Awareness and Uptake of Antenatal Care Service Among Women in Iddo Local Government Area of Oyo State, Nigeria

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ABSTRACT

Various health challenges of neonatal death, still birth and maternal mortality are traceable to ineffective antenatal care programmes among others. The study therefore investigated awareness and uptake of antenatal care service content among women in Iddo local government area of Oyo State. Using snow ball research technique, 90 breast feeding mothers were selected from the study area and data was collected using structured questionnaire on their personal characteristics, awareness and uptake of Antenatal Care (ANC) service content, ANC service providers in the study area and constraints faced by mothers in accessing ANC services. Mean age of respondents was 36.3 and 78.8% had below secondary school education. Most of mothers were aware of each of the content of antenatal care services with highest awareness observed for urine test (83.3%) followed by blood test (82.2%). Uptake of ANC components was highest for tetanus toxoid ($\bar{x}=2.2$) followed by anti-malarial ($\bar{x}=2.0$) and blood test ($\bar{x}=1.7$). Religious centers ($\bar{x}=2.31$) received the highest patronage from mothers who attended antenatal care. Delay respondents faced at health centers before they received attention from service providers ranked as the highest constraint they faced in up-taking ANC services ($\bar{x}=2.32$). Significant relationship existed between respondents location ($\chi^2=15.89; p<0.05$) and uptake of ANC. Efforts aimed at decreasing the existing wide gap between health workers and clientele ratio and to increase the number of health facilities providing antenatal services should be given urgent attention.
Key words: *Women, Maternal mortality, Antenatal care.*

BACKGROUND TO THE STUDY

Antenatal care (ANC) is an intensive care given to pregnant women at all stages of their gestation period. It is to monitor the mother and the feutus health condition to prevent any complication or risk of any infections. It is also done to discover any abnormality in the fetus for proper treatment. ANC offers excellent privilege for promoting maternal health. Antenatal care is a variable package of screening (through clinical evaluation and investigation) and treatments for pregnant women with the prime objective of prevention, early detection and treatment of complications in the mother and fetus, and the ultimate goal of optimizing maternal and prenatal health. It is also a clinical assessment of mother and fetus during pregnancy for the purpose of obtaining the best possible outcome for mother and child. To achieve this objective, medical history and examination are complemented by screening using combination of methods, including biochemical, hematological and ultrasound. Efforts are also made to maintain maternal, physical and mental wellbeing, prevent premature delivery, to anticipate difficulties and complications at delivery and to ensure the birth of live healthy infant. It assists couples in preparation for parenting.

Maternal deaths due to poor antenatal care services among rural women regularly go unreported and the burden is often underestimated. According to Seema Shah (2011), about 99% of the four million neonatal deaths and three million still births per year occur in developing countries. Out of the figure, Nigeria is adjudged to have the highest absolute number of newborn deaths among countries in Africa, accounting for 255,500 of the 912,000 neonates who die annually in Africa (The Nigeria Academy of Science, 2009). In addition to the heavy scourge of neonatal deaths and still births, about 55,000 of the estimated 500,000 of women who die each year from complications of pregnancy and childbirth come from Nigeria (NPC, 2003). Although, Oyo State is not the worst hit by these health problems, studies revealed that the state suffer the greatest set – back among others in the Southwest region of the country (Adegoke, Lawoyin, Ogundeji and Thomson, 2007).

The role of women in agricultural development is an important one. According to Odurukwe, Matthews-Njoku, and Ejiogu-Okereke (2006),

women produce a sizeable proportion of the food crops consumed in Nigeria, contribute a high proportion of the workforce and form an important link in the marketing chain. According to CTA (1993), women make up one third of the work force in Africa. They account for 70% of agricultural workers, 80% of food processors while; 60% - 90% of them are involved in marketing. According to Women in Development (Gbolagade, 1987), Nigerian women represent 70% of the agricultural labour force and thus produce much of the country's food. Women contribute mainly to subsistence agriculture in Nigeria and they constitute a great asset to peasant agriculture. Given the significant roles women play in agricultural production, the need to safeguard their health cannot be overemphasized.

The Nigerian Academy of Science (2009) argued that various health challenges of neonatal death, still birth and maternal mortality are traceable to ineffective antenatal care programmes among others. As a result of this scourge, Nigeria is confronted with the challenge of losing the major player in agricultural production. This is because women play active role in all levels of agricultural production and income generation for household survival. It is against the back-drop of the foregoing and the need to reverse the ugly trend that this study was carried out.

Objectives of the study
The general objective of the study is to determine the awareness and uptake of antenatal care services among women in Iddo Local Government Area of Oyo State. Specific Objectives include to:
1. determine the respondents' personal characteristics,
2. investigate respondents' level of awareness of ANC services in the study area,
3. identify the ANC service providers in the study area,
4. determine respondents' uptake of ANC services; and
5. ascertain constraints faced by women in accessing ANC services in the study area.

METHODOLOGY
The area of study is Iddo local government area of Oyo State. The major occupation of the people in this area is farming with cassava, maize, and yam as important staple crops cultivated. The population for the study comprised of all breast feeding mothers in Iddo local government area. This is because this group of respondents is anticipated to have a complete experience of ANC service and was adjudged as most appropriate in providing answers to the questions aimed at achieving the objectives of this study.

Iddo local government area comprises of fourteen communities out of which four communities were selected using simple random sampling technique. These include: Akufo, Ijokodo, Omi-adio and Awotan. In each of the selected communities, a list of all breast feeding mothers was generated using snow ball sampling technique. From the generated list, a representative proportion of the women were selected using simple random sampling technique to give a total sample size of ninety respondents. Primary data was used to fulfill the objective of this study. Data was collected with the aid of a structured questionnaire on respondents' personal characteristics, awareness and uptake of antenatal care service content, ANC service providers in the study area and constraints faced by mothers in accessing ANC services. Uptake of ANC contents was measured by asking respondents to indicate how frequently they received each of ANC service during their pregnancy period on a 3 point scale of never (1), sometimes (2) and always (3). Mean for each content was computed to determine extent of uptake. Respondents indicated the availability of ANC service providers in their area as yes and no. They further indicated extent of patronage for each provider as never (1), occasionally (2) and regularly (3). Data collected was summarized using descriptive statistics such as frequency counts, mean and percentages. Chi-square was used to test the hypothesis on relationship between respondents' personal characteristics and uptake of antenatal care services.

RESULTS AND DISCUSSION
Table 1 shows that an overwhelming proportion of the respondents (85.6%) were less than 40 years of age ($\bar{x}$=36.3) and majority were of the Islamic religious faith. The age distribution which showed that majority of respondents were young people is consistent with the report of Sule-Odu, Fakoya, Oluwole, Ogundahunsi, Olowu, Olanrewaju, Akesode, Dada and Sofekun (2008) that observe the mean age of mothers of child bearing age in Nigeria to be 27.5. About 78.8% had below secondary school education suggesting a poor level of education among the nursing mothers in the study area. This finding is consistent with the argument of Oniye (2009) that Nigerian women are educationally disadvantaged in terms of accessibility to formal education. Also, the findings implies that more efforts will be required to ensure adequate awareness and utilization of Antenatal care services among women given several studies which show a positive correlation between level of awareness and literacy (Nigerian Academy of Science, 2009;

Schillinger, 2002). For instance, Nigerian Academy of Science observed low attendance of Antenatal care among three-fifths of women with no education in their studies. More than half (55.6%) of mothers were traders and about 40.0% had a household size of between 4-6 members. This result implies that most of the mothers have had previous experience(s) of childbearing. This is expected to reflect in their awareness of antenatal care services and its benefits for both pregnant mothers and fetus.

TABLE 1
Personal characteristics of respondents

Variables	Freq.	Percent	Mean
Age (years): <30	26	28.9	
30-39	51	56.7	36.3
40-49	11	12.2	
≥50	2	2.2	
Religion : Christianity	35	38.9	
Islam	51	56.7	
Traditional worshippers	4	4.4	
Educational status			
Non-formal	12	13.3	
Adult literacy	21	23.3	
Primary education	38	42.2	
Secondary education	18	20.0	
Tertiary education	1	1.1	
Occupation			
Student	5	5.6	
Pensioner	2	2.2	
Full housewife	18	20.0	
Trader	50	55.6	
Others	15	16.7	
Household size: 1-3	49	54.4	
4 - 6	56	40.0	
Greater than 10	1	1.1	

Table 2a on respondents' awareness of antenatal care components shows that more than half of mothers were aware of each of the content of antenatal care services. Highest awareness was observed for urine test ($\bar{x}$=83.3%) followed by blood test ($\bar{x}$=82.2%), iron supplement, blood pressure check-up, health education/counseling and nutrition education ($\bar{x}$=81.1 respectively). Lowest awareness was observed for ultra sound ($\bar{x}$=63.3%). Table 2b on categorization of respondents based on their level of awareness however shows that majority (68.9%) had below the mean awareness score of 12.0. The result corroborates the argument of Ekabua and Njoku (2011) that awareness of antenatal care services is still poor among women of child bearing age in Nigeria. While the data on table 2a is impressive, the result on table 2b implies that more is still required to be done by various stakeholders of maternal and infant mortality issues in Nigeria to improve mothers' awareness of the various components of the antenatal service package.

TABLE 2a
Respondents' awareness of content of antenatal care services

S/N	Contents of ANC	Awareness
1.	Vaccines for pregnant women	72 (80.0%)
2.	Routine checkup (womb examination, position of the fetus)	72 (80.0%)
3.	Nutrition education	73 (81.1%)
4.	Scanning (ultra sound)	57(63.3%)
5.	Health Education/Counseling	73(81.1%)
6.	Blood pressure check up	73(81.1%)
7.	Urine test	75(83.3%)
8.	Blood test	74(82.2%)
9.	Iron supplement at the beginning of first attendance till date	73(81.1%)
10.	Anti-malaria treatment	62 (68.9%)

* Multiple responses

TABLE 2b
Distribution of respondents based on their level of awareness

Level of awareness	Scores	Frequency	Percentage
High	12-20	28	31.1
Low	10-11	62	68.9

*Mean score =12

Table 3a shows that uptake of antenatal care components was highest for tetanus toxoid ($\bar{x}$= 2.2) followed by anti-malarial ($\bar{x}$=2.0) and blood test ($\bar{x}$=1.7). Uptake was however lowest for information on signs of pregnancy complications ($\bar{x}$=1.4) and urine test ($\bar{x}$=1.5). This finding contradicts the report on similar study carried out by the Nigerian Academy of Science (2009) which indicates that 55.0% of mothers in the reviewed data received information about signs of pregnancy complications and that content of tetanus toxoid and anti-malarial were least up-taken by the mothers. Table 3b on respondents' categorization based on uptake of antenatal care contents reveals that majority (62.2%) fell below the average uptake level, an indication that uptake was generally low among the mothers in the study area.

TABLE 3a
Respondents uptake of antenatal care service content

S/N	Statements	Never (%)	Sometimes (%)	Always (%)	Mean
1	Information on signs of pregnancy complication	68(76.4)	8(8.9)	13(14.4)	1.4
2	BP check	52(57.8)	23(25.6)	15(16.7)	1.6
3	Urine Test	58(64.4)	17(18.9)	15(16.7)	1.5
4	Blood Test	47(52.2)	27(30.0)	16(17.8)	1.7
5	Iron supplement	57(63.3)	18(20.0)	14(15.6)	1.5
6	Anti-Malarial (IPT)	19(21.1)	50(55.6)	20(22.2)	2.0
7	Tetanus toxoid	9(10.0)	57(63.3)	24(26.7)	2.2

TABLE 3b
Distribution of respondents based on their uptake of ANC service content

Utilization	Scores	Freq	Percent
High	12-21	34	37.8
Low	7-11	56	62.2

* Mean score=11.8

Figure 1 shows that religious centers ($\bar{x}$=2.31) received the highest patronage from mothers who attended antenatal care. This was followed by public health centers ($\bar{x}$=2.24). This finding show that antenatal care services rendered at religious centers has gained a wide popularity among mothers in the study area. This result gives credence to the assertion that most births in the developing world do not take place in hospitals (Wirawan and Linnan, 1994). The plausible reason for this may be explained by the traditional belief that pregnant women are prone to spiritual attacks arising from enemies and therefore need to be under constant spiritual watch in addition to the orthodox care which the antenatal care services offers. The considerable extent of patronage received by other alternatives to public health centers such as religious centers, traditional birth attendants and private midwives suggest the need for the relevant authority to evolve with a policy in order to integrate these alternative providers into the antennal care service framework through appropriate training and regulatory activities. This measure will ensure that the patrons of these alternatives also receive qualitative services like their counterparts who uptake the antenatal care services from government centers. This measure is also important against the backdrop of the inadequacy of public health workers (table 6) in the study area. Integrating the alternative providers within the service provision framework will thus provide the necessary backstopping for the few available hands in government health centers.
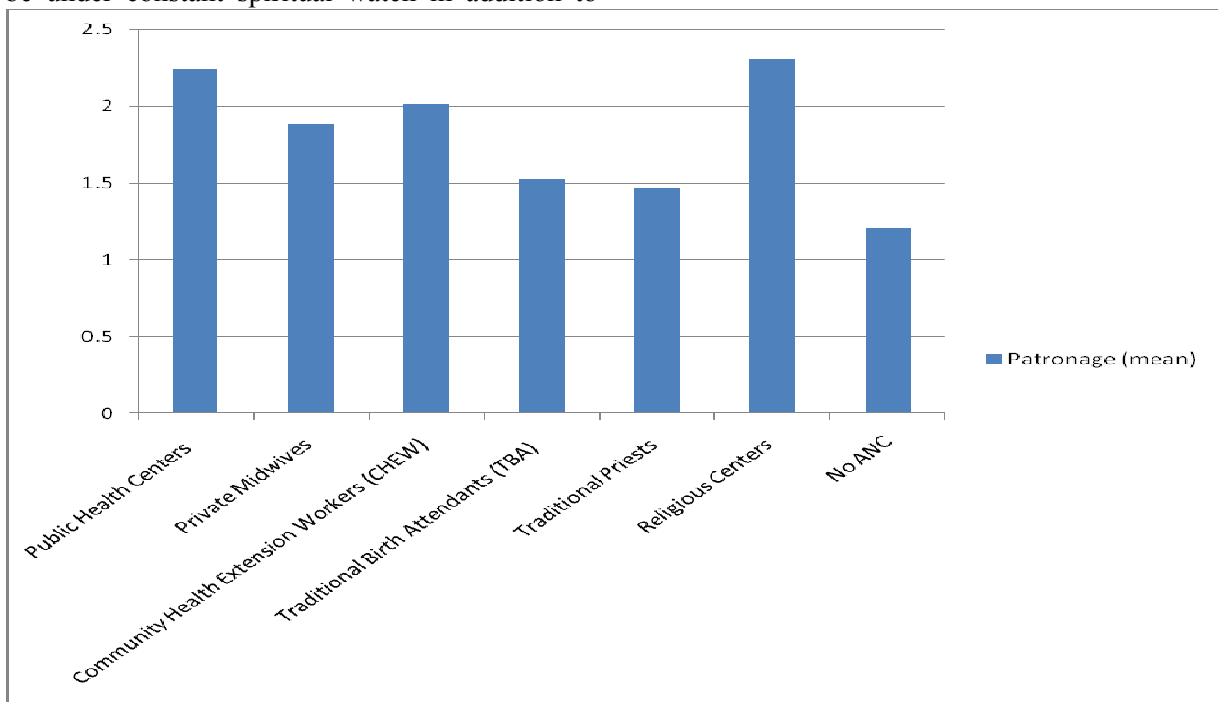

Figure 1: Patronage of antenatal service providers in the study area

Table 4 shows that delay respondents faced at health centers before they received attention from service providers ranked as the highest constraint they faced in uptake of antenatal care services (mean=2.32). This was followed by long distance between their residence and health centers (mean=2.04) and high cost of antenatal care services (mean=1.60). The finding on delay experienced at health centers as a major constraint is an indication that the ratio of health care service providers to clients is wide in the study area. This finding is in line with the argument of Adebimpe, Owolade and Adebimpe (2011) that there is dearth of skilled health care workers in Nigeria. Furthermore, findings on long distance between place of residence of mothers and health centers suggests that health centers where respondents can access antenatal services are not adequate in the study area. This might be another reason why most respondents utilized the religious centers and other non-governmental alternatives for antenatal care service uptake. The foregoing therefore indicates that efforts aimed at decreasing the existing wide gap between health workers and clientele ratio (through training and recruitment of more health workers) and increasing the number of health facilities providing antenatal services would translate in higher utilization of antenatal care services among mothers in the study area. On the other hand, poor antenatal care services and poor technical skills of health care providers (mean=1.2 respectively) ranked as low constraints among respondents. This suggests that these conditions or factors were not major reasons why mothers did not attend or uptake antenatal care services from government facilities.

TABLE 4
Constraints to uptake of ANC Services from government health facilities

S/N	Constraints	Mean	Rank
1	Poor antenatal care services	1.12	7
2	Poorly equipped health centers	1.16	5
3	Inadequate health personnel	1.16	5
4	Poor technical skills of health care providers	1.12	7
5	Lack of fund to access Antenatal services	1.39	4
6	High cost of Antenatal care services	1.60	3
7	Long distance between place of residence and health centers	2.04	2
8	Delay at health centers before getting attention	2.32	1

Table 5 shows a significant relationship between the mothers places of residence (location) and their uptake of antenatal care services (χ^2=15.89; p<0.05). This result implies that respondents who were closer to public health centers utilized antenatal care services more than others who are farther. This result corroborates the earlier findings of this study (table 4) that long distance between mothers residence and health centers was a major constraint to utilization of antenatal care services among the respondents. On the other hand, respondents' religion, education, household size and occupation had no significant relationship with their uptake of antenatal care services (χ^2= 2.55, 3.24, 0.925 and 4.30 respectively; p>0.05). This suggests that there is no religious bias towards antenatal care programme in the study area. It also implies that level of education of mothers and the type of occupation in which they engaged did not influence their decision to uptake antenatal care services. The non-significant relationship between education and uptake as observed in this study is however contrary to the findings of Nigerian Academy of Science (2009) that level of education of mothers affects their attendance of antenatal care. It can therefore be inferred that factors that influence attendance and utilization of antenatal care services at the national level may not be the same at local levels giving the possibilities of location specific differences. This observation is an indication that measures aimed at improving antenatal care attendance and utilization among mothers in Nigeria should consider factors relating to their location differences.

TABLE 5
Relationship between mothers' personal characteristics and uptake of ANC services

Variables	df	χ^2 value	p - value
Location of respondents	3	15.89	0.001*
Religion	2	2.55	0.280
Education	4	3.24	0.518
Household size	3	0.925	0.819
Occupation	4	4.30	0.367

*Significant at P≤0.05

CONCLUSION AND RECOMMENDATIONS

The study concludes that uptake of ante natal care services was low among mothers in the study area despite a generally high awareness of each of the content of antenatal care services among them. In addition, antenatal care services rendered at religious centers had gained a wide popularity among mothers in the study area. Delay respondents faced at health centers before they received attention from service providers and the distance between place of residence of mothers and health centers were major limitations that hindered utilization of ANC in public health centers. Efforts aimed at decreasing the existing wide gap between health workers and clientele ratio and to increase the number of health facilities providing antenatal services should be given urgent attention. Also, government should evolve a policy that would integrate alternative ANC providers (such as private midwives in religious centers, traditional birth attendants and traditional priests) into the antennal care service framework through appropriate training and regulatory activities.

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