

SOCIODEMOGRAPHIC FACTORS THAT INFLUENCE GESTATIONAL AGE AT ANTENATAL CARE BOOKING IN JOS UNIVERSITY TEACHING HOSPITAL, JOS, NIGERIA.

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ABSTRACT

Background: *The purpose of antenatal care is to improve pregnancy outcome for both the mother and the fetus. Antenatal care is more beneficial in preventing adverse pregnancy outcome when it is sought early in pregnancy and continued through to delivery. However, existing evidence from developing countries including Nigeria indicates that few women seek antenatal care (ANC) at early stage of their pregnancies. Objective: To assess the gestational age at antenatal care booking and sociodemographic factors that influence the gestational age at antenatal booking.*

Subject and Method: *A prospective cross sectional clinic based study that recruited 274 women using a structured questionnaire to willing pregnant women who came to book in the antenatal clinic of Jos University Teaching Hospital (JUTH).*

Result: *The mean age of the women was 28±4.1 years. Two hundred and twenty three (81.4%) booked late for antenatal care. The mean gestational age at antenatal booking was 21.1±3 weeks. One hundred and forty one (51.5%) booked in second trimester. Employment, education, income and parity significantly influenced gestational age at antenatal booking. Maternal education (OR=0.8625, 95%CI, 0.1703-0.8722) and income (OR=0.2803 95%CI, 0.1037-0.7577) were found to be the strongest determinant of gestational age at antenatal booking. About one-third of those that booked late, (29.4%) think that was the best time to book while 24% was due to lack of money to book for antenatal care.*

Conclusion: *Late antenatal booking still remain significantly high in our environment indicating that the importance of early antenatal booking is yet to be appreciated. Public enlightenment, health education coupled with women empowerment would be helpful in reducing the problem.*

Keywords: *Sociodemographic, antenatal care, obstetrics, Gestational age, booking, pregnancy outcome.*

INTRODUCTION

Timely and adequate antenatal care is generally acknowledged to be an effective method of preventing adverse outcomes in pregnant women and their babies¹. Early commencement of antenatal care by pregnant women as well as visits has the potential to affect maternal and foetal outcome positively^{2,3}.

Many developing countries do not have national guidelines on antenatal care but commencement of antenatal care within the first 14 weeks of gestation is widely accepted as early and many previous workers have defined booking after the 14th weeks of pregnancy as late^{4,5}.

Commencement of antenatal care before 14 weeks of gestation allows for early commencement of health education and counseling on expected physiological changes, the normal course and possible complications of pregnancy, labour and puerperium^{6,7}. Similarly, it aids early documentation of the woman's baseline physiological and laboratory parameters for subsequent comparison and early detection of anomalies with the progress of pregnancy⁸. It aid preventive treatment approach, and HIV Counseling and testing⁹.

Subject and Method: *A prospective cross sectional clinic based study that recruited 274 women using a structured questionnaire to willing*

pregnant women who came to book in the antenatal clinic of Jos University Teaching Hospital (JUTH).

LIMITATIONS OF THE STUDY

Since it was a clinic based study, the findings may not be generalizable to the entire population of pregnant women in Nigeria, necessitating a larger population-based study in the future.

RESULTS

Two hundred and eighty questionnaires were administered to women who came to book during the study period. Of these, 274 (97.8%) were returned. The mean age of the respondents was 28(4.1) years. Majority of the respondents, 100(36.5%) were in the age group of 25-29 years. These findings are summarized in table 1 below:

Table 1: Sociodemographic Characteristics

Educational status			
None	10	3.7%	3.7%
Primary	40	14.7%	18.3%
Secondary	105	38.5%	56.8%
Tertiary	119	43.2%	100.0%
Total	274	100.0%	100.0%
Marital status			
Married	269	98.2%	98.2%
Single	5	1.8%	100.0%
Total	274	100.0%	100.0%
Marital setting			
Monogamous	239	88.2%	88.2%
Polygamous	35	11.8%	100.0%
Total	274	100.0%	100.0%
Employment status			
Government Employed	54	19.8%	19.8%
House Wife	38	13.9%	33.7%
Private Employed	26	9.2%	42.9%
Self employed	128	46.9%	89.7%
Student	28	10.3%	100.0%
Total	274	100.0%	100.0%
Average monthly income			
<10,000	129	47.4%	47.4%
10,000-49,000	108	39.6%	91.5%
50,000-99,000	24	8.5%	100.0%
≥100,000	14	4.4%	51.9%
Total	274	100.0%	100.0%
Husband's educational status			
Primary	25	9.2%	9.2%
Secondary	98	36.2%	45.4%
Tertiary	148	54.6%	100.0%
Total	271	100.0%	100.0%
Husband's average income			
<10,000	24	8.8%	8.8%
10,000-49,000	112	41.2%	67.6%
50,000-99,000	33	12.1%	79.8%
≥100,000	48	17.6%	26.5%
I Don't Know	55	20.2%	100.0%
Total	274	100.0%	100.0%
Parity			
0	76	27.9%	38.2%
1	52	18.8%	57.0%
2-4	118	43.0%	100.0%
≥5	28	10.3%	10.3%
Total	274	100.0%	100.0%

Table 2: Reasons Given For Booking Late

Reasons	Frequency	Percent	Cum Percent
This is the best time to book	67	27.3%	27.3%
Did not have money to register	24	9.8%	37.1%
It is not necessary to book before now	16	6.5%	43.6%
I usually book my pregnancy about this time	15	6.1%	49.7%
Did not want to make the pregnancy public yet	4	1.6%	51.3%
Somebody advised me to book now	10	4.1%	55.4%
I did not have any complaints/complications so there was no need to see a health care provider earlier	48	19.6%	75%
Failure to recognize the pregnancy symptoms early	2	0.8%	75.8%
There was difficulty obtaining an appointment	6	2.4%	78.2%
Due to lack of transportation	9	3.7%	81.9%
The pregnancy was not planned	1	0.4%	82.3%
There is no advantage booking early	4	1.6%	83.9%
I live very far from the hospital	5	2.0%	85.9%
Only pregnancy with problem require early antenatal booking	17	6.9%	92.8%
Abdominal Pain	2	0.8%	93.6%
Booked else where	9	3.7%	97.3%
Husband was out of Town	2	0.8%	98.1%
No reason	1	0.4%	98.5%
Out of Town	1	0.4%	98.9%
Was self-monitoring & taking haematinics	2	0.8%	100.0%
Total	245	100.0%	100.0%

Table 3: Factors Influencing Late Booking (Bivariate analysis)

Variables	Gestational age ≤13 weeks Number (%)	Gestational age >13 weeks Number (%)	P value
Employment Status			
Government Employed	17(33.3)	37(16.6)	
House Wife	2(3.9)	36(16.1)	
Private Employed	7(13.7)	19(8.5)	
Self Employed	22(43.1)	106(47.5)	
Student	3(5.9)	25(11.3)	
TOTAL	51(100)	223(100)	0.0317
Educational status			
None	0(0.0)	10(4.4)	
Primary	1(2.0)	39(17.5)	
Secondary	13(25.5)	92(41.3)	
Tertiary	37(72.5)	82(36.8)	
TOTAL	51(100)	223(100)	0.0000
Age			
<20	1(2.0)	5(2.2)	
20-24	8(15.7)	50(22.4)	
25-29	26(51.0)	74(33.2)	
30-34	11(21.6)	60(26.9)	
≥35	5(9.8)	34(15.3)	
TOTAL	51(100)	223(100)	0.1556
Average monthly income			
<10,000	5(9.8)	124(55.6)	
10,000-49,000	27(52.9)	81(36.3)	
50,000-99,000	17(33.3)	7(3.1)	
≥100,000	2(3.9)	12(5.0)	
TOTAL	51(100)	223(100)	0.0013

Problem in previous pregnancy			
Yes	11(30.6)	57(29.7)	
No	25(69.4)	135(70.3)	
TOTAL	36(100)	192(100)	0.9492
Marital setting			
Monogamous	49(96.1)	190(85.2)	
Polygamous	2(3.9)	33(14.8)	
TOTAL	51(100)	223(100)	0.0593
Marital status			
Married	51(100)	218(97.8)	
Single	0(0.0)	5(2.2)	
TOTAL	51(100)	223(100)	0.3819
Parity			
Nulliparous	25(49.0)	51(22.9)	
Primiparous	15(29.4)	37(16.6)	
Multiparous	11(21.6)	107(48.0)	
Grandmultiparous	0(0.0)	28(12.5)	
TOTAL	51(100)	223(100)	0.0000
Husbands income			
< 10,000	3(5.9)	21(9.4)	
10,000-49,000	15(29.4)	103(46.2)	
50,000-99,000	6(11.8)	27(12.1)	
≥100,000	17(33.3)	31(13.9)	
	10(19.6)	45(18.4)	
TOTAL	51(100)	223(100)	0.0481
Husbands education			
Primary	4(7.8)	21(9.5)	
Secondary	8(15.7)	90(40.9)	
Tertiary	39(76.5)	109(49.6)	
TOTAL	51(100)	220(100)	0.0018

χ^2 -Chi square, df-degree of freedom

P value < 0.05 is significant

Multivariate analysis showed that pregnant women who earn higher income were more likely to book early for antenatal care than those that have lower income (OR=0.2803, 95%CI, 0.1037-0.7577). Late booking was also found to be more in women of lower or no educational status than those with higher educational status (OR=0.8625, 95%CI, 0.1703-0.8722), as shown in table 4 below:

Table 4: Multivariate analysis of factors associated with late booking

Variables	OR	95%CI	P value
Educational level			
Secondary/primary	0.6972	0.5114-9.2642	0.2925
Tertiary/primary	0.8625	0.1703-0.8722	0.0187*
Employment status			
Housewife/Govt employed	2.4727	0.493-12.3987	0.2711
Private/Govt employed	0.7631	0.2554-2.2837	0.6295
Self-employed/Govt employed	0.9501	0.4234-2.1320	0.9012
Student/Govt Employed	2.5341	0.6509-9.8659	0.1800
Average income			
	0.8882	0.4268-1.8485	0.7512
≥50,000/9,000/<10,000	0.2803	0.1037-0.7577	0.0122*
≥100,000/<10,000	2.4901	0.2867-21.7511	0.4073
⇒>100,000/<10,000	0.4804	0.0914-2.5262	0.3866
⇒>10,000-49,000/<10,000	1.3150	0.2647-6.5325	0.7378
⇒>50,000-99,000/<10,000	0.9740	0.1627-5.8316	0.9770
Educational level			
Secondary/Primary	2.1776	0.5119-9.2640	0.2921
Tertiary/primary	0.6976	0.1703-2.8579	0.6168

(OR-Odds ratio, CI-Confidence Interval

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

DISCUSSION

This study showed that 81.4% of the women booked late for ANC while only 18.6% booked early before 13 weeks of gestation. The mean gestational age at ANC booking was 21.1 weeks. This study showed that 81.4% of the pregnant women booked late for antenatal care. This was similar to the study in South Western Nigeria by Adekanle and Isawumi²⁷ and Okunola et al²⁸ who reported prevalence of late booking of 82.6% and 86% respectively from south western Nigeria. In this study, only 18.6% booked early (i.e ≤ 13 weeks). This is comparable to the findings by the joint report from WHO and UNICEF on ANC in developing countries that found out that pregnant women in sub-saharan Africa who started ANC within three months of pregnancy were only about 20%^{29,30}.

In this study, mean gestational age at antenatal booking was 21.1 weeks. This was comparable to the 21.82 weeks at Ibadan by Okunola et al²⁸, 23.68 weeks at Ilesha by Komolafe et al³¹, 20.3 weeks in Oshogbo by Adekanle and Isawumi²⁷ and 23.5 weeks reported from Sokoto by Ekele and Audu³². It was still higher than the recommended gestational age for antenatal booking by WHO³³.

CONCLUSION

Late antenatal care booking still remains significantly high in our environment indicating that the importance of early antenatal booking is yet to be appreciated. Maternal education and employment status is associated with better income which has been found to improve early antenatal care booking. There is need for public enlightenment and incorporation of the benefits of early antenatal care booking in the routine antenatal health education.

RECOMMENDATIONS

1. Community based health education programmes with emphasis on benefits of early antenatal care booking in the first trimester of pregnancy is advocated.
2. The benefits of early antenatal care booking should be incorporated in the routine antenatal health education.
3. Women should be given quality education and empowered economically in order to improve their capacity to meet their health needs.

4. Policies that support women education and empowerment should receive top priority and massive support in Nigeria and other developing countries.

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