

Predictors of antenatal care services utilization by pregnant women in a selected Akwa Ibom state community, Nigeria

American Journal of Social Sciences and Humanities

Vol. 8, No. 2, 173-186, 2023

e-ISSN: 2520-5382



Corresponding Author

Ben, Victor Effiong¹

Obama, Lawrence Adhowhoarie²

^{1,2}Department of Sociology and Anthropology University of Uyo, Uyo, Nigeria.

¹Email: vikeben+reality2007@yahoo.com

²Email: it+lawsoho@gmail.com

ABSTRACT

In Nigeria, the burden and incidence rate of maternal mortality significantly affects the achievement of the Sustainable Development Goal 3. The study was designed to investigate the factors and trends of Antenatal Care Services Utilization by Pregnant Women in Anua Community Akwa Ibom State, Nigeria. The assumptions of Andersen Behavioural Model of Health Services and Antonovsky Theory of Social Class were adopted to explain the use of antenatal care services. A combined survey was conducted to obtain primary data from 264 women between the ages of 15 and 49 selected as respondents through snowball and respondents driven sampling techniques; antenatal registers and documents at the Antenatal Care Unit of health facility were reviewed to obtain secondary data. Findings from the study showed an extended predictors of antenatal care services utilization rooted in the socio-cultural, economic, demographic and environmental configurations of the study area. Based on the findings, strengthening of health facility, the implementation of health interventions and enforcement of policies such as free enrolment of all pregnancies and compulsory Antenatal Care Services Utilization in the study area were recommended. The recommendations have implications to reduce the incidence rate of maternal mortality and improve child health outcomes in the study area.

Keywords: Akwa Ibom, Antenatal care, Maternal mortality, Predictors, Pregnant women, Utilization.

DOI: 10.55284/ajssh.v8i2.913

Citation | Effiong, B. V., & Adhowhoarie, O. L. (2023). Predictors of antenatal care services utilization by pregnant women in a selected Akwa Ibom state community, Nigeria. *American Journal of Social Sciences and Humanities*, 8(2), 173-186.

Copyright: © 2023 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Funding: This study received no specific financial support.

Competing Interests: The authors declare that they have no competing interests.

History: Received: 6 March 2023/ Revised: 27 April 2023/ Accepted: 4 May 2023/ Published: 11 May 2023

Publisher: Online Science Publishing

Highlights of this paper

- Understanding the factors that affect the use of antenatal care services in Nigeria is important.
- This study aimed to investigate the factors that influence utilization of antenatal care services among pregnant in Anua community of Akwa Ibom State, Nigeria.
- The study identified several factors that affect the utilization of antenatal care services in the area and based on the findings action-oriented recommendations were made to improve maternal and child outcomes.

1. INTRODUCTION

A number of studies have reported the impact of several factors on the desire for and barrier of using modern health services in different countries of the world. Evidence documented in the works of [Etukudo and Ben \(2014\)](#); [NDHS \(2018\)](#); [Okafor \(2007\)](#) and [Mekonnen and Mekonnen \(2003\)](#) have confirmed previous submissions by [Abasiokong \(1997\)](#); [Olajuyin \(1997\)](#); [Gesler \(1979\)](#); [Foster \(1977\)](#) and [Baldwin and Ford \(1976\)](#) and many other researchers, that a correlation of socio-economic, demographic, cultural and Hospital environment-related factors play crucial roles in such decisions. Some of these factors includes: mother's education, marital status, place of residence, parity, and religion, lack of trained Doctors, Nurses and Midwives; ignorance of available antenatal care services; waste of time; cost of services; distance to a health facility; frequent absent of health personnel from a health facility; quality of care or services; decision of spouse and those of family members among others.

To [Aniebue and Aniebue \(2011\)](#) the attitude of pregnant women to a new antenatal care model is a constraint to the use of modern health care services, whereas for [Nwosu, Urama, and Uruakpa \(2012\)](#) women education level, household wealth or status and the place of antenatal care are the most influential factors. As argued by [Katung \(2001\)](#) easy access to traditional healers is among the factors that caused non-attendance at the health facility. While it is obvious that these factors exert the aforesaid influence, the changes in the code of conduct and operational ethics of the medical profession, the geographical spread of health institutions, standards of health infrastructures and services especially among private health practitioners, and the proficiency of health personnel in contemporary times have raised chilling questions about previous inferences and created knowledge gap that needs sufficient new studies.

In the past two decades, data related to the conditions of women in pregnancy and delivery, and those of new born in parts of the world have been nervous. For instance, statistics on the State of the World's Children ([UNICEF, 1987](#)) indicate that approximately 12.9 million children die every year in the developing world. Similarly, the global estimate of the number of women that died each year from causes related to pregnancy and childbirth in the period before the millennium declaration in the year 2000 was 500,000 ([Abasiokong, 1997](#)). According to the [Economic Commission for Africa \(2007\)](#) during the period 1995-2000, Africa had an estimated infant mortality rate of 91 per 1000 compared to 10 per 1000 in Europe. The scenario regarding new-born deaths in Nigeria was pathetic as 87 of 1000 infants born in the country died before their first birth day while 115 of 1000 children died before reaching the age of five ([NDHS, 1990](#)). Furthermore, the [NDHS \(1999\)](#) indicated an infant mortality rate of 75 per 1000 live births and under-5 mortality rate of 140 per 1000 live births for 1995-1999 periods. Data also show that the estimated rate of maternal mortality in Africa in the same period before the implementation of Millennium Development Goals (MDGs) was 640 per 100,000 live births compared to 30 per 100,000 live births recorded in the developed countries. Estimates for Nigeria varied between 815 and 1,500 per 100,000 births as reported by [Lorretta et al. \(2018\)](#). In other African countries such as Niger, the incidence of maternal mortality was 280 and 700 per 100,000 live births, respectively. In short, in this period, the [WHO \(2005\)](#) posits that one out of every 22 women in Africa died from pregnancy-related complications. Statistics show that during the period 2000 to 2015, the target period for the achievement of the millennium goals, global mortality

rates for both children and women in the child bearing age took a depreciative trend on account of changes in attitude to access and use of antenatal care services, even though the case was different in many developing countries. Apparently, global under-five mortality rate dropped from 93 deaths per 1,000 live births in 1990 to 41 in 2016 whereas maternal mortality rate dropped from 380 per 100 000 live births in 1990 to 210 per 100 000 live births in 2013.

In the attempt to cushion the challenges of these ugly situations, global emphasis has focused on antenatal care services and access to the services using varied methods, including mHealth (mH) and World Health Organization Antenatal care Model (WHO ANC model), also known as focused antenatal care (FANC) or basic antenatal care (BANC) that was developed in the 1990s. Antenatal care as enunciated in several academic literature is core to safe pregnancy and delivery, and the survival of the mother and new born. According to the 2008 Nigeria Demographic Survey, the objective of antenatal care is to improve health outcomes through the provision of essential health services to pregnant women. These essential services include pregnancy related health education, disease monitoring, prevention and treatment. The World Health Organization (WHO), defines antenatal care as the healthcare services which involves education, screening, counselling, treatment of minor ailment, and immunization a pregnant woman receives before birth (WHO, 2005). Watterson, Walsh, and Madeka (2015) argue that the combination of antenatal care (ANC), postnatal care (PNC) and childhood immunization constitutes an important package of preventive health interventions that can improve maternal and child health. Akowuah, Agyei-Baffour, and Awunyo-Vitor (2018) also argue that the healthcare a mother receives during pregnancy, at the time of delivery, and shortly after delivery is critical for the survival and well-being of both the mother and her child.

Access to antenatal care (ANC) and postnatal care (PNC) services is known to have significant influence on major causes of infant death and significantly shapes mortality trends in a population. It also contributes to the reduction of mortality by encouraging women to give birth with the help of a skilled birth attendant or in a health facility Regassa (2011). Globally, an increase in antenatal coverage is indicated by UNICEF (2019) showing that 86 percent of pregnant women access skilled antenatal care at least once and only two in three or about 65 percent, receive at least four antenatal visits. Evidently, an estimated 43 percent (6 out of 10) women globally had used the services as at the close of the Millennium Development Goals in 2015 compared to only 4 out of 10 (less than half of all) women that accepted and as well used such services in the period before the adoption of the MDGs. Variation in the data show that in the developed countries, antenatal coverage was already higher prior to the MDG period and highest when the pursued of the Goals ended even when they were not the target countries. Among countries in Africa, Asia and Latin America that were basically the target, UNICEF (2019) reported an estimated 61 percent or less antenatal coverage rate before and 83 percent after the implementation of the MDG.

The foregoing advances in saving the lives of women and children through antenatal care services notwithstanding, death resulting from pregnancy-related complications is still daunting in many parts of Nigeria. Recently, NDHS (2018) report that Nigeria's maternal mortality ratio which is 545 per 100,000 live births is one of the highest in the world. The 2016 World Health Organization's revised estimates indicate a figure that is twice as high as that reported in NDHS (2013). In Akwa Ibom State, the trends in antenatal care use from skilled personnel and non-used are parallel and upward. Based on NDHS (2009) 66.8 percent women obtained antenatal care services from a skilled personnel while 12.6 percent women did not use the service. Similarly, in NDHS (2013) and NDHS (2018) reports published respectively, 73.3 percent and 74.5 percent women used the services provided by a skilled personnel; and 22.5 percent and 19.0 percent women respectively, did not use any service. Also, data from the three surveys indicate the percentage of women who obtained antenatal care services from a traditional birth attendance in the ratio of 19.7:1.8:5.7. Although, the surveys further indicate improvement in maternal and new-borns survival

rates, the burden is still heavy as the target set in the Sustainable Development Goal is yet unmet. This study investigated the extant factors that both contribute to non-use of antenatal care services by some women and the continued maternal and new born mortality and morbidity in Akwa Ibom State, Nigeria.

2. LITERATURE REVIEW

Studies related to antenatal care have flooded academic literature thus, portraying maternal and new born mortality and morbidity as phenomena that have been over looked and difficult to be checked in some parts of the world. Similarly, the importance of antenatal care to maternal health has been widely discussed and novel suggestions made. In all the studies, the crux is that the unfortunate deaths of mother and new born could be averted with effective and quality antenatal care services (Tekelab, Chojenta, Smith, & Loxton, 2019b; Tunçalp et al., 2017; WHO, 2016). Providing high quality of care, whether preventive or curative, improves the overall health and wellbeing of a population (Assaf, Wang, & Mallick, 2015). Again, if female adolescent and women in the reproductive age of 15-49 years avail themselves of antenatal care services from a skilled personnel with at least four, and optimally eight visits during the pregnancy (Tunçalp et al., 2017; UNICEF, 2016) as stipulated by the World Health Organization.

Antenatal care (ANC) according to Nasloon Ali et al. (2020) refers to the healthcare services given to pregnant women by healthcare professionals. It includes risk assessment, identification, screening, prevention and management of pregnancy-related or concurrent diseases, as well as health education and promotion (Tunçalp et al., 2017). Antenatal care provides monitoring and routine follow-up of maternal and fetal health during pregnancy (Nasloon Ali et al., 2020). A catalogue of factors such as maternal age (Rahman et al., 2017), educational level (Nasoon Ali et al., 2018), planned pregnancies (Tekelab, Chojenta, Smith, & Loxton, 2019a), timing of first ANC visit (Mchenga, Burger, & Von, 2019), socio-economic, demographic cultural and Hospital environment-related factors play crucial roles in such decision (Dahiru & Oche, 2015; Etukudo & Ben, 2014; NDHS, 2018), new antenatal care model (Aniebue & Aniebue, 2011), have been reported in several literature to predict antenatal care visits and use of the services. The exposure to mass media, family income, and accessibility of the obstetric service also determined increased utilization of antenatal care (Tekelab et al., 2019a; S. Yaya et al., 2017; Sanni Yaya et al., 2018).

Pregnancy in human is a minute issue and delivery like death, occurs every second as the worldometer ticks. Statistics indicate that globally, 140 million women become pregnant and give birth every year (Roser & Ritchie, 2013). Studies have shown that despite global reduction in rates, maternal and new born mortality and morbidity are major development and health challenges for the developing countries. According to an earlier submission by WHO (2005), about 99 percent of global maternal mortality occurred each year in developing countries. WHO (2014) reports that an estimated 800 women die from pregnancy related complications globally each day the majority of these deaths occur in developing countries with Sub-Saharan Africa alone accounting for approximately 62 percent or two thirds of the deaths. Compared to Ethiopia, where 19,000 maternal deaths occur every year (Tsegay et al., 2013), Nigeria has a high maternal mortality rate of over 500 per 100,000 live births, accounting for 13 percent of maternal deaths worldwide (WHO, 2014). Over 50 percent of maternal deaths occur each year due to the high number pregnancy-related complications among pregnant women (Ekholuenetale, Nzopotam, Barrow, & Onikan, 2020).

The issue of antenatal care that is core to women and new born health and survival has been examined widely in academic literature (Arthur, 2012; Ekholuenetale et al., 2020). Equally, scientifically investigated and captured in literature are the factors that promote and or impinge antenatal care use in different societies (McTavish, Moore,

Harper, & Lynch, 2010). Although the contradiction between the possible influence of these factors and the current realities in the health sector and institutions has created gap in academic knowledge, one salient instigator of the overlapping researches on maternal and new born health including the current one, is the frightening reports by Annan (2010) and UNFPA (2013) that women in the Sub-Saharan Africa have a 1:16 chance of dying in pregnancy and childbirth, compared to 1: 2800 chances for women in the developed world. Similarly, WHO (2016) shows that the utilization of antenatal care in Nigeria is still very low especially in the rural areas and the northern part of the country; and that the period of pregnancy up to delivery for a woman, the spouse and closed relatives that is celebrated in parts of the developed world, is, for most women in Nigeria characterized by anxiety and fear of safe delivery, and survival of the baby and mother (Abasiokong, 1997), makes the present study critical.

2.1. Theoretical Underpinning

There are several theories with ample assumptions to explicate antenatal care services utilization in diverse contexts. The Andersen Behavioural Model of Health Services and Antonovsky Theory of Social Class garnered prominence in this study. The Andersen Behavioural Model of Health Services examines the factors that both regulate the provision and use of health services in various contexts. It asserts that three dynamics, namely, predisposing factors, enabling factors, and need are responsible for health services utilization. The predisposing factors include race, age, and health beliefs; enabling factors include family support, having access to health insurance, and one's community among others; need refers to both the perceived and actual need for healthcare services. Andersen and Newman (1973) describe utilization of health services is a type of individual behaviour that depends on and is elicited by the provision of the services. Therefore, juxtaposing the three dynamics, explains the demographic, social, economic, cultural and environmental factors that many researchers argued impinged antenatal care services utilization.

As examined widely in literature, the socio-economic, demographic, religious and cultural, and environmental factors are critical determinants of human attitude not only one that is health-related. Studies in Sociology, Demography and the likes have underscored the indispensability of these factors on contraceptive use, marital decision, pregnancy and abortion, sex preference and desired family size. Mosley and Chen (1984) on their proximate determinants framework of child survival have emphasized the important roles of the variables on infant and child mortality, the same way Ahonsi (1992) did on child health and Kapungwe (2003) on child survival. Antonovsky (1967) in his Theory of Social Class has estimated the incidences of death of the new born and mothers on the basis of these variables. Implicit in these ideas as well as the assumption of the Andersen Behavioural Model of Health Services are the outline emphasis on the safety precaution and necessities for the survival of mothers and new-borns.

3. METHODOLOGY OF THE STUDY

The survey research design and case study methods were combined to obtain primary and secondary data. Two sampling techniques, namely, snowball and respondents driven were used to select 264 women or the study respondents. Primary data were collected with questionnaire and interview of the 264 women in Anua Community while desk review method was used to extract relevant secondary data from documents at the Antenatal Care Unit at St. Luke's Hospital, Anua - Uyo. Anua is a sub-urban community that lies between latitude 5.025 and longitude 7.960 (5°1'28" N and 7°57'37" E) along Nwaniba Road, Uyo, Akwa Ibom State. It is one of the highly populated and fast growing communities inhabited mostly by people of low and medium economic statuses. Anua community houses the popular Saint Luke's Hospital and other private clinics. The primary data were based on birth histories

of the respondents and, personal and other known reasons for non-use of antenatal care services. For the secondary data, emphasis was on booked cases/visits, un-booked cases/visits, emergency cases and number of trimester in the period from conception to delivery. Internet-based sources of literature such as Google Scholar, Pub Med, Research Gate, Springer Link, and DOI, and books and journal articles were widely consulted from where the list of factors that affect the use of antenatal care services was compiled and presented to the respondents to tick the ones applicable and not applicable to them. The respondents were also requested to mention the factors ever known but not contained in the list presented to them. This process aided the identification and distinction between the predictors mentioned and the one not mentioned in existing literature. In order to avoid duplication of data or information obtained in the study, only the women who admitted non-use of antenatal care services (both never use and non-use for a long time), were given the questionnaire or interviewed since the identities of the women whose data were captured in the Hospital records were not known. Data collected in the study were tabulated and presented in frequency tables thus:

Table 1. Percentage distribution of the respondents by use and non-use of antenatal care services.

Description		No. of respondents	%
UANC	Booked cases/Visits	19	4.9
	Un booked cases/Visits	42	10.9
	Emergency cases/Visits	59	15.4
Non-UANC		264	68.8
Total		384	100

3.1. Presentation of Data

Data in Table 1 show the distribution of the respondents in the categories of those that use and those failed to use antenatal care services. Based on the data, majority of the respondents, 264 (68.8%) reported non-use of antenatal care services while 120 (31.2%) of the respondents have been using as indicated on records. Among the 120 respondents, 19 (4.9%) booked their visits or cases to the health care facility; 42 (10.9%) of the respondents do not book their visits or cases whereas 59 (15.4%) others only visit the health care facility on emergency.

Data in Table 2 show the background characteristics of the respondents. It shows majority respondents in the age group of 20-34 years; comprising 79 (29.9%) aged, 25-29 years, 52 (19.7%) in the group of 30-34 years and 43 (16.3%) in the 20-24 years age bracket. Another 26 (9.8%) respondents shown in the table said they were in the 45-49 years age group, 24 (9.1%) said they were between 35-39 years while 21 (8.0%) and 19 (7.2%) others maintained that they were in the 15-19 and 40-44 years age group, respectively. As indicated in the table, the respondents were in four status categories, namely, married 225 (85.2%), single 26 (9.8%), widow 9 (3.0%) and co-habited 4 (2.0%) respondents.

A large number of the respondents, 98 (37.1%) reported a university degree as their highest educational qualification while 13 (5.0%) others said they have acquired Post Graduate Diploma Certificate. The table shows that 107 (40.5%) respondents have Senior School Certificate or West African Examination Certificate as their highest educational qualification. Based on data presented in the table, 41 (15.5%) respondents said they have a National Diploma whereas 5 (1.9%) other respondents reported a National Certificate of Education as their highest qualification. The data indicate that majority of the respondents were either self-employed, 139 (52.7%) or in paid employment, 111 (42.0%). Only 14 (5.3%) respondents said they were unemployed. This number in addition to 48 other respondents constituted the 78 (29.5%) respondents that reported a monthly of ₦30,000 or less. Comparatively, 89 (33.7%) respondents reported that they earned between ₦51,000 and ₦70,000 every month while 43 (16.3%) others said they earned normally ₦31,000 and ₦50,000 in a month. A little higher income of ₦110,000

or more was reported by only 9 (3.4%) respondents while 24 (9.1%) respondents and another 21 (8.0%) reported a monthly income in the range of ₦71,000-₦90,000 and ₦91,000 and ₦110,000, respectively. The data indicate that all the respondents have borne at least a child and also well experienced in child rearing. Among them, 116 (44.0%) have ever had 3-4 live births; 51 (19.3%) have ever had a child or two children while 97 (36.7%) others reported ever giving birth to between 5 and 6 children.

Table 2. Background characteristics of the respondents not using antenatal care services.

Description	No. of respondents	%
Age		
15-19	21	8.0
20-24	43	16.3
25-29	79	29.9
30-34	52	19.7
35-39	24	9.1
40-44	19	7.2
45-49	26	9.8
Marital status		
Single	26	9.8
Co-habited	4	2.0
Married	225	85.2
Divorced	Nil	-
Separated	Nil	-
Widow	9	3.0
Highest educational qualification		
FSLC	Nil	-
SSCE/WAEC	107	40.5
ND	41	15.5
NCE	5	1.9
Degree	98	37.1
PGD	13	5.0
Employment status		
Unemployed	14	5.3
Self employed	139	52.7
Paid employment	111	42.0
Income/month		
< ₦31,000	78	29.5
₦31,000 - ₦50,000	43	16.3
₦51,000 - ₦70,000	89	33.7
₦71,000 - ₦90,000	24	9.1
₦91,000 - ₦110,000	21	8.0
> ₦110,000	9	3.4
No. of children ever born		
1-2	51	19.3
3-4	116	44.0
5-6	97	36.7
Total	264	100

Table 3. Percentage distribution of the respondents by cases/visits for antenatal care services.

Description	Booked visits	%	Un-booked visits	%	Emergency visits	%
1 st Trimester	19	100	11	23.4	11	18.6
2 nd Trimester	19	100	7	14.9	9	15.3
3 rd Trimester	19	100	24	61.7	39	66.1
Total	19	100	42	100	59	100

The data in Table 3 shows that all the respondents made a maximum of three visits for antenatal care services from conception till delivery. For those who booked with the Doctor and or Nurse, none failed to keep such appointment at agreed date and time. The data varied for those who did not book their visits in any of the

trimesters. Among the 42 respondents, 11 (23.4%) visited the health care centres for the services during the 1st trimester; seven (14.9%) did same during the 2nd trimester while 24 (61.7%) visited the health care facilities in the 3rd trimester. The data in the table further show that among the 59 respondents who visited the health centre only when there was an emergency, 11 (18.6%) occurred during the 1st trimester whereas nine (15.3%) and 39 (66.1%) took place during the 2nd and 3rd trimesters, respectively.

Based on records, some reasons for antenatal care visit include routine checking, immunization and scanning, etc. For the un-booked cases, findings reveals that none of the respondents went for scanning but immunization, fever and other unhealthy feeling on their body. Some others made un-booked antenatal care visits to confirm the month of pregnancy, size/weight of the child, location and date of delivery. Emergency visits were found to be due to noticeable bumps in the breast, bleeding, severe waist pains, weakness and swollen legs, dizziness, asthmatic attack and difficulty in breathing. As indicated by data in the table, this was higher at the 3rd trimester period when it was nearer to child delivery. The record did not indicate any number of the pregnant women who willingly visited the health care centre without having one issue or the other as complaint to be sorted out by the Doctor or Nurse.

Table 4. Percentage distribution of the respondents by known reasons for non-use antenatal care services.

Description	No. of respondents	%	Mean	Std. dev.
Cost	168	63.6	2.7	10.2
Time waste	41	15.5		2.4
Pastoral advice	85	32.2		5.1
Specialist TBA	37	14.0		2.1
Parity level	62	23.5		3.6
Maternal age/Experience	62	23.5		3.6
Paternal age	59	22.3		3.5
Illegitimate pregnancy	11	4.2		0.5
Pregnancy for commercial purpose	4	1.5		0.1
Infection	61	23.1		3.6
Fear of caesarean section	29	11.0		1.6
Total	264	100		

Table 4 shows the predictors of antenatal care services utilization identified by the respondents. At the height is cost of the services mentioned by 168 (63.6%) of the respondents. The time required for one to wait and see the Doctor or Nurse in order to obtain the services was reported by 41 (15.5%) of the respondents. This number varied with a standard deviation of 2.4 from 10.2 associated with the cost factor. Pastoral advice or church prophesy in the study population, is an important determinant of human attitude and decisions on many things including health. As indicated in the table, 85 (32.2%) of the respondents reported that pregnant women particularly those belonging to the Pentecostal Churches, first go for prayers, vision and a prophetic declaration, and seek approval from their Pastor before stepping out for the hospital for any reason; the most critical time is the period of pregnancy through delivery. The belief on Pastoral advice with a standard deviation of 5.1, was stronger particularly where a pregnancy was linked to the miracles performed by the Pastor. In all, religion has contributed to why most women has refused to be immunized during pregnancy.

In the study area, many people consider the traditional birth attendant indispensable in matters involving maternal and child care. A lot regard them as specialists with skill and competence to handle complicated cases devoid of stress and protocols that characterize the hospital setting. Thirty seven (14.0%) of the respondents (2.1 Std.), said although they go for antennal care at the Hospital, they still patronize the traditional birth attendants. The traditional birth attendant who with their hands and supernatural fifty determines the size month, location and date of their baby’s delivery. Besides, their services are less costly than what is charged at the hospital. Unlike

Pastoral advice or church prophesy which is an external force, parity level, maternal age/experience and paternal age are personal factors that exert critical influence on the decision to seek antenatal care services from the hospital. Data which vary between 3.6 and 3.5 standard deviation, respectively, indicate that pregnant women with higher parity attend antenatal care sporadically while women that have lower parity go for the services regularly. The former group complement the services obtained from the Traditional Birth Attendant with the experiences they have in a repeated interaction with the health care providers at the hospital or clinic. Similarly, mothers who desire for and have had many children but have been receiving antenatal care services at a particular hospital or clinic, the fear of mocking and negative utterances from nurses and other health workers, and people previously known at the hospital or clinic could contribute to limit further visit to the facility. Maternal age/experience is analogous to parity level. Sixty-two (23.5%) of the respondents maintained that women who are of age and with long time experience in pregnancy and child rearing will commit more attention to self-medication than for antenatal care visit and where her spouse (male partner) is younger, unemployed or earning meagre income, there will be much interest in the Traditional Birth Attendant. The worst occurs when both parties (mother and father) are younger in age. In such situation, the fear and desire to hide the unexpected pregnancy from public knowledge, often contribute to the avoidance of antenatal care services at the hospital or clinic.

The fear of exposing illegitimate pregnancy is, for 11 (4.2%) of the respondents, the reason for avoiding antenatal care visit. Illegitimate pregnancy is least expected, unwanted, borne out of wedlock and adultery-related. Often times, it centers on falseness and involves married individuals and adolescents, and it is concealed in many ways including avoidance of antenatal care visits and instead, relying on the services provided by the Traditional Birth Attendant, Spiritualists and Church prophesy. Among adults, when involved in illegitimate pregnancy, the fear and shame of exposing the pregnancy limits interest in antenatal care visit at the orthodox facilities. Another important factor that predicts antenatal care services use in the study area is conception or pregnancy for commercial purpose. The notion of commercial pregnancy applies in circumstances in which the 'new born' is sold after delivery. Four (1.5%) of the respondents argued that most young and adolescent mothers involved in commercial pregnancy do not utilize antenatal care services at the modern health care facility. It is of course a difficult task to identify mothers that conceived for the purpose of selling the baby because in most cases they are kept and cared for in a confined environment. Infection is yet another predictor of antenatal care services utilization found in the study. Sixty-one (23.1%) of the respondents reported that pregnant women who knew their status as host of deadly infection or disease such as Human immunodeficiency Syndrome, Acquired Immunodeficiency Syndrome (HIV/AIDs), but may not wish their spouse to have knowledge of such, never attempt to utilize antenatal care services at the Hospital where test is normally carried out before any form of treatment is given. Some respondents varying 3.6 standard deviation, confirmed knowledge of pregnant women who consistently refused to attend antenatal care centres or clinics for undisclosed health reasons but routinely visit prayer houses and herbalists. The attitude of some women to the Caesarean Section and it demur by some Churches and their Pastors is a salient factor that hinders women interest on antenatal care utilization. For the women who hold on to such belief, although the number was quite negligible, attending antenatal care could prompt a referral to the Hospital if complication is diagnosed. The respondents added that pregnant women would agree to go for antenatal care services for purposes of immunization and to check cases of bleeding and Vesicovaginal Fistsula (VVF) problem.

4. FINDINGS AND DISCUSSION

A milestone in this study is the extended list of predictors of antenatal care services utilization, all of which are rooted in the society and culture, economic, demographic and environmental forces. Some of the predictors that

have already been mentioned in previous studies were confirmed by this study. For instance, [Watterson et al. \(2015\)](#) have in part corroborate the findings of this study that within the society and culture contexts, families tend to use medical services when someone is ill but frequently omit the beneficial preventive services (antenatal care, postnatal care and immunization) that are essential to improve health. Also, as found in this study, factors such as planned pregnancies corroborate ([Tekelab et al., 2019a](#)), socio-cultural factors, poor quality of services and poor attitude of health staff corroborate ([Sina & Adekeye, 2019](#)), the context of marriage, household and family setting corroborate [Regassa \(2011\)](#), women's education, inadequate household income, and unwanted pregnancy corroborate ([Belay, 1997](#)), maternal age, parity, lack of time, marital status, have significant effects on health facility utilization contrary to the timing of first ANC visit that was noted in [Mchenga et al. \(2019\)](#) and women's economic status ([Mengistu & James, 1996](#)) which have not been reported by any of the respondents.

This study found some factors other than socio-cultural, economic and demographic, example, the legitimacy of pregnancy, purpose of the pregnancy, infection and fear of caesarean Section that predict antenatal care services use by the women. [Simkhada, Teijlingen, Porter, and Simkhada \(2008\)](#) confirmed this finding when they identified seven groups of factors that affect antenatal utilization, namely, the socio-demographic factors; availability, accessibility and affordability of the services; health service characteristics; position of women in the household and the society; women's knowledge; attitudes and beliefs; and the prevailing culture in the domain of the women. Similarly, the findings of this study corroborated [Tiruaynet and Muchie \(2019\)](#) that lower educational level, difference in ethnicity, lower wealth status and rural residence of women were determinants of antenatal utilization.

A gap in the current study is the absent of information on the environmental factors or variables that affect antenatal care services utilization. The study conducted by [Nghargbu and Olaniyan \(2019\)](#) which identified that antenatal care utilization in Nigeria is influenced by two factors: economic factors (such as employment, wealth, health insurance, distance to health facilities, gender and availability of service provider) and non-economic variables (such as age, education, birth order, region, ethnicity, marital status and religion), has not bridged the gap even though it had agreed partly with the findings of the study. No other study reviewed in this work has done so. However, there is a level of agreement of the findings of this study with the assumptions of the theories that have been examined. For instance, the acceptance and use of antenatal care services by pregnant women is a product of the interplay of predisposing factors, enabling factors and need, as postulated by Andersen Behavioural Model of Health Services; and on the type of individual behaviour and provision of services according to [Andersen and Newman \(1973\)](#). The use of antenatal care services by women in the study area is considered as a planned action to check infant and child death as argued by [Ahonsi \(1992\)](#) as well as to guarantee their child survival, similar to the arguments of [Kapungwe \(2003\)](#) and [Mosley and Chen \(1984\)](#). There is equally an agreement between the findings of this study that the desire for and use of antenatal care services by women is determined by the social class variables of the individual and family as hypothesized by [Antonovsky \(1967\)](#).

5. RECOMMENDATIONS

- i) Enforcement of compulsory enrolment of all pregnancies irrespective of where one goes for antenatal care services.
- ii) In order to elicit compliance by the women, the use of antenatal care services at a specialized facility should be certified and used as one of the requirements for school enrolment.
- iii) All forms of charges and conditions for assessing antenatal care services should be abolished where such are still in place.

- iv) There should be regular interactions between the officials of Ministry of Women Affairs, Nurses and Midwives and all relevant women groups with the pregnant women to find out such difficulties that may constraint the women from accepting antenatal care services.

6. CONCLUSION

Available literature and the findings of this study have underscored maternal health as subsisting and disturbing in Akwa Ibom State and some other parts of Nigeria. The problem is caused by more than what has been reported in previous literature and include factors mostly intimate to the pregnant women. Notwithstanding the fact that every human being desires health and life as valuable assets and that no one wishes death even for the fetus, a lot of women still avoid antenatal care services. This eventuality may continue with unquantified burden on the society except the recommendations in this and other relevant studies are given strict attention.

REFERENCES

- Abasiokong, E. M. (1997). *Children beliefs, attitudes and practices of Ibibio women and their families in South-East Nigeria*. An Unpublished Study Reports Submitted to the International Development Research Centre. University of New Foundland Canada.
- Ahonsi, B. A. (1992). Developmental implications of early mortality factors in Nigeria. *Journal of Social Development in Africa*, 7(1), 67-85.
- Akouwah, J. A., Agyei-Baffour, P., & Awunyo-Vitor, D. (2018). Determinants of antenatal healthcare utilisation by pregnant women in third trimester in Peri-Urban Ghana. *Hindawi Journal of Tropical Medicine*, 2018(2), 1-8. <https://doi.org/10.1155/2018/1673517>
- Ali, N., Elbarazi, I., Alabboud, S., Al-Maskari, F., Loney, T., & Ahmed, L. A. (2020). Antenatal care initiation among pregnant women in the United Arab Emirates: The Mutaba'ah study. *Frontiers in Public Health*, 8, 211. <https://doi.org/10.3389/fpubh.2020.00211>
- Ali, N., Sultana, M., Sheikh, N., Akram, R., Mahumud, R. A., Asaduzzaman, M., & Sarker, A. R. (2018). Predictors of optimal antenatal care service utilization among adolescents and adult women in Bangladesh. *Health Services Research and Managerial Epidemiology*, 5. <https://doi.org/10.1177/2333392818781729>
- Andersen, R., & Newman, J. F. (1973). Societal and individual determinants of medical care utilization. *Milbank Memorial Fund Quarterly*, 51(1), 95-124. <https://doi.org/10.2307/3349613>
- Aniebue, U., & Aniebue, P. (2011). Women's perception as a barrier to focused antenatal care in Nigeria: The issue of fewer antenatal visits. *Health Policy and Planning*, 26(5), 423-428. <https://doi.org/10.1093/heapol/czq073>
- Annan, K. A. (2010). *Maternal health: Investing in the lifeline of healthy societies and economies African progress panel policy brief*. Retrieved from <https://bibalex.org/baifa/en/resources/document/451566>
- Antonovsky, A. (1967). Social class, life expectancy and overall mortality. *The Milbank Memorial Fund Quarterly*, 45(2), 31-73. <https://doi.org/10.2307/3348839>
- Arthur, E. (2012). Wealth and antenatal care use: Implications for maternal health care utilisation in Ghana. *Health Economics Review*, 2(14), 1-8. <https://doi.org/10.1186/2191-1991-2-14>
- Assaf, S., Wang, W., & Mallick, L. (2015). *Quality of care in family planning services at health facilities in senegal DHS analytical studies No. 55. rockville, maryland*. USA: ICF International.
- Baldwin, W. H., & Ford, T. R. (1976). Modernism and contraceptive use in Colombia. *Studies in Family Planning*, 7(3), 75-79. <https://doi.org/10.2307/1965038>

- Belay, T. (1997). *Correlates of antenatal care attendance among women in Yirgalem town and surrounding peasant associations*. Southern Ethiopia; 1997 Unpublished M.Sc Thesis.
- Dahiru, T., & Oche, O. M. (2015). Determinants of antenatal care, institutional delivery, and postnatal care services utilization in Nigeria. *The Pan African Medical Journal*, 21, 1-17. <https://doi.org/10.11604/pamj.2015.21.321.6527>
- Economic Commission for Africa. (2007). *The state of demographic transition in Africa, downloaded*. Retrieved from www.uneca.org
- Ekhlouetale, M., Nzopotam, C. I., Barrow, A., & Onikan, A. (2020). Women's enlightenment and early antenatal care initiation are determining factors for the use of eight or more antenatal visits in Benin: Further analysis of the demographic and health survey. *Journal of the Egyptian Public Health Association*, 95(1), 1-12. <https://doi.org/10.1186/s42506-020-00041-2>
- Etukudo, I., & Ben, V. (2014). Transport cost and the use of family planning as a preventative and promotion health care strategies in rural Akwa Ibom State of Nigeria. *British Journal of Education*, 2(4), 63-72.
- Foster, G. M. (1977). Medical anthropology and international health planning. *Social Science & Medicine*, 11(10), 527-534. [https://doi.org/10.1016/0037-7856\(77\)90171-8](https://doi.org/10.1016/0037-7856(77)90171-8)
- Gesler, W. M. (1979). Illness and health practitioner use in Calabar, Nigeria. *Social Science & Medicine. Part D: Medical Geography*, 13(1), 23-30. [https://doi.org/10.1016/0160-8002\(79\)90022-4](https://doi.org/10.1016/0160-8002(79)90022-4)
- Kapungwe, A. (2003). Health-seeking behaviour and under-five mortality: A case study of two stricts in Luapula province in Zambia. *South-South Journal of Culture and Development*, 5(2), 153-189.
- Katung, P. (2001). Socio-economic factors responsible for poor utilisation of the primary health care services in a rural community in Nigeria. *Nigerian Journal of Medicine: Journal of the National Association of Resident Doctors of Nigeria*, 10(1), 28-29.
- Lorretta, F. N., Friday, E. O., Ogu, F. N., Hadiza, S. G., Mohammed, G., Ola, N. O., . . . Abdullahi, J. R. (2018). Prevalence and risk factors for maternal mortality in referral hospitals in Nigeria: A multicentre study. *International Journal of Women's Health*, 10, 69-76. <https://doi.org/10.2147/ijwh.s151784>
- Mchenga, M., Burger, R., & Von, F. D. (2019). Examining the impact of WHO's focused antenatal care policy on early access, underutilization and quality of antenatal care services in Malawi: A retrospective study. *BMC Health Survey Research*, 19(1), 1-14. <https://doi.org/10.1186/s12913-019-4130-1>
- McTavish, S., Moore, S., Harper, S., & Lynch, J. (2010). National female literacy, individual socio-economic status, and maternal health care use in Sub-Saharan Africa. *Social Science & Medicine*, 71(11), 1958-1963. <https://doi.org/10.1016/j.socscimed.2010.09.007>
- Mekonnen, Y., & Mekonnen, A. (2003). Factors influencing the use of maternal healthcare services in Ethiopia springer. *Journal of Health, Population and Nutrition*, 21(4), 374-382.
- Mengistu, M., & James, J. (1996). Determinants of antenatal care utilization in Arsi Zone, Central Ethiopia. *Ethiopia Journal of Health Development*, 1(3), 171-178.
- Mosley, W., & Chen, L. C. (1984). An analytical framework for the study of child survival in developing countries. *Supplement on Child Survival*, 1(10), 25-45. <https://doi.org/10.2307/2807954>
- NDHS. (1990). *Nigeria demographic and health survey*. USA: IRD/Macro International Inc Maryland.
- NDHS. (1999). *Nigeria demographic and health survey: Federal office of statistics*. Abuja, Nigeria: National Population Commission and ICF Macro.
- NDHS. (2009). *National population commission [Nigeria] and ICF macro. 2009. Nigeria demographic and health survey*. Abuja, Nigeria: National Population Commission and ICF Macro.
- NDHS. (2013). *National population commission (Nigeria) and ICF international Nigeria demographic and health survey*. Abuja: Nigeria, and Rockville, Maryland, USA: NPC and ICF International.

- NDHS. (2018). *National population commission [Nigeria] and ICF. 2019. Nigeria demographic and health survey*. Abuja: Nigeria, and Rockville, Maryland, USA: NPC and ICF. National Population Commission and ORC Macro.
- Nghargbu, R., & Olaniyan, O. (2019). *Determinants of antenatal care utilization in Nigeria*. Retrieved from Working Paper Series N° 321, African Development Bank, Abidjan, Ivory Coast.
- Nwosu, E. O., Urama, N. E., & Uruakpa, C. (2012). Determinants of antenatal care services utilisation in Nigeria. *Developing Country Studies*, 6(6), 41-53.
- Okafor, S. L. (2007). *Distribution and question of justice an inaugural lecture*. Ibadan: University of Ibadan Press.
- Olajuyin, L. O. (1997). Locational analysis of health facilities: A case study of Irewole local government area (1940-1985). *Ifé Planning Journal: A Journal of Ifé Community Development Team*, 1(1), 1-3.
- Rahman, A., Nisha, M. K., Begum, T., Ahmed, S., Alam, N., & Anwar, I. (2017). Trends, determinants and inequities of 4+ ANC utilisation in Bangladesh. *Journal of Health, Population and Nutrition*, 36(1), 1-8. <https://doi.org/10.1186/s41043-016-0078-5>
- Regassa, N. (2011). Antenatal and postnatal care service utilization in Southern Ethiopia: A population-based study. *African Health Sciences*, 11(3), 390-397.
- Roser, M., & Ritchie, H. (2013). *Maternal mortality published online at ourworldindata.org*. Retrieved from <https://ourworldindata.org/maternal-mortality>
- Simkhada, B., Teijlingen, E. R. v., Porter, M., & Simkhada, P. (2008). Factors affecting the utilization of antenatal care in developing countries: Systematic review of the literature. *Journal of Advanced Nursing*, 61(3), 244-260. <https://doi.org/10.1111/j.1365-2648.2007.04532.x>
- Sina, O. J., & Adekeye, D. S. (2019). Socio-cultural factors and utilization of healthcare facilities: Implications for maternal mortality in urban areas of Ekiti State, Nigeria. *Alternative Medicine Chiropractic OA J*, 2(1), 180012.
- Tekelab, T., Chojenta, C., Smith, R., & Loxton, D. (2019a). Factors affecting utilization of antenatal care in Ethiopia: A systematic review and meta-analysis. *PLoS One Internet*, 14(4), 1-24. <https://doi.org/10.1371/journal.pone.0214848>
- Tekelab, T., Chojenta, C., Smith, R., & Loxton, D. (2019b). The impact of antenatal care on neonatal mortality in sub-Saharan Africa: A systematic review and meta-analysis. *PLoS One*, 14(9), 1-15. <https://doi.org/10.1371/journal.pone.0222566>
- Tiruaynet, K., & Muchie, K. F. (2019). Determinants of utilization of antenatal care services in Benishangul Gumuz region, Western Ethiopia: A study based on demographic and health survey. *BMC Pregnancy and Childbirth*, 19, 1-5. <https://doi.org/10.1186/s12884-019-2259-x>
- Tsegay, Y., Gebrehiwot, T., Goicolea, I., Edin, K., Lemma, H., & San Sebastian, M. (2013). Determinants of antenatal and delivery care utilization in Tigray region, Ethiopia: A cross-sectional study. *International Journal of Equity Health*, 12(1), 1-10. <https://doi.org/10.1186/1475-9276-12-30>
- Tunçalp, Ö., Pena-Rosas, J. P., Lawrie, T., Bucagu, M., Oladapo, O. T., Portela, A., & Gülmezoglu, A. M. (2017). WHO recommendations on antenatal care for a positive pregnancy experience-going beyond survival. *Bjog*, 124(6), 860-862. <https://doi.org/10.1111/1471-0528.14599>
- UNFPA. (2013). *The role of traditional/religious leaders on reduction of maternal mortality and survival of women*. United Nations Population Fund. Retrieved from <https://www.unfpa.org/>
- UNICEF. (1987). *The state of the world's children*. New York: Oxford University Press.
- UNICEF. (2016). *UNICEF data: Monitoring the situation of children and women*. New York: UNICEF.
- UNICEF. (2019). *Antenatal care. United nations children's fund data*. New York: UNICEF.
- Watterson, J. L., Walsh, J., & Madeka, I. (2015). Using mHealth to improve usage of antenatal care, postnatal care, and immunization: A systematic review of the literature. *BioMed Research International*, 2015, 1-9. <https://doi.org/10.1155/2015/153402>

- WHO. (2005). *Maternal mortality: Woman to woman childbirth education*. Retrieved from www.google.com/WorldUnderfiveMortalityStudy
- WHO. (2014). *WHO/maternal mortality country profiles WHO; world health statistics*. Geneva, Switzerland: World Health Organization.
- WHO. (2016). *WHO recommendations on antenatal care for a positive pregnancy experience in: WHO press, editor*. Geneva: Switzerland: World Health Organization.
- Yaya, S., Bishwajit, G., Ekholuenetale, M., Shah, V., Kadio, B., & Udenigwe, O. (2017). Timing and adequate attendance of antenatal care visits among women in Ethiopia. *PLoS One*, *12*(9), 1–16. <https://doi.org/10.1371/journal.pone.0184934>
- Yaya, S., Bishwajit, G., Ekholuenetale, M., Shah, V., Kadio, B., & Udenigwe, O. (2018). Factors associated with maternal utilization of health facilities for delivery in Ethiopia. *International Health*, *10*(4), 310–317. <https://doi.org/10.1093/inthealth/ihx073>

Online Science Publishing is not responsible or answerable for any loss, damage or liability, etc. caused in relation to/arising out of the use of the content. Any queries should be directed to the corresponding author of the article.