Original Article

Proximate Determinants of Antenatal Care Utilization among Women in Southeastern Nigeria

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ABSTRACT

BACKGROUND: In order to scale up Antenatal services, there is need to determine the factors that deter women from accessing antenatal care.

AIM: To determine the proximate factors that affect utilization of antenatal care among market women in Nnewi, southeastern Nigeria

MATERIALS/METHOD: A cross sectional survey of 400 market women using semi structured questionnaires and focus group discussions.

RESULT: Out of the 398 studied women, 97.2% attended antenatal care in their last pregnancy. Most (64.5%) of them booked after the third trimester and majority of the women received antenatal care from the private specialist hospitals(37.4%), followed by the private general practice hospitals (34.7%) and government hospitals(17.8%). The main reasons for choosing antenatal care facilities were the perceived friendliness of the staff (33.9%), availability of staff always (27.4%) and proximity of the facility (17.4%). Financial considerations accounted for 4.5% of the reasons for the choice of facility. There was no significant influence of age, parity and religion on the utilization of antenatal care. However, the likelihood of ANC attendance was significantly lower among the house wives(x^2=14.2; p=0.0). There was no association between choice of facility for ANC and age, parity, occupation or religion. The main reasons identified by the FGD discussants for preferring the private hospitals were more friendly and available staff. Also late booking was mainly attributed to wrong advice from friends and husbands refusal to provide money.

CONCLUSION

Antenatal care attendance rate was high among the studied women and most of the women utilize private hospitals for care. Staff friendliness and availability at all times were the main reasons for choice of ANC facilities. There is the need to address the negative attitudes of the staff in government hospitals.

KEYWORDS: Proximate determinants, antenatal care utilization, Southeastern Nigeria.

Date Accepted for Publication: 25th March, 2012
NigerJMed 2012: 196-204

Introduction

Antenatal care (ANC) is the specialized form of care given to a pregnant woman in order to ensure a healthy mother and a healthy baby. This form of care is usually instituted very early in pregnancy and seeks to identify factors, either preexisting or developing de novo in pregnancy, capable of compromising the outcome of pregnancy. Antenatal care provided by a skilled health worker enables early detection and prompt treatment of complications, prevention of diseases through immunization and micronutrient supplementation, birth preparedness and complication readiness and health promotion through health messages and counseling of pregnant women[1].

Although recent studies have challenged the potential of ANC to reduce maternal mortality [3,4], good quality ANC has been recognized in terms of its ability to prevent, diagnose or treat pregnancy complications [5] and has been recognized by the WHO as a key component of the safe motherhood initiative (SMI) [6]. A study conducted in India reported that women who had received a high level of antenatal care were about four times as likely to use skilled assistance at delivery compared to women who receive low quality care [7]. Regular antenatal care is important not only for identifying those women who are at increased risk of adverse pregnancy outcomes, but also for establishing good relations between women and their health care providers.[8]

It is a common knowledge that unbooked pregnant women (pregnant women that did not receive antenatal care) have worse pregnancy outcomes when compared to the booked pregnant women[9,10]. Despite the central role of good quality antenatal care in improving maternal health and reducing mortality, socioeconomic, geographical, cultural and Health care provider factors constitute Impediments to the effective delivery of ANC in Africa [4, 11,12].

The identified determinants of utilization of maternal health services include maternal education[13-16], perception of quality of services[17-22], negative attitude of the healthcare workers[23,] and failure of the providers to respect the culture of the people[24]. Cost of services has also been identified as a limiting factor to utilization of maternal health services[25-27].

In Nigeria, the rate of utilization of antenatal care varies according to regions and also differs between the urban

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and rural dwellers. In Ibadan, 87.6% of the mothers attending infant welfare clinics received antenatal care, but almost all of them (87.7%) commenced antenatal care after the 1st trimester.[28] Thirty percent (30%) of the women delivered out of formal health facilities.

Okafor CB[29] in a survey conducted in four rural towns in Nigeria to assess the availability and use of services for maternal and child health care found that available services were deficient in terms of number of facilities and content of care. Maternal and husband's education, occupation, distance and previous use of physician significantly influenced the rate, place and timing for prenatal registration and subsequent use of services.

Also, among rural women in Niger delta area of Nigeria who delivered within one year of a survey, Osubor et al, [30] that only 9.9% received antenatal care while 25.9% of rural Hausa women in Zaria, northern Nigeria, received antenatal care in a formal health facility[31]. Most of the women felt that antenatal care was not necessary and husband's refusal was cited as the main reason for non utilization of antenatal care services.

This study therefore, seeks to evaluate the rate and pattern of utilization of antenatal care services in Nnewi, Southeastern Nigeria and also the proximate determinants.

Study Area
Nnewi is a semi urban town located in Anambra state within the southeast region of Nigeria. It comprises four quarters; Otolo, Nnewichi, Uruagu and Umudim. The town is known for business and technology and has been described as "Japan of Africa". It has the largest motorcycle and motor spare parts market in Africa. Therefore the inhabitants are predominantly traders and scores of indigenes who are peasant farmers and petty traders. Apart from the central market, each of the quarters has its own daily market that caters for the routine needs of its people. There is electricity and good road network, but no pipe borne water. The residents are mostly Christians with a few Muslims and traditionalists. Due to the presence of a federal teaching hospital, there are a large number of healthcare workers as well as numerous specialist hospitals.

Study Design
This is a cross sectional descriptive study in which information was obtained through quantitative and qualitative means.

Sample size determination
The minimum sampling size of 400 was determined using the statistical formula of Fischer for calculating sample size[32] utilizing the prevalence of antenatal care services in Nigeria=64.0%[1] allowing for a 10% attrition.

Study population
The study population comprised market women who delivered their last child within the past three years. Equal numbers (100) of women were selected from each of the four markets, representing the four quarters of the town. Women, who withhold consent or who had not delivered a child were excluded from the study.

Data collection
Data was collected from eligible women using pre tested semi-structured questionnaires which were either interviewer or self administered depending on the convenience of the women. The information obtained included sociodemographic characteristics, knowledge about antenatal care, and utilization of antenatal care, the place and timing of antenatal care in the last pregnancy and the reason for the choice.

The data was augmented with information from focus group discussions (FGDs) involving selected women. The FGDs consisted of ten to fifteen participants, a facilitator, tape recorder and a note- taker. The discussions took place in the evenings between 4.00pm and 6.00pm Nigerian time when the women had closed business for the day. The venues were either in a building within the market or under any big tree that provided shade. The language was a mix of the local language (Igbo) and English language as determined by the convenience of the participants. In all a total of 8 focus group discussions were held- 2 for each of the markets. The parameters used in choosing participants included sociodemographic characteristics likely to affect attitude to the use of antenatal care services.

Data analysis
The collected data was analyzed using EPI INFO version 3.5.1(2008) software. Descriptive statistics such as means, median and mode were computed for continuous variables and proportions for nominal characteristics of the women. The Pearson's chi-square test was used to assess significance of associations between two nominal variables and a p-value of < 0.05 at 95% confidence interval was taken as significant. The results were presented in tables and charts.

Ethical considerations
Ethical clearance was obtained from the ethical committee of the local government area. As much as possible, the rights of patients were protected in this research work and questionnaires were only administered to women who have given their consent, after due counseling.

RESULT
Table I shows the sociodemographic characteristics of the respondents. The modal age group was 25-29(34.2%; n=136) while the modal parity group was 2-4(56.8%; n=226). Literacy level was very high (85.1%; n=339) and

majority of the respondents were traders.(81.7%;n=325). Almost all of the women were Christians (99.7%; n=397) with a preponderance of the Roman Catholic denomination.

Table II shows the knowledge, attitude and practice of antenatal care among the respondents.
Most (98.2%) of the respondents knew about antenatal care and 97.2% of them attended ANC at their last pregnancy. 37.2% (130) booked within the 1st trimester. The main reasons for non-attendance to ANC were the feeling of the antenatal not being necessary. Majority of the women felt that ANC is important and 89.9 %(n=350) would attend ANC at the next pregnancy.

Table III shows the choice of places for antenatal care and the reasons for such choices. Most (81.8%) of the women received antenatal care from the private hospitals while only 17.8% of them attended ANC at the government hospitals. The main reasons for choosing antenatal care facilities were the perceived friendliness of the staff (33.9%), availability of staff always (27.4%) and proximity of the facility (17.4%). Financial considerations accounted for 4.5% of the reasons for the choice of facility.
Table IV shows the influence of sociodemographic factors on antenatal attendance. There was no significant influence of age(x^2=0.45,P=0.72) parity, education(x^2=1.4,P=0.70) and religion(x^2=3.1,P=0.5) on the utilization of antenatal care. However, occupation significantly influenced attendance to ANC. (x^2=14.2; p<0.01).

Focus group discussions
Most of the participants at the FGD agreed that antenatal care is very important and attended antenatal care in their last delivery. The main reasons identified for non attendance to antenatal clinic include the attitude of the men as one of the participants put it "some of the men are nonchalant about their wives health and do not provide money for their antenatal care. These men usually feel that their wives exploit them"(a participant at one of the FGDs). The major reasons identified by the FGD discussants for late booking were wrong advice from friends and husbands refusal to provide money. Preference for private hospitals was mainly attributable to the poor attitude of the health care workers at the public hospitals, incessant strikes and long waiting periods.

Table I: Sociodemographic profile of the respondents

Sociodemographic profile	N=398	Percentage
Age		
<25	33	1.2
25 29	136	34.2
30-34	119	29.9
35 and above	110	27.7
Parity		
1	76	19.0
2-4	226	56.8
3	1	0.3
5 and above	95	23.9
Marital status		
Married	387	97.2
Widowed	10	2.5
Divorced /separated	1	0.3
Occupation		
Trader	325	81.7
Housewife	30	7.5
Artisan	23	5.8
Public servant	11	2.8
Student	9	2.3
Highest Educational Qualification		
No Formal Education	9	2.3
Primary	50	12.6
Secondary	262	65.8
Tertiary	77	19.3
Religion		
Anglican	102	25.6
Catholic	188	47.2
Islam	1	0.3
Others	5	1.3
Pentecostal	102	25.6

Table II: Knowledge, Practice and attitude to antenatal care am ong the respondents

Perceptions and practice of antenatal care	Frequency	Percent
knowledge about ANC		
No	7	1.8
Yes	391	98.2
Do You think it is important to Attend ANC?		
No	5	1.3
Yes	393	98.7
Attendance to ANC at the last Pregnancy		
No	11	2.8
Yes	387	97.2
Month Of ANC Booking		
Within 3 Months	130	32.7
-6 Months	231	58.0
After 6 Months	26	6.5
Reasons For Non Attendance of ANC		
Could Not Afford it	2	0.5
Not Aware Of Services	3	0.8
Not Necessary	6	1.5
ANC Attendance in the next Pregnancy		
No	40	10.1
Yes	358	89.9
Place of ANC attendance in next pregnancy		
Church	1	0.3

Table III: Places of antenatal care in the last pregnancy and the reasons for choices

Places of antenatal visit	Frequency	Percent
No attendance	11	2.8
Private Specialist Hosp	149	37.4
Private general practice Hosp	138	34.7
Government Hosp	71	17.8
Maternity Home	25	6.3
Mission hospital	4	1.0
Church	1	0.3
Reason for choice of ANC Places		
More friendly Staff	135	33.9
Availability of staff always	109	27.4
Proximity	58	14.6
Specialist Services	26	6.4
Husband's Decision	19	4.8
Advise of friends	18	4.5
Less costly	18	4.5
Availability of facilities	3	0.8
Trust	3	0.8

Table IV: The influence of sociodemographic characteristics on ANC attendance

	Antenatal care attendance		Total	X^2	p-value
Sociodemographic profile	**Yes (%)**	**No (%)**			
Age					
20-24	30 (93.8)	2 (6.2)	32		
24-29	1 (100.0)	0 (0.0)	1		
25-29	133 (97.8)	3 (2.2)	136	0.45	0.72
30-34	113 (95.0)	6 (5.0)	119		
35 and above	110 (100.0)	0 (0.0)	110		
Parity					
1	73(96.0)	3 (4.0)	76		
2-4	221 (97.8)	5 (2.2)	226		
3	1 (100.0)	0(0.0)	1	1.63	0.65
5 and above	94 (98.9)	1 (1.1)	95		
Marital status					
Married	376 (97.2)	11 (2.8)	387		
Widowed	10 (100.0)	0 (0.0)	10	0.33	0.85
Divorced /separated	1(100.0)	0 (0.0)	1		
Occupation					
Trader	319(98.2)	6(1.8)	325		
Housewife	26(86.7)	4(13.3)	30	14.2	0.00
Artisan	22(95.7)	1(4.3)	23		
Public servant	11(100.0)	0(0.0)	11		
Student	9(100.0)	0(0.0)	9		

DISCUSSION

Quality antenatal care from a trained provider has been recognized in its ability to reduce maternal mortality ratio and improve the health of the mother and the newborn. Antenatal care provided by a skilled health worker enables, early detection and prompt treatment of pregnancy complications, prevention of diseases through immunization and micronutrient supplementation, ensuring birth preparedness and complication readiness; and health promotion and disease prevention through health messages and counseling of pregnant women[1].

This study of pregnant women in Nnewi was carried out to determine the proximate determinants of ANC attendance in the area. The study showed a very positive attitude to antenatal care as well as a high rate of attendance at the last delivery. A similar trend has been previously report both from the southwestern part[33,34] of the country and the southeast[35]. These figures are higher than the national rate for ANC attendance as contained in the latest National Demographic and Health Survey[1]. It is possible that the results from these institution based reports represents findings from the urban areas while the Demographic study is truly representative of the general trend. Majority of the women booked after the first trimester. It is desirable to book for antenatal care within the first trimester so that factors that can cause injury during organogenesis are identified and tackled. Failure to do this may result in various congenital anomalies that may not be compatible with life.

A vast majority (81.8%) of the respondents received antenatal care in private hospitals and only 17.8% of the women received care at the public hospitals. This shows the important place of privately owned hospitals in the provision of essential obstetric services as has been documented by previous studies in Nigeria[36,37]. For instance, in Anambra State, during review of all the health facilities providing obstetric care, Okonkwo et al[36] found that 79% of all deliveries took place in the private hospitals. These hospitals should therefore, be integrated into the current efforts at reducing maternal mortality. The Government should consider periodic training in EmOC among the health providers working in these hospitals. Also, the assistance obtained from the development partners should be extended to these hospitals since they cater for the majority of the populace.

The major reasons for poor patronage of the public hospitals include poor and unfriendly attitude of the healthcare workers, distant location of the hospitals and lack of privacy.

This work identified friendliness of the staff, availability of the staff on a 24 hour basis as the main factors that encourage preference of the private hospitals. This had been previously reported in Calabar, South-south Nigeria by Asuquo et al[23] who found that negative attitude of the health care providers was a major deterring factor to utilization of maternity services. Most of the women interviewed in that study said that doctors and nurses only pay attention to their friends and relatives or those who have seen them privately. Even when the nurses were seen, they show no sympathy but rather throw abuses on them. A study in Egypt similarly reported that 13 out of 29 households did not utilize available health services because they were dissatisfied with the attitude of the hospital staff[22]. It is important therefore, to address the poor attitude of the health care providers at the public hospitals through sustained re-orientation exercises to restore the trust and confidence of the people in the hospitals.

The study did not find any correlation between education and the likelihood of attending ANC. However, women education has been a major determining factor for utilization of maternal health services with the rate of utilization of services increasing with increasing levels of education.[13,14] For example in Jordan and Philipines, the use of antenatal services increased significantly from 24.0% and 69.0% among illiterate women to 70.0% and 91.0 % among those with Secondary education respectively[15,16].

Although the cost of services contributed a little to the pattern of utilization of ANC services (4.5%), it has been recognized as a militating factor to utilization of maternity services. An increasing cost of services can take the available services out of the reach of the poorer segment of the populace. Many African countries introduced user fees following the introduction of the Bamako initiative [25]. The aim was to generate revenue for the health sector and improve the quality of services delivered to the people. At present 14 out of 15 African countries operate some form of user fees in Government health facilities.[26] The obvious effect is a decline in the rate of

utilization of services. A World Bank report on Nigeria illustrates very well the effect of user fees on maternal mortality. The survey reported that introduction of user fees deterred at-risk women from seeking antenatal health care with the result that the number of emergencies being admitted without prior care increased[27]. The women arrive late and this increases the operational risk and for those who survive, the recovery was slow, hospital stay prolonged and treatment costs, both for the provider and beneficiary were substantially increased.

Although not assessed directly in this study, the perception of quality of services by women has been shown to determine the extent and pattern of use of maternal services in Africa[17-21]. If the people are satisfied with the quality of services rendered at the facilities, they are willing to pay and access those services [17]. But if they perceive the services to be of low quality, they will shun the facilities even if services are offered free of charge [21].

Another important staff barrier to utilization of maternal services is failure to respect the culture of the people. Due to cultural inclination, some women may prefer women physicians and may also prefer to adopt some positions during delivery. These preferences need to be respected. Among rural Hausa women of the northern Nigeria, Ejembi et al[24] found that only 9.9% of the women delivered their last baby in a health facility while 90.1% of them delivered at home. Cultural unacceptability of the hospital practices was the main deterring factor mentioned by the women. Lack of trust in the providers as found in this study may derive in part from unwillingness

CONCLUSION

The rate of antenatal care attendance is high among the women in Nnewi. However, the private hospitals are preferred for mainly on the basis of more friendly and available staff. There is need to address to negative attitude of workers at the public hospitals in order to restore the confidence and trust of the people in these hospitals.

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