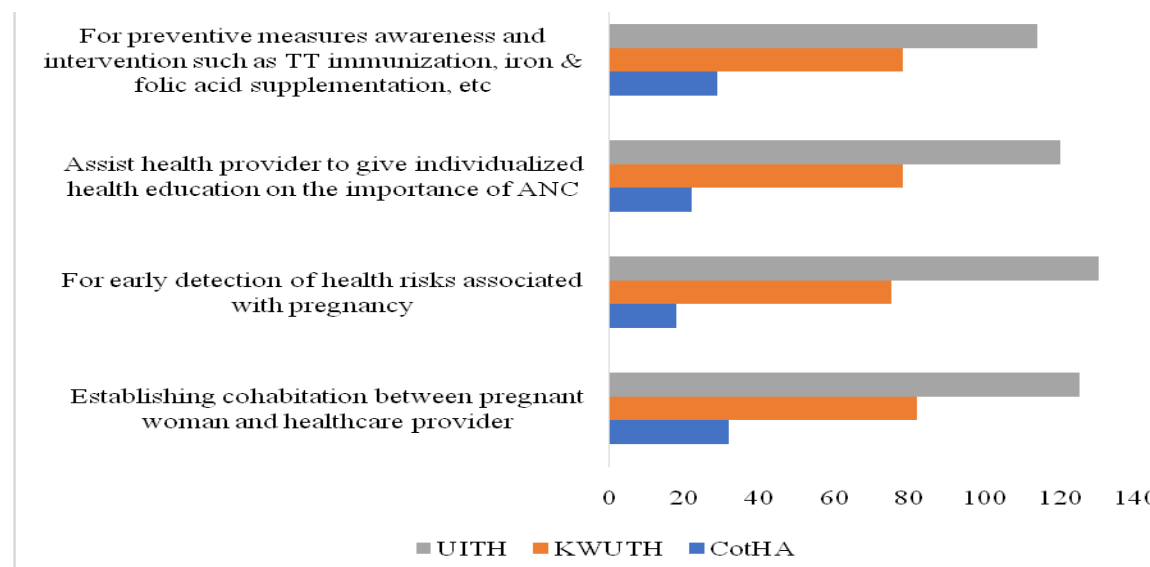


Figure 1: Respondents perspectives on ANC

Mean = 76.67; p-value = 0.070

Figure 1 indicates no significant relationship between respondents' perception of antenatal care benefits and factors motivating its utilization (p-value = 0.070 > 0.05).

At what duration of pregnancy did you visit the health centre for Antenatal booking?

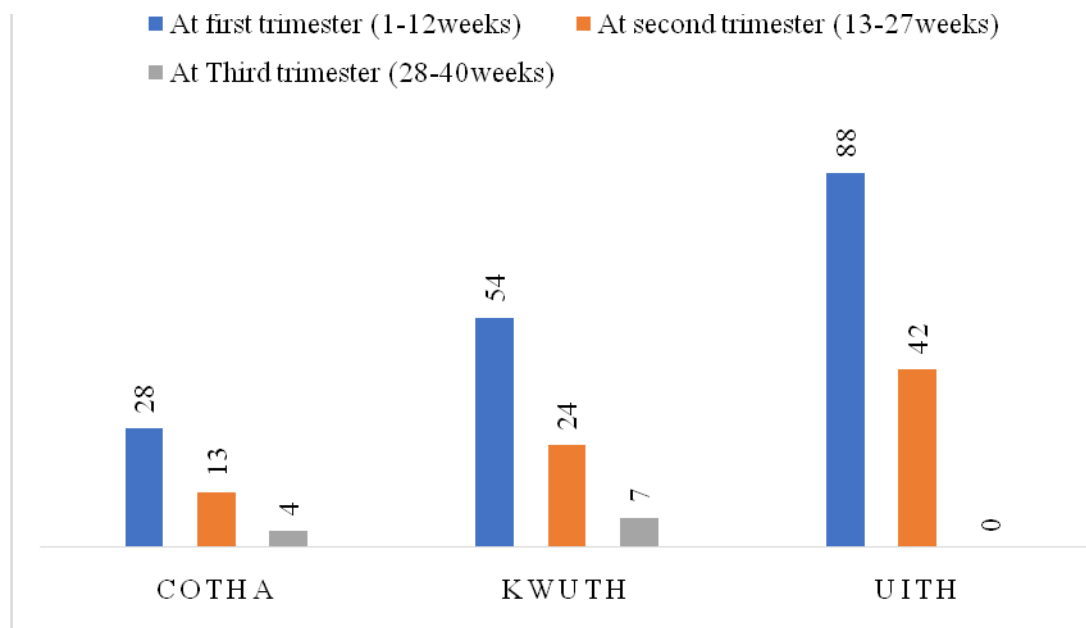


Figure 2: Respondents response on duration of pregnancy at antenatal booking

Mean = 21.50; p-value = 0.093

Figure 2 reveals that most respondents (170, 65.38%) booked antenatal care services during their first trimester (1-12 weeks), followed by 79 (30.38%) in the second trimester (13-27 weeks), and 11 (4.24%) in the third trimester (28-40 weeks). However, the statistical analysis shows no significant relationship between antenatal care booking timing and effective utilization (p-value = 0.093 > 0.05).

Table 1

Respondents response on regularity for antenatal care service

Are you regular in antenatal care visit for check-up?							
		N=260	%=100	Valid Percent	Cumulative Percent	Mean	p-value
Valid	Yes	235	90.4	90.4	90.4	43.33	0.034
	No	25	9.6	9.6	100.0		
	Total	260	100.0	100.0			

Table 1 indicates that most respondents (235, 90.4%) reported being regular with their antenatal care (ANC) appointments, while 25 (9.6%) did not. The statistical analysis reveals a significant relationship between regular ANC attendance and factors motivating its utilization ($p\text{-value} = 0.034 < 0.05$).

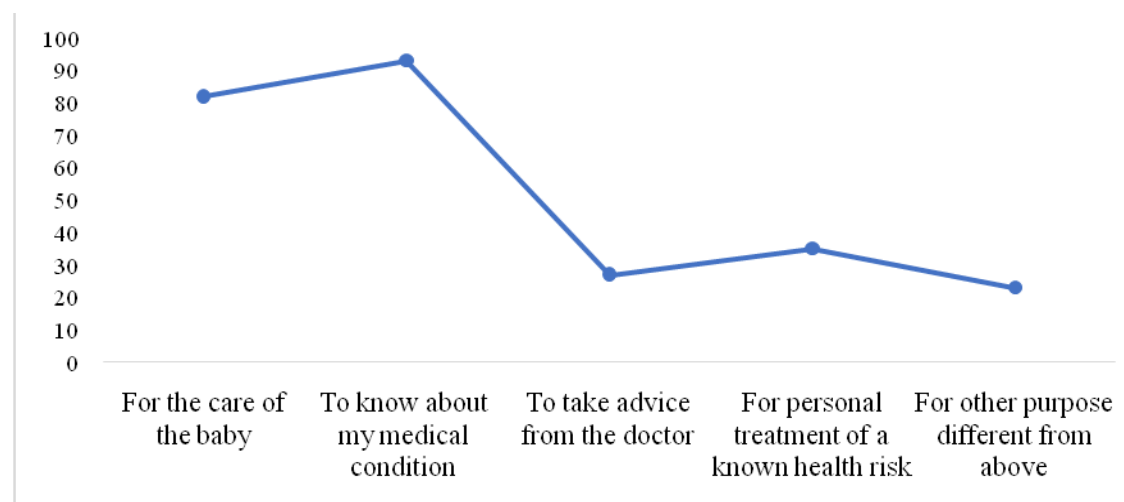


Figure 3: Respondents response on reasons for regular ANC visitation

Figure 3 above revealed that most of the respondents visit ANC regularly mainly to know about their medical condition and also for the care of the fetus.

Question to know if Respondents have ever experienced any complication during Pregnancy

Table 2: Have you ever experienced any complication during pregnancy							
		N=260	%=100	Valid Percent	Cumulative Percent	Mean	p-value
Valid	Yes	78	30.0	30.0	30.0	43.34	0.051
	No	182	70.0	70.0	100.0		
	Total	260	100.0	100.0			

The table above shows that 70% of respondents had no pregnancy complications, while 30% did. A significant link exists between complications and ANC utilization motivation ($p=0.05$).

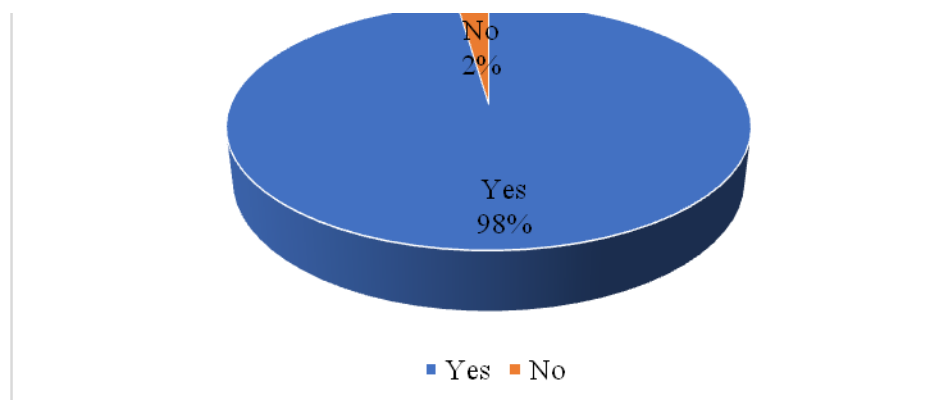


Figure 4: Variation towards getting treatment for the complication

Figure 4 above shows that 94% of respondents sought medical treatment for reproductive complications, while 6% did not.

Respondents' perception on the Importance of ANC services

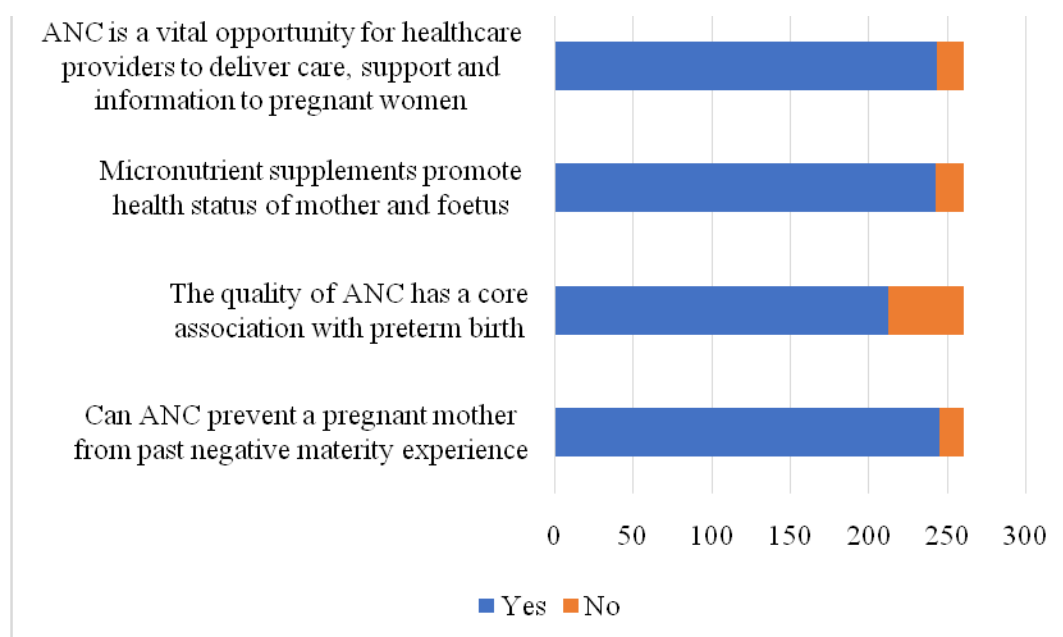


Figure 5: Perception on the importance of ANC services

Figure 5 above shows that Respondents demonstrate high awareness (81.5%-94%) of ANC benefits, including improved health, reduced preterm birth risk, and prevention of negative maternity experiences.

Table 3
Response on Questions on Knowledge and Awareness on ANC

ANC follow-up is for the monitoring of the mother and fetus growth					
		N=260	%	Valid Percent	Cumulative Percent
Valid	Yes	244	93.8	93.8	93.8
	No	16	6.2	6.2	100.0
	Total	260	100.0	100.0	
ANC booking should be done before the second trimester stage					
Valid	Yes	224	86.2	86.2	86.2
	No	36	13.8	13.8	100.0
	Total	260	100.0	100.0	
Screening of blood for infection should be carried out during ANC check-up					
Valid	Yes	234	90.0	90.0	90.0
	No	26	10.0	10.0	100.0
	Total	260	100.0	100.0	
Blood pressure should be check regularly during pregnancy					
Valid	Yes	235	90.4	90.4	90.4
	No	25	9.6	9.6	100.0
	Total	260	100.0	100.0	
USG should be carried out during pregnancy to monitor fetal growth					
Valid	Yes	255	98.1	98.1	98.1
	No	5	1.9	1.9	100.0
	Total	260	100.0	100.0	
Supplementation of iron & folic acid are good for the mother & fetus					
Valid	Yes	243	93.5	93.5	93.5
	No	17	6.5	6.5	100.0
	Total	260	100.0	100.0	
Home delivery is safer than hospital delivery					
Valid	Yes	60	23.1	23.1	23.1
	No	200	76.9	76.9	100.0
	Total	260	100.0	100.0	
Alcohol or other alcoholic-containing substance aid fetal growth					
Valid	Yes	17	6.5	6.5	6.5
	No	243	93.5	93.5	100.0
	Total	260	100.0	100.0	
Too much of exercise can affect the fetus negatively					
Valid	Yes	215	82.7	82.7	82.7
	No	45	17.3	17.3	100.0
	Total	260	100.0	100.0	
ANC check-up is compulsory for women after conception					
Valid	Yes	185	71.2	71.2	71.2
	No	75	28.8	28.8	100.0
	Total	260	100.0	100.0	

Respondents demonstrated high knowledge and awareness of antenatal care (ANC) benefits, with 93.8%-98.1% understanding its importance in monitoring mother and fetus well-being, ultrasound scanning, and supplements. A

significant majority (90.4%-93.5%) recognized the importance of regular blood pressure checks, blood screening, and avoiding alcohol during pregnancy. Additionally, 76.9%-86.2% were aware of the need for safe delivery, timely ANC booking, and care after conception. Furthermore, 82.7% understood the risks associated with excessive exercise during pregnancy.

Motivational Factors Influencing the Uptake of ANC

Motivation from Family Members

Criticism for Additional Children: A large majority of respondents (85.77%) reported not being criticized by family members for having additional children, with only 14.23% experiencing criticism.

Husband's Role in Antenatal Care Booking: Most respondents (81.90%) stated that their husbands played a significant role in motivating them to book antenatal care early, while 18.10% did not credit their husbands for this motivation.

Cultural or Societal Influence: The majority (86.54%) indicated that cultural or societal factors did not influence their decision to engage with antenatal services, with only 13.46% acknowledging such influence.

Counseling and Communication: A high percentage (88.46%) of respondents found that effective communication and counseling from their husbands at home motivated them to attend antenatal care, while 11.54% did not see this as a factor.

Recommendations from Others: 64.60% of respondents stated that recommendations or experiences of others did not play a role in their decision to use antenatal care, with only 35.40% attributing their ANC utilization to such influences.

In summary, spousal support, particularly in terms of motivation and communication, was a strong factor in antenatal care utilization, while external influences like societal pressure or recommendations from others had a less significant impact. Statistical analysis showed no significant relationship between overall family influence and antenatal care motivation.

Table 4

Healthcare Worker's Relationship

Variable	Option	CotHA n (%) 45 (17.30)	KWUTH n (%) 85 (32.70)	UITH n (%) 130 (50.00)	TOTAL n (%)
Are you convenient with the scheduled hour of operation for antenatal session in the healthcare centre?	Yes	29 (11.15)	17 (6.54)	120 (46.15)	166 (63.85)
	No	16 (6.15)	68 (26.15)	10 (3.85)	94 (36.15)
Have you ever experienced any delayed in waiting time since you have been attending antenatal service?	Yes	22 (13.85)	68 (26.15)	57 (41.92)	147 (56.54)
	No	23 (3.46)	17 (6.54)	73 (8.08)	113 (43.46)
With your experience as a pregnant woman in the hospital, is there any output of competence and expertise from the healthcare workers?	Yes	27 (10.40)	75 (28.85)	109 (41.92)	211 (81.15)
	No	18 (6.90)	10 (3.85)	21 (8.08)	49 (18.85)
Is there any encouragement to ask questions from your	Yes	41 (15.77)	71 (27.31)	120 (46.15)	232 (89.20)

healthcare provider during educative session of the antenatal care service?	No	4 (1.54)	14 (5.40)	10 (3.85)	28 (10.80)
Are you always comfortable with male health workers during ANC visitation?	Yes	31 (11.90)	20 (7.70)	109 (41.92)	160 (61.54)
	No	14 (5.40)	65 (25.00)	21 (8.08)	100 (38.46)

@ 0.05 confidential level: df = 4; p-value = 0.015

Table 4 examines the impact of healthcare workers on antenatal care (ANC) utilization. The results show that 63.85% of respondents find scheduled ANC visitation hours convenient, while 56.54% experience delays in waiting times. Despite this, 81.15% consider healthcare workers competent and expert. Encouragingly, 89.2% report being encouraged to ask questions during educational sessions. However, comfort levels with male health workers vary across facilities:

76.5% at KWUTH are uncomfortable, whereas 11.9% at CotHA and 41.9% at UITH are comfortable. The statistical analysis (p-value: 0.015) indicates a significant relationship between healthcare worker-patient relationships and motivation to utilize ANC services.

Table 5

Adequate Healthcare Facilities

Variable	Option	CotHA n (%) 45 (17.30)	KWUTH n (%) 85 (32.70)	UITH n (%) 130 (50.00)	TOTAL n (%)
Standard and well-equipped facilities can maximize positive health outcome.	Yes	38 (14.61)	82 (31.54)	130 (50.00)	250 (96.15)
	No	7 (2.70)	3 (1.15)	0 (0.00)	10 (3.85)
Availability of essential health commodities can contribute to the level to which pregnant mother will be motivated towards antenatal care booking.	Yes	39 (15.00)	78 (30.00)	130 (50.00)	247 (95.00)
	No	6 (2.30)	7 (2.70)	0 (0.00)	13 (5.00)
Do you have access to the available healthcare facilities in the healthcare centre?	Yes	34 (13.08)	65 (25.00)	99 (38.08)	192 (76.15)
	No	11 (4.23)	20 (7.70)	31 (11.92)	62 (23.85)
Modern equipments for easy check – up presents in the healthcare center are operated by experts	Yes	43 (16.54)	78 (30.00)	130 (50.00)	251 (96.54)
	No	2 (0.76)	7 (2.70)	0 (0.00)	7 (3.46)

@ 0.05 confidential level: df = 3; p-value = 0.002

Table 5 reveals the significant influence of available health facilities on antenatal care (ANC) utilization. An overwhelming majority of respondents (96.15%) believe that standard and well-equipped facilities are crucial for effective healthcare services. Additionally, 95% emphasize the importance of essential health commodities in motivating pregnant mothers to use ANC services. Most respondents (76.15%) have access to healthcare facilities, and 96.54% confirm that modern equipment is operated by experts, underscoring the critical role of quality healthcare infrastructure in promoting ANC utilization.

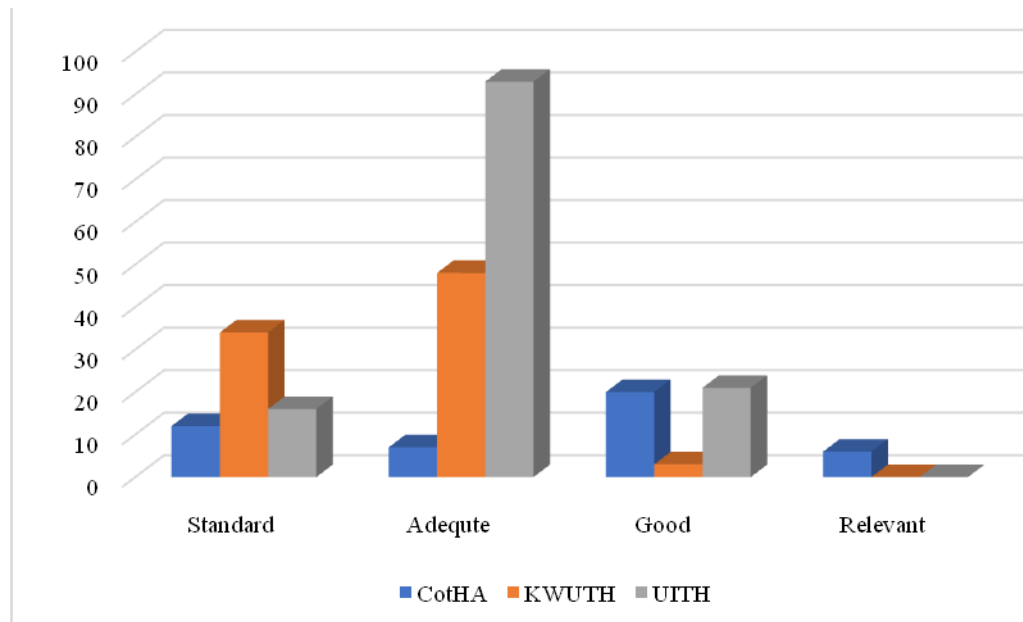


Figure 6: Health Facility condition in the healthcare centre

Figure 6 reveals that majority of the respondents, 93 out of 130 in UITH attested that the health facilities used at the healthcare centre are adequate; 21 authenticated that the condition of the facilities used in UITH are good. While at KWUTH, 48 out of 85 respondents attested to the fact that the available healthcare facilities are adequate and 34 respondents declared that the facilities are indeed standard. Meanwhile, at CotHA, 20 out of 45 respondents declared that the healthcare facilities condition at the centre were good and 12 respondents agreed that those facilities are standard. The statistical p-value (0.002) is lower than the expected p-value of 0.05. This implies that availability of adequate healthcare facilities has a significant towards the rate at which pregnant woman utilize antenatal care services.

Table 6

Motivation through Community Outreach and Advocacy

Variable	Option	CotHA n (%)	KWUTH n (%)	UITH n (%)	TOTAL n (%)
Is there any medium of antenatal education and awareness in your community apart from going to the healthcare centre?	Yes	18 (6.90)	3 (1.20)	62 (23.80)	83 (31.90)
	No	27 (10.40)	82 (31.50)	68 (26.20)	177 (68.10)
Has there been any increasing awareness of women at reproductive age about ANC through mass media such as Television, Radio, Smart device etc.?	Yes	31 (11.90)	65 (25.00)	73 (28.10)	169 (65.00)
	No	14 (5.40)	20 (7.70)	57 (21.90)	91 (35.00)

As a pregnant woman, have you ever been empowered through ANC education and awareness by any philanthropist or prominent healthcare provider in your community?	Yes	14 (5.40)	17 (6.50)	120 (46.20)	151 (58.10)
	No	31 (11.90)	68 (26.20)	10 (3.80)	109 (41.90)
ANC services should be readily accessible to increase its utilization in both rural and urban areas.	Yes	34 (13.10)	75 (28.90)	130 (50.00)	239 (91.90)
	No	11 (4.20)	10 (3.80)	0 (0.00)	21 (8.10)
Group antenatal care approach should be adopted for time consciousness and mother's comfort.	Yes	34 (13.10)	71 (27.30)	130 (50.00)	235 (90.40)
	No	11 (4.20)	14 (5.40)	0 (0.00)	25 (9.60)

@ 0.05 confidential level: df = 4; p-value = 0.096

Table 6 examines the impact of community outreach and health-based advocacy on antenatal care (ANC) utilization. The results show that 68.1% of respondents are aware of mediums circulating ANC information, while 65% cite mass media as a source of ANC awareness. Additionally, 58.1% have received ANC education and awareness from healthcare providers. Notably, 91.9% emphasize the need for accessible ANC services in communities to boost utilization and awareness. Most respondents (90.6%) advocate for group ANC approaches for convenience and comfort. However, the statistical analysis (p-value: 0.096) suggests that community outreach and advocacy programs do not significantly influence ANC utilization among pregnant women.

Discussion

The study examined socio-demographic factors influencing antenatal care (ANC) uptake among reproductive women in Nigeria. The participants comprised 45 respondents from Cottage Hospital, Adewole (CotHA), 85 from Kwara State University Teaching Hospital (KWUTH), and 130 from University of Ilorin Teaching Hospital (UITH). The socio-demographic data revealed that most respondents (55%) had their first child between 25-34 years, while 45% were between 18-24 years. Additionally, 93.46% were married, 53.10% held HND/B.Sc. certificates, 66.50% were self-employed, 86.50% were Yoruba, and 58.10% practiced Islam. Regarding perspectives, knowledge, and awareness on ANC services, most respondents (65.38%) booked for ANC services during their first trimester and 90.4% reported regular attendance at scheduled dates. The primary reasons for attending ANC were to know about medical condition and fetal care. Family background, healthcare workers, and availability of healthcare facilities motivated ANC uptake.

The study also examined community intervention in ANC uptake. Awareness dissemination revealed that 65% of respondents reported mass media awareness on ANC utilization, while 35% stated there was no mass media awareness. Furthermore, 58.1% received empowerment through ANC education and awareness from healthcare providers, while 41.9% had never received empowerment. However, community intervention showed no significant association with ANC uptake (p-value = 0.096). The study's findings provide valuable insights into factors influencing ANC uptake among reproductive women in Nigeria. Significant associations were found between socio-demographic factors and ANC uptake. Mass media awareness and healthcare provider empowerment positively influenced ANC utilization. However, community intervention requires reevaluation. Improving accessibility and adopting group ANC approaches can enhance ANC utilization.

The study's implications suggest that targeted education and awareness campaigns should focus on socio-demographic factors. Healthcare providers should prioritize empowerment and support. Community-level interventions require reevaluation, and improving accessibility and adopting group ANC approaches can enhance ANC utilization. This study contributes to the understanding of factors influencing ANC uptake in Nigeria, informing strategies to improve maternal healthcare outcomes and reduce disparities in ANC utilization.

Conclusion

The study's findings reveal that respondents have positive awareness, perspectives, and knowledge about antenatal care (ANC) services. Notably, 90.4% of respondents attend ANC appointments regularly, demonstrating their commitment to prenatal care. Furthermore, 94% consider ANC vital for healthcare providers to deliver care and information, while 81.5% believe micronutrient supplements promote maternal and fetal health. Additionally, 93.08% associate quality ANC with reduced preterm births, and 93.5% think ANC prevents negative maternity experiences. Statistical analysis revealed significant relationships between ANC regularity and motivational factors ($p < 0.05$), and between healthcare worker relationships and ANC uptake ($p = 0.015$). However, no significant associations were found between ANC booking and effective utilization ($p = 0.093$), family influence and ANC motivation ($p > 0.05$), and community intervention and ANC uptake ($p > 0.05$). Conversely, adequate healthcare facilities significantly associate with ANC uptake ($p < 0.05$).

The findings underscore the importance of healthcare worker relationships, adequate facilities, and availability of essential health commodities in influencing ANC uptake. Respondents' high knowledge and positive attitudes toward ANC services suggest that targeted interventions can enhance ANC utilization. Specifically, 96.15% believe standard and well-equipped facilities are crucial for effective healthcare service delivery, and 95% acknowledge the role of essential health commodities in motivating ANC services. Moreover, 76.15% reported access to healthcare facilities, and 96.54% confirmed expert operation of modern equipment. Overall, the study highlights the need for healthcare providers to prioritize patient relationships, ensure adequate facilities, and provide essential health commodities to promote ANC uptake. By addressing these factors, healthcare providers can enhance the effectiveness of ANC services and improve maternal healthcare outcomes.

Recommendations

The findings of this research emanate the following recommendations:

1. There is need to improve safe motherhood advocates within the State and Local level most especially in rural communities where antenatal care has been restrained in recent years as an intervention for reducing the rate of maternal mortality.
2. There should be community mobilization by health workers toward the education of each family as a unit on the importance of early initiation of antenatal care. Legislating law binding employers of labour to give concession for pregnant workers both at government and private sectors to meet up with their antenatal visits.
3. Information, awareness, education, and communication on antenatal care must be intensified in order to reach all segments of the population regardless of tribe, religion or family background.
4. Providing more education and training courses for health team especially nurses, midwives and associated staff involved in antenatal care to improve their knowledge and to take their role in educating and giving advice and instructions to pregnant women.

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