

Utilization of Antenatal Care Services Among Pregnant Women Attending Public Hospitals in Awka-South Local Government Area Anambra State

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Abstract - Antenatal care services (ANCS) are provided for pregnant women and adolescent girls, to ensure the best health conditions for both mother and baby during pregnancy. Poor utilization of antenatal care services is still common in most societies, leading to unacceptably high level of complications developed during pregnancy from preventable or treatable diseases. This study aimed at investigating the Utilization of ANCS among pregnant women attending Public Hospitals in Awka-South Local Government Area, Anambra State. A total of 314 pregnant women volunteered for the study. Structured questionnaires were issued to the participants and the data collected were analyzed using descriptive statistics of frequency counts and percentage, Fisher's exact and chi-square (χ^2) statistics was used to test the study hypotheses at $P \leq 0.05$ significance level. The result showed that among 341 pregnant women assessed, 92(29.3%) were utilizing the services properly while 222(70.7%) were utilizing it poorly. Highest utilization was found among the age group 26-30 years (33.5%), 31-35 years (33.8%), and over 35 years (33.3%), and less utilization was found among the younger women of less than 26 years old (17.1%). There was slightly significant difference between age and the level of proper utilization of antenatal care services among the study group ($P=0.046$). Married women and the divorced or separated properly utilized the antenatal care services more than the single women. There was significant difference between the marital status and the utilization of antenatal care services ($P=0.021$). Findings from this study shows that there is the underutilization of antenatal care services among the respondents which could lead to complications in pregnancy, therefore, adequate education and awareness are highly recommended in the among pregnant women in the study area.

Key words: Utilization, Antenatal, Pregnant, Women, Public, Awka-South

I. INTRODUCTION

Antenatal care (ANC) is a special service provided by skilled health-care professionals to pregnant women and adolescent girls during pregnancy through the public health services (Carla *et al.*, 2003; WHO,

2016a). While these services help to prevent problems in both infant and mother, they also help to prepare women for birth and parenthood, ensure that each newborn child has a good start, and also to prevent problems for pregnant women, mothers and babies (Lincetto *et al.*, 2010).

It was estimated that in 2015, roughly 303,000 women died during pregnancy and child birth and 99% of all of these deaths occurred in developing countries (WHO Fact sheet, 2016). Utilizing maternal healthcare is paramount to improving women's health status; as poor utilization could lead to health complications during pregnancy. Maternal complications resulting from poor utilization of maternal health care services may vary in terms of demographics, socioeconomic and psychological factors. Government owned health facilities for antenatal care services have recorded poor of utilization of ANCS.

Maternal health has a high priority on the global agenda mentioned under Millennium Development Goals (MDGs) 5 which aims to improve on maternal health (Rosmans and Graham, 2006). Women should have a right and a choice in determining and ensuring a healthy living but very often, legal, social, economic and cultural constraints among others have been identified as hindering factors to this right.

Proper utilization of antenatal care services is essential for accomplishing the objectives of maternal and child healthcare. Hence, this study aimed at investigating the Utilization of Antenatal Care Services among Pregnant Women attending Public Hospitals in Awka-South Local Government Area, Anambra State.

II. MATERIALS AND METHODS

Study Area

Awka-south is one of the twenty-one Local Government Areas in Anambra State, Nigeria; made up of nine towns including Amawbia, Awka, Ezinato, Isiagu, Mbaukwu, Nibo, Nise, Okpuno and Umuawulu. It has a land area of about 180 square kilometres. The inhabitants are mainly Igbos with other ethnic groups like Igala, Tiv, Efik and Fulani. Most of the inhabitants are civil servants with quite a number in the business line, blacksmiths and farming. In a publication by the National Bureau of Statistics (2012), the population of Awka-south as recorded in 2006 census was 189,654, with females accounting for up to 48.9% of the population (National Bureau of Statistics, 2012). The 2017 population projection of Awka-South was 269,943 with a male proportion of 48.7% and female proportion of 51.3%, with birth rate set at 2.8% and the women of child bearing age accounted for 56,354 of the population (National Population Commission, 2017). Maternity hospitals represent more than half (52.9%) of the total number of health establishments in the state (Anambra State Bureau of Statistics, 2011).

Study Design

This study was designed as a descriptive survey study conducted between November, 2018 and January, 2019 using questionnaire. Observations regarding the Antenatal Care awareness and its utilization by pregnant women attending Public hospitals in Awka-south Local Government Area of Anambra state were described and analysed with respect to the Socio-demographic and Socio-economic conditions of the research respondents.

Study Population and Sample Size

The study population comprised of pregnant women who attended antenatal care services at the public hospitals of study in Awka-south Local Government Area which are Chukwuemeka Odumegwu Ojukwu University Teaching Hospital, Amaku Awka and General Hospital Mbaukwu, between November 2018 and January 2019. The sample size was a total of three hundred and fourteen (314) pregnant women who volunteered for the study.

Ethical Consideration

Approval was obtained from the Chief Medical Directors of the institutions. Verbal consent was obtained from research respondents before administration of the questionnaires. The respondents were informed about the research and its objectives and participation was made voluntary. They were

assured that confidentiality will be maintained during and after the study and information given would be used only for the research purposes.

Validity of Instruments

Face validity and Content validity were used in validating the research instruments proposed for this study. For the face validity, the study questionnaire was carefully prepared and approved by the supervisor of this study, and for the content validity, a medical personnel was consulted for the validation of the research instruments.

Reliability of Instruments

Test – retest method was adopted for reliability testing of research instruments. Before the distribution of the questionnaires to the respondents, about ten pieces of the questionnaires were distributed to the women who came for their routine antenatal care services in a non – selected hospital in the sample frame. This was repeated after one week to another randomly selected cohort. After this, the questionnaires were collected, cross-checked and analyzed for reliability using Crombach alpha tests.

Data Collection

The questionnaires were administered to the respondents after informed consent. Literate respondents were allowed to fill the questionnaires independently while those who were not rich in English language were assisted by interviewer method and language interpretation. The services of the nurse(s) in charge of antenatal care in those hospitals were also employed.

Data Analysis

Data analysis was performed in IBM – SPSS Statistics Version 23. The methods used include descriptive method such as frequency distribution method (percentage frequency) and Pie chart. Statistical Chi square test method was used to test for the study hypotheses, at 5% level. Where the Chi square rule could not be met, Fishers exact test was used for 2 by 2 tables, while Likelihood Chi square test was used for more than 2 by 2 tables. Probability value (p) was used to interpret the results.

III. RESULTS

Of the 314 respondents, 92 (29.3%) utilized antenatal care services properly. Age as a demographic factor showed significant influence on the level of proper

utilization of ANCS among the study group ($p<0.05$). The ANCS were utilised properly at the similar pattern for the 26-30 years 52(33.5%), 31-35 years 22(33.8%) and over 36 years 4(33.3%) but less utilized properly by the less than 26 years old, 14(17.1%)(Table 1). Marital status of the women was another significant factor of Antenatal care proper utilization found in this study ($p<0.05$). Single women proper utilisation of Antenatal care services was poor 0(0.00%) compared to the married 90(30.0%) and the divorced or separated 2(50.0%)(Table 1). Antenatal care proper utilization was highest among the tertiary education level participants 44(37.6%), than in other education levels although it was not a significant factor ($p>0.05$)(Table 1). Those respondents living with their spouse or partners had higher proper utilization level 88(30.8%), compared to those who were either living with their parents, relatives, friends, alone, etc. However this has no significant influence ($p>0.05$)(Table 1). Occupation was found significant ($p>0.05$). The civil and public servants 36(38.3%) as well as the women in trading or business activities 35(32.7%) properly utilised the Antenatal care services more than the seamstress 19(19%) and the hairdressers 2(15.4%)(Table 1). The lowest income

earning pregnant women in Awka South local government area utilized antenatal care services 87(30.1%) more than any other income level group, while proper utilization of the Antenatal care services based on transportation cost did not vary much among the different costs assessed (Table 1). Interestingly, all the pregnant women studied showed awareness for the existence of antenatal care services in the hospitals of study. Women who gave their first source of information as hospital or heath centre (%) seem to utilize Antenatal care services more than those that obtained the information firstly from any other source. However, first source of information awareness and the level of proper utilization of antenatal care services among pregnant women in Awka-South Local Government were not found to be associated significantly ($p=0.579$, $\chi^2=2.875$), in this study (Table 2). When perception of the benefits was considered, majority of the women studied (309: 98.4%) showed recognition for the benefits of Antenatal care services utilization but no evidence of significant relationship between perception of the benefits of Antenatal care services and utilization of the services was found in the index study ($p>0.05$)(Table 3).

Table 1: Socio-demographic factors and Proper utilization of Antenatal care services by pregnant women in Awka-South Local Government Area

	Total (n=314)	ANCS poorly utilized (n=222)	ANCS utilized (n=92)	Properly utilized (n=92)	χ^2	P
Age						
< 26	82	68	82.9	14	17.1	
26-30	155	103	66.5	52	33.5	
31-35	65	43	66.2	22	33.8	
36+	12	8	66.7	4	33.3	
Total	314	222	70.7	92	29.3	8.011 0.046*†
Marital Status						
Single	10	10	100	0	0.0	
Married	300	210	70.0	90	30.0	
divorced/ separated	4	2	50.0	2	50.0	
Total	314	222	70.7	92	29.3	7.757 0.021*‡
Education						
Non formal	1	1	100	0	0.0	
Primary	4	3	75.0	1	25.0	
Secondary	110	78	70.9	32	29.1	
Tertiary	117	73	62.4	44	37.6	
Post tertiary	71	57	80.3	14	19.7	
Others	11	10	90.9	1	9.1	
Total	314	222	70.7	92	29.3	10.536 0.061 †
Person Living With						
Spouse/ partner	286	198	69.2	88	30.8	

Parents	12	10	83.3	2	16.7		
Relatives	4	3	75.0	1	25.0		
Alone	3	3	100	0	0.0		
Others	5	4	80.0	1	20.0		
Total	314	222	70.7	92	29.3	3.647	0.456 [†]
Occupation							
civil/public servant	94	58	61.7	36	38.3		
business/ trading	107	72	67.3	35	32.7		
Seamstress	100	81	81.0	19	19.0		
hair dresser	13	11	84.6	2	15.4		
Total	314	222	70.7	92	29.3	10.611	0.014*
Monthly Income(naira)							
less than 30000	289	202	69.9	87	30.1		
30,000 - 49,000	13	10	76.9	3	23.1		
50,000 - 99,000	4	3	75.0	1	25.0		
100,000 -199,000	3	3	100	0	0.0		
200,000+	5	4	80.0	1	20.0	2.686	0.612 [†]
Transport cost (naira)							
less than 200	223	159	71.3	64	28.7		
200-500	50	35	70.0	15	30.0		
> 500	41	28	68.3	13	31.7		
Total	314	222	70.7	92	29.3	0.165	0.921

† : Likelihood ratio used instead of Pearson Chi square, * = significance at 5%

Table 2: Awareness and Source of Information

Awareness and Source of Information	Total	ANCS poorly utilized (n=222)		ANCS Properly utilized (n=92)		χ^2	P
		N	Freq	%	Freq		
Awareness of ANC services							
Aware	314	222	100	92	100		
Not aware	0	0	0.0	0	0.0		
Total	314	222	100	92	100	0	0
First Source of Information							
Hospital/ Health centre	151	102	67.5	49	32.5		
School	71	55	77.5	16	22.5		
Friends	43	29	67.4	14	32.6		
Family member	23	16	69.6	7	30.4		
Others	13	8	61.5	5	38.5		
Total	301	210	69.8	91	30.2	2.875	0.579

Table 3: Perception of the Benefits of Antenatal Care Services and Utilization of the services among Pregnant Women Studied

ANC benefits	Utilization	ANCS Poorly utilized (n=222)		ANCS Properly utilized (n=92)		P
		Total	N	Freq	%	
Yes	309	218	70.6	91	29.4	
No	5	4	80.0	1	20.0	
Total	314	222	70.7	92	29.3	0.54 ⁺

+: Fishers exact test was used

IV. DISCUSSION

It is a common practice that majority of women in Nigeria attend Antenatal care services in public hospitals, but the extent of utilization of such care

services should be of concern, considering the level of maternal mortality in the country. The present study investigated the utilization of antenatal care services by pregnant women attending public hospitals in Awka-South Local Government Area, Anambra State Nigeria.

Clearly, the overall level of proper utilization of antenatal care services among pregnant women in Awka-South Local Government Area was quite low (29.3%). The level obtained in this study is lower than national rate of 46.5% in Nigeria (Adewuyi *et al.*, 2018). The reasons for this low level of Antenatal care utilization could be as a result of poor services and location. The level of utilization of Antenatal care services among pregnant women were low registering and attending for the services within the recommended first 12 weeks of gestation (WHO, 2016), going for ultrasound scan within 24 weeks gestational age, taking at least 2 doses of tetanus Immunization before nearing delivery, and constant use of bed nets. This rate of first attendance to Antenatal care services within the first 12 weeks of gestation in this study (44.3%) is lower than 50.2% in Abimbola *et al.*, 2016 and also lower than 57.1% reported in Osun state South Western Nigeria (Onasoga *et al.*, 2012).

On the other hand, the index study identified significant demographic factors of utilization of Antenatal care services which include age, marital status and occupation. Marital status was also found significant in an Osun state Nigerian study (Onasoga *et al.*, 2012). A study in Uganda found occupation as an important factor of Antenatal care utilization (Kawungezi, 2015). Both level of education and occupation were significant Antenatal care services utilization factors in Awotunde *et al.*, 2019.

For age, Antenatal care services were found to be less utilized by the younger women of less than 26 years old. Single women utilize the services poorly compared to the married and the divorced. This finding is similar to Fagbamigbe and Idemudia 2015 where they stated that 93% of the women that utilized antenatal care were married ones.

In terms of occupation, the civil and public servants utilize the Antenatal care services mostly followed by those engaged in business and trading. This finding at the present study is similar to Awotunde, *et al.*, 2019 and Kawungezi, 2015 where civil servants

completed four Antenatal care visits compared to only two among the self-employed.

Antenatal care proper utilization was highest among the tertiary education level participants than in other education levels. It was also highest among those living with their spouses or partners compared to those who were either living with their parents, relatives, friends, alone, etc. The lowest income earning pregnant women in Awka South Local Government Area utilize antenatal care services more than any other income level group but this is contrary to the findings in Fagbamigbe and Idemudia, 2015, where most non-users of Antenatal care were found among the poor, though income was not an established significant factor of Antenatal care utilization in the present study.

V. CONCLUSION

Antenatal care is an avenue to reach a great number of pregnant women with the hope of providing effective clinical and health promotion services. However, findings from this study shows that antenatal care is still under utilized in Public hospitals in Awka South Local Government Area. It was discovered that utilization was high among women that attained tertiary institution, the young and the married women. These factors are significantly associated with the utilization of antenatal care services in the area. Study participants indicated proximity to hospital as a challenge hindering utilization. Efforts should be made towards addressing proximity and quality of service barriers to increase the chances of contact between pregnant women and health care workers. These findings could also help policy makers and researchers to design some specific strategies to improve utilization of Antenatal Care. Antenatal care is essential for safe motherhood. World Health Organization (WHO) recommends that every pregnant woman should utilize Antenatal Care (ANC) to ensure best health conditions for both mother and baby during pregnancy. Therefore to achieve effective utilization of antenatal care services in Awka South Local Government area, more awareness programmes should be created to enlighten and encourage pregnant women on the importance of antenatal care services as this would play a very crucial role in promoting utilization of antenatal care and maternal health. The findings from the study support the need for establishment of antenatal care centres in

communities that would be made easily accessible to pregnant women. Hospitals should be monitored to ensure effective care services are rendered, as this will greatly improve the number of Antenatal care users. The Ministry of Health should enhance Information, Education and Communication strategies aimed at promoting healthy behaviours both at health facility and communication levels.

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