

Mean gestational age at booking amongst antenatal clinic attendees at a Tertiary Hospital in Rivers State, Nigeria

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Abstract

Background: Many literature have reported that the first 14 weeks as recommendation for pregnant women to book for antenatal care. The World Health Organization (WHO) has recommended that pregnant women register for antenatal care (ANC) in the first 12 weeks of pregnancy or after two missed periods. However, there are challenges of late booking in the developing countries of the world due to illiteracy, socio-cultural beliefs, economy and religious ideologies.

Aim: To determine the mean gestational age at booking amongst ANC attendees at Rivers State University Teaching Hospital (RSUTH), Port Harcourt, Rivers State, Nigeria.

Method: The present cross-sectional and observational study was conducted after informed consent was given by antenatal clinic attendees. Antenatal women who attended antenatal clinic were recruited for the study during January to June 2019. Data was collected from the consented women using a pretested questionnaire. Data were expressed in absolute numbers and percentage scale. Permission for the study was obtained from the ethical committee of the Rivers State Hospital Management Board. The information was entered into a spread sheet and analyzed using SPSS Version 25.

Result: A total of 500 questionnaires were distributed and 488 questionnaires retrieved. The mean age was 31.44 years and the modal parity was 0. For the educational status 357 (73.2%) had tertiary level, 126 (25.8%) had secondary level, 5 (1%) had primary level of education, while 5 (1%) of the respondents did not provide their educational status. The mean gestational age (GA) at booking was 19 weeks. Eighty one (16.6%) of the ANC attendees registered for ANC in the third trimester. Total number of ANC attendees that registered late for ANC were 414 (84.8%).

Conclusion: The study revealed that majority of antenatal clinic attendees at the RSUTH registered late for ANC representing 84.8% of the pregnant women at booking. There is need to educate women of reproductive age to register early for ANC to prevent adverse maternal and perinatal outcome.

Keywords: Mean; Gestational age; Booking; ANC attendees; RSUTH

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1. Introduction

Many literature have reported that the first 14 weeks as recommendation for pregnant women to book for antenatal care.[1] The World Health Organization (WHO) has recommended that pregnant women register for antenatal care (ANC) in the first 12 weeks of pregnancy or after two missed periods.² However, there are challenges of late booking in the developing countries of the world due to illiteracy, socio-cultural beliefs, economy and religious ideologies.[1,2]

Nigeria which is one of the developing Countries in West Africa sub region has a high prevalence rate of late ANC booking.[1-4] This ranges from 77.3- 82.6% in south – west, Nigeria, 53. 3% in North – central Nigeria, 73.5% - 80% in south-south Nigeria.⁵⁻⁶ 83.1% in South East Nigeria.[5-7]

Studies have shown that majority of women who registered for antenatal clinic present when they have symptoms of diseases like following illness in pregnancy, presenting with fever, joint pains. [7] Seventy percent of these women were on treatment for malaria by a doctor and 30% were on treatment for malaria by a nurse.[8]The global coverage of one skilled ANC contact remains high at 86%.[9] A lower proportion of pregnant women register for ANC during the first trimester. [7] The reasons for this is myriad which includes financial constraint, distance to health facilities, cultural and religious beliefs, disclosure of pregnancy status, gender norms, lack of awareness of pregnancy signs and ante natal care schedules, perception on the need to start ANC early and quality of care received.[4]

It is a norm for pregnant women to book early in the developed countries it is the reverse in the developing nations.[2-4] The average gestational age at booking in Riyadh Saudi Arabia was 13 weeksthe mean gestational age at booking in different cities in Nigeria was 19.1 $\pm$ 7.8 weeks in Lagos, 21.8 $\pm$ 7.0 weeks in Ibadan, and 23.5 $\pm$ 6 weeks in Sokoto.[2-7]

From the study conducted in Lagos there were differences in the gestational age at booking in relation to parity.[2-6] While nulliparous women booked at a mean gestational age of 18.5 $\pm$ 8.3 weeks.[2-4] However, the grand multiparous women booked averagely at 25.9 $\pm$ 8.6 weeks.[2-7] Due to the disparity in the mean gestational age at booking across different health facilities locally and globally in view of the accepted recommended booking gestational age, hence the reason for this study. Furthermore, this study will help provide counseling platform for antenatal mothers in this region to register early for antenatal care for better pregnancy outcome.

Aim

To determine the mean gestational age at booking amongst ANC attendees at Rivers State University Teaching Hospital (RSUTH), Port Harcourt, Rivers State, Nigeria.

2. Method

2.1. Design

This was a cross sectional study of ANC attendees at the RSUTH

2.2. Setting

Hospital based study

2.3. Participants

They were ante natal clinic attendees who were randomly selected. Informed consents were obtained from the respondents. Permission for the study was obtained from the Head of Department of obstetrics and Gynaecology, Rivers State University.

2.4. Study Population

This study was conducted in the Rivers State University Teaching Hospital. It is a 370 bed hospital located at Harley Street Port Harcourt Local Government Area of Rivers State, South-South Nigeria. It is a tertiary health institution that provides all levels of health care services to Rivers, Bayelsa, Delta, Imo, Abia and Akwa-Ibom States. The Obstetrics/Gynaecology department is one of the clinical departments of the hospital with twelve 13 Consultant Staff.

2.5. Tool

A Structured questionnaire was used. Information was obtained by self-reporting.

2.6. Main Outcome Measured

The mean gestational age at booking amongst ANC attendees at the RSUTH.

2.7. Sampling method

Simple random method was used.

2.8. Analysis

The information was analysed using SPSS version 25.

2.9. Ethical Consideration

Permission for the study was obtained from the ethical committee of the Rivers State Hospital Management Board

3. Results

A total of 500 questionnaires were distributed and 488 questionnaires retrieved. The mean age was 31.44 years and the modal parity was 0. For the educational status 357 (73.2%) had tertiary level, 126 (25.8%) had secondary level, 5 (1%) had primary level of education, while 5 (1%) of the respondents did not provide their educational status. The mean gestational age (GA) at booking was 19 weeks. Eighty one (16.6%) of the ANC attendees registered for ANC in the third trimester. Total number of ANC attendees that registered late for ANC were 414 (84.8%).

Table 1 Total number of respondents, mean age of respondents, mean gestational age at booking, number of residents that booked late

Total number of respondents	488
Mean age of respondents	31.44 yeas
Mean gestational age at booking	19 weeks
Total number of respondents that booked late	414 (84.8%)

Table 2 Weeks

Gestational Age (weeks)	Frequency (f)	Percentage (%)
< 13	74	15.2
13 - 26	333	68.2
>26	81	16.6
	448	100

Distribution of the gestational age of subjects with respect to their time of booking

Table 3 Educational Status of Respondents

Educational Status	Number	Percentage (%)
Primary	5	1
Secondary	126	25.8
Tertiary	357	73.2
Total	488	100

4. Discussion

Our study revealed the mean gestational age at booking as 19 weeks. (Table 1) majority of the antenatal clinic attendees registered for antenatal care during the second trimester (see pre chain). In Nigeria the mean gestational age at booking ranges from 24 – 26 weeks which is in agreement with our study.[1,2] In western Nigeria researchers have shown that the mean gestational age was 23 weeks.[3] In Southern Nigeria scholars have revealed the gestational age ranges from 19 – 24 weeks.[1-4] An institutional based study conducted in Northern Nigeria revealed the average gestational age at booking as 19.1 weeks.[7] This was also in agreement with our study. This was not in agreement with the study conducted by Eli et al in some rural health facilities in Ogoni, Rivers State where the mean gestational age at booking was 25 weeks.[4] Amongst many reasons why there was disparity in the timing of antenatal care booking of 19 weeks in this study compared with that observed in Ogoni was that those antenatal clinic attendees at the Rivers State University Teaching Hospital majority of who had tertiary level of education compared with those mothers in Ogoni of which majority had secondary and primary levels of education.[4] In addition, this study was conducted in the city with more health awareness and enlightenment compared to Ogoni which is more of a rural area.[4]

In a study conducted in Riyadh Saudi Arabia the mean gestational age was 13 weeks at booking.[3] This was lower than that from our study which was 19 weeks. When mean gestational age is compared from different cities in Nigeria it was revealed that in Lagos the figure was 19.1 weeks, in Ibadan it was 21 weeks and in Sokoto it was 23.1 weeks.[6]

According to the World Health Organization the recommended time for booking is after two missed period which corresponds to 8 weeks of gestation, less than 12 weeks gestation.[1] Some of the reasons for late booking by ANC attendees in our sub-region cuts across economic social – cultural factors.[2-4,11] In addition, antenatal clinic attendees register for antenatal care late base on distance from health facility, ignorance, over confidence especially for multiparas and also for financial constraints.[4,6,7]

From our study majority of our patients registered for antenatal during their second trimester (table2).

5. Conclusion

Our study revealed the mean gestational age at booking at the Rivers state University Teaching Hospital as 19 weeks. Majority of the antenatal clinic attendees registered late for Ante natal care representing 84.8% of the pregnant women at booking.

It is important that antenatal clinic attendees are encouraged to register early for ante natal care, after their second missed period – eight . This will help achieve the aims of antenatal care and directly or indirectly reducing maternal and perinatal morbidity and mortality.

Due to the alarming maternal and perinatal morbidity and mortality in developing countries of the world especially in sub-saharan Africa of which Nigeria contributes immensely. Hence, the reason to conduct this study and encourage antenatal mothers to register early for antennal care for a favourable feto-maternal outcome.

Compliance with ethical standards

Acknowledgments

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Disclosure of conflict of interest

Authors have declared that there was no conflict of interest.

Statement of ethical approval

Permission for the study was obtained from the ethical committee of the Rivers State Hospital Management Board

Statement of informed consent

Informed consent was obtained from respondents

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