

**QUALITY ASSESSMENT OF THE PRACTICE OF FOCUSED
APPROACH TO ANTENATAL CARE IN RURAL AND URBAN
PRIMARY HEALTH CENTRES IN EKITI STATE.**

BY

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ABSTRACT

High maternal mortality in Nigeria has been of major Public Health concern and recently it has been a major focus of Millennium Development Goals. Focused Antenatal Care (FANC) is a complete model of antenatal care adopted to improve maternal care during pregnancy and subsequently reduce maternal mortality. However, the practice is yet to be optimized and there has been a suggestion that there is inequity in access and utilization of antenatal services with the rural areas underserved. Lack of antenatal care increases the risks of maternal mortality, between a third and half of maternal deaths are caused by factors which are directly related to inadequate care in pregnancy. This study aimed at assessing the practice of FANC at the Primary Health Centers, in urban and rural areas of Ekiti state.

A cross sectional study was carried out. The Local Government Areas (LGAs) were stratified into urban and rural areas, 50% of PHCs offering maternity services in each stratum were selected using simple random sampling; four hundred eligible and consenting pregnant women attending antenatal clinics of the PHCs in both urban and rural areas were selected based on proportional allocation. Adapted safe motherhood exit interview questionnaire was used to collect information from the respondents. The in-depth interview participants comprised of senior nurses and matrons; they were selected by purposive sampling. Descriptive statistics, Chi-square test, and binomial logistic regression were used to analyze quantitative data and p was set at 5% level of significance. The in-depth interview was analysed using thematic approach.

The mean age of all the respondents was 27.5 ± 5.7 (rural areas 27.8 ± 5.9 , urban areas 27.2 ± 5.5), fewer women (20.7%) in rural areas received the standard antenatal care compared with (29.3%) urban respondents ($P < 0.005$), there was a slight rural -urban difference in the proportions that were given a range of lectures on health education in the different locations: 90.8% of women in the urban areas were taught compared to 88.5% of the rural residents. Majority (98.8%) of the respondents were satisfied with the care received at the various PHCs and opined that they would return to the facility in future ($P = 0.024$). Skilled workers were about 2.6 times less likely to have their first antenatal visit in the first trimester than respondents not working. Findings of the in-depth interview revealed that the health providers accepted FANC and they acknowledged the support of the state government as a facilitating factor to the practice of FANC. Most mentioned challenges to antenatal care included inadequate number of skilled workers and insufficient space for antenatal clinics to hold.

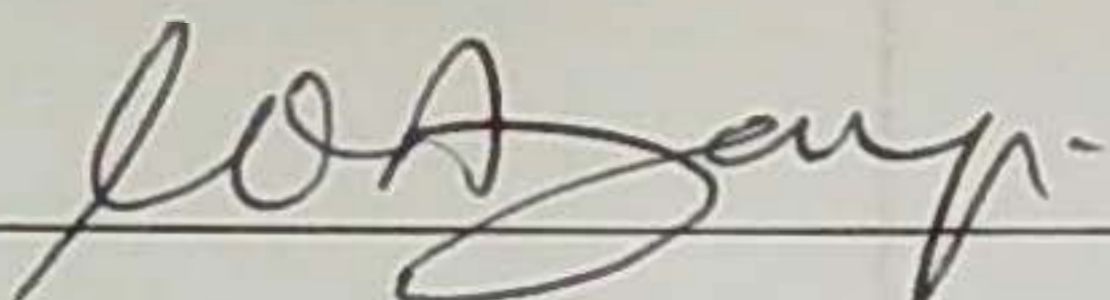
Health care providers still doubt the feasibility of Focused Antenatal Care, there is the need to train and retrain health workers on the benefits of Focused antenatal care, more skilled providers are needed in the PHCs especially in the rural areas. There should be policies in place to ensure that all the pregnant women receive the standard contents of focused antenatal care regardless of their place of residence.

Key Words: Focused Antenatal Care, Rural - Urban differentials, Pregnant women, Primary Health Centers.

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CERTIFICATION

I certify that this work was carried out by Miss D.C Osakinle in the Department of Epidemiology and Medical statistics, Faculty of Public Health, University of Ibadan.

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DEDICATION

This work is dedicated to God my father, my help in ages past and my hope for years to come and to my nephew and nieces; Afolarin, Afolasewa and Afolabomi. Thanks for bringing so much joy.

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LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Ante natal care
DOT	Direct Observation Treatment
EMOH	Ekiti state Ministry Of Health
FANC	Focused Ante Natal Care
FHI	Family Health International
FMOH	Federal Ministry Of Health
HIV	Human Immune deficiency Virus
IPTp	Intermittent Prevention Treatment in Pregnancy
LLINs	Long Lasting Insecticide Nets
MNCH	Maternal, Newborn and Child Health
NPHCDA	National Primary Health Care Development Agency
NDHS	Nigerian Demographic Health Survey
PMTCT	Prevention of Mother- to- Child Transmission
SP	Sulfadoxine/Pyrimethamine
SPSS	Statistical Package for the Social Science
STI	Sexually Transmitted Infection
TT	Tetanus Toxoid
WHO	World Health Organization

CHAPTER ONE

1.1 Background Information

Antenatal care programme came into existence in the early part of the twentieth century. Since then, it has been widely implemented globally. During the last decade, following the publication of a large WHO trial on antenatal care that found that more frequent visits (of the previous antenatal care approach) does not necessarily improve pregnancy outcomes. There has been a worldwide re-assessment of the way routine antenatal care is provided and this gave birth to the Focused Antenatal Care (FANC).

The WHO advocated a minimum of 4 visits for pregnancies without complications scheduled as (First visit: before 16 weeks or when woman first thinks she is pregnant, Second visit: At 20-24 weeks or at least once in second trimester, Third visit: At 28-32 weeks and Fourth visit: At 36 weeks or later). (Villar et al,2001)(FMOH Orientation package).

Focused Antenatal Care (FANC) means that providers focus on assessment and action needed to make decisions and provide care to each woman's individual situation. (WHO/UNICEF, 2003) It recognizes that every pregnant woman is at risk for complications, and therefore all women should receive the same basic care and monitoring for complications. The four main goals of FANC according to Federal Ministry of Health and malaria action orientation package are: (1) Early detection and treatment of conditions, (2) Prevention of diseases (3) Birth preparedness and complication readiness and (4). Health education. (WHO/UNICEF, 2003) The goals are expanded below:

- Identification and surveillance of the pregnant woman and her expected child
- Recognition and management of pregnancy-related complications, particularly pre-eclampsia
- Recognition and treatment of underlying or concurrent illness
- Screening for conditions and diseases such as anaemia, Sexually Transmitted Infections (STIs) (particularly syphilis), HIV infection, mental health problems, and/or symptoms of stress or domestic violence

- Preventive measures, including tetanus toxoid immunization, de-worming, iron and folic acid, intermittent preventive treatment of malaria in pregnancy (IPTp), insecticide treated bednets (ITN)
- Birth preparedness and complications readiness
- Health education and promotion.

The concept of Focused antenatal care is a model of preventive and treatment of pathologic conditions in pregnancy, decisions on how the care is planned and implemented is fashioned according to the needs of individual patient. Antenatal visits have been reduced to four visits in FANC and it has been proved not to have any risk to its effectiveness (Yengo, 2009)

1.2 PROBLEM STATEMENT

It has been estimated that 25 percent of maternal deaths occur during pregnancy, with variability between countries. Between a third and a half of maternal deaths are due to causes such as hypertension (pre-eclampsia and eclampsia) and antepartum haemorrhage, which are directly related to inadequate care during pregnancy. (Olowonyo et al, 2006).

In sub-Saharan Africa, an estimated 900,000 babies die as stillbirths during the last twelve weeks of pregnancy. It is estimated that babies who die before the onset of labour, or antepartum stillbirths, account for two-thirds of all stillbirths in countries where the mortality rate is greater than 22 per 1,000 births, moreover, in developing countries, maternal mortality ratio is estimated at 40–800 per 100 000 live births. Each day, the world loses 1500 women from pregnancy related complications. (AbouZahr and Wardlaw, 2001). Nigeria's population of about 140million has 31million women belonging to reproductive age groups. Every year about 52900 women die from pregnancy related complication and maternal mortality ratio in Nigeria is 545 per 100,000 live births. (NDHS, 2008), 1 in 13 Nigerian women stand a chance of experiencing maternal death, neonatal mortality is equally high in Nigeria it is about 48 per 1000 live births, however, most of these mortalities are of preventable and treatable causes. (NDHS, 2008). In Ekiti state antenatal attendance rate steadily dropped comparing the trends between 2007 and 2010.

Antenatal care is arguably more important in developing countries because of the risks of malaria and anaemia in poorly nourished women, as well as risk of tetanus. Studies on risk factors of maternal mortality have shown that the lack of antenatal care increases the risk of maternal mortality (AbouZahr and Wardlaw,2001). Antenatal care utilization is still low in Nigeria. This under utilization varies from region to region and from state to state. (Dairo and Owoyokun 2010). Inequity exists, between old and young, rural and urban, poor, and less educated women may not benefit from ANC services or may drop out due to access barriers and low quality services. The presence of more qualified medical practitioner in urban areas, and the interference of alternative medicine with the available maternity care in the rural areas among other factors are responsible for the broad disparities in the practice of focused approach to antenatal care.

1.3 JUSTIFICATION.

Considerable variation exists in the practice of antenatal care worldwide especially between urban and rural areas, findings from NDHS 2008 showed that it is clear that there are indeed rural-urban differences in ANC utilization with the urban residents faring better than the rural residents. It was reported that urban women have more visits and more adequate ANC than rural women and they were more likely than rural women to deliver in the health facility under the care of skilled attendants . (Tran et al, 2011)

Evidence has also shown that maternal deaths could be reduced by promoting the availability, access and utilization of basic and comprehensive emergency obstetric care services for women with complications of pregnancy and childbirth (AbouZahr and Wardlaw, 2001).

Some contents of focused antenatal care are not optimum in Ekiti state evident from previous reports; only 23.9% of pregnant women attending Ekiti state PHCs were reported to have heard about intermittent preventive treatment in pregnancy, IPTp use was really low and there was poor adherence to the Direct Observed Therapy scheme in the state.(Akinleye et al,2009), About 186 of the PHCs in Ekiti state offer maternity services, only two of these PHCs provide antiretroviral treatments and prevention of mother to child transmission of HIV services.(ESMOH, 2011)

This study is an attempt to ascertain that the focused approach to antenatal care is being practiced in accordance with the Federal Ministry of Health's guideline (stated in the Malaria Control and Reproductive Health adopted strategy) at the most basic level- Primary Health Centres in both urban and rural areas and to elucidate the disparities (if any) in the antenatal care available to pregnant women residing in urban and rural areas. The findings of this study will also help the government to make better health policies to meet the needs of the primary health centers (if need be) in the area of antenatal care.

1.4 Objectives Of The Study

Broad Objective: To assess the practice of focused approach to antenatal care at the Primary Health Care level in urban and rural areas of Ekiti State.

Specific Objectives:

1. To assess the type antenatal care received by the pregnant women in the PHCs.
2. To explore the perception of the women about the attitudes of the health care providers.
3. To determine the utilization of ANC services across different socio demographic characteristics in both urban and rural PHCs.
4. To determine the facilitating factors and challenges to the practise of FANC in urban and rural areas.

CHAPTER TWO

LITERATURE REVIEW

2.1 Focused Antenatal Care

Focused Antenatal Care (FANC) is the care that women receive during pregnancy, it helps to ensure healthy outcomes for the women and newborns. It serves as the vehicle for many programs put in place to achieve the goals of safe motherhood such as malaria prevention in pregnancy, prevention of mother to child transmission of HIV/AIDS, adequate birth preparedness, health education which introduces them to family planning and post natal care among others. Antenatal care is a key entry point for a pregnant woman to receive a broad range of health promotion and preventive health services. (WHO/UNICEF 2003).

The antenatal period presents opportunities for reaching pregnant women with interventions that may be vital to their health and wellbeing and that of their infants. Antenatal care is one of the pillars of safe motherhood initiative, known as one of the best strategies to improve maternal health.

Focused antenatal care (FANC) means that health providers focus on each woman's individual need and take decisions to suit each woman's need, unlike the traditional approach which employs the generalized risk approach using limited resources on routine and frequent visits which has not been found to be of specific benefits (Family Care International, 1998)

FANC is an updated approach to antenatal care emphasizing quality over quantity number of visits. (Kinzie and Gomez, 2004), Focused Antenatal care approach recognizes three realities. Firstly, that antenatal care is a unique opportunity for early diagnosis and treatment of problems and prevention. Secondly, the majority of pregnancies progress without complication. Thirdly, all women are considered at risk of complications because most complications cannot be predicted by any type of risk categorization. Therefore, all women should receive essential care and monitoring for complications that are focused on individual needs. (Maine, 1991).

In summary, focused antenatal care underscores actions that have been proven to improve maternal and neonatal health while de-emphasizing the interventions not known to be beneficial,

at the same time, informing the pregnant women of potential danger signs and ways to respond to the signs appropriately. (Yengo, 2009)

2.2 Acceptability and Sustainability of FANC

The findings of the trial carried out in Argentina, Cuba, Saudi Arabia, and Thailand proved that FANC was safe and was a more sustainable, comprehensive, and effective ANC model (WHO 2001). With this evidence FANC was adapted into the policy of some countries in sub Saharan Africa including Nigeria. The findings of Reproductive Health Program (FRONTIERS) to assess the feasibility, acceptability, and effects of implementing FANC in Africa showed that FANC is acceptable to clients and providers in Africa, and can improve quality of care, but sustainable provision of FANC require staff training, outreach to ensure client compliance, infrastructure strengthening to ensure availability of space, equipment, and supplies for providing services.(Program brief, 2008).

2.3 Differences between FANC and Traditional Approach

Traditional approach to antenatal care characterized by frequent and routine visits came into existence in early 1900s. In 2002, WHO adopted the goal-oriented antenatal care approach after a recommendation by some researchers. FANC has been adopted among many other countries including Ethiopia, Malawi, Ghana, Kenya and Nigeria. FANC is a better holistic approach characterized by the reduced number of visits. FANC has the following advantages over the traditional approach, (Ekabua et al, 2011):

1. Traditional approach was vertical; it only discussed issues related to pregnancy alone, while FANC integrates counseling, nutrition, immunization, HIV screening and others as part of Antenatal care.
2. Traditional approach used the frequent visits to classify pregnancy as high or low risks, instead of this; FANC assumes each pregnancy is potentially at risk.
3. FANC prepares the families of the pregnant women in terms of birth preparedness and complication readiness, this is absent in the traditional approach.

4. Alertness about danger signs of the pregnant women primarily classified as low risk by the traditional approach is reduced; FANC alerts the health providers, the pregnant women and the families that complications might occur anytime.
5. FANC is the best approach for resource-limited countries where health professionals are few and health infrastructures are limited. In particular, the majority of pregnant women can't afford the cost incurred by the frequent antenatal visits required by the traditional antenatal care approach

In summary, FANC emphasizes helping women to maintain normal pregnancies by identifying existing health conditions, detecting emerging complications, promoting health, preparing for a healthy birth, and educating clients on postpartum care including nutrition, breastfeeding, and family planning. (Ekabua et al,2011)

2.3 Coverage of Antenatal care (ANC)

Antenatal care coverage is an indicator of access and use of health care during pregnancy, it is defined as the percentage of women who used antenatal care provided by skilled health personnel for reasons related to pregnancy at least once during pregnancy as a percentage of live births during a specific time period.(WHO,2004)

Globally, ANC is a success story. Currently, 71 percent of women worldwide receive at least one ANC; in industrialised countries, more than 95 percent of pregnant women have access to ANC. (Lincetto et al,2010), in sub-Saharan Africa, 69 percent of pregnant women have at least one ANC visit, majority have four visits or more and in Nigeria about 45% percent of pregnant women had four visits in 2008.(NDHS, 2008).

Addressing the coverage of focused antenatal care in Nigeria, in 2008, only 45 percent of pregnant women had the four or more recommended visits. (NDHS, 2008). Factors militating against the proper coverage of antenatal care in Nigeria as found by Awusi et al, 2009 are; lack of motivation, non-accessibility, cultural and negative role played by husbands, in addition to these factors, poor funding, culture, religious practices, ignorance and inadequate training of health care providers on the advantages of focused antenatal care are cogent factors affecting Focused antenatal care specifically. (Amosu et al 2011)

Studies in developing countries have shown that the use of health-care services generally is related to the availability, quality and cost of services, as well as to the social structure, health beliefs and personal characteristics of the users- especially socio demographic factors. (Kabir et al,2005). It can be implied that FANC is also affected by these factors more importantly perceived quality of service was found to be the most relevant factor which influenced the choice of facility for obstetric care in south west Nigeria. (Iyaniwura and Yusuff, 2009)

2.4 Timing and presentation at ANC clinics

Timing and presentation of the women at the antenatal clinics showed that a lot of women present late. According to Boller et al, (2003) it was found that in sub-Saharan Africa, most women present for antenatal care in the second trimester and a relatively substantial proportion present only in the third trimester. This late presentation defeats the first goal of focused antenatal care which is early detection and treatment of underlying conditions; Because underlying medical conditions are worsened or aggravated in pregnancy, these conditions are often missed and not managed appropriately when women present late in the antenatal clinics (Boller et al, 2003). Typical of developing countries is the findings in Ghana where 45% of the pregnant women make the first antenatal visit in the second or third trimesters and about 6% did not have a single visit. (Nyarko et al,2006) Reasons for late presentation for ANC especially in the rural areas are long distance, negative attitudes of health workers, lack of knowledge on time for initiating prenatal care and cultural beliefs.

2.5 Quality of ANC and perception of pregnant women

WHO defined quality of care as “the proper performance, according to standards, of interventions that are known to be safe, that are affordable to the society in question, and that have the ability to produce an impact on mortality, morbidity, disability and malnutrition” (Otolorin, 2008)

The criteria for good quality maternal health service are accessibility and availability; it must be acceptable to potential users, it must be responsive to local cultural and social norms (e.g. privacy, confidentiality, quick, care by female health workers, adequacy of essential supplies and equipment). It has to provide comprehensive care and linkages to other reproductive services and it should provides for continuity of care and follow-up. (Otolorin, 2008).

Focused antenatal care is the standard in use in Nigeria, the contents of FANC at the minimum (for ANC to be of high quality) are: at the first visit- comprehensive medical history, classification of the woman's health status, Expected date of delivery must be determined. For every other visits- complete and general obstetric examinations, blood pressure, fetal movements and fetal growth. Screening tests must include: Hemoglobin, syphilis, HIV and proteinuria. Preventive measures must include: 2 doses of tetanus toxoid immunisation, iron and folate drugs, 2 doses of intermittent preventive treatment, use of long lasting insecticide treated net. Lastly health education must contain topics such as nutrition, safe sex, self care, HIV prevention Post natal care, family planning e.t.c (Lincetto et al, 2010).

High quality antenatal care is threatened by the poor knowledge of some health care providers; similar to Nigeria, Kenya is a malaria endemic country and malaria prevention in pregnancy is a major content of FANC, Burungi and Oyango, 2006 reported that the use of the drug of choice for malaria prevention was disturbed by the poor knowledge and the reluctance of the health providers to administer the "sulpur" drugs to the pregnant women, in the same vein, the pregnant women were discouraged from using the prophylactic treatment due to fear of miscarriages and congenital abnormalities. (Burungi and Oyango, 2006). In Nigeria, Akinleye et al, 2009 found that there is poor adherence to the directly observed therapy of the intermittent preventive treatment of malaria designed to ensure compliance to the prophylaxis. The need for cooperation of the health workers to the success of FANC cannot be overemphasized.

Aniebue and Aniebue, 2010 found that women's perception is a barrier to focused antenatal care in Nigeria. It was reported that only 20.3% of the parturients desired a change to the new model (Focused Antenatal care). The common reasons for desiring the change were convenience (65.1%) and cost considerations (24.1%) and the reasons given for the rejection of the new model were: fear of inadequate learning during antenatal care (45.7%), the suspicion that four visits were inadequate for familiarization with care providers (12.9%), the need for early detection of disease (6.7%) and social satisfaction from antenatal visits (6.7%) (Aniebue and Aniebue, 2010), in the same vein, findings from a qualitative research in four developed countries revealed that the pregnant women had positive views about the FANC they however expressed doubts about the aspects of reduced visits. (Nigenda et al, 2003)

countries revealed that the pregnant women had positive views about the FANC they however expressed doubts about the aspects of reduced visits. (Nigenda et al,2003)

Among the health care providers in south west Nigeria, 42% of those who participated in a study considered frequent routine as the norm and that women should be classified by risk category to determine their chance of complication, 52% identified ignorance as one of the factors affecting focused antenatal care. Furthermore, 66% accepted that focused antenatal care is not enforced by their healthcare facility as a result of lack of policy concerning the practice of focused antenatal care and about the components of FANC. Only (6%) of the respondents agreed that early detection and prevention of diseases are major components of focused antenatal care. (Amosu et al 2011).

Exploring the perception of nurses about implementation of FANC, Oyango 2009 found that 97% of the nurses had good perception about the implementation in Tanzania.

From the findings of Rani et al, 2006, it is known that poor quality ANC reduces the utilization, possible reasons for poor quality ANC are inadequate resources, poor attitudes of health care personnels, low level competence of health care providers, lack of compliance with defined standards, poorly supervised workers, underpaid and overworked staff, delays in receiving treatment, delay in problem recognition, delay in deciding to seek care, and delay in reaching the health facility(Ali et al,2011; Otolorin,2008),

However, findings of a systematic review revealed that more qualitative research is required to explore the effect of women's satisfaction with antenatal care generally, as well as correlation between satisfaction and utilization.(Simkhada, et al,(2008).

2.6 Socio demographic factors, ANC attendance and delivery at health facility.

In Sagamu, south west Nigeria, all the women who earned more than N10,000 (\$74) per month received ANC while 6.5% of those who earned less than N10,000 (\$74) per month did not receive any ANC. Compared to those who were employed, women who indicated that their husband were unemployed were less likely to use ANC irrespective of their primary consideration, 94.3% of the pregnant women still sought their husband's permission before using a facility.(Iyaniwura and Yussuff, 2009), The proportion of the women that had ANC increased with respondent's educational status and the husband's educational level. Women with

secondary education are 2-3 times more likely to have antenatal care than women with no education (WHO,2003).

Education and income affected pattern of use of ANC by the respondents. Uneducated women had fewer ANC attendances compared to the well educated women. Formal education has a positive effect on the use of ANC service. Educated women were more likely to have received ANC during pregnancy, had more frequent visits and used health facilities for delivery.(Adamu and Salihu, 2002).

Effects of age, parity and level of education on ANC utilization as been consistently the same from various studies, younger women (<20) use antenatal services better than older women, primiparas register early for antenatal care than women with more than one child alive. Both the level of education of husband and wife affect in the utilization of antenatal services- women with primary education have been found to use antenatal care better than women with no education at all. Factors that predict antenatal care utilization also determines the choice of place for delivery and whether or not a skilled attendant will be present at delivery, this is buttressed by the result of a systematic review of literatures, whereby, Simkhada et al,2008 found out that maternal education, husband's education, marital status, household income, women's employment, media exposure and having a history of obstetric complications, cultural beliefs and ideas about pregnancy all had an influence on antenatal care use, these factors are consistent with the findings of Nwakoby (2011).

2.7 Rural and Urban Differences in utilization of ANC

Regional disparities exist in health service delivery and resource availability. (Aka, 2000) and this is further explained by the findings of Babalola and Fatusi 2009. It has been established that place of residence has a significant influence on the utilization of maternal health care services and also that rural women are generally less likely to give birth in health facility than their urban counterparts.

In Ethiopia, the percentage of women living in urban area and receiving ANC was about three times higher than those mothers living in rural parts. (Nigussie and Mitike, 2004).

In most developing countries, access to safe motherhood services in rural areas is more limited than in urban areas. This issue is of particular significance for Nigeria since the majority (52 percent) of her population lives in rural areas (Pop reference Bureau, 2006).

2.8 Primary Health Centers (PHCs) and Antenatal care.

In Nigeria, statistics showed that there are about 5,482 PHC facilities, distributed across 744 Local Government Areas. Only forty-nine, (49) percent of these PHCs offer ante-natal services, 76% of these facilities operate without skilled attendants, the skilled attendants are concentrated in the local government headquarters. It was also found that only about 50% of the PHCs run 24-hours service. (Sorunke,2008). There are about 250 PHCs in Ekiti state and less than 60% provide antenatal services (ESMOH, 2011)

The PHCs in Nigeria have different amenities and the standards vary from state to state. Olanrewaju et al, 2011 compared the amenities in the PHCs located in Kogi and Lagos states and discovered that about 83% of the PHCs in Lagos states were adequately supplied with electricity compared to 43% in Kogi state.

Concerning antenatal care received in the PHCs in south west Nigeria, Oladapo et al, 2008 reported that the respondents expressed satisfaction with the level of expertise and basic technical competence of their care providers, also, less than 30% of them were pleased with the existing patients' referral mechanisms and at least two-thirds of the respondents received as much information as desired in salient aspects of antenatal health information needs, however, in a similar study, pregnant women were displeased with the constellation of services especially poor sanitary facilities and few number of skilled health care providers.(Nikiéma et al.2009)

Millennium Development Goals and Antenatal Care

Millennium development goals four and five are directly related to reducing infant and maternal mortality rates by 2015, however, the results of analysis of trends in 2008 revealed that, goals 4 and 5 were not likely to be achieved by 2015, except there was a drastic change to improve the strategies which were in place. (FMOH and NPHCDA, 2009). The mid-point assessment of MDGs between years 2000-2007 revealed that by 2015, maternal mortality rate is expected to have reduced to 440 per 100000 live births, however as at the time of the assessment, maternal mortality rates was reported to be 828 death per 100000 live births in rural areas and 531 deaths per 100000 live births in urban areas, this disparity is wide, about two-thirds of Nigerian women do not deliver in health facilities and in the presence of medically skilled attendants, factors responsible for these included poor attitudes to antenatal and post natal services as well as low

quality health care delivery. Considering years 1990 and 2007, with minimal data available, antenatal care coverage as an indicator to measure progress towards targets worsened, despite a lot of programs in place ranging from National Health Insurance Scheme to Making Pregnancy Safer Initiative, only minimal impact could be felt on maternal health, it suggests a weak policy environment.(UNDP, 2007). Teenage pregnancy, cultural and attitudinal factors, delay in seeking antenatal care, low commitment of local government chairmen to providing skilled manpower at the PHCs, inadequate funding, and health workers' refusal of rural posting are some of the many challenges Nigeria needs to overcome to have a substantial improvement on maternal health.(UNDP,2007).

In summary, focused approach to antenatal care in Nigeria needs to be reinforced to achieve sustainability. The overall aim of focused antenatal care is to ensure safe motherhood by bringing maternal deaths and infant mortality to the barest minimum, for this aim to be achieved in record time, universal education at least to secondary school level, improvement of the economic status of women and targeting men with information will significantly improve utilization of obstetric services in Nigeria. (Iyaniwura and Yusuf,2009: WHO(2004),

CHAPTER THREE

STUDY SUBJECTS AND METHODS

3.1 Description of Study Area

Ekiti state is one of the thirty-six states of Nigeria, created on 1st October 1996, and it has sixteen local government areas. The state shares boundaries with Kogi, Kwara, Osun and Ondo states.

The 16 local government areas in the states can be classified into urban and rural. Urban local government areas of Ekiti state are Ado, Efon, Ikere, Ijero and Ikole and rural local government areas are Ise-Orun, Ilejemeje, Emure and Ido-Osi. (EMOH, 2006) Only the PHCs in the urban and rural areas were used in this study.

Total area covered by Ekiti state is 6,353km² and the population was estimated in 2006 as 2,384,212. Ekiti people are homogenous and hardworking, they share the same cultural beliefs with other Yorubas. Agriculture is the main stay of the economy of the people. A wide variety of cash crops and food crops are grown in Ekiti State, although education is held in high esteem, majority of the people practice subsistence farming.

The state is in the forefront of educational development in Nigeria, there are about 541 public primary schools and about ninety registered private nursery and primary schools. There are also about 141 public secondary schools and more than twenty five registered private secondary schools, four state unity secondary schools, three federal unity schools and four technical colleges, and about five tertiary institutions, in addition are numerous computer schools, women education centers, nomadic schools and continuing education centers.

In terms of health care delivery, various categories of health and medical facilities are available to the people of the state. These health facilities belong to the Federal, State and Local Governments, religious organizations, and private individuals. The hospitals are classified as Federal Medical Centre, University Teaching Hospital, State hospitals, General Hospitals and District Hospitals- which are the primary health centers.

Private individuals and missions also provide healthcare services by establishing hospitals, clinics and diagnostic laboratories. At the time of this study, there was free health service in

Private individuals and missions also provide healthcare services by establishing hospitals, clinics and diagnostic laboratories. At the time of this study, there was free health service in most of the selected government hospitals in Ekiti state for ages 0-5 years also for antenatal and post natal care.

Data available in the Ministry Of Health revealed that maternal mortality has drastically reduced in the state comparing years 2006 and 2010. In 2006, there were 743 maternal deaths this reduced to 4 maternal deaths in 2010 this change was attributed to great improvement in maternity services. (ESMOH, 2011)

Basic maternity services available in Ekiti state PHCs included; antenatal care, delivery, post natal care (growth monitoring and routine immunization) and family planning. Tuesdays and Thursdays were the allotted days of antenatal clinics, although pregnant women had access to the PHCs any day of the week in case they had medical complains. The number of attendees in antenatal clinics of urban and rural PHCs didn't differ much, an average of about 30 women were seen on each antenatal day. (ESMOH, 2011)

3.2 STUDY DESIGN: the study design was cross-sectional and used both qualitative (in-depth interview) and quantitative data collection methods.

3.3 STUDY POPULATION

Study population comprises of pregnant women visiting antenatal clinics in Primary Health Centers (offering maternity services) in both urban and rural areas of Ekiti State located in Ekiti state. The chief nurses of the selected PHCs in both rural and urban areas were interviewed.

Inclusion criterion: Pregnant women visiting the antenatal clinics in PHCs for at least the first time.

Exclusion Criteria: Pregnant women living with HIV/AIDS were excluded from this study because of the special antenatal care they receive and pregnant women referred from rural area to urban area or vice versa were also excluded to eliminate recall bias.

Sample size determination: A sample size of 156 for each group was derived from

$$n = \frac{(Z_{\alpha} + Z_{1-\beta})^2 p_1(1-p_1) + p_2(1-p_2)}{(p_1 - p_2)^2} \quad (\text{Kirkwood et al, 2003})$$

Being the formula for two independent groups:

Where

Z_{α} = standard normal deviate set at 1.96 at 95% confidence interval

$Z_{1-\beta}$ = standard normal deviate (0.84) corresponding to power of $1-\beta$ (80% power)

p_1 = 45% of women had the recommended four ANC visits from National Demographic Health Survey of 2008.

p_2 = Proportion of women in rural areas was expected to be less than p_1 by a difference of 15%.

$$n = \frac{(1.96 + 0.84)^2 0.45(1 - 0.45) + 0.30(1 - 0.30)}{(0.45 - 0.30)^2}$$

Adjusting for non response with the formula,

$$(n_a) = \frac{n}{1-f} \quad \text{where}$$

- Non-response rate (f) = 10%,
- Calculated sample size, $n = 156$.

Adjusted sample size $n_a = 173$ women in each stratum.

However, a total sample of 400 women (200 in urban and 200 in rural areas) was used in this study.

Sampling technique: The study area was stratified into urban and rural areas before selection of study population. Two PHCs (providing maternity services) each were selected using simple random sampling (using a table of random numbers) in both urban and rural local government areas. The number of eligible and consenting women studied in each PHC was determined by proportional allocation till sample size was attained.

3.4 INSTRUMENT DESIGN AND DATA COLLECTION PROCEDURE

Both qualitative and quantitative methods were used in this study. Antenatal care exit interview questionnaire of the Safe Motherhood Needs Assessment package was adapted. (Osungbade et al, 2008) and used to obtain information on services received by the pregnant women and their

responses were validated with their maternity cards. The questionnaire sought information on socio-demographic factors, the perception of the pregnant women about the care they receive and contents of focused antenatal care. The questionnaire was also translated to Yoruba language (the local language of the people in the study areas) and back translated to English for easy comprehension by the pregnant women.

Concerning the in-depth interview, in-depth interview guide was developed and used to explore mainly the challenges and facilitating factors to the practice of FANC in Ekiti state. The challenges and the facilitating factors to providing focused antenatal care in rural and urban PHCs of Ekiti state were explored under the following themes;

- The number of years each matron had spent working in the PHCs,
- The general experience of the respondents since they started work,
- The tests been carried out in the PHCs,
- Practice of Prevention of mother to child transmission of HIV/Aids,
- Malaria prevention strategies,
- Availability of all the needed kits and materials,
- Impact of the free health service on antenatal care,
- General challenges about the pregnant women visiting the PHCs,
- General challenges being experienced in the PHCs .
- Challenges to the practice of focused antenatal care in Ekiti state.

The questionnaire was face validated by 2 Epidemiologists and one gynaecologist. The questionnaire was pretested among 40 pregnant women, 20 in urban LGA and 20 in rural LGA of Osun state. The essence of this is to identify possible flaws in questionnaire before administering to the entire study. Some questions in the questionnaires had to be re-worded to remove ambiguity and to ensure consistency based on findings of pretest.

3.5 ETHICAL CONSIDERATIONS

Ethical approval and permission was obtained from Ekiti State Ministry of Health. All the heads of the selected PHCs used were briefed and their informed consents were obtained. The

information obtained was kept confidential, names of respondents were coded and only codes were used to identify the questionnaires. The code was known only to the researcher.

3.6 DATA ANALYSIS

Data entry and analysis were done using SPSS version 15-software. Univariate analysis was used to determine the frequencies and proportions of the general characteristics of the study population, bivariate analysis- Chi-square, cross-tabulations used to show the relationship between the covariates and the dependent variables. Multivariate analysis- Logistic regression was used to determine significant predictors of the outcome variables. Thematic approach was used to analyze the in-depth interview and the result was reported in narratives.

A new variable; “focused antenatal care contents” was computed using whether or not the women received these services: blood pressure check, abdominal examination check, fetal heart beat, proteinuria (urine test), hemoglobin test (blood test), HIV, Syphilis, iron drugs, TT vaccines, IPTp & DOT, LLINs and multivitamins. Also, a new variable “attitude of health care providers” was computed using variables on whether or not the respondents felt the health providers cared about their well beings and whether or not the respondents felt respected.

The range of health education topics examined in this study included: diet and nutrition, knowledge about EDD and fetal growth, birth-preparedness, complication readiness, danger signs in pregnancy and post partum, HIV screening and prevention of HIV and STIs; all these were put together to compute a new variable named ‘health education topics’.

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CHAPTER FOUR

4.1 Socio-demographic characteristics of respondents

Mean age of the respondents was 27.5 ± 5.7 years, majority 231 (57.8%) belong to the age group 20-29 years, followed by 134 (33.5%) in age group 30-39 years; teenagers (15-19) years were 25 (6.2%) while women aged 40 years or more were the least 10 (2.5%) (Table 4.1)

Many of the respondents 318 (79.5%) were Christians, 76 (19.0 %) were Muslims while only 6 (1.5%) belonged to the traditional religion. One hundred and forty nine, (37.2%) had secondary education, 132 (33.0%) had tertiary education, 71(17.8%) had primary education and 48 (12.0%) had no formal education at all. Most 379 (94.8%) were married at the time of the study while 14(3.5%) were single, 6 (1.5%) were separated, and only 1 (0.2%) was legally divorced. A little over half of the respondents 205 (51.2%) had skilled occupation, 106(26.0%) had unskilled occupation and 89 (22.0%) were not working at all. (Table 4.1)

Table 4.1: Socio-demographic characteristics of the respondents

Variables	Frequency	Percentage
Religion		
Christianity	318	79.5
Islam	76	19.0
Traditional	6	1.5
Age		
15-19	25	6.2
20-29	231	57.8
30-39	134	33.5
40+	10	2.5
Marital status		
Married	379	94.8
Single	14	3.5
Separated	6	1.5
Divorced	1	.2
Level of education		
None	48	12.0
Primary	71	17.8
Secondary	149	37.2
Tertiary	132	33.0
Occupation		
Skilled	205	51.2
Unskilled	106	26.5
Not working	89	22.2

4.2 Pregnancy related characteristics

Almost half 199 (49.8%) of the women were in their second trimester at the time of this study while 160 (40.0%) were in their third trimester and 35 (8.8%) were in their first trimester. With regards to parity, 228 (57.0%) of the women had had one to four children and 54 (13.5%) had had more than four children while 118 (29.5%) of the women had not had any child before. Over half of the women 231 (58.0%) trekked to the PHCs for antenatal care while 101 (25.4%) and 66 (16.6%) used commercial and private vehicles respectively. (Table 4.2)

Concerning the number of antenatal visits the women had at the time of this study, 155 (38.8%) had more than five visits, 86 (21.5%) had between three and four visits, 82 (20.5%) came for ANC twice, 58 (14.5%) have had only one visit, with the least being 4.8% representing those that had forgotten the number of visits they had. A higher proportion 247 (61.8%) did not register in other facilities apart from their PHCs, 68 (17.0%) received care in faith homes or mission homes, 38 (9.5%) received care from traditional care givers, 31 (7.8%) received care at secondary or tertiary health centres, and 16 (4.0%) received care from private hospitals.

4.2 Frequency distribution of pregnancy- related characteristics

Variable	Frequency	Percentage
No of children alive		
None	118	29.5
Between 1-4	228	57.0
Above 4	54	13.5
Gestational age(at the time of survey)		
First Trimester	35	8.8
Second trimester	199	49.8
Third trimester	160	40
Don't know	6	1.5
No of antenatal visits		
Once	58	14.5
Twice	82	20.5
3- 4	155	38.8
> 5	86	21.5
many/ can't count	19	4.8
Means of Transportation to the clinic		
Walked/trekked	231	58.0
Commercial	101	25.4
Private	66	16.6
Where else do you receive ANC		
None	247	61.8
Traditional care givers	38	9.5
Mission houses	68	17.0
Private hospitals	16	4.0
SHC/THC	31	7.8

Table 4.3 shows the percentage distribution of respondents that had the minimum recommended contents of focused antenatal care. A quarter 99 (25%) of the respondents had the minimum recommended contents; majority 297 (75%) did not have the minimum recommended contents of FANC. With regards to the health education topics, a very high proportion 355 (89%) were taught a wide range of health education topics, 41 (10.4%) were not taught all the topics at the time of this study.

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Table 4.3 Frequency distribution showing the number of respondents who had the standard antenatal care

Variable	Frequency	Percentage
FANC contents and tests		
Yes	99	25.0
No	297	75.0
Health Education topics discussed		
Yes	355	89.6
No	41	10.4

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Table 4.4 shows the frequency distribution of the number of ANC visits the respondents at the third trimester had. Very few respondents 19 (11.9%) had one visit, followed by the same proportion 19 (11.9%) with two visits, majority 59 (36.9%) had between 3 and 4 visits, similarly 50 (31.2%) had over 4 visits and 13 (8.1%) of the respondents had forgotten the number of visits they have had.

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Table 4.4: Frequency distribution of the number of antenatal care visits, had by respondents in their third trimesters.

Variable	Frequency	Percentage
Once	19	11.9
Twice	19	11.9
Between 3 and 4	59	36.9
More than 4	50	31.2
Don't know/ lost count	13	8.1
Total	160	100

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4.3 Comparison between socio-demographic characteristics and pregnancy-related information of the respondents in rural and urban areas

There were fewer pregnant women 26 (13%) who were not working in rural areas than urban areas 63 (31%). More respondents 111 (55.5%) in the rural areas were skilled workers compared to urban respondents 94 (47%), of the respondents in the rural areas more 63 (31.5%) were unskilled workers compared with 43 (21.5%) of the urban areas, ($p < 0.001$). Teenage respondents between ages 15-19 years were fewer in the rural areas 8 (4.0%) than in the urban areas 17 (8.5%). In the rural areas, slightly more respondents 119 (59.0%) belonged to the age group 20-29 years compared to 112 (56.0%) of the urban residents belonging to the same age group, for the age group 30-39 years, fewer proportion 64 (32%) were from the rural areas compared to 70 (35%) that were from urban areas. More respondents in the rural areas 9 (4.5%) were aged 40 and above compared to the urban areas 1 (0.5%): the differences in the distribution of age groups between rural and urban areas was found to be significant with $p < 0.001$.

There were fewer respondents with no education at all in the rural areas 21 (10.5%) compared with 27 (13.5%) of the urban areas; respondents whose highest level of educational attainment was primary education were slightly fewer in rural area 32 (16.0%) than in urban areas 39 (19.5%), those with secondary education as the highest level of educational attainment were more in rural areas 86 (43.0%) compared with urban areas 63 (31.5%); respondents with tertiary education as their highest level of education attained were fewer in rural areas 61 (30.5%) compared to urban areas 71 (35.5%), the observed difference was however not significant. ($p = 0.125$). With regards to marital status: there were slightly fewer married respondents in the rural areas 183 (91.5%) than in the urban areas 196 (98.0%), 17 (8.5%) of the single respondents were rural residents compared to 4 (2.0%) who were urban residents ($p = 0.004$). There were slightly fewer Christian respondents in rural areas 158 (79.0%) than urban areas 160 (80.0%), there were slightly fewer Muslim respondents 37 (18.5%) in rural than in urban areas 39 (19.5%), however, there were more respondents belonging to the traditional religion in rural areas 5 (2.5%) than urban areas 1 (0.5%), the rural-urban difference seen was insignificant. ($p = 0.255$)

With regards to the pregnancy related variables, respondents with no children were exactly the same proportion 59 (29.5%) in rural and urban areas respectively. More respondents in rural

areas 128 (64.0%) had between 1 to 4 children compared with those of the urban areas 100 (50.0%), however, women with more than 4 children were fewer in rural areas 13(6.5%), than urban areas 41(20.5%); the observed difference was significant ($p<0.001$). Of the total number of respondents in the first trimester of their pregnancies, 22 (11.2%) were rural respondents and 13(6.6%) were urban residents, a higher proportion 102 (51.8%) of the rural residents were in their second trimester compared to their urban counterparts 97 (49.2%), fewer respondents 73 (37.1%) in the rural areas were in the third trimester of their pregnancies compared to 87 (44.2%) those in the urban areas, ($p=0.106$). Regarding transportation to the PHCs; a higher proportion 132 (66.7%) of those that trekked to their PHCs were rural residents compared to urban 99 (49.5%), fewer respondents went to the PHCs with commercial means in rural areas 40 (20.2%), than urban areas 61 (30.5%) and also, fewer respondents in the rural areas 26 (13.1%) came with private means than the urban respondents 40 (20.0%) ($p=0.002$). A statistically significant rural-urban difference existed in whether or not the respondents got antenatal care from other places apart from their PHCs. More rural respondents 133 (66.5%) did not register in other places apart from the PHCs compared to 114 (57.0%) of the urban respondents; fewer rural respondents received care from traditional care givers 12 (6.0%) compared to 26(13%) urban respondents, more women 36 (18.0%) got care from faith homes in rural areas than in urban areas 32 (16.0%), only two (1%) of the rural respondents got care from private hospital compared to 14 (7.0%) of urban respondents who got care from private hospitals and more rural respondents 17 (8.5%) got care from either secondary or tertiary health centres. ($p=0.003$)

Table 4.5: Socio Demographic and pregnancy related characteristics between rural and urban women visiting the antenatal clinics

Variable	Rural n(%)	Urban n(%)	Total n(%)	χ^2	df	P-value
Occupation						
Not working	26(13.0)	63(31.5)	89(22.2)	20.6	2	0.000
Skilled	111(55.5)	94(47.0)	205(51.2)			
Unskilled	63(31.5)	43(21.5)	106(26.5)			
Parity						
none	59(29.5)	59(29.5)	118(29.5)	18.0	2	0.000
1 to 4	128(64)	100(50)	228(57.0)			
Above 4	13(6.5)	41(20.5)	54(13.5)			
Age						
15-19	8(4.0)	17(8.5)	25(6.2)	10.1	3	0.018
20-29	119(59.5)	112(56.0)	231(57.8)			
30-39	64(32.0)	70(35.0)	134(33.5)			
40+	9(4.5)	1(0.5)	10(2.5)			
Marital status						
Married	183(91.5)	196(98.0)	379(94.8)	8.5	3	0.004
Single	17(8.5)	4(2.0)	21(5.2)			
Gestational age						
First trimester	22(11.2)	13(6.6)	35(8.9)	3.7	2	0.160
Second trimester	102(51.8)	97(49.2)	199(50.5)			
Third trimester	73(37.1)	87(44.2)	160(40.6)			
Means of transportation to the health facility						
Walked	132(66.7)	99(49.5)	231(58.0)	12.0	2	0.002
Commercial means	40(20.2)	61(30.5)	101(25.4)			
Private means	26(13.1)	40(20.0)	66(16.6)			
Level of Education						
None	21(10.51)	27(13.5)	48(12.0)	5.8	3	0.125
Primary	32(16.0)	39(19.5)	71(17.8)			
Secondary	86(43.0)	63(31.5)	149(37.2)			
Tertiary	61(30.5)	71(35.5)	132(33.0)			
Other sources on						
ANC						
None	133(66.5)	114(57.0)	247(61.8)	16.2	4	0.003
Traditional care givers	12(6.0)	26(13.0)	38(9.5)			
Mission houses	36(18.0)	32(16.0)	68(17.0)			
Private hospitals	2(1.0)	14(7.0)	16(4.0)			
SHC/THC	17(8.5)	14(7.0)	31(7.8)			
Religion						
Christianity	158(79%)	160(80%)	318(79.5)	2.7	2	0.255
Islam	37(18.5%)	39(19.5%)	76(19.0)			
Traditional	5(2.5%)	1(0.5)	6(1.5)			

The percentage distribution of the variables computed to form variable “minimum contents of FANC” revealed that a very high proportion of the respondents had their blood pressures checked in both urban and rural areas, all the respondents in the rural areas 200 (100%) had their blood pressures checked, compared to the urban areas 196 (98.0%) this was not found to be significant ($p= 0.123$). A statistically insignificant relationship existed between whether or not abdominal examination was performed on rural and urban residents; a slightly lower proportion of rural respondents 195 (97.5%) had abdominal examinations compared to respondents living in urban areas 200 (100%) ($p= 0.061$), there was no rural- urban difference in whether or not the fetal heart beat was checked ($p=1.00$).

More rural residents had their haemoglobin level checked 199 (95.5%) compared to urban residents 177 (88.9%), this finding was significant at $p=0.014$. Similarly, almost all respondents residing in rural areas had urinalysis 191 (95.5%) compared to urban areas where fewer respondents did. ($p< 0.001$). With $p= 0.001$, a greater proportion of rural respondents reported to have received tetanus toxoid vaccine 194 (97%) compared to the urban respondents 177 (88.5%). Of the pregnant women that reported to have received at least a dose of Intermittent Preventive Treatment of malaria in pregnancy (IPTp), 194 (97.0%) were from the rural areas and 191 (95.5%) were from urban areas, however this slight difference was not found to be significant with $p=0.60$. More rural respondents 149 (74.5%) reported that they were being directly observed while taking the IPTp compared to urban respondents 106 (53.0%) chance was an unlikely explanation of this relationship with $P<0.001$. Majority of the respondents 161 (80.5%) in rural areas have been given Long Lasting Insecticide Nets (LLINs) compared to respondents residing in urban areas 139 (69.5%) and this was statistically significant with $p= 0.026$.

A slight but statistically significant rural –urban difference existed between the respondents that had ever received iron drugs in their present pregnancy; all the rural residents 200 (100%) had done so, compared to fewer urban residents 189 (94.5%). A greater proportion 181 (90.5%) of rural respondents had ever received multivitamins compared to the proportion in urban areas 128 (64.0%). ($p <0.001$)

Very slight rural – urban difference existed with regard to whether HIV test results were recorded, a lower proportion 108 (54.0%) of rural respondents had their HIV tests results

recorded in the cards compared to urban respondents 112 (56.0%) this relationship was however not significant with $p=0.457$.

One hundred and thirty two (33%) of the total respondents had their syphilis test result in their cards, of these, a slightly lower proportion 62 (31.0%) were from the rural areas while 70 (35%) were respondents from the urban areas, $p = 1.621$

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Table 4.6 Percentage distribution of minimum contents of focused antenatal care received between rural and urban women.

Variable	Rural N(%)	Urban N(%)	Total n(%)	χ^2	df	p-value
Blood pressure						
Yes	200 (100)	196(98.0)	396(99.0)	4.040	1	0.123*
No	0(0)	4(2.0)	4.0(1.0)			
Abdominal examinations						
Yes	195(97.5)	200(100)	395(98.8)	5.063	1	0.061*
No	5(2.5)	0(0)	5(1.2)			
Fetal heart beat						
Yes	199(99.5)	199(99.5)	398(99.5)	0.000	1	1.000*
No	1(0.5)	1(0.5)	2(0.5)			
Blood test (Hb)						
Yes	191(95.5)	177(88.9)	368(92.2)	5.982	1	0.014
No	9(4.5)	22(11.1)	31(7.8)			
Urinalysis						
Yes	192(96.0)	168(84.0)	360(90.0)	16.000	1	0.000
No	8(4.0)	32(16.0)	40(10.0)			
TT vaccine						
Yes	194(97.0)	177(88.5)	371(92.8)	10.744	1	0.001
No	6(3.0)	23(11.5)	29(7.2)			
IPTp						
Yes	194(97.0)	191(96.0)	385(96.2)	0.307	1	0.600*
No	6(4.0)	8(3.0)	14(3.5)			
DOT(IPTp)						
Yes	149(79.9)	106(53.0)	255(63.9)	20.693	2	0.000
No	50(25.1)	94(47.0)	144(36.1)			
Iron						
Yes	200(100)	189(94.5)	389(97.2)	11.311	1	0.001*
No	0(0)	11(5.5)	11(2.8)			
LLINs						
Yes	161(80.5)	139(70.9)	300(75.0)	4.948	1	0.026
No	39(19.5)	57(29.1)	96(24.0)			
HIV tests						
Yes	108(54.0)	112(56.0)	220(55.0)	0.457	2	0.796
No	90(45.0)	87(43.5)	177(44.2)			
Syphilis test						
Yes	62(31.0)	70(35.0)	132(33.0)	1.621	2	0.445
No	135(67.5)	129(64.5)	264(66.0)			
Multivitamins						
Yes	181(90.5)	128(64.0)	309(77.2)	39.959	2	0.000
No	19(9.5)	72(36)	91(22.8)			

(*) represent values of Fishers' exact test,

Values in bold represent the values significant at $p < 0.005$

There was no significant rural-urban differences in the range of health education topics the respondents had ever been taught. With regards to diet and nutrition health education topic, 197 (98.5%) of the rural residents reported that they have been taught while all urban respondents 200 (100.0%) areas reported same. ($p=0.248$). A slightly lower 188 (94.0%) proportion of those in rural areas reported that they were told their expected date of delivery compared to urban residents 194 (97.0%), however this is not statistically significant. ($p=0.148$). With regards to whether or not the women were given updates on fetal growth, a lesser proportion 194 (97.0%) of rural residents were given updates compared to urban residents where almost all the respondents 199 (99.5%) were told, the difference observed was not significant. ($p=1.000$). The same proportion of respondents 199 (99.5%) had ever been taught birth preparedness in the rural and urban areas respectively, ($p=1.000$). A slightly greater proportion 193 (96.5%) of respondents residing in rural areas had been taught complication readiness compared to urban residents 199 (95.5%). ($p=0.860$). Almost all the respondents have been taught danger signs in pregnancy and after delivery; 196 (98%) in rural areas had been taught this and 199 (99.5%) in the urban areas ($p=0.372$). Concerning the importance of HIV screening and prevention, a slightly greater proportion 198 (99.0%) reported they have been taught about HIV in rural areas compared to 196 (98.0) urban areas, the result was not statistically significant with $p=0.681$. On information about sexually transmitted infections, fewer proportion 190 (95.0) of rural respondents had been taught about STIs compared to the urban respondents, 196 (98.0%), the rural-urban difference noticed was however not statistically significant. ($p=0.103$)

Table 4.7: Percentage distribution of the health education topics learnt by the pregnant women in rural and urban areas

Variable	Rural N=200 n(%)	Urban N=200 n(%)	Total N=400 n(%)	χ^2	df	P-value
Diet and nutrition						
Yes	197(98.5)	200(100)	397(99.2)	3.023	1	0.248*
No	0(0.0)	3(1.5)	3(0.8)			
EDD						
Yes	188(94.0)	194(97.0)	382(95.5)	2.094	1	0.148
No	12(6.0)	6(3.0)	18(4.5)			
Update on fetal growth						
Yes	194(98.0)	199(99.5)	393(98.7)	1.864	1	0.214*
No	4(2.5)	1(0.5)	5(1.3)			
Birth preparedness						
Yes	199(99.5)	199(99.5)	398(99.5)	0.000	1	1.000*
No	1(0.5)	1(0.5)	2(0.5)			
Complication readiness						
Yes	193(97.5)	191(97.0)	384(97.2)	0.099	1	0.753
No	5(2.5)	6(3.0)	11(2.8)			
Post partum danger signs						
Yes	196(98)	199(99.5)	395(98.8)	1.823	1	0.372*
No	4(2.0)	1(0.5)	5(1.2)			
HIV prevention and screening						
Yes	198(99.0)	196(98.0)	394(98.5)	0.677	1	0.681*
No	2(1.0)	4(2.0)	6(1.5)			
Information on STIs						
Yes	190(95.0)	196(98.0)	386(96.5)	2.665	1	0.103
No	10(5.0)	4(2.0)	14(3.5)			

(*) represent values of Fishers' exact test

The percentage distribution of women who had the minimum contents of FANC in rural and urban areas revealed that a lower proportion 41 (20.7%) of respondents in the rural areas had the minimum contents of focused antenatal care compared to urban areas where 58 (29.3%) of the respondents did; chance is an unlikely explanation of the noticed relationship. ($p=0.05$). Majority of the respondents were taught a wide range of health education topics however the proportion of respondents taught these topics were slightly lower in the rural areas 177 (88.5%) compared to urban areas 178 (90.8%) however, it was not statistically significant. ($p=0.449$)

There were rural and urban differences in the gestational age that the respondents presented for their first antenatal visit; more urban respondents 90 (50.5%) had their first antenatal visit at the first trimester compared to their rural counterparts 72 (39.3%).

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Table 4.8: Percentage distribution of minimum contents of focused antenatal care received by rural and urban women

Variable	Rural	Urban	Total			P-value
	n(%)	n(%)	n(%)	χ^2	df	
Was minimum FANC						
Content received?						
Yes	41(20.7)	58(29.3)	99(25.0)	3.892	1	0.05
No	157(79.3)	140(70.7)	297(75.0)			
were the women						
taught all the topics						
Yes	177(88.5)	178(90.8)	355(89.6)	0.572	1	0.45
No	23(11.5)	18(9.2)	41(10.4)			
Number of visits at the						
third trimester						
Once	16(21.9)	3(3.4)	19(11.9)	17.886	4	0.001
Twice	5(6.8)	14(16.1)	19(11.9)			
Between 3 and 4 times	22(30.1)	37(42.5)	59(36.9)			
More than 5	26(35.6)	24(27.6)	50(31.2)			
Too much/have lost count	4(5.5)	9(10.3)	13(8.1)			

Values in bold represent the values significant at p<0.005

Table 4.9 shows the percent distribution of the respondents' perception of the health workers' attitudes across rural and urban areas. One hundred and ninety two (96.0%) of the respondents in rural areas felt that their health providers were concerned about their well being, much more proportion 200 (100%) felt the same in urban areas where all the respondents believed the staff showed concern about their well being, the observed relationship was statistically significant. (P=0.007). Fewer proportion 150 (75.0%) in rural areas compared with urban areas 191 (95.5%) perceived that they were being treated with respect by their health providers, chance was an unlikely explanation of this rural-urban difference noticed with $p < 0.001$.

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Table 4.9: Percentage distribution of the respondents' perception of the health workers' attitudes across rural and urban areas

Variable	Rural n(%)	Urban n(%)	Total n(%)	χ^2	df	P-value
Are the staff ? concerned about your well being						
Yes	192(96)	200(100)	392(98.0)	8.163	1	0.0
No	8(4.0)	0(0.0)	8(2.0)			
Were you treated with respect?						
Yes	150(75.0)	191(95.5)	341(85.2)	33.421	1	0.0
No	50(25.0)	9(4.5)	59(14.8)			

* represent values of Fishers' exact test

Values in bold represent the values significant at $p < 0.005$

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4.4 Perception of the respondents about antenatal care

Three hundred and thirty (83.5%) of the respondents spent 30 minutes or less before the antenatal clinic began (Table 4.10); 170 (85.9%) of the rural women compared to lower proportion 160 (81.2%) of urban women reported to have waited for thirty minutes or less before they were attended to. There was a slight rural and urban difference in the proportion of respondents that waited for more than thirty minutes; a lesser proportion 28 (14.1%) of rural respondents waited for more than 30 minutes compared to their urban counterparts 37 (18.8%) however this difference was not statistically significant. ($p=0.214$)

Only one (0.5%) of rural respondents thought that the time for consultation was too short compared to three (1.5%) in urban respondents. Twenty one (10.5%) and 20 (10%) of the rural and urban respondents respectively perceived the consultation time as being too long. A total of 349 respondents out of 400 (100%) perceived the consultation time as right and appropriate, this comprise 174 (87.2%) and 175 (87.5%) rural and urban respondents respectively, ($p=0.638$)

A much lower proportion of the rural women 125 (69.4%) perceived the attitude of their health care providers as good and acceptable when compared with 133 (93.7%) of urban women and the difference observed was statistically significant. ($p<0.001$). All the rural respondents 200 (100%) and 195 (97.5%) of the urban respondents felt satisfied with the antenatal care received and would return to the facility in future, the result is not statistically valid with $p = 0.061$.

Table 4.10: Percentage distribution of the perception of the respondents about antenatal care received between rural and urban women.

Variable	Rural N=200 n(%)	Urban N=200 n(%)	Total N=400 n(%)	χ^2	df	P-value
Waiting time						
<= 30mins	170(85.9)	160(81.2)	330(83.5)	1.547	1	0.214
>30mins	28(14.1)	37(18.8)	65(16.5)			
Perception about consultation time						
Too short	1(0.5)	3(1.5)	4(1.0)	1.694	3	0.638
Too long	21(10.5)	20(10.0)	41(10.2)			
Right length	174(87.2)	175(87.5)	349(87.2)			
Don't know	4(2.0)	2(1.0)	6(1.5)			
Is the attitude of health providers acceptable						
Yes	125(69.4)	133(93.7)	258(80.1)	29.233	1	0.000
No	55(30.6)	9(6.3)	64(19.9)			
Will you return to the facility in future						
Yes	200(100)	195(97.5)	395(98.8)	5.063	1	0.061*
No	0(0.0)	5(2.5)	5(1.2)			

* represent values of Fishers' exact test

Value in bold is significant at $p < 0.005$

4.5 Adequacy of antenatal care

Table 4.11a shows cross-tabulation between socio-demographic characteristics and having adequate antenatal care, measured by two indices which are; proportions whose first visit was in the first trimester and proportions that had four visits or more at the third trimester).

Greater proportion 128 (64.0%) of respondents in the rural areas had their first antenatal visits at the first trimester compared to urban residents 90 (45.0%), however, this rural-urban difference is statistically not significant. ($p=0.07$)

A higher proportion 29 (53.7%) of those who had above four children made their first antenatal visit in the first trimester compared to those without children 46 (39.0%) and those who had between one to four number of children, 87 (38.2) ($p=0.103$). A statistically insignificant relationships existed between marital status and whether or not the first antenatal visit was made in the first trimester; more single respondents 12 (57.1%) had their first antenatal visits in the first trimester than married women 150 (39.6%) ($p=0.110$). A lower proportion of christian respondents 127 (39.9%) made their first antenatal visits at the first trimester compared to respondent of other religions 35(42.7%) ($p=0.652$).

Exploring the relationship between other places where the respondents received antenatal care and whether or not they had their first antenatal visits at the first trimester; of those that had their first visit in the first trimester, a higher proportion 20 (52.6%) were those that received care from traditional care givers, 33 (48.5%) of those who received care from mission/faith homes, and 14 (45.2%) of those that registered in secondary or tertiary health centers did the same compared to those that did not register in any other place 91 (36.8%) and those who registered in private hospitals 4 (25.0%). ($p=0.117$).

With regards to age, majority of those whose first visits were in their first trimester were the teenage mothers 12 (48.0%), 57 (42.5%) of those in age group 30-39 years did the same, and 4 (40.0%) of the respondents aged above 40years also had their first visit in the first trimester compared to the respondents in the age group 20-29 where 89 (38.5%) of them had their first visit in the first trimester. ($p=0.756$). However age, marital status religion, parity, where else the respondents received care and location were not found to be significantly associated with early antenatal visits.

A larger proportion of pregnant women who were not working 50 (56.2%) and those who were unskilled workers 44 (41.5%) made their first antenatal visits at the first trimester compared to those who were skilled workers 68 (33.2%), chance was an unlikely explanation of the relationship between the type of occupation and whether or not the first antenatal visit was made in first trimester. ($p=0.001$), slight but significant differences were noticed at the various levels of educational attainment, 35 (49.3%) respondents with primary education as the highest level attained and 62 (47.0%) respondents with tertiary education were the majority who had their first visits at the first trimester followed by those with no education at all 17 (35.4%) which was slightly higher than the proportion with secondary education 48 (32.2%) ($p=0.025$). Comparing the means of transportation to the PHCs; a significantly larger proportion of those who used private means 38 (57.6%) had their first visits at the first trimester compared to those who walked 87 (37.7%) and those who used commercial means 37 (36.6%), means of transportation was associated with whether or not the respondents had their first antenatal visit in first trimester.

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Table 4.11a: Association between socio demographic characteristics and having adequate antenatal care; First visit in first trimester

Sociodemographic variables	First visit in first trimester Yes n(%)	No n(%)	Total n(100)	χ^2	df	P-value
Location						
Urban	90(45.0)	110 (55.0)	200(50)	3.361	1	0.067
Rural	128(64.0)	72 (36.0)	200(50)			
Parity						
None	46 (39.0)	72(61.0)	118(29.5)	4.538	2	0.103
Between 1-4	87 (38.2)	141(61.8)	228(57.0)			
Above 4	29(53.7)	25 (46.3)	54(13.5)			
Occupation						
Not working	50 (56.2)	39 (43.8)	89(22.2)	13.695	2	0.001
Skilled	68 (33.2)	137(66.8)	205(51.2)			
Unskilled	44 (41.5)	62 (58.5)	106(26.5)			
Religion						
Christianity	127(39.9)	191(60.1)	318(79.5)	0.204	1	0.652
Others	35 (42.7)	47 (57.3)	82(20.5)			
Means of transportation						
Walked	87(37.7)	144(62.3)	231(58.0)	9.363	2	0.009
Commercial means	37(36.6)	64 (63.4)	101(25.4)			
Private means	38(57.6)	28(42.4)	66(16.6)			
Marital status						
Married	150(39.6)	229(60.4)	379(94.8)	2.548	1	0.110
Single	12(57.1)	9 (42.9)	21(5.2)			
Age						
15-19	12 (48.0)	13(52.0)	25(6.2)	1.188	3	0.756
20-29	89 (38.5)	142 (61.5)	231(57.8)			
30-39	57(42.5)	77 (57.5)	134(33.5)			
> 40	4(40.0)	6(60.0)	10(2.5)			
Level of education						
None	17 (35.4)	31(64.6)	48(12.0)	9.331	3	0.025
Primary	35 (49.3)	36(50.7)	71(17.8)			
Secondary	48 (32.2)	101(67.8)	149(37.2)			
Tertiary	62(47.0)	70 (53.0)	132(33.0)			
Where else do you receive ANC						
TBAs	20(52.6)	18(47.4)	38(9.5)	7.386	4	0.117
Mission	33(48.5)	35(51.5)	68(17.0)			
SHC/THC	14(45.2)	17(54.8)	31(7.8)			
None	91(36.8)	156(63.5)	247(61.8)			
Private HC	4(25.0)	12(75.0)	16(4.0)			

The second index to measure adequacy of antenatal care is whether or not the respondents at the third trimester had a minimum of four recommended visits. (Table 4.11b) Age was found to be significantly associated with whether or not the pregnant mothers had up to four visits by their third trimesters; of those who had these recommended number of visits, 49 (74.2%) of them belonged to age group 30-39, 57 (67.9%) were aged between 20-29 years compared to those belonging to age group 15-19 and those aged above 40 years. ($p=0.861$). All the 10 (100%) who registered in secondary or tertiary health centers had the recommended number of visits, 11 (84.6%) of the respondents who received care from traditional homes, 25 (73.5%) of those who received care from mission/faith homes had the recommended number of visits compared to 59 (64.1%) of those who didn't receive care in other places apart from their PHCs and 4 (36.4%) of those who received care from private hospitals. ($p=0.014$)

Married respondents who had four or more ANC visits were slightly higher in proportion 105 (68.2%) than the single respondents 4 (66.7%) the difference was not statistically significant. ($p=0.938$). There was little or no difference in the proportion of those who walked 61 (69.3%), those who used private means of transportation 16 (69.6%) compared to those that used commercial means 30 (63.8%) with regards to having four visits or more at the third trimester ($p=0.793$). More urban respondents 61 (70.1%) had four visits or more at the third trimester compared to rural respondents 48 (65.8%) , this was not statistically significant ($p=0.938$). A higher proportion of those whose highest educational level was primary education 26 (78.8%) and those with no education at all 11 (73.3%) had the recommended number of visits compared to those with tertiary education 35 (66.0%) and secondary education 37 (62.7%) ($p=0.79$)

Respondents with more than four children constitute the highest proportion 18 (75.0%) of those that had four ANC visits at third trimester, 28 (73.7%) of those who did the same were respondents with no children compared to 63 (64.3%) of respondents that had between 1 and 4 number of children, however, the result was not statistically significant. ($p=0.421$). Fewer Christian respondents 84 (66.7%) compared to other religions 25 (73.5%) had four or more recommended visits ($p=0.446$)

Table 4.11b: cross tabulation between socio demographic characteristics and having adequate antenatal care

Sociodemographic variables	4visitsormore n(%)	Yes	No n(%)	Total n(100)	χ^2	df	P-value
Age							
15-19	2(40)		3(60)	5(3.1)	0.031	1	0.861**
20-29	57(67.9)		27(32.1)	84(52.5)			
30-39	49(74.2)		17(25.8)	66(41.2)			
> 40	1(20)		4(80)	5(3.1)			
Marital status							
Married	105(68.2)		49(31.8)	154(96.2)	0.006	1	0.938
Single	4(66.7)		2(33.3)	6(3.8)			
Transportation							
Walked	61(69.3)		27(30.7)	88(55.7)	0.464	2	0.793
Commercial means	30(63.8)		17(36.2)	47(29.7)			
Private means	16(69.6)		7(30.4)	23(14.6)			
Location							
Urban	61(70.1)		26(29.9)	87(54.4)	0.348	1	0.555
Rural	48(65.8)		25(34.2)	73(45.6)			
Level of Education							
None	11(73.3)		4(26.7)	15(9.4)	2.818	3	0.421
Primary	26(78.8)		7(21.2)	33(20.6)			
Secondary	37(62.7)		22(37.3)	59(36.9)			
Tertiary	35(66.0)		18(34.0)	53(33.1)			
Parity							
None	28(73.7)		10(26.3)	38(23.8)	1.728	2	0.421
Between 1-4	63(64.3)		35(35.7)	98(61.2)			
Above 4	18(75.0)		6(25.0)	24(15.0)			
Occupation							
Not working	18(69.2)		8(30.8)	26(16.2)	1.999	2	0.368
Skilled	66(71.7)		26(28.3)	92(57.5)			
Unskilled	25(59.5)		17(40.5)	42(26.2)			
Where else do you receive antenatal care							
None	59(64.1)		33(35.9)	92(57.5)	12.550	4	0.014
Traditional care givers	11(84.6)		2(15.4)	13(8.1)			
Mission houses	25(73.5)		9(26.5)	34(21.2)			
Private hospitals	4(36.4)		7(63.6)	10(6.2)			
SHC/THC	10(100)		0(0)				
Religion							
Christianity	84 (66.7)		42(33.3)	126(78.8)	0.581	1	0.446
Others	25 (73.5)		9 (26.5)	34(21.2)			

** being value for linear by linear association which is the exact test used here.

Value in bold indicates values significant at $p < 0.005$

4.6 Logistic regression showing association between standard FANC tests and location

Logistic regression analysis of standard contents of FANC and on location showed that urban respondents were about 1.6 times more likely to receive the minimum contents of focused antenatal care than rural respondents, this result was statistically significant. OR= 1.6, 95% CI=1.00-2.51 (Table 4.12)

Urban respondents were found to be about 6.5 times more likely to perceive the attitude of their health providers as good and acceptable compared to the rural respondents, OR=6.5, 95% CI OR= 3.08-13.70

With regards to the association between whether or not the respondents made their first antenatal visits in their first trimester and location; urban residents were more likely to have their first antenatal visits in the first trimester compared to rural residents, OR=1.01, 95%CI=0.64-1.60

Respondents with no children were about 2.3 times less likely to have their first antenatal visits at the first trimester compared to those with children above 4; this result was statistically significant. (OR=0.44, 95% CI=0.21-0.93). Respondents who walked to their PHCs were about 2.5 times significantly less likely to have their first antenatal visits in their first trimester. (OR=0.4, 95% CI=0.21-0.77). A statistically significant difference existed between those who used commercial means to come to the hospital and those that used private means of transportation. Those that used commercial transportation were about 2.5 times less likely to have their first ANC visits at the first trimester compared to the respondents who used private means. (OR=0.4, 95%CI=0.20-0.80).

The different levels of education were not significant predictors of the likelihood that the respondents made their first ANC visits at their first trimester; respondents with no education at all were about 1.9 times less likely to have their first antenatal visit at the first trimester compared to those with tertiary education. (OR=0.5, 95%CI=0.22-1.31), those whose highest educational attainment was primary education were only about 1.3 times more likely to have their first antenatal visit at the first trimester (OR=1.3, 95%CI=0.36-1.27), similarly, those with

secondary education only were almost 1.5 times less likely to have their first antenatal visit at the first trimester compared to those with tertiary education.(OR=0.68, 95% CI=0.59-2.73,)

There was a significant association between the different types of occupation the respondents are engaged in and whether or not they made their first visit at the first trimester. Unskilled workers were 1.8 times less likely to have their first antenatal visit at the first trimester compared to those not working (OR= 0.6, 95%CI= 0.31-0.98) similarly, the skilled workers were 2.6 times less likely to have their first antenatal visit at the first trimester compared to those not working (OR= 0.39,95%CI=0.23-0.66).

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Table 4.12: Logistic regression showing the odds of association between whether the first antenatal visit of the respondent was in first trimester with some socio-demographic factors

VARIABLE	ODDS RATIO	95%CONFIDENCE INTERVAL	P-VALUE
Location			
Urban			
Rural(REF)	1.013	0.64-1.60	0.935
Parity			
None	0.442	0.21-0.93	0.032
Between 1-4	0.537	0.28-1.03	0.063
Above 4(REF)			
Means of transportation to the facility			
Walked	0.40	0.21-0.77	0.006
Commercial means			
Private means(REF)	0.40	0.20-0.80	0.010
Level of Education			
None	0.54	0.22-1.31	0.173
Primary	1.27	0.59-2.73	0.540
Secondary	0.68	0.36-1.27	0.227
Tertiary(REF)			
Occupation			
Unskilled	0.554	0.313-0.979	0.040
Skilled	0.387	0.233-0.645	0.000
Not working(REF)			

(Ref); Reference group

Exploring the odds of association between the second index of adequacy of antenatal care (having four or more visits); age of the respondents and whether or not they were receiving care from other places were found to be insignificantly associated with whether or not the respondents had the four or more recommended visits at the third trimester. Respondents in their third trimester, who did not receive care anywhere else apart from the PHCs were about 1.5 times less likely to have had 4 or more visits compared to those receiving care in other places. (OR=0.7, 95%CI =0.33-1.34), the odds of having four or more recommended visits at the third trimester was about 3.5 times more in respondents belonging to age group 20-29 years compared to the teenage mothers (OR= 3.48, 95%CI=0.54-22.43,).

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Table 4.13; Logistic regression showing the odds of association between respondents who had four visits or more recommended visits at the third trimester with some selected socio-demographic characteristics.

VARIABLE	ODDS RATIO	95%CONFIDENCE INTERVAL	P-Value
Where else do you receive antenatal care			
None	0.66	0.33-1.34	0.250
Other places (REF)			
Age			
15-19(REF)			
20-29	3.48	0.54-22.43	0.190
30-39	4.66	0.71-30.78	0.110
Greater than 40	0.44	0.03 -7.63	0.574

REF= Reference categories

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Results of the qualitative aspect

When asked about the number of years the respondents had spent working in the PHCs, all the respondents had spent at least one year in the PHCs in both urban and rural areas.

“... I have been working in this PHC for about three years” Matron urban PHC 1.

“...it is about three years now and I am very much aware of things happening here” Matron rural PHC 2

Services available to pregnant women in the PHCs

In all the PHCs, the respondents mentioned that with every change in government there were either good or bad effects on the health care services. They explained that they saw improvements in the delivery of health services with the declaration of free health services by the state government and they acknowledged the support received from the Non Governmental Organizations, however, one of the respondents acknowledged the support of her members of staff as the main reason behind successful delivery of health service in her PHC..

“...I have good experience; I have the cooperation of members of staff here now compared to where I have worked before for 15years” Matron rural PHC 2.

With regards to the tests and examinations available to the pregnant women in both rural and urban PHCs; The respondents mentioned blood pressure check, packed cell volume test, hemoglobin test, tests for proteinuria and glucosuria among others.. *“...we do HIV screening for all of them{pregnant women}, we do urinalysis and all other blood testing like blood group, genotype, PCV and HB.”* Chief Matron Urban PHC 2

“...we do PCV, genotype, Rhesus factor, HIV and AIDS tests and the likes” Senior Midwife Service Scheme Officer Rural center 3

None of the primary health centers were enabled to take care of pregnant women living with HIV/AIDS, meanwhile, prevention of mother to child transmission of HIV/AIDS is part of focused antenatal care.

"...we do HIV counseling and testing for everyone of them routinely and if there is anyone of them that is positive, we counsel them and refer them to general hospital close to us and those people that are negative we counsel them so that they will be able to remain negative." Chief Matron Urban PHC 2

"...when we discover that any patient has HIV and AIDS, we have HIV/AIDS department here that counsel them, but we refer them to specialist hospitals." Matron Rural PHC 4

Assessing the strategies in place to prevent malaria during pregnancy, the respondents explained that there were three main strategies in place, the first is health education whereby the women are advised to keep their surroundings clean and mosquitoes-free, and then each pregnant woman is given Long Lasting Insecticide Nets (LLINS) and doses of Sulfadoxine pyrimethamine.

"...we give all the women SP drugs and LLINs and we practice "DOT" {Direct Observed Treatment}, we tell them to take it {their SP} in our presence" Chief matron Urban PHC 4.

"...we give to all newly booked pregnant women LLINs and we give SP drugs routinely... we asked them to bring their pure water (sachet water) and take the drugs under our observations" Senior Midwife Service Scheme Officer Rural PHC 2

Facilitating factors

One major facilitating factor to antenatal care mentioned is the free health service scheme in place in Ekiti state. Respondents compared the rate of antenatal bookings before the free health service with the present situation; the respondents in the urban areas believed that they had seen between 50 and 100% percent increase in the patronage while those in the rural areas suggested that the increase is gradual; just by about 10 percent.

".....before the free health service, many people use to go to the TBAs {traditional birth attendants}, this time around they now to come here because everything is free, We have hundred percent increase now compared to when the service was not free". Chief matron Urban PHC 1

"....we have a free health service now, the pregnant women come more than before, the increase is about 10 percent, it is not all that much but just little by little" Matron Rural PHC 1

Concerning the supply and availability of test kits and malaria prevention materials, four out of the five urban local governments areas responded that the tests kits and other materials needed are supplied by the government and they are always available, however, two of the four rural local government areas respondents said that the HIV tests kits were not available at the time of this study, but in all the respondents mentioned that the government supplies all they need.

“...HIV test kits are not always available, but it is very much available now, we always have the LLINS and the SP drugs”. Midwife Service Scheme officer Urban PHC 3

“...Both the mosquito nets and the intermittent Preventive drugs are provided by the government we have never run short of them,.... the government is trying, they supply us with all the kits.” Matron Rural PHC 4

Challenges with the women

The respondents had various things to say about what they consider as their greatest challenges with the pregnant women attending antenatal clinics in their PHCs. The general complains in the urban areas included the fact that a lot of the pregnant women still receive care from faith homes and traditional care givers, the pregnant women miss appointments especially if it fell on market days, these are similar to those of the rural areas where the respondents reported that some of their patients had negative attitudes towards ANC which suggested to the health care providers that the antenatal care visits were sheer waste of time. However, some of the respondents gave entirely different complains which included high parity and late ANC registration excerpted below;

“.....the devastating challenge with the women is that, we still see Gravida VII, Gravid VI. They are not using family planning well”. Matron Urban PHC 1

“...they don't come on time to register, they will be at least 36 weeks before they come to register for the first time, even when they register early they don't keep to appointments.

Midwife Service Scheme Officer Rural PHC 3

Challenges to FANC in the PHCs

It is worth mentioning that few of the PHCs provided syphilis tests and none could boast of an ultrasound machine in both the rural and urban areas.

“...we have ultrasound machine before, it was purchased by communal effort but since there is free health service now, the community took it back because they cannot allow us to use it for free” Matron Urban PHC 1.

Majority of the respondents felt that their patients appreciated the focused approach to antenatal care especially the aspect of the reduced visits; the respondents thought FANC will give their patients more time to do other things. However, three out of the nine respondents in both urban and rural areas felt that it will take time for the patients to get accustomed to this new model.

“...many of our pregnant mothers are used to the former one, when you give them 2 months or 6 weeks appointment they raise eyebrow and say wow “so I won't come until that time.” But all that we used to tell them is that if you have any complain before then, you are free to come” Chief Matron Urban PHC 4

“...it is not practicable here to be sincere because before I came here they used to come weekly and it is not suppose to be like that, but when I came I was trying to correct it but the clients find it difficult to adjust” Matron Rural PHC 1.

In conclusion, majority of the respondents generally suggested that more midwives and doctors are needed at the PHCs and majority also complained that the space used for antenatal clinics are too small, but only one of the respondents said her PHC lacked transportation facilities. To support these is a quote from one of the respondents – A matron in one of the rural Primary Health Centers

“...there is no full time medical practitioner, no gynecologist in this hospital although we have one doctor who is a youth corps member there is no full time doctor.” Matron Rural PHC 4

“...we have transportation problems in this PHC especially when we need to refer a patient to a secondary health center, we don't have enough space and offices too.” Chief matron Urban PHC

2

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CHAPTER FIVE

5.1 DISCUSSION

This study assessed the practice of focused approach to antenatal care at the PHC level, examining the contents of FANC and comparing the antenatal care in rural and urban areas of Ekiti state Nigeria. Focused antenatal care sometimes referred to as a new model of antenatal care was adopted in Tanzania in year 2002; it was also adopted in Ghana, Malawi and Kenya. In Nigeria, FANC is the adopted antenatal care evident in the training and orientation package of the Federal Ministry of Health and malaria action.

Having established that FANC is the standard type of antenatal care in Nigeria, there is the need to evaluate whether or not the standard is being followed in urban and rural areas. The recommended standard content involves only examinations and tests that serve an immediate purpose and that have been proven to be beneficial; these examinations include measurement of blood pressure, testing of urine for proteinuria, and blood tests to detect syphilis, severe anaemia and HIV (Villar et al,2001). Routine weight and height measurement at each visit is considered optional, suggesting that some of these contents are subject to the country's discretion. The minimum content of FANC in this survey was based on thirteen beneficial examinations and services and only 25% of the pregnant women received the standard contents of FANC. One major reason that could explain the low standard of FANC is the one provided some years ago by MNPI 1999, which is that when policies, have been adopted, they do not automatically translate into quality services at the local level- which in this case is at the primary health care level ; this means that the standard model of antenatal care in the PHCs is presently experiencing a gradual transition to become the high quality and efficient model it is meant to be.

Not surprisingly, the urban residents were more likely to have received the standard contents of FANC than their rural counterparts, this finding is supported by (MNPI,1999 and AbouZahr Wardlaw, 2002) where it was found out that 57% of urban women have access to safe motherhood services compared to 29%. (MNPI,1999) It is recommended that pregnant women

should be counseled on different topics of education; this aspect was examined in this study using eight topics, and 89.6% of the respondents were taught the health education topics. However, more respondents in urban areas 90.8% were taught the topics compared with the rural areas 88.5%. Although the difference appears small, but it emphasizes the fact that urban women enjoy better ANC services than rural women (Dairo and Owoyoku,2010)

Perception of the pregnant women about the care given to them has been found important in the choice of obstetric services sought (Iyaniwura and Yusuff ,2009). Some studies found that consumers' satisfaction with health care services in Africa was one of the most important factors determining the utilisation of services (Uzochuwku et al,2004) . In this study, exploring whether or not the respondents felt they were respected by their health care providers, huge rural-urban difference existed in this; 25% as compared to 4.5% of the respondents in rural and urban areas respectively believed they were not respected, possible reasons for this perception could be as a result of the fact that there might be fewer health workers in the rural PHCs to attend to teaming population of the pregnant mothers, frustration and hostility on the part of the health workers could be interpreted as lack of respect by the respondents,(Adetoro, 2012).

For an antenatal care to be of high quality, Oladapo et al, 2009, suggested that the pregnant women should be attended to within 30minutes of their arrival to the health facility, in this study, more respondents (18.8%) in the urban areas waited for more than 30minutes before being attended to compared to 14.1 rural respondents, however, majority of the respondents were attended to within 30minutes. In all, the respondents showed high satisfaction with the quality of services received in the PHCs generally, judging from the fact that 98.8% of the respondents believed they would return to the facilities. This is supported by the findings of Oladapo et al,2009,

Indicators for monitoring antenatal care program (both utilisation and coverage) include proportions of pregnant women that received antenatal care from a skilled provider at least once and proportion that had four visits (Lincetto et al,2001). However, utilisation of antenatal care in this study was measured by the single adequacy indicators which are duration of pregnancy at entry into antenatal care and number of antenatal visits; these indicators are particularly suitable

for developing countries.(Trinh et al, 2006). Considering the first index, occupation, and level of education were determinants of whether or not the pregnant women made their first antenatal visits at the first trimester. It is beneficial for pregnant women to present for their first antenatal visit in the first trimester because the first goal of focused antenatal care which is early detection and treatment of underlying medical conditions respondents would be easily achieved.

Respondents with tertiary education and primary education alone had their first antenatal visits in the first trimester compared to those with secondary education and no education at all, this finding could point out to the fact that universal primary education will go a long way to improve utilization of antenatal care and it is supported by the findings of a study by Nigerian academy of science where it was reported that utilization of antenatal care got better with increased level of educational attainment (2009). More respondents who were not working and those who were unskilled workers made their first antenatal visit at the first trimester compared to those who were skilled workers; work place policies and the fact that antenatal booking are made on weekdays and at work hours may hinder or be discouraging to the working class mothers. Level of education and occupation are socio-demographic characteristics that influenced early bookings for antenatal care in this study and this was contrary to the findings of Egbeibe and Igberase 2005 where these characteristics were associated.

The second index considered only women in the third trimester because they are expected to have had the minimum number of visits at that gestational period. Teenage mothers and mothers aged above 40 years had less than four visits, these age groups have been found to poorly utilize antenatal care, (Awusi et al,2009). Surprisingly, respondents who received care from traditional homes and faith homes reported four or more recommended visits, this perhaps is as a result of various outreaches targeted at educating the TBAs and community members to embrace modern medical care with regards to maternal and child health, the TBAs now ensure that their clients register and attend antenatal services in the government hospitals.(Ofilli and Okojie, 2005), however, those who received care from private hospitals were the least likely group to have the recommended number of antenatal visits to the PHCs. (Iyaniwura and Yussuf 2009).

Qualitative aspect of this study looked at the facilitating factors and challenges to the practice of FANC in Ekiti state PHCs; one major facilitating factor is the free health service project in government PHCs in the state. Respondents reported that there has been increase in the patronage of antenatal care than when patients were paying. The respondents also acknowledged the support of the government and non-governmental organizations in ensuring that tests kits, drugs and LLINs were always available. All the respondents reported to directly observe the pregnant women as they take the IPTp but this doesn't agree with the findings in the quantitative aspect of this study where about 36% of the respondents mentioned that they were never directly observed; DOT for IPTp is recommended to ensure the pregnant women's compliance to the treatment regimen, when DOT is practiced the efficacy of the IPTp is very high, this is backed up with the findings of Adebayo et al, 2011

The reported challenge militating against the practice of focused antenatal care at the PHC level is the fact that the pregnant women do not desire the change to the new model, this is in agreement with findings of Aniebue and Aniebue 2010 where the respondents expressed fears about poor service with regards to the reduced visits; some of the in-depth interview respondents believed FANC is impracticable this could just be a pointer to the fact that the health care providers did not fully comprehend the advantages, goals and purpose of FANC, as supported by Amosu et al, 2011

Prevention of Mother To Child Transmission of HIV/AIDS has been incorporated with other services handled in the PHCs (Idoko, 2011), none of the PHCs used in this study were enabled to care for pregnant women living with HIV/AIDS. Possible reasons for this as reported by Balogun et al, 2010 is that PMTCT service is still concentrated in the tertiary health centers.

5.2 CONCLUSION

Antenatal care is an important program to ensure safe motherhood and successful pregnancy outcomes. The FANC is a set of goal directed maternal and neonatal interventions, it is evidence based on global lessons; emphasizing quality of care rather than quantity of visits. As much as FANC is the standard in Nigeria, it has not been widely accepted enough by both health care providers and those to whom it is targeted; health providers still doubt the feasibility of FANC. There is the need to train health care providers especially those in the PHCs about the goals of

space for antenatal care and lack of transportation facilities should there be need for referrals. This study found that the gap between quality and utilisation of antenatal in urban and rural areas is gradually being closed up; this is a huge achievement that should be built upon and maintained.

Limitations of The Study

The following are the limitations of the study:

- 1) Cultural barriers which forbade revealing the gestational age during pregnancy caused respondents to be highly reluctant to disclose gestational age, which is part of pregnancy related characteristics in this study.
- 2) Problems of recall bias: some of the women could not accurately remember the number of times they took tetanus vaccines and IPTs.
- 3) Some important details were missing in some of the maternity cards such as, gestational age at first visit, the result of the tests carried out on the women, and Expected Dates of Delivery of the women.

RECOMMENDATIONS

1. Efforts should still be intensified so that place of residence will not necessarily dictate whether high or low quality health care especially antenatal care will be received.
2. Quality health care services should be available to all, regardless of culture, level of education, religion or place of residence.
3. Generalized standard contents of antenatal care should become available in hospitals and public places so that the recipients of this service will not settle for less.
4. PHCs are the first level of health care, closest to the people, they should be brought to standard, improved to bring about better efficiency in the delivery of health care services especially antenatal care. One of the strategies in place for PMTCT of HIV is that the service will be available in the PHCs, this should be put to practice in Ekiti state PHCs.

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AWON IFOJUSUN ITOJU ALABOYUN (FANC) IFOROWANILENUWO AGBELERO IBEERE

Oruko Ile Iwosan-----

Amin Idamo Ile-iwosan-----

Siria Nomba-----

Aloo, mo je akeko gboye digirii keji masta ti Epidemiology ni ile iwe giga unifasiti Ibadan, mo n se iwadi lori itoju ti awon alaboyun n ri gba ati lori eto ilera ti o wa ni ile iwosan ti e wa loni.

N ko ni fi amin idanimore han tabi fi idahun re han si awon osise ile iwosan re, tabi eni yio wu koje. Awon oluse iwadi ati awon to n se akoso iwadi yii nikan ni yio ri ajoso wa lori ise iwadi yii.

Ko si ewu kan kan ti o ro mo kikopa ninu ise iwadi yi, tabi ai kopa ninu re. ko ni se idiwo fun riri iwosan gba ati awon anfaani miran ni ile iwosan re.

Iwadi yii yio gba o ni asiko bi iseju meedogbon peere, kikopa ninu ise iwadi yi je wofun-ni-itelorun, o le pinnu lati maa dahun awon ibeere kookan ninu awon ibeere yii, mo ni ireti pe o kopa ni ekunrere ninu ise iwadi yii nitoripe awon ero okan re se pataki. Ti o ba ni ohun ko hun lati beere ninu ise iwadi yii ki o to pari mafoya lati beere.

Ni fifi owo si iwe yi tumo si wipe gbogbo alaye ti a ka si o leti yii ye o ati pe o fe kopa ninu ise iwadi yii. O se pupo.

Ibuwolu

Deeti

Sosio demografik (Q1- Q6)

	Ibeere	Idahun	Nomba	Jowo so awon omiran I a ko daruko
Q1	Omo odun melo ni o je?	-----		
Q2	Iru esin wo ni o n sin?	Igagbo	1	
		Musulumi	2	
		Abalaye/ Ibile	3	
		Irunmiran	22	
Q3	Nje o ti loko?	Mo ti loko	1	
		N ko ti loko	2	
		Mo ti ko oko	3	
		N ko gbe pelu oko	4	
Q4	Bawo ni o se ka iwe to?	N ko kawe rara	0	
		Alako beere primary	1	
		Oni pele keji sekondari	2	
		Iwe giga	3	
Q5	Iru ise wo ni o n se?	N ko sise	0	
		Onise owo	1	

Q6	Omo melo ni o ni?	Akose mose(ti iwe)	2
		N ko ni omo kan kan	0
		Omo kan si omo merin	1
		O ju omo merin lo	2
Q7	Iru nkan irinse wo ni o gbe o wa ile iwosan? <i>Mu idahun ti o baa mu ju, ma ka gbogbo idahun sita</i>	Mo n rin ese wa	1
		Mo sanwo wo oko tabi okada	2
		Mio san wo wo oko tabi okada	3
		Omiran ti a ko so	22
Q8	Igba wo ni o ro pe o ye lati lo ri eleto ilera fun itoju oyun. <i>Ko idahun si aye ti a pese</i>		
Q9	Igba melo ni o ro pe o ye ki alaboyun lo si odo eleto ilera ninu oyun <i>Mu idahun ti o baa mu ju</i>	Eekan ninu oyun	1
		Eekan tabi eemeji	2
		Eemeta tabi eemerin	3
		Yio ju emerin lo	4
		Imiran ti a ko daruko	22
		N ko mo	77
Q10	Ni ero okan re ki ni idi ti o fi ye ki alaboyun lo ri eleto ilera ninu oyun. <i>Ko idahun si aye ti a pese</i>		
Q11	Igba wo ni o ti loyun <i>Ko idahun sile ko si ye kaadi wo</i>	Osu-----	
		N ko mo	77
Q12	Igba melo ni o ti wa fun itoju oyun yi	Igba-----	

	<i>Ko iye igba sile kio si ye kaadi wo</i>	N ko mo	77
Q13	O ti to iseju melo ti o ti lo lati duro ri eleto itoju oyun loni	Iseju----- N ko mo	77
Q14	Ki a ma ka iseju ti o ti duro lati ri eleto ilera, o to iseju melo ti eleto ilera fi da o lohun	Iseju----- N ko mo	77
Q15	Nje o ro pe igba ti o lo pelu eleto ilera kuru, ogunju, tabi igba ti o ye ni o lo	O ti kuru ju O ti kun ju Igba ti o ye N ko mo	0 1 2 77
Q16	Nje o ni anfaani latiri eleto ilera ni idakonko	Beeni Beeko	0 1
Q17	Lenu igba ti o ti n wa si ile iwosan yii, nje awon osise ibi ba o lo pelu owo	Beeni Beeko	0 1
Q18	Nje o lero pe awon osise bikita nipa ilera re	Beeni Beeko	0 1
Q19	Nje awon osise eleto ilera bi o pe se o ni ibcere	Beeni Beeko	0 1
Q20	Nje o bere ibeere kan kan loni? <i>Ti idahun ba je beeko lo si nomba 22</i>	Beeni Beeko	0 1
Q21	Nje idahun si ibeere re ye o?	Beeni Beeko	0 1
Q22	Nje o o pada wa si ile iwosan yii fun itoju oyun ni ojo iwaju?	Beeni Beeko N ko mo	0 1 2
Lori wiwa si ile iwosan loni			
Q23	Loni, nje awon eleto ilera ye ifunpa re wo?	Beeko Beeni Beeko	1 0 1
Q24	Nje won ye ikun re wo?	Beeni Beeko	0 1
Q25	Nje won ye bi okan omo re se n lukuku wo?	Beeni Beeko	0 1
Q26	Nje won fun o ni ogun adeena arun iba?	Beeni Beeko	0 1
Lori gbogho igba ti o ti n wa ati oni			
Q27	Nje won bi o lori awon nkan to ti sele si o tele lori ilera re?	Beeni Beeko N ko mo tabi mi o ranti	0 1 77
Q28	Nje won gba eje lara re fun ayewo?	Beeni Beeko N ko mo tabi mi o ranti	0 1 77
Q29	Nje won gba ito re?	Beeni	0

		Beeko	1
		N ko mo tabi mi o ranti	77
Q30	Nje won fun o ni eroja ayoonu (oogun eje)?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q31	Nje won fun o ni abeere ajesara ti eran-ipa T.T?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q32	Nje won fun o ni ogun adena iba?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Lori gbogbo akole eko ilera , (Q33-Q47)			
Q33	Nje won fun o ni eko tabi imoran lori ounje asaralore ati eroja asaralore ninu oyun?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q34	Nje won so fun o igba ti o ye ki o bimo?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q35	Nje won so fun o bi omo ti n dagba si?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q36	Nje won so fun o pataki imurasile fun ojo ikunle?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q37	Nje won so fun o awon ohun ti o nilo ni ojo ikunle?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q38	Nje won gba o ni iyanju pe ki o bimo sile iwosan?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q39	Nje won so fun o iye tio o ye ki o mu lowo fun ojo ikunle?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q40	Nje won so fun o Pataki fifi owo pamo fun ojo ikunle?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q41	Nje won so fun ipa ti awon ebi tabi ara ile le ko ninu gbigaradi fun ojo ikunle?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q42	Nje won so fun o awon ami ewu to le sele ninu oyun?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q43	Nje won so fun o awon ami ewu to le sele to ba bimo tan?	Beeni	0
		Beeko	1
		N ko mo tabi mi o ranti	77
Q44	Nje won ba o so ewu aisan iba ninu oyun?	Beeni	0
		Beeko	1
Q45	Nje won ba e soro ideena arun eedi ati ayewo re?	Beeni	0
		Beeko	1

Q46	Nje won ba e soro ideena arun eedi to n ti ara iya bo si ara omo?	N ko mo tabi mi o ranti	77
		Beeni	0
		Beeko	1
Q47	Nje won ba e so awon arun ti a n ko lati ibi ibalopo ?	N ko mo tabi mi o ranti	77
		Beeni	0
		Beeko	1
Q48	Ibo miran wo ni o tun ti n gba itoju ninu oyun yi?	N ko mo tabi mi o ranti	77
		Ko si ibo miran	0
		Ile iwosan ibile	1
		Ile igebi soosi	2
		Ile iwosan adaani	3
		Ile iwosan ti ijoba	4
		Ona miran	22
		<i>Ko idahun miran si aye ti a pese ni owo otun</i>	.
Q49	Ibo ni o hun gbero lati bi mo si?	Ile eto ilera yii	0
		Ile	1
		Ile iwosan ibile	2
		Ile igebi soosi	3
		Ile iwosan adaani	4
		Ile iwosan ti ijoba	5
		Ona miran	6
		N ko mo	77
	Alaye lati inu kaadi iya. <i>Ma se ka ibeere 49-64 si oke, lo wo idahun ninu kaadi iya</i>		
Q50	Nje iye oyun ti tele ati eyi wa ni akosile ninu kaadi?	Beeni	0
		Beeko	1
Q51	Fun oyun ti o ni lowolowo yii, igba wo ni ose ni o koko wa fun itoju oyun? (lo "fundal height" ti won koko ko)	Ose-----	.
		Ko si ni akosile	88
Q52	Igba melo ni won ko iwon ara re sile ninu kaadi? <i>Ko iye igba ti won ko, ma se ko iwon gangan</i>	Iwon-----	
Q53	Igba melo ni won ye ifunpa (BP) wo ti o si wa ni akosile ni nu kaadi?	Koosile-----	
Q54	Igba melo ni giga oyun(fundal) wa ni akosile ninu kaadi ?	Koosile-----	
Q55	Igba melo ni won se ayewo fun proteinuria ti o si wa ni akosile ninu kaadi?	Koosile-----	
Q56	Nje esi ayewo emoglobin(Hb)je kikosile ninu kaadi?	Beeni	0
		Beeko	1

Q57	Nje aropo asaraloore ayoonu/folik asid wa ni kikosile?	Beeni	0
		Beeko	1
Q58	Nje aridaju wa pe won fun ni apo efon ti won ti re logun. ? <i>Beere lowo oludahun</i>	Beeni	0
		Beeko	1
Q59	Igba melo ni won ti fun o ni abeere ajesara eran-ipa wa ni kikosile ninu kaadi.? <i>Ti oludahun yi ba gba ni eekan ti o si pa pe ni odun meta seyin marki 1</i> <i>Ti o ba je eekan ni o wa ni kikosile, ti o si si aridaju pe o ti gba tele bi odun meta seyin marki 2</i>	Ko gba rara	0
		Eekan, ogba pe	1
		Eekan ogba saa	2
		Emeeji	3
		Miran ti a ko so	22
Q60	Nje esi ayewo sifilisi je kikosile ninu kaadi?	Beeni	0
		Beeko	1
Q61	Nje esi ayewo HIV je kiko sile ninu kaadi?	Beeni	0
		Beeko	1
Q62	Iru adeena aisan iba wo ni won pese?	Ko si rara	0
		Kemo profilasis(klorokuini)	1
		Wiwosan ati gbadegba (sp)(meta meta)	2
		Imiran ti a ko so	22
Q63	Se oju awon eleto ilera ni oludahun ti maa n lo oogun adeena iba?	Beeni	0
		Beeko	1
Q64	Igba melo ni won ko pe oludahun lo oogun adeena iba?	rara	0
		Igba melo-----	

FOCUSED ANTENATAL CARE (FANC) EXIT ADAPTED QUESTIONNAIRE

Health facility identification

Serial Number

Hello, I am a student of epidemiology in the University of Ibadan, am carrying out a research on the antenatal care you have received in your visit today.

I will not reveal your identification number, or your responses the health care providers in this facility or even to anybody, only those in charge of this research may see our conversation.

There is no harm associated with participating or not participating in this study, and it will not reduce the quality of care you receive in this health facility.

This study will take around sixteen minutes, participating in this study is voluntary, you may decide not to answer any of the questions, I hope that you will participate fully in this study because your opinions are important. If you have any question during the course of the interview, feel free to ask.

By consenting, you indicate you understand the information I just read about the study and that you are willing to participate. Thanks

Signature.....

Date.....

Socio Demographic Information (Q1-Q6)

	Questions	Answer	Number	Please specify
Q1	How old are you?		
Q2	What is your religion?	christainity	1	
		islam	2	
		traditonal	3	
		others		
Q3	Are you married?	I am married	1	
		I am not married	2	
		I am divorced	3	
		I am separated	4	
Q4	What is the highest level of education you attained?	None	0	
		Primary	1	
		Secondary	2	
		Tertiary	3	
Q5	What is your type of occupation?	not working	0	
		unskilled	1	
		skilled	2	
Q6	How many children do you have?	None	0	
		between 1-4	1	
		Above 4	2	

Q7	What form of transport did you use to get to the clinic today? <i>Tick the best response. Do not read out list.</i>	I trekked	1	
		Commercial means	2	
		Private means	3	
		Others specify	22	
Q8	When do you think is the best time to register for antenatal care? <i>Write the answer in the space provided</i>			
Q9	How many antenatal visits do you consider appropriate during pregnancy? <i>Mark the most appropriate</i>	Once during pregnancy	1	
		Once or twice	2	
		Three or four	3	
		More than four	4	
		Others	22	
		I don't know	77	
Q10	In your own opinions, what are the main purposes of going for antenatal care? <i>Write the answer in the space provided</i>			
Q11	How long have you been pregnant? <i>Enter response in months, and consult the ANC card</i>	Months-----		
		I don't know	77	
Q12	How many times have you come for ANC for this pregnancy? <i>Enter number of times and consult the ANC card</i>	Times-----		
		I don't know	77	
Q13	How much time did you spend waiting to meet with the health provider today	Minutes-----		
		I don't know	77	
Q14	Not counting waiting time, how long (in minutes) was your consultation with the health provider today?	Minutes-----		
		I don't know	77	
Q15	Did you think your consultation with the health provider was too			

	short too long, or the right length of time?	Too short	0	
		Too long	1	
		Right length of time	2	
		I don't know	22	
Q 16	Did you have a chance to meet the health care provider in private?	Yes	0	
		No	1	
Q 17	During your visit(s) to this facility, did the staff treat you with respect?	Yes	0	
		No	1	
Q 18	Did you feel that the staff cared about you and your well-being?	Yes	1	
		No	0	
Q 19	Did the staff ask you if you had any questions or concerns?	Yes	0	
		No	1	
Q 20	Did you ask any questions today? <i>If answer is No, go to 22</i>	Yes	0	
		No	1	
Q 21	Did you understand the answers to your questions?	Yes	0	
		No	1	
Q 22	Would you return to this facility for maternal health services?	Yes	0	
		No	1	
		I don't know	22	
About your visit today				
Q 23	Today, did the staff check your blood pressure	Yes	0	
		No	1	
Q 24	Did they perform an abdominal examination?	Yes	0	
		No	1	
Q 25	Did they check the baby's heartbeat?	Yes	0	
		No	1	
Q 26	Did they provide drugs to prevent malaria?	Yes	0	
		No	1	
About all your visit including today				
Q 27	Did they ask about your medical history?	Yes	0	
		No	1	
		I don't know or I	77	

		don't remember		
Q 28	Did they take your blood samples for investigation?	Yes	0	
		No	1	
		I don't know	77	
Q 29	Did they take urine samples?	Yes	0	
		No	1	
		I don't know or I can't remember	77	
Q30	Were you given iron supplements?	Yes	0	
		No	1	
		I don't know or I can't remember	77	
Q 31	Did they give you a TT (tetanus) immunisation?	Yes	0	
		No	1	
		Don't know or remember	77	
Q 32	Did they give you drugs to prevent malaria?	Yes	0	
		No	1	
		Don't know or can't remember	77	
About the health education topics(Q33-Q47)				
Q 33	Did they give you information or advice about diet and nutrition during pregnancy?	Yes	0	
		No	1	
		Don't know or can't remember	77	
Q 34	Did they tell you the expected date of delivery?	Yes	0	
		No	1	
		Don't know or can't remember	77	
Q 35	Did they give you an update on how the baby is growing?	Yes	0	
		No	1	
		Don't know or can't remember	77	
Q36	Did they discuss the importance of planning or preparing for delivery?	Yes	0	
		No	1	

		Don't know or can't remember	77	
Q 37	Did they discuss the items or supplies that will be needed during delivery?	Yes	0	
		No	1	
		Don't know or can't remember	77	
Q 39	Did they inform you of the costs you should anticipate for delivery?	Yes	0	
		No	1	
		Don't know or can't remember	77	
40	Did they discuss with you the importance of saving funds in advance for delivery?	Yes	0	
		No	1	
		Don't know or can't remember	77	
Q41	Did they discuss how other family members can assist in planning or preparing for delivery?	Yes	0	
		No	1	
		Don't know or can't remember	77	
Q 42	Did they Inform you of danger signs during pregnancy?	Yes	0	
		No	1	
		Don't know or can't remember	77	
Q 43	Did they Inform you of danger signs after delivery?	Yes	0	
		No	1	
		Don't know or can't remember	77	
Q 44	Were you told the dangers of malaria during pregnancy?	Yes	0	
		No	1	
		Don't know or can't remember	77	
Q45	Did they Talk about preventing and testing for HIV/AIDS	Yes	0	
		No	1	
Q 46	Did they talk about prevention of mother-to-child transmission of HIV	Don't know or can't remember	77	
		Don't know or can't remember	77	
Q 47	Did they tell you about other sexually transmitted infections?	Yes	0	

		No	1	
		Don't know or can't remember	77	
Q 48	Where else do you receive antenatal care in this pregnancy?	None	0	
		Traditional care givers	1	
		Mission houses	2	
		Private hospital	3	
		State hospital	4	
		Others <i>Please specify</i>	22	
Q 49	Where do you plan to give birth?	this facility	0	
		home	1	
		with traditional care givers	2	
		Mission houses	3	
		Private hospital	4	
		State hospital	5	
		others	22	
		I don't know	77	

Information from the mothers' card. Do not read questions Q50-Q63 aloud. Refer to the Mother's Card to answer the questions.

Q 50	Has the number of pregnancies including current pregnancy been recorded on the card?	Yes	0	
		No	1	
Q 51	For the current pregnancy, what is the gestational age in weeks at first ANC visit as recorded on the card? <i>use the first fundal height recorded</i>	Weeks-----		
		Not recorded	88	
Q 52	How many times is WEIGHT recorded on the card? <i>Enter number of times weight was recorded</i>	Measurements-----		
Q 53	How many times was BLOOD PRESSURE (BP) measured and recorded on the card?	Recordings: _____		

Q 54	How many times is FUNDAL HEIGHT recorded on the card?	Recordings: _____		
Q 55	How many times was the PROTEINURIA measured and recorded on the card?	Recordings: _____		
Q 56	Are the results of a haemoglobin (HB) test recorded on the card?	Yes	0	
		No	1	
Q 57	Was supplementation with iron/folic acid recorded on the card?	Yes	0	
		No	1	
Q 58	Was she given Long lasting insecticide net? <i>confirm from the respondent</i>	Yes	0	
		No	1	
Q 59	How many tetanus toxoid immunisations were recorded on the card? <i>If client had only one dose, but had been pregnant and fully immunised against tetanus within previous three years, tick One dose, fully immunised. If only one dose was recorded and there is no record of previous immunisation within previous three years, tick One dose, partially immunised</i>	None	0	
		One dose, partially immunized	1	
		One dose, fully immunized	2	
		Two doses	3	
		Other (specify):	22	
Q 60	Are the results of a syphilis test recorded on the card?	Yes	0	
		No	1	
Q 61	Are the results of HIV test recorded on the card?	Yes	0	
		No	1	
Q 62	What type of malaria prophylaxis was provided?	0 None	0	
		Chemoprophylaxis (Chloroquine)	1	
		Intermittent presumptive treatment (IPT)	2	
		Other (specify):	22	
Q 63	Was the respondent directly			

	observed when taking the IPT?	Yes	0	
		No	1	
Q 64	How many doses are recorded on the card?	None	0	
		Times-----		

Questions End, Thanks a lot

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MINISTRY OF HEALTH

Phase III, State Secretariat Complex, Ado - Ekiti, Ekiti State, Nigeria.

All Communications should be addressed
To the Permanent Secretary quoting

Our Ref: ...AD\MOH\PRS\HMIS\56.....

The Principal Investigator,

November 8, 2011

Department Of Epidemiology

Medical Statistics & Environmental Health

University of Ibadan.

ATTENTION: OSAKINLE, DAMILOLA CHRISTINAH

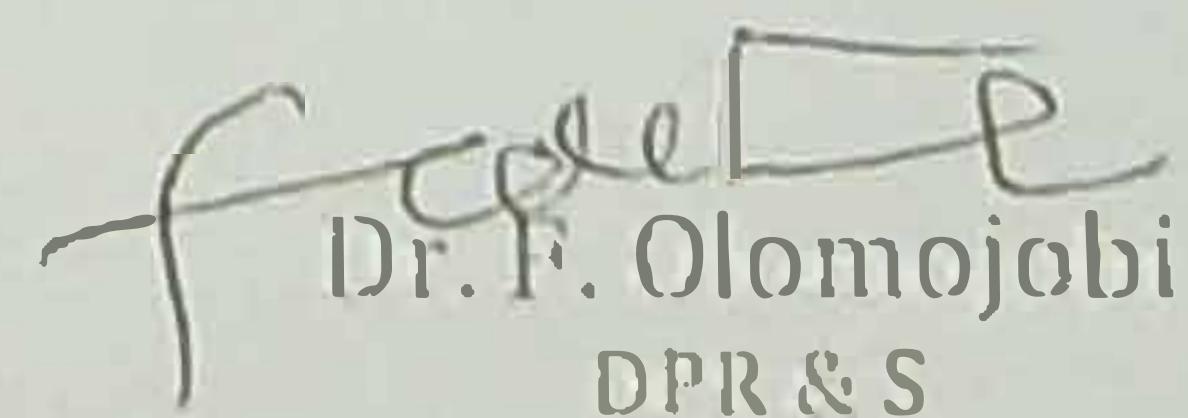
Re: Ekiti State Ministry of Health (Ethical Review Board)

In response to your letter requesting for ethical approval for the Implementation of your research Proposal titled: "***Comparative Assessment of the practice of Focused Approach to Antenatal Care in rural and urban Primary Health Centre's in Ekiti State.***"

I wish to inform you that the committee has reviewed the proposal and has granted the proposal Approval.

Thanks

Yours sincerely,


Dr. F. Olomojabi
DPR & S



MINISTRY OF HEALTH

ADO EKITI

EKITI STATE OF NIGERIA

THE Medical Officer of Health/OIC

Primary Health Care Facilities

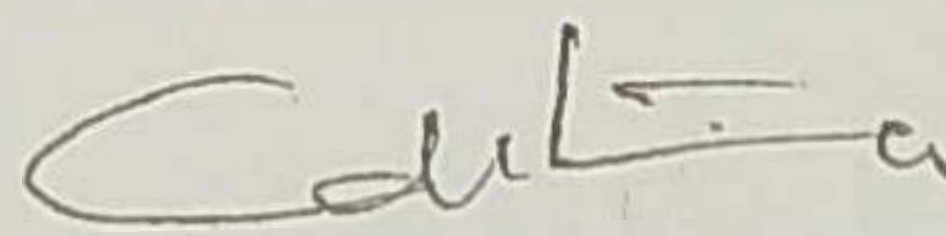
Ekiti State

LETTER OF INTRODUCTION

The bearer Miss Osakinle Damilola of Department of Epidemiology, Medical Statistics and Environmental Health, University of Ibadan, would be visiting your facilities to carry out a research on "Comparative Assessment of the practice on focus Approach to Ante -Natal care in rural and urban primary health centres in Ekiti State"

2. This research work is done as a prerequisite to the award of her master degree
3. kindly, give her all the necessary assistance.

Thanks


Mr Adetunji A.

for Permanent Secretary