
PERCEPTION AND PATTERN OF ANTENATAL CLINIC ATTENDANCE AMONG PREGNANT WOMEN IN A STATE GOVERNMENT MATERNITY TEACHING HOSPITAL, NIGERIA

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ABSTRACT: *Globally, there is emphasis on antenatal clinic attendance for pregnant women to reduce maternal mortality. This study examined the perception and pattern of antenatal clinic attendance among pregnant women attending Adeoyo Maternity Teaching Hospital, Ibadan. A descriptive cross-sectional design was adopted. A structured, self-administered questionnaire was used for data collection from 136 pregnant women. Data was analysed using SPSS version 22.0. Inferential statistics of chi-square test at 0.05% level of significance was used for hypotheses testing. The result reveals that 79.4% of participants had regular pattern of antenatal clinic (ANC) attendance, 44(75.7%) participants have good perception towards ANC attendance. The findings reveal that there was significant association between the perception of pregnant women towards ANC attendance and their gestational age at booking with $p < 0.05$. Conclusively, to maintain regular pattern of ANC attendance, early booking should be emphasized and encouraged among pregnant women.*

KEYWORDS: antenatal care; clinic attendance; maternal mortality; perception; pregnancy

INTRODUCTION

Antenatal clinic (ANC) is a department of the hospital where antenatal services are rendered. Activities in antenatal clinic includes general examination, abdominal examination, health education, urine testing, etc, while antenatal Care (ANC) is defined as the care given to pregnant women before birth, and includes health education, counseling, screening, supervision, advice, support and treatment to monitor the progress of pregnancy and to promote the well-being of the mother and fetus. Also Antenatal care is the care given to expectant mothers from the time conception is confirmed until the beginning of labor, in addition to monitoring the progress of pregnancy and the attitude of pregnant women towards antenatal care (Adesokan, 2010). Antenatal care is also an opportunity to promote the use of skilled attendance at birth and

healthy behaviors such as breastfeeding, early postnatal care and planning for optimal pregnancy spacing (World Health Organisation (WHO), 2010).

The primary aim of antenatal care is to achieve, at the end of pregnancy, a healthy mother and a healthy baby. Worldwide, there has been a significant drop in the number of women dying from pregnancy and childbirth. However, Africa still lags behind other parts of the world in making childbirth safe and the conditions in sub-Saharan Africa remain at emergency levels. In the 1990s, while the maternal death rate was as high as 1,100 per 100,000 live births in Nigeria, 600 in India, about 400 in Kenya, it was only 10, 12 and 17 for Italy, Poland and US respectively (World Bank Group, 2014). By the year 2010, while appreciable reduction has been achieved in other countries, Nigeria still ranks high among the countries with high maternal mortality due to low utilization of modern healthcare facilities (WHO, 2012). Recent finding indicates that maternal mortality in India is as low as 200 per 100,000 live births, 21 in United States, 4 in Italy and only 5 in Poland. In a recent report by the United Nations Funds for Population Activities (UNFPA, 2007), Nigeria is said to account for over 14 per cent of the World's maternal deaths. At about 145 of such deaths per day, this figure is outrageously high and unacceptable, if we consider that the figure translates to 576 deaths per 100,000 births and that Nigeria's population is just two per cent of the world's population (World Bank Group, 2014)

An estimated 287,000 maternal deaths occurred globally in 2010 out of which 99.4 percent representing 285,300 occurred in developing countries and more than half of this proportion occurred in sub-Saharan Africa (World Bank Group, 2013). Nigeria accounts for about 10 percent of the Global Mortality Ratio putting the country in the class of second highest after India (Adamu, Hauwa & Suleiman, 2011). However, while virtually all developed countries have made appreciable progress in curbing the menace of maternal mortality, the appalling rates in Nigeria and other sub-Saharan African countries remain worrisome. Global efforts at reducing maternal deaths by engaging in the use of modern healthcare facilities and disengaged from attending traditional birth homes have increased to save the life of mothers and children.

Between 2003 and 2008, only 45 percent of Nigerian expectant mothers received adequate antenatal care from a skilled provider: doctors, nurses/midwives, 28 percent of births were assisted by skilled provider and 25 percent of deliveries took place in modern healthcare facilities. Expectant mothers who cannot access these services, due to perceived challenges like cost, distance and trust, are left to use "alternatives" such as Traditional Birth attendance (TBA) services (WHO, 2012).

The antenatal period is an important time for collecting vital information that fosters women's health, wellbeing and survival of their infants. The international organisations, like United Nations Children Endowment Fund (UNICEF), the United Nations Fund for Population Activities (UNFPA) and the World Health Organisation (WHO) recommended a minimum of four antenatal care visits during pregnancy. The prescribed minimum number of visits is expected to provide needed services for safe delivery, and it could be possible through proper intervention which include treatment of hypertension to prevent eclampsia, tetanus immunisation, intermittent preventive treatment for malaria and distribution of insecticide-treated nets, prevention of mother-to-child transmission of HIV, and micronutrient supplementation, including information about danger signs during pregnancy and childbirth (UNICEF, 2011).

A good care during pregnancy is important for the health of the mother and the development of the unborn baby. Pregnancy is a crucial time to promote healthy behaviors and parenting skills. Good ANC links the woman and her family with the formal health system, increases the chance of using a skilled attendant at birth and contributes to good health through the life cycle. Inadequate care during this time breaks a critical link in the continuum of care, and affects both women and babies such as maternal or neonatal morbidity or mortality. And maternal mortality is the most important indicator of maternal health and well-being in any country (Bourne, 2011).

Previous studies indicate that the vast majority of Nigerian women who utilize modern antenatal care book late, which is in sharp contrast with findings in most developed countries. Also reported prevalence of late booking of 86% and 82.6% respectively from south western Nigeria (Rowe, Magee, & Quigley, 2012). Similarly, an incidence of 79.9% in the Niger Delta was reported while the mean gestational age at booking ranged from 20.3-23.6 weeks (Ebeigbe & Igberase, 2010). Similar findings have been reported from other countries in sub-Saharan Africa suggesting that this is a wide spread practice (Rowe, Magee, & Quigley, 2012).

However, recent studies in this region have revealed that the women's understanding and perception of the need for ANC play a more dominant role. For instance, it was reported that ignorance was the underlying factor in late initiation of ANC in two-fifth of the pregnant women accessing care in a Nigerian Teaching Hospital while only 25% indicated financial constraints (WHO, 2010).

Two of the key MDG goals (Reduction of childhood mortality and improving Maternal health) might be unfeasible if adequate knowledge and right perception about ANC services of pregnant women are compromised, as this may influence their subscription, time and rate at which they visit ANC facilities (WHO, 2012). Distance to a health facility, long waiting time, poor staff attitude, and perceived quality of services also have strong associations with attending pregnancy care (Finlayson & Downe, 2013).

Furthermore, 19% of women with a live birth in the five years before the survey made four or more ANC visits during their recent pregnancy, while only 11% made their first ANC visit before the fourth month of pregnancy. The median duration of pregnancy at the first visit was 5.2 months, and urban women made their first ANC visit earlier (4.4 months) than rural women (5.5 months) (Belayneh, Adefris, & Andargie, 2014).

Lack of benefit, limited facility access, uncertainty about pregnancy and laziness to go for many visit affect perception of ANC attendance. So late ANC attendance is detrimental because it prevents the client from obtaining the maximum benefits from the ANC services. and poor social amenities, poor knowledge about the timing, goals of ANC attendance visit and the number of ANC visits and waiting time at the clinic affects perception of ANC attendance. Understanding clients' perception of antenatal clinic attendance provides opportunity for identifying deficiencies in healthcare as well as motivators and barriers to uptake healthcare services (Kamil & Khorshid, 2013; Hutchinson, Do & Agha, 2011).

In a systematic review of qualitative and quantitative studies conducted in developing countries and published between 1990 and 2006 to identify and analyse the main factors affecting the attendance of antenatal care in developing countries, found out that the following factors affect

antenatal clinic attendance: maternal education, husband's education, marital status, availability, cost, household income, women's employment, media exposure and having a history of obstetric complications. Cultural beliefs and ideas about pregnancy also had an influence on antenatal clinic attendance. Parity had a statistically significant negative effect on adequate attendance. Whilst women of higher parity tend to attend antenatal care less, there is interaction with women's age and religion (Simkhada, Teijlingen, Porter, & Simkhada, 2008).

The vulnerability to diseases and death during pregnancy are decidedly higher among women who do not follow up in antenatal care clinics in contrast to women who do so (Onoh, Umeora, Agwu, Ezegwui, Ezeonu & Onyebuch, 2012). Maternal mortality in Nigeria is one of the highest globally. Every 10 minutes, one woman dies on account of complications of pregnancy or childbirth in Nigeria, giving a total of 53,000 per year. This means that about 700 women die in every 100,000 live births. Many people do not readily appreciate this disaster because the deaths do not occur together in one place, as they occurred silently in many different communities in Nigeria (World Bank Group, 2014). It was observed that most pregnant women at Adeoyo Maternity Teaching Hospital, Ibadan, Oyo State who booked at the clinic, booked late and did not attend antenatal clinic as regular as it should, and this make them to have few antenatal visit, while some did not come back to the antenatal clinic for follow up care. This study is therefore designed to find out pregnant women's perception and pattern of antenatal clinic attendance.

LITERATURE REVIEW

Maternal mortality was common in both developed and developing countries as late the mid-1900s, but maternal mortality began to decline dramatically in most developed countries around the 1930s. Although before then, Antenatal care was rare. According to Ekabua, Ekabua and Njoku, (2011), antenatal care is an opportunity to promote the benefits of skilled attendance at birth and to encourage women to seek postpartum care for themselves and their newborn. It is also an ideal time to counsel women about the benefits of child spacing. It involves four visits and it is a package known as focus antenatal care, which provides evidenced based interventions for the pregnant women. The focused antenatal services refer to minimum number of four antenatal clinic visits, each of which has specific items of client assessment, education and care to ensure early detection and prompt management of complication. Antenatal care is generally acknowledged as an effective method of preventing adverse outcomes in pregnant women and their babies. Early and regular antenatal care, with evidence-based interventions, offers an introduction to a continuum of care that spans pregnancy, labour and the postpartum period. (WHO, 2010).

Perception of care by pregnant women is a paramount and an important element of quality ANC. It often determines willingness of the pregnant women to subscribe, comply and continue with the service. However, recent studies in this region have revealed that the women's understanding and perception of the need for ANC play a more dominant role. For instance, it was reported that ignorance was the underlying factor in late initiation of ANC in two-fifth of the pregnant women accessing care in a Nigerian Teaching Hospital while only 25% indicated financial constraints (WHO, 2010). Two of the key MDG goals (Reduction of childhood mortality and improving Maternal health) might be unfeasible if adequate knowledge and right perception about ANC services of pregnant women are compromised, as this may influence

their subscription, time and rate at which they visit ANC facilities. (WHO, 2011). Some of the dangers of pregnancy and childbirth can be avoided if the pregnant woman attends antenatal regularly. In order to decrease these mortality rates, regular antenatal care has to be instituted or reinforced which can only be achieved through identifying factors causing poor attendance to antenatal clinic.

According to Fagbamigbe (2017), some studies had highlighted various factors, such as aversion for caesarean sections, high hospital bills, religious beliefs, cultural beliefs, illiteracy, poverty, ignorance, availability and accessibility of antenatal services, husband's education and acceptance of the services as barriers hindering women from attending antenatal care and hospital delivery. Psychosocial factors include whether the pregnancy was planned, the woman's reaction to the pregnancy, a delayed diagnosis of pregnancy, contemplation of abortion, and the availability of social support. The quality of antenatal care might have an influence on attendance of antenatal care, leading to infrequent or late first visits to antenatal care. Adamu, Hauwa, Suleiman (2011).

THEORETICAL FRAMEWORK

The health belief model is a psychological health behavior change model developed to explain and predict health-related behaviors, particularly in regard to the uptake of health services. The model was developed in the 1950s by social psychologists at the U.S. Public Health Service (Rosenstock, 1974) and remains one of the most well-known and widely used theories in health behavior research. It suggests that people's beliefs about health problems, perceived benefits of action and barriers to action and self-efficacy explain engagement (or lack of engagement) in health-promoting behavior. A stimulus, or cue to action, must also be present in order to trigger the health-promoting behavior. This model hypothesizes that health related action depends upon the simultaneous occurrence of three classes of factors:

1. The existence of sufficient motivation (or health concern) to make health issues salient or relevant.
2. The belief that one is susceptible (vulnerable) to a serious health problem or to the sequelae of that illness or condition. This is often termed perceived threat.
3. The belief that following a particular health recommendation would be beneficial in reducing the perceived threat, and at a subjectively-acceptable cost. Cost refers to perceived barriers that must be overcome in order to follow the health recommendation.

The health belief model has been used to develop effective interventions to change health-related behaviors by targeting various aspects of the model's key constructs. Interventions based on the health belief model may aim to increase perceived susceptibility to and perceived seriousness of a health condition by providing health education about prevalence and incidence of maternal morbidity and mortality cause by complications in pregnancy due to lack of antenatal care, individualized estimates of risk such as risks in pregnancy example hypertension, diabetes, anaemia and malaria and other risk factors, and information about the consequences of disease (e.g., medical, financial, and social consequences example pre-eclampsia, increase hospital expenses and low self esteem. Interventions may also aim to alter

the cost-benefit analysis of engaging in a health-promoting behavior (i.e., increasing perceived benefits and decreasing perceived barriers) by providing information about the efficacy of various behaviors to reduce risk of complications in pregnancy, identifying common perceived barriers, providing incentives to engage in health promoting behaviors, and engaging social support or other resources to encourage health-promoting behaviors.

Furthermore, interventions based on the health belief model may provide clues to action to remind and encourage the pregnant women to engage in health promoting behaviors. Interventions may also aim to boost self-efficacy by providing training in specific health-promoting behaviors, particularly for complex lifestyle changes (e.g., adequate nutrition during pregnancy, personal hygiene, avoidance of strenuous physical activity and adhering to antenatal clinic medication regimen). Interventions aim at the pregnant women level (i.e., working one-on-one with the health personnel to increase engagement in health-related behaviors such as attending antenatal clinic) or the societal level (e.g., through legislation, changes to the physical environment).

METHOD

Study settings

A descriptive cross-sectional study was carried out in Adeoyo Maternity Teaching Hospital, Ibadan north local government area. It provides holistic care to all age group. It is a national health insurance scheme accredited primary care provider founded in 1927. The hospital is owned by the state government; it is located in Yemetu. The hospital provides training grounds for all medical related students. It provides special care for obstetrics and gynaecological cases. Public health services rendered at this hospital include immunization, infant and maternal clinic, communicable diseases in partnership with other private and public health organization. The hospital antenatal clinic consists of the matron who is a Chief Nursing Officer (CNO) and others nursing staffs and a health attendance. The clinic provides health talk, booking, and physical examination of the pregnant women and preventive measures. The antenatal clinic usually commences with an interactive health talk coordinated by a qualified community health nurse which usually lasts for at least 45minutes and the clinic days is three times a week with about 180 pregnant women, about 56 pregnant women attending clinic on each clinic day. The study population comprises pregnant women attending antenatal clinic in Adeoyo Maternity Teaching Hospital in Ibadan that are of childbearing age, who were available at the time of the administration of the questionnaires in the clinic, irrespective of their religion and occupation.

Inclusion Criteria

All consenting pregnant women attending ANC at Adeoyo Maternity Teaching Hospital, Yemetu in Ibadan Oyo state.

Exclusion Criteria

Women that are not pregnant and non-consenting participants.

Sample size determination

Size for this study was determined using (Araoye, 2004) sample size formula stated below;

$$n = \frac{N}{[1 + N(e)^2]}$$

Where, n – Required sample size, N-Population of study participants (180), e- Degree of error tolerance at 5%, Given N= 180

$$n = \frac{180}{[1 + 180(0.05)^2]}$$

n = 124 Giving consideration for 10% attrition rate,

$$A = 10\% \text{ of } 124 = 12$$

Thus,

$$n = 124 + 12 = 136$$

136 respondents were recruited for the research (with consideration for attrition).

Sampling technique

Simple random sampling technique was use to select the participants.

Data analysis

Data obtained was screened for errors and completeness. Analysis was done using IBM-SPSS version 22.0 software. Descriptive statistics of frequency counts, simple percentage, mean + SD was obtained to summarize and present the results. Chi-square test was employed to investigate whether the association between level of education and perception about ANC attendance is not statistically significance at $P < 0.05$.

Ethical approval

A proposal of the study was submitted to the Ethical Review Board of UI/UCH, after which ethical approval was given from the Ethical review board. An ethical consideration was taken into cognizance by ensuring that informed consent is gotten from the participants before distributing the questionnaires. A pre-test study was carried out using 10 pregnant women from a primary health centre in Ibadan North Local Government. The content of the questionnaire was assessed by the supervisor, for relatedness of the items to the research questions and focus on the study. And the result from the pre-test was analysed using Cronbach alpha co-efficient in determining the consistency of the instrument. Thereafter the actual administration of the questionnaire to the study population was done. The questionnaires were collected as soon as they answer.

RESULT

Socio-Demographic Characteristics of the respondents

Findings as presented in table 1 reveals that almost half 47(34.6%) of the respondents were age between 20-24years with the mean \pm SD age of 27.8 ± 5.07 . majority of the respondents

120(88.3%) were married. Very few 4(3.0%) had no formal education, while 62(45.6%) had tertiary institution education. According to their religion, 66(48.5%) practiced Christianity; while 7(5.1%) were traditionalist. Also, 51(37.5%) of the respondents were traders, followed by farmers, National Youth Service Corps (NYSC) members and student 8(5.9%).

Pattern of Antenatal Clinic Attendance of the respondents

The findings of the study as presented on table 2 reveals the pattern of ANC attendance and the result showed that majority of the respondents had regular pattern of antenatal clinic attendance.

Figure 1 displays the number of ANC attendance reported by the respondents; almost 95(70.0%) reported 1-4times attendance at ANC; while 41(30.0%) indicated they attended 5-8times before delivery.

Comparison of socio-demographic characteristic (age group, educational status and marital status) and Gestational Age at Booking

Only the marital status showed a significant association with the women's gestational age at booking; $\chi^2 = 19.07, 4 df, p = 0.001$. The women's age group and their educational level had no significant association with the women's gestational age at booking; age group ($\chi^2 = 11.11, 6 df, p = 0.085$) and educational level $\chi^2 = 4.48, 2 df, p = 0.106$.

Perception of Pregnant Women towards Antenatal Clinic Attendance

Findings as presented on table 4 below revealed perception of pregnant women towards ANC attendance. The results showed that majority of respondents have good perception of ANC attendance.

Comparison of socio-demographic characteristic (age group, educational status and marital status) and Perception towards ANC attendance

The pregnant women's educational status showed a significant association with their perception, with p-values of the test being less than 0.05; age group ($\chi^2 = 8.00, 1 df, p = 0.005$). This shows that women's education has a positive impact on their perception towards ANC attendance. Meanwhile, no statistically significant association was obtained between the women's perception towards ANC attendance and their age group, as well as marital status ($\chi^2 = 3.39, 3 df, p = 0.274$) and ($\chi^2 = 0.73, 2 df, p = 0.696$).

Factors influencing pattern of ANC attendance

The findings presented on table 6 reveal that 78(57.4%) of the participants indicated that lack of education could affect a pregnant women's ANC attendance; 15(11.1%) affirmed that marital status, as a single parent, could affect a pregnant woman's ANC attendance while 120(88.9%) did not; lack of finance, as a factor affecting ANC attendance, was indicated to have an effect on ANC attendance by 67(49.6%); about 62(45.6%) remarked unavailability of services as a factor affecting ANC attendance while 74(54.6%) reported it does not affect their ANC

attendance; lastly, about 48% indicated that culture and distance to antenatal clinic could affect women's ANC attendance.

Association between gestational age at booking and Perception towards ANC Attendance

The findings presented on table 7 reveal that there is a significant association between the perception of the pregnant women towards ANC attendance and the gestational age at first ANC attendance with $P < 0.05$.

Association between pattern of ANC attendance and Perception towards ANC attendance

Findings presented on table 8 reveal a significant association between the perception of pregnant women towards ANC attendance and their pattern of ANC attendance with $P < 0.05$.

DISCUSSION

This study examined Perception and pattern of antenatal clinic attendance among pregnant women attending Adeoyo Maternity Teaching hospital, Yemetu, Ibadan. The sample size was 136 pregnant women. 136 questionnaires were administered and retrieved and also used for the analysis. Demographically, the average age of the respondents was 28 years with a standard deviation of 5.07 years. The age groupings of the participants showed that almost 47(35%) were in the age-range "20 – 24 years"; about 39(29%) were in the age-range of "25 – 29 years"; 33(24%) had ages ranging from "30 – 34 years"; and 17(12%) had ages between 35 and 43 years. This shows that most of the pregnant women that attends antenatal clinic are between the ages of 20 – 24 years. The distribution of the participants according to their marital status showed that about 13(10%) were Single; the most of them 120(89%) were married, less than 1(2%) were either divorced or separated. From the data obtained, most of the pregnant women that attends antenatal clinic are married women. The distribution of the participants by their occupation showed that most of the study participants, 51(38%), engaged in trading; 36(17%) indicated they were self-employed; 16(12%) were civil servants; 14(10%) of them indicated they were housewives; 8(6%) were into farming; while 8(6%) indicated to have other forms of employment such as being a National Youth service Corp member and student. This shows that most of the participants were traders. According to their religion groups, 66(49%) practiced Christianity, 62(46%) practiced Islam, while 7(5%) claimed to practice traditional religion. This is possible because the area is dominated by Christianity and Islamic. The distribution with respect to their educational level showed that 4(3%) had no formal education, 15(11%) had not more than primary education, while 55(40%) had secondary education, and lastly almost 65(46%) with tertiary education.

The findings revealed majority of the respondents 108(79.4%) had regular pattern of ANC attendance, and this is in support with a study that some of the dangers of pregnancy and childbirth can be avoided if the pregnant women attend antenatal care regularly (WHO, 2012) and a study reported that with maternal risk held constant, low birth weight, and infant mortality

were 1.5-5 times higher with late and less frequent antenatal care than with early and frequent care (Onoh *et. al.*, 2012). Also, 28(20.6%) of the participants had irregularly pattern of ANC and this is in line with a study, that in Nigeria, it has been found that only about 18.0% of parturient book for antenatal care in the first trimester and that most pregnant women book late and despite the advantages of early booking, late booking is common in Nigeria (Ebeigbe & Igberase, 2010). And this is also supported by existing evidence from developing countries including Ethiopia which indicates that few women seek antenatal care at early stage of their pregnancy (Belayneh *et. al.*, 2014). And according to WHO new guideline on antenatal care, every pregnant woman should attend at least eight ANC visit during pregnancy (WHO, 2016).

Further analysis was carried out to compare the socio-demographic characteristics (such as age group, educational status, and marital status) that could be associated with the gestational age at booking of the participants. The results revealed that only the marital status showed a significant association with the women's gestational age at booking. Conversely, the women's age group and their educational level had no significant association with the women's gestational age at booking.

The findings revealed that majority 103(75.7%) of the participants have a good perception towards ANC attendance. This is supported by the study that said that patient perception of quality of care is one of the major determinants of uptake of healthcare services including maternal health services (Finlayson & Downe, 2013). And understanding clients' perception of antenatal clinic attendance provides opportunity for identifying deficiencies in healthcare as well as motivators and barriers to uptake healthcare services (Hutchinson *et. al.*, 2011), while 33(24.3%) of the participants have a poor perception, and this is in support with a study which stated that poor perceptions towards ANC were also identified due to lack of resources and long waiting time (Adamu *et. al.*, 2011). And majority of the respondents agreed that antenatal clinic attendance is beneficial in improving outcome and detecting any abnormality. This shows that majority of the study population had a good perception towards ANC attendance.

Further analysis, was carried out to compare socio-demographic characteristics (such as age group, educational status, and marital status) that could be associated with the participants' perception. It was obtained that the women's educational status showed a significant association with their perception, with p-values of the test being less than 0.05; age group. This shows that women's education has a positive impact on their perception towards ANC attendance. Meanwhile, no statistically significant association was obtained between the women's perception towards ANC attendance and their age group, as well as marital status.

The study also showed that majority of the respondents did not identified marital status as a single parent, lack of finance, unavailability of services, culture and distance as the major factors influencing its ANC attendance, while most of the respondent identified lack of education as a factor influencing its ANC attendance. This result is possible because, is mostly married women that attends antenatal clinic. A study said that, religion and marital status do not influence ANC attendance (Chiang, Labeeb, Higuchi, Mohamed & Aoyama, 2013). Contrarily, in a systematic review of qualitative and quantitative studies conducted in developing countries and published between 1990 and 2006 to identify and analyse the main factors influencing the attendance of antenatal clinic in developing countries, it was found out that the following factors influence antenatal clinic attendance: maternal education, husband's

education, marital status, availability, cost, household income, women's employment, media exposure and having a history of obstetric complications. Cultural beliefs and ideas about pregnancy also had an influence on antenatal clinic attendance (Chiang *et. al.*, 2013).

Moreover, the findings also revealed that there is a significant association between the perception of the pregnant women towards ANC attendance and the gestational age at first ANC attendance with $P < 0.05$. This is supported by the study that said that Patient perception of importance of care is one of the major determinants of uptake of healthcare services including maternal health care services (Hutchinson *et. al.*, 2011). Noteworthy is that, 26(26%) among those with good perception attended within first trimester, while about 4(13%) of those with poor perception attended within first trimester.

The findings also revealed that there is a significant association between the perception of pregnant women towards ANC and their pattern of ANC attendance with $P < 0.05$. This means that perception is a determining factor in the pattern of ANC attendance which is in line with the findings from a study that patient perception of quality of care is one of the major determinants of uptake of healthcare services including maternal health care services and it measures the level of satisfaction of antenatal clinic attendance received from health facility (Hutchinson *et. al.*, 2011). Importantly, it was revealed that 20(61%) of those with poor perception had a regular pattern of ANC attendance, while up to 88(85%) of those with good perception had a regular pattern of ANC attendance.

RESEARCH IMPLICATION

The study has been able to assess the pregnant women perception and pattern of attendance towards antenatal clinic (ANC) and identified the factors influencing the attendance of antenatal clinic at Adeoyo maternity teaching hospital, Yemetu, Ibadan. Therefore, the research findings could impact increase awareness on antenatal clinic attendance by the Government, hospitals, and health professionals. Furthermore, this study has necessitated the need for Government to provide adequate funding to all health facilities, providing the necessary financial support needed to encourage attendance to antenatal clinic. Also, Non-governmental organizations such as World health organization need to ensure the supervision of antenatal clinic attendance at the international, federal, state and PHCs level. They should also help in funding and providing the necessary support needed to encourage attendance to antenatal clinic. Health professionals such as midwives and public health nurses should work together to ensure periodic seminar/workshop in ensuring their continuous care to the pregnant women.

CONCLUSION

Antenatal clinic (ANC) is a department of the hospital where antenatal services are rendered. While antenatal Care is the care given to pregnant women before birth, and includes health education, counselling, screening, supervision, advice, support and treatment to monitor the progress of pregnancy and to promote the well-being of the mother and foetus. The findings from this study will provide a basis for improvement and revision of ANC sensitisation schemes and ANC attendance. And to improve the pattern of antenatal clinic attendance such as early booking and level of attendance during pregnancy, the Government, the hospital and the health professional should continue to create awareness on ANC attendance.

RECOMMENDATION

It is recommended that Hospital management should organize programs such as community services or home visiting to pregnant women to health educate the non-educated ones and pregnant women who default in antenatal clinic. Good time management should be ensured to avoid prolonging the antenatal clinic, reduced waiting time will invariably boost the perception of the pregnant women about antenatal clinics, and encourage a regular pattern of attendance. The midwives need to health educate pregnant women on need for continuous antenatal visits and also encourage them to disseminate the information to others in the community. Also they should be well informed on need to book early.

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TABLES**Table 1: Socio-Demographic Characteristics**

Variable	Frequency (n = 136)	Percentage (%)
Age Group		
20 – 24 years	47	34.6
25 – 29 years	39	28.7
30 – 34 years	33	24.3
35 years or more	17	12.4
Mean ± SD = 27.8 ± 5.07		
Marital Status		
Single	13	9.6
Married	120	88.3
Divorced	1	0.7
Separated	1	0.7
No response	1	0.7
Occupation		
Trading	51	37.5
Farming	8	5.9
Housewife	14	10.3
Civil Servant	16	11.8
Self-employed	36	16.5
Others (Corper, Student)	8	5.9
No response	3	2.2
Religion		
Christianity	66	48.5
Muslim	62	45.6
Traditional	7	5.1
No response	1	0.7
Education		
Non-formal	4	3.0
Primary	15	11.0
Secondary	55	40.4
Tertiary	62	45.6

Table 2: Pattern of Antenatal Clinic Attendance

Variable		Frequency	Percentage
Attendance of the ANC	Regular Attendance		
	Regularly	108	79.4
	Irregular Attendance		
	Sometimes	28	20.6
Gestational age at first ANC visit	Regular Attendance		
	First trimester	30	22.9
	Irregular Attendance		
	Second trimester	78	59.5
	Third trimester	23	17.6
Attendance based on appointment days	Regular Attendance		
	Appointment days	113	86.3
	Irregular Attendance		
	When I have complaints	17	12.9
	No response	1	0.8
Attendance time	Regular Attendance		
	In the morning	109	83.2
	Irregular Attendance		
	Anytime I want	21	16.0
	No response	1	0.8
Number of ANC attendance	1 – 4 times	95	70.0
	5 – 8 times	41	30.0

Table 3: Comparison of socio-demographic characteristic (age group, educational status and marital status) and Gestational Age at Booking

	Gestational	Age	at Booking	χ^2 (df)	p- value
Socio- demographic Characteristic	First Trimester	Second Trimester	Third Trimester		
Age Group					
20 – 24 years	15 (35.7%)	25 (59.5%)	2 (4.8%)	11.11 (6)	0.085
25 – 29 years	6 (15.4%)	24 (61.5%)	9 (23.1%)		
30 – 34 years	6 (18.2%)	18 (54.5%)	9 (27.3%)		
35 years or more	3 (17.6%)	11 (64.7%)	3 (17.6%)		
Educational Level					
Below tertiary	12 (16.2%)	47 (63.5%)	15 (20.3%)	4.48 (2)	0.106
Above tertiary	18 (31.6%)	31 (54.4%)	8 (14.0%)		
Marital Status					
Single	3 (37.5%)	1 (12.5%)	4 (50.0%)	19.07 (4)	0.001
Married	26 (21.7%)	77 (64.2%)	17 (14.2%)		
Divorced/ Separated	-	-	2 (100.0%)		

Table 4: Perception of Pregnant Women towards Antenatal Clinic Attendance

Variable	Agree	Disagree
Antenatal clinic attendance is beneficial in improving pregnancy outcome and detecting any abnormality.	127 (93.4%)	9 (6.6%)
There is non-availability of antenatal care services during antenatal clinic attendance.	65 (47.8%)	71 (52.2%)
During ANC attendance, do you think the pregnant women are being unnecessarily delayed?	67 (49.3%)	69 (50.7%)
The environment of the clinic is good and conducive for antenatal clinic attendance	103 (75.8%)	33 (24.2%)
The behaviours of the health care workers during antenatal clinic encourage regular clinic attendance.	97 (71.3%)	39 (28.7%)

Table 5: Comparison of socio-demographic characteristic (age group, educational status and marital status) and Perception towards ANC attendance

Socio-demographic Characteristic	Perception towards	ANC attendance	χ^2 (df)	p-value
	Poor	Good		
Age Group				
20 – 24 years	10 (21.3%)	37 (78.7%)	3.39 (3)	0.274
25 – 29 years	7 (17.9%)	32 (82.1%)		
30 – 34 years	9 (27.3%)	24 (72.7%)		
35 years or more	7 (41.2%)	10 (58.8%)		
Educational Level				
Below tertiary	25 (33.8%)	49 (66.2%)	8.00 (1)	0.005
Above tertiary	8 (12.9%)	54 (87.1%)		
Marital Status				
Single	3 (23.1%)	10 (76.9%)	0.73 (2)	0.696
Married	29 (24.2%)	91 (75.8%)		
Divorced/ Separated	1 (50.0%)	1 (50.0%)		

Table 6: Factors influencing pattern of ANC attendance

Variable	Yes	No
Lack of education	78 (57.4%)	58 (42.6%)
My marital status as a single parent	15 (11.1%)	120 (88.9%)
Lack of finance dictates when I attend antenatal clinic.	67 (49.6%)	68 (50.4%)
Unavailability of services	62 (45.6%)	74 (54.6%)
Culture and distance to antenatal clinic.	65 (47.8%)	71 (52.2%)

Table 7: Association between gestational age at booking and Perception towards ANC attendance

Perception towards ANC attendance				χ^2 (df)	p-value
	First Trimester	Second Trimester	Third Trimester		
Poor	4 (12.5%)	17 (53.1%)	11 (34.4%)	9.11 (2)	0.010
Good	26 (26.3%)	61 (61.6%)	12 (12.1%)		

Table 8: Association between pattern of ANC attendance and Perception towards ANC attendance

Perception towards ANC attendance	Pattern of ANC Attendance		χ^2 (df)	p-value
	Irregular	Regular		
Poor	13 (39.4%)	20 (60.6%)	9.43 (1)	0.002
Good	15 (14.6%)	88 (85.4%)		

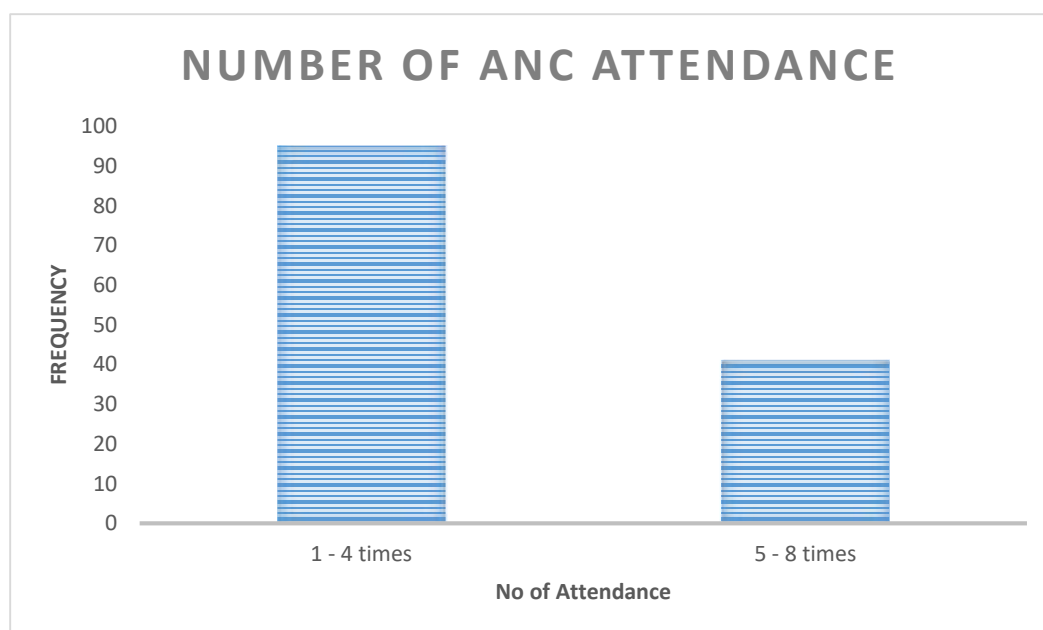


Figure 1: Bar chart showing the Number of ANC attendance among participants