Attitudinal and Religious Dichotomy of Prenatal Delivery Preference in Phi-Coefficient Analysis: Implication for Midwifery in Cross River State, Nigeria

FAVOUR AYAMBEM
Department of Public Health, College of Nursing Sciences, Calabar, Cross River State

Abstract- ***Adequate skilled obstetric assistance during delivery are important strategies that significantly reduce maternal mortality and morbidity. The aim of the study was to determine the association between attitude, religion and prenatal delivery preferences among pregnant women in Cross River State, Nigeria. Based on this purpose, two research questions were raised to guide the study. The Heath belief model by Rosenstock (1974) and Mechanics theory of health seeking behaviour by David Mechanics (1978) formed the bedrock of the study. The research design adopted in this study was the correlational research design. A sample of 800 pregnant women was selected from a population of 3,866,262 via the use of Taro Yamane sample size determination formular. Attitude, Religion and Prenatal Delivery Preference Questionnaire (ARPDPQ) was used to collected data. Data was analyzed with Phi Coefficient (ϕ). Results indicated that Phi Coefficient (ϕ) calculated of .143 and the Pearson Chi-Square (X^2) equivalent of 16.464 at 1 degrees of freedom was found to be greater than the p-value value of .000. Again, Phi Coefficient (ϕ) analysis showed that the ϕ calculated of .345 and the Pearson Chi-Square (X^2) equivalent of 95.037 at 1 degrees of freedom was found to be greater than the p-value value of .000. Study concluded that there is a significant association between attitude, religious background and prenatal delivery preference among pregnant women in Cross River State, Nigeria. It was recommended among others that health agencies should implement culturally sensitive health education campaigns, emphasizing the importance of skilled healthcare professionals***

Keywords: Attitude, Religion, Skill-based Attendance, Prenatal Delivery Preference, Midwifery

I. INTRODUCTION

Pregnancy often comes with childbirth which is associated with the feelings of happiness and hope. Although it is unanticipated event for many women that pregnancy and childbearing provide a number of obstacles for women, including discomfort, stress, worry, fear, grief and even death. According to Suitor et al (2020), women of reproductive age 15-49 are the primary victims of pregnancy-related complications, which sometimes leads to the death of many. Women are biologically designed to perform reproductive functions specifically for procreation. They are the life-wire of a growing society and therefore a significant contributor to life.

The birth of a child is a pivotal time in the life of a mother and her family. The health and well-being of a mother and child at birth largely determines the future health and wellness of the entire family (Esuabana, 2019). In preparing to give birth, women, knowingly or unknowingly, develop a birth plan. The use of formal birth plans is a way for women to engage in discussion with their care providers and to articulate their desired birth experience. Birth plans generally include information such as where a woman wishes to give birth, who will attend to her, and what forms of medical intervention and pain relief will be used. The birth plan is a tool that outlines a woman's expectations for her birth and can open communication between a woman and her care providers, providing the woman with knowledge prior to giving birth (Doherty, 2020). There may also be negative outcomes of developing a birth plan; for example, feelings of failure if the birth plan is not followed and disappointment with the birth experience if expectations are not met (Berg et al, 2023).

Unfortunately, women still die from childbirth and pregnancy-related death in developing countries despite interventions by governmental and non-governmental agencies and these preventable deaths are due to the underutilization of maternal health services. Ayambem (2023) averred that poor utilization of maternal health services is the leading cause of high maternal mortality. All over the world, childbearing is an important and sensitive issue, viewed from a variety of perspectives including culture, religion, beliefs, law and social class differentials. Over the years, maternal health indices in many developing countries, in sub-Saharan Africa,

including Nigeria, have remained poor (World Health Organization, 2019).

The experience of childbirth has always represented an extremely important event in women's lives, constituting a singular process, a unique and special moment, marked by the transformation of women in their new role of being mothers. pregnancy, childbirth and the puerperium represent one of the most significant human experiences, with strong potential, positive and enriching for all who participate in it. According to Santana et al (2015), childbirth, as well as childbirth care, have undergone transformations over time, especially with regard to women's health and the increase in knowledge related to reproduction. These transformations led to a renewal in the experience of pregnancy and childbirth, prioritizing the surgeon as a form of scientific obstetrics. over time, both childbirth and childbirth care have been modified. In the nineteenth century, medicine implemented changes in relation to women's health and knowledge about reproduction. Since then, there have been several changes, such as, for example, the customs of midwives have placed scientific obstetrics in the figure of the surgeon, modifying once and for all the experience of pregnancy and childbirth, leaving women incapable of their knowledge, functions and domains. Consequently, natural and physiological processes, such as pregnancy and childbirth care, came to be characterized as a pathological and medicalized process, which caused an increase in the rate of cesarean deliveries (Carvalho, 2018).

Prenatal care is when a woman gets checkups from a doctor, nurse, or midwife throughout pregnancy period. It helps keep the woman and the future baby healthy. Having a healthy pregnancy is one of the best ways to promote a healthy birth. Getting early and regular prenatal care improves the chances of a healthy pregnancy (Orokpo & Sunday, 2023). This care can begin even before pregnancy with a pre-pregnancy care visit to a health care provider. Prenatal care is the regular health care women should receive from an obstetrician or midwife during pregnancy. Prenatal care refers to all healthcare delivered to a woman before childbirth. Antenatal care focuses on preconception counselling, pregnancy confirmation, and monitoring the mother's and baby's health during the pregnancy.

In the continuum of maternal health care, antenatal care, institutional/skilled attendant at delivery and postnatal care are important milestones required to achieve optimum maternal and child health (Esuabana, 2019). The elements of care are expected to be provided as a continuum of care in order to impact optimum benefit and the provision of these elements of care is a comprehensive and continuum pattern of care during pregnancy. Therefore, child birth and postpartum period has been identified to reduce maternal and child death (Lawn & Kerber, 2016).

Firstly, prenatal care which is an entry point for maternal and child care service utilization, has the capability to reduce both maternal and neonatal death, by detecting at-risk pregnancy and managing the risk associated; provides a platform for interaction between the medical personnel and pregnant woman during which relevant information and education concerning the health of mother and her unborn child is passed and facilitates informed decision making by the pregnant woman such as seeking skilled attendant at delivery and delivery in health care facility (Sunday & Neji, 2023). Additionally, women who utilize Antenatal Care (ANC) are more likely to utilize institutional/skilled delivery (Hospital delivery) (Pervin *et al*, 2024). Adequate antenatal ANC and skilled obstetric assistance during delivery are important strategies that significantly reduce maternal mortality and morbidity (WHO, 2019).

A major determinant of pregnancy outcome is the quality of care received during pregnancy and the utilization of available services by pregnant women (Shorter, 2016). Prenatal is the care a pregnant woman receives during her pregnancy through series of consultations with trained health care workers such as midwives, nurses, and sometimes doctors who specializes in pregnancy and birth (Nigeria Demographic and Health Survey, NDHS, 2023).

The right to choose mode of delivery is a crucial component of compassionate and respectful care in modern obstetrics as it fosters both maternal and neonatal well-being. Client-centered care is the core of health service delivery system involving client's decision-making about their treatment preference (Amaike, 2022). Hence, the pregnant mother's desire to prefer their mode of delivery is profound, as failure

to respect their interest may expose the mother to depression and posttraumatic stress.

In Cross River State, a report by Ugal, et al (2022) in Obudu and Ogoja local government areas reported that over 60% of the women used the private and public health facilities for antenatal care while 30% utilized the traditional birth attendant services for antenatal care and about 80% of the women delivered outside the health facilities. Another study report in Calabar by Farnaz (2023) reported that amongst the women who registered for antenatal, 40% of them registered in the first trimester, 41% in the second trimester and 13% in the third trimester. Only 18.5% of respondents attended prenatal care three times and above. The prevalence of health institutional delivery among the respondents was 52%, of the remaining 48% that had childbirth outside health facilities, 72% of the women delivered in Traditional Birth Attendants (TBAs) centers, while the rest delivered at home or in worship centres. Also, a survey by Ayambem (2019) on the perception of men and women of reproductive age in rural communities in Cross River State about TBAs revealed that they have indirectly worsened pre-existing medical conditions aggravated by the poor healthcare services rendered by some of them. Other women die from common causes of pregnancy-related deaths, such as amniotic fluid embolism, heavy bleeding, and sickle cell diseases, including trauma and drug overdoses prescribed by the TBAs during peripartum periods in the birth centres. Women tend to be fairly decisive regarding birthplace and most decide before pregnancy, by booking visit or within the first trimester (Murray-Davis et al, 2017).

Personal observation by the researcher shows that most traditional midwives in Cross River State are spiritualists, herbalists or other traditional healers. Unlike skilled birth attendants, most unskilled birth attendants learnt their midwifery from informal sources such as female relatives or neighbours, mother to mother-in-law, sister or cousin, grandmother, other relatives or self-taught, among others (World Health Organisation, 2022). It has also been observed that traditional midwives lack basic knowledge about physiological processes during labour and childbirth. Ogunyomi and Ndikom (2016), affirmed that TBAs do not understand the basics of sterilising placenta-cutting devices, which are potentially dangerous to the life of both mother and child. In some rural Cross River State communities, most traditional midwives cut the umbilical cord with traditional bamboo sheaths.

In the same vein, they do not know the necessary nutrition intake during pregnancy and postpartum because traditional midwives impose various dietary restrictions on the mothers. This tends to deprive the mothers of some nutritious ingredients such as fish, snail, meat or vegetables. Similarly, the researcher has noticed that there is a practice of withholding breastfeeding up to six (6) days after the birth of a child in some areas, all in the name of spiritual cleansing, hence, depriving the child of both nourishment and the vital substances for immune response system. These practices, over the years, are noted to be associated with an increased incidence of infectious morbidity in infants as formula feeding will be introduced by mothers in both rural and urban communities in Nigeria, increasing the rate of morbidity and mortality (Esan et al, 2023). More so, UNAID (2016), reported a situational analysis of orphans and vulnerable children in Nigeria as they observed that 1.3 million children are victims of maternal mortality by traditional birth services other than Human Immuno Deficiency Virus (HIV) in Cross River State. Table 1 describes the scenario of Morbidity / Mortality Rate in Cross River State, Nigeria.

Consequently, Eke, et al (2021), noted that disparities in maternal healthcare is present in Nigeria despite the goal of the United Nations Millennium Development Goal to reduce maternal mortality by 2015 (MDGs). There is an effort by the World Health Organisation to provide collaboration between health care facilities and Traditional Birth Attendants in Nigeria in order to reduce the high rate of death arising from pregnancy and childbirth (Orokpo, Sunday & Neji, 2024). Evidently, mortality rate from pregnancy and childbirth has been attributed to the lack of access to hospital facilities, cost of healthcare, economic status and educational qualification, healthcare proximity, cultural belief/orientation and delivery complications facing the rural and urban dwellers in the study area.

TABLE 1: Cross River State Morbidity / Mortality Rate

S/N	LG	Morbidity/ Mortality rate in percentage	
		2016/2017	2020/2021
1	Bekwarra	10.64	20.69
2	Obanliku	7.10	14.92
3	Obudu	6.83	12.83
4	Ogoja	5.52	10.13
5	Yala	4.11	8.30
6	Abi	4.10	8.12
7	Yakurr	9.10	18.92
8	Obubra	7.83	14.83
9	Ikom	3.52	7.13
10	Etung	4.11	8.20
11	Boki	7.83	14.12
12	Akamkpa	15.64	34.69
13	Akpabuyo	4.10	9.92
14	Bakassi	12.83	24.83
15	Calabar Municipal	10.52	20.13
16	Calabar South	8.11	16.30
17	Odukpani	10.11	20.30

Source: Society for family health, 2023.

Prenatal delivery preferences have been linked to not only medical issues but also the socio-cultural situations. Medical factors in one hand includes hypertension, anemia, limited access to emergency care, and endemic diseases such as malaria, hepatitis, lack of access to standard healthcare institutions, and medication (Joia et al, 2020). Others socio-cultural and economic factors attributed to maternal mortality includes Nutritional status, illiteracy, consumption behavior, cultural practice, domestic violence and access to basic services. Moreover, inadequate income and productive power to sustain a livelihood, lack or limited access to quality education and other life basic needs, homelessness or poor housing. In addition, there is the issue of unsafe environments and social exclusion. These factors may be related to prenatal preferences in some ways, particularly in settings where traditional belief contradicts or replaces orthodox medical practices and where pregnant women's needs are largely ignored (Omer, 2021).

Several studies have also identified rural–urban differentials in use of prenatal care in Nigeria and elsewhere (Dairo, & Owoyokun 2020; Lippman et al, 2018). The higher prenatal care coverage in urban areas than in rural areas worldwide has been ascribed to inequities in the number of accessible health facilities. In Nigeria, urban bias in public health expenditure, inadequate financing coupled with difficulties in attracting health workers to and retaining them in rural areas have limited government's ability to create an accessible community-based health care system which could reduce inequities in rural–urban health facilities (Esuabana et al, 2021). Similarly, family members of pregnant women as well as the community, have roles to play in prenatal care attendance and birthing choices.

Complications of pregnancy and childbirths among pregnant women are leading contributors to maternal deaths in developing countries (Ayambem, 2019). This underscores the necessity of giving birth in health facilities with the support of skilled health workers who have the expertise to manage complications and make referrals to the next level of care where appropriate. Increasing the percentage of births delivered in health facilities is an important strategy to reduce maternal deaths.

In spite of the state government's initiatives to increase access to essential maternal health services, disseminating key messages on the advantages of facility delivery and pregnancy complications, in addition to the training of health workers on interpersonal communication, home deliveries have persisted and therefore requires a policy solution. Previous studies have not established the predictors of choice of birthplace or prenatal preference by women in Cross River State but, instead, have focused on the barriers to utilization of maternal

services in other regions of the country (Sunday & Etuk, 2024; Esuabana et al, 2023). This study examined the role of attitudes and religion in delivery preferences among pregnant women in Cross River State, Nigeria. The attitude and religion of pregnant women are presented in this context as they associate with prenatal preferences of pregnant women in Cross River State, Nigeria.

Attitude towards prenatal delivery, antenatal and postpartum is the disposition of the pregnant women to the activities in the delivery centres. Attitudes refer to the overall evaluations of people, groups, and objects in our social world. Reporting an attitude involves making a decision concerning liking versus disliking or favoring versus disfavoring an attitude object. Attitudes are important because they affect both the way people perceive the world and how they behave. Reuben and Edu (2020) asserted that the attitude concept is the most indispensable concept in social psychology. That statement remains equally valid because the study of attitudes remains at the forefront of social psychological research and theory. This consideration concentrates on three key aspects of attitudes: their content, structure, and function. It is therefore vital to consider the attitudes of pregnant women towards the prenatal facilities available for them.

The term “religiosity” is described as the overall importance of religion in one’s life or the extent to which one is involved in religious activities characterized by one’s belief in God and practices and attendance in corporate worship. It is regarded as the degree to which someone has a relationship with a particular doctrine about a supernatural power that occurs through affiliation with an organized faith and participation in its prescribed rituals. According to Newberg and Newberg (2018), religious encompasses the search for both sacred and non-sacred goals that receives validation and support from within an identifiable group. It involves the ability of the family engaging in prayer for one another, attending worship services, or personally applying teachings gathered from sermons or messages.

Statement of the problem

From observation, the rate of utilization of prenatal care services at skilled based centres among pregnant women in Cross River State, Nigeria in recent times is below expectation. This has attracted the concern of most people in our society including the researcher. This has led to an increase in the rate of mortality and morbidity in the Cross River State today (Orokpo & Sunday, 2023). The federal government has established and implemented focused prenatal care (a new approach to antenatal care with only four visits by pregnant women to antenatal clinic) emphasizing quality of care rather than quantity of visits to the traditional antenatal care. The government of Cross River State has established a minimum of seven health care centres in each senatorial district since the inception of primary health care so that all women of child bearing age in the State will benefit from them (Esuabana, 2020).

In spite of these, observations revealed that health posts, primary health centres and general hospitals with services that should be sought, are actually less patronized. Mortality rate especially among mothers and children (zero to five years), sexually transmitted diseases, incidence of diabetes mellitus and hypertension are on the increase. However, the response of the population in the utilization of health services, especially routine prenatal care has been poor. Besides, the health of the citizenry has not remarkably improved, as mortality rate among children has remained high.

Despite the global concern about poor quality prenatal deliveries, records have shown that many studies have been carried out to identify such factors that determine the utilization of prenatal delivery care services in the State, but none has been documented on persona-social variables and values orientation in which could influence positively or negatively the delivery preference or choice of birthing places. This study therefore is aimed at addressing this gap by determining the association between attitude, religion and prenatal delivery preferences among pregnant women in Cross River State, Nigeria. In other words, what is the association between attitude, religion and prenatal delivery preferences among pregnant women in Cross River State, Nigeria? This study was carried out to provide answer to this question.

Purpose of the study

The main purpose of the study was to determine the association between attitude, religion and prenatal delivery preferences among pregnant women in Cross River State, Nigeria. Specifically, the study intended to:

1. Examine the association between attitude and prenatal delivery preferences among pregnant women
2. Determine the association between religious background and prenatal delivery preferences among pregnant women

Research questions

The following research questions were raised to guide this study:

1. How does attitude associate with delivery preferences among pregnant women?
2. How does religious background associate with delivery preferences among pregnant women?

Definition of terms

For appropriate understanding, these terms were defined conceptually:

Attitude: This is a feeling or opinion about something or someone, or a way of behaving that is caused by one's emotional state.

Religious background: The term religious background is described as the overall importance of religion in one's life characterized by one's belief in God and practices and attendance in corporate worship. This could be Christianity, Muslem religion and traditional worshipers.

Dichotomous variables: Are variables that have only two possible values or categories. These variables are often used in research, statistics, and data analysis to represent binary outcomes or characteristics (Sunday, 2025). Dichotomous variables are useful for simplifying complex data and facilitating analysis, but they may not always capture the full nuance of a phenomenon (Ndiyo, 2016; Sunday et al, 2025).

Theoretical framework

The Heath belief model by Rosenstock (1974)

This Model was propounded by a social psychologist called Rosenstock in 1974 to identify individual's decision-making process in seeking health care for preventive measures. Health Belief Model is a conceptual framework that can be used to guide health promotion and disease prevention programs. It explains changes in health-related behaviour. Key elements of the Health Belief Model focus on individual beliefs about health conditions, which predict individual health-related behaviours. The Health Belief Model can be used to design short- and long-term programs. The model's predictive ability varies depending on the ability to gauge the presence of perceived susceptibility, perceived severity, perceived benefits of action, perceived barriers to action, cues to action, and the sense of self-efficacy among the target population.

The five key action-related components that determine the ability of the Health Belief Model to identify key decision-making dispositions that influence health behaviours are:

1. Gathering information by conducting health assessments and other efforts to determine who is at risk and the population(s) that should be targeted.
2. Conveying the consequences of the health issues associated with risk behaviours in a clear and unambiguous fashion to understand perceived severity.
3. Communicating to the target population the steps that are involved in taking the recommended action and highlighting the benefits to action.
4. Providing assistance in identifying and reducing barriers to action.
5. Demonstrating actions through skill development activities and providing support that enhances self-efficacy and the likelihood of successful behaviour changes.

These four factors which are influenced by mediating variables indirectly influence the probability of performing protective health behaviours by influencing the perceived threat of the illness and expectations about outcome. According to Health Believe Model (HBM), individuals concern about being healthy are more likely to exercise regularly than individuals who place little value on health. Mediating factors such as demographic structuring and social variables have been explored in applying the Health Belief Model (HBM). The model is important to this study in that it helps in explaining the likelihood that someone will take action to prevent illness. For example, when an individual perceives a life threatening health problem such as malaria, anaemia, malnutrition, tuberculosis, etc, the individual will likely take all necessary measures to prevent the illness by going to the hospital to seek medical advice. On the other hand, when an individual does not perceive a life threatening health problem, the person may not take necessary precautions in preventing the illness nor utilize the

health care services. In other words, the Health Care services will not make any meaning to the individual.

Mechanics theory of health seeking behaviour by David Mechanics (1978)

This mechanics general theory of health seeking behaviour was developed by David Mechanics in 1978 to facilitate an understanding of assessment of process and how individuals act prior to or instead of seeking a health care provider mechanic traced the extreme variations of how people respond to illness, to differences in how they define the illness situation and to differences in their ability to cope with the situation, the process of definition and the ability to cope with one both culturally and socially determined. One of the tenets of this theory is that as individuals mature through the stages, they are socialized within families and within communities to respond to illness in particular ways. Part of this socialization is observing how others within the group respond to illness and noting the positive or negative reaction their behaviours elicit. Sociologists refer to this process as the social construction of illness. Mechanic in the theory identified ten (10) factors that determine how individuals respond to symptoms of illness, as:

1. The visibility, reconcilability or perceptual silence of symptoms.
2. The individual's perception of symptom severity.
3. The extent to which symptoms disrupt family, work and other social activities.
4. The frequency of the appearance of symptoms, their persistence or frequency of reoccurrence.
5. The individual's tolerance of symptoms.
6. Available information, knowledge and cultural assumption of the illness.
7. Denials of illness as a result of basic needs.
8. Needs competing with illness response.
9. Competing possible interpretations that can be assigned to the symptoms once they are recognized.
10. Availability of treatment resources, physical proximity, psychological and monetary costs of taking action.

It may be difficult to determine which determinants are most influential in the decision to utilize health care; but culture, economics, access, perceptions, knowledge, belief, inefficacy, age, gender and social roles are all among the extensive list factors influencing both the choice to seek health care (ANC), how relevant they see (effect). Antenatal care services will determine how they actually make use of antenatal care.

The pregnant woman who needs to make a proper choice of birthing place is faced with attitude and religious background factors. The theory is relevant to the present study in that it will give the adolescent women the idea that attitude and religious background variables manifest in their various forms. The factors are seen to be interdependent as they complement each other in various forms.

Research design

The research design adopted in this study was the correlational research design. A correlational research design investigates relationships between variables without the researcher controlling or manipulating any of them. A correlation reflects the strength and/or direction of the relationship between two (or more) variables. The direction of a correlation can be either positive or negative (Sunday, 2025). This design is most useful in a study where the researcher does not have control of the independent variables (age, attitude, educational qualification, marital status, family size, family social relations, peer association, religious background, social values, cultural values and moral values orientation) and as such, could not manipulate them because they had already occurred before the desire to conduct the research.

Population/Sample of the study

The population of this study will comprise all women of reproductive age in Cross River State. The women of reproductive age are those within 15-49 years of age. The estimated population of women of reproductive age in Cross River State is 3,866,262 (National Bureau of Statistics, 2023).

The sampling technique adopted for this study is the simple random and the accidental sampling techniques. To determine the sample size of this study, Taro Yamane's formula was used. This formula enabled the researcher to decide on the minimum sample size needed to allow for generalisations, given that the population size is already known. Taro Yamane's formula is given as:

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

Where:

n = the sample size to be determined.

N = Known population size. In this study, the population size is 3866269.
e = desired margin error. In this study, the desired error margin is 5% = 0.05. Substituting to the formula, we have that:

$$n = \frac{3866269}{1 + 3866269(0.05)^2}$$

$$n = \frac{3866269}{1 + 3866269 * 0.0025}$$

$$n = \frac{3866269}{1 + (3866269 * 0.0025)}$$

$$n = \frac{3866269}{1 + 9665.6725}$$

$$n = \frac{3866269}{9666.6725}$$

$$\therefore n = 399.95 \cong 400 \text{ respondents}$$

Secondly, the researcher selected 40% of the local government areas (LGA) through the use of simple random sampling. To achieve this, the researcher wrote the names of all the LGAs on a paper, wrap it and put them into a container and blindly selected seven (7) pieces of paper from the container that was for the study. This way, 3 local government areas from southern, 2 from central and 2 from northern senatorial districts were selected. Again, to account for proper representation, double of the sample size was used, which is 800 women of reproductive age (15-49 years old). Full details of the sample distribution are presented in Table 3.

The accidental sampling was adopted as the researcher gave the instruments only to women of reproductive age who were willing to volunteer information to serve as respondents at the time she visited them. 800 women were selected from the total population for the study.

Research Instrument
The instrument for data collection was a questionnaire titled 'Attitude, Religion and Prenatal Delivery Preference Questionnaire (ARPDPQ)'. The instrument was designed by the researcher and validated by one expert in the field of Measurement and Evaluation.

Procedure for data analysis
This study consists of two research questions. For each research question, independent and dependent variables is identified as well as instrument for statistical analysis technique.

Research question one:
How does attitude associate with delivery preferences among pregnant women?
Independent variable: Attitude (Positive, Negative)
Dependent variable: Delivery preference
Statistical analysis technique: Phi Coefficient (ϕ)

Research question two:
How does religious background associate with delivery preferences among pregnant women?
Independent variable: Religious background (Christianity, Others)
Dependent variable: Delivery preference
Statistical analysis technique: Phi Coefficient (ϕ)

General description of research variables
The major independent variable used in this study is, attitude and religious background and were measured discretely in binary form. The dependent variable in the study was prenatal delivery preferences was also measured discretely in terms of binary form (skilled-based attendance and others) both measured discretely in a mutually exclusive method.

Data gathered from the exercise were subjected to analysis using a version 24.0 of the Statistical Package for Social Sciences (SPSS). The descriptive statistics of the variable is presented in Table 2. A total sample of eight hundred pregnant women was used for the study. The result in Table 2 shows that 449 representing 44% of the total respondents were 15- 24 years, while 351 (44%) were 25 years and above. In terms of respondents' attitude, 405 (51%) had positive attitude, while 395 (50%) had negative attitude. Again, for educational qualification 418 (53%) had B.Sc and above, while 382 (48%) had below B.Sc. For marital status, 530 (66%) were married, whereas 270 (34%) of the respondents were single respectively. On religious background, the binary variable shows that respondents who were Christians were 538 (67%), while those who are in other religious background were 262 (33%) respectively.

TABLE 2: Descriptive statistic for the research variables (800)

S/n option	Variable	Categories	N	Response	%
1.	Age	15-24 years	449	1	56
		25 & above	351	2	44
		Total	800		100
2.	Attitude	Positive	405	1	51
		Negative	395	2	49
		Total	800		100
3.	Edu Qu'l	B.Sc & above	418	1	52
		Below B.Sc	382	2	48
		Total	800		100
4.	Marital Status	Single	530	1	66
		Married	270	2	34
		Total	800		100
5.	Religion	Christianity	538	1	67
		Others	262	2	33
		Total	800		100

Presentation of results

Research question one:
How does attitude associate with delivery preferences among pregnant women? The independent variable in this research question is attitude which was categorised into positive and negative attitude; while the dependent variable is prenatal preferences among pregnant women. To answer this research question, the association between attitude and prenatal preferences among pregnant women was analysed using Phi Coefficient (ϕ) with the following categories of prenatal preferences: Skilled-Based Attendance (SBA) and Others (TBA, HBA, FBA).

TABLE 3: Summary of Phi Coefficient (ϕ) analysis of the association between attitude and delivery preferences among pregnant women in Cross River State, Nigeria n= 800

	Prenatal Delivery Preferences among Pregnant Women				
Attitude	SBA	Others	N	(ϕ)	P-value
Positive	125 (100.2)	73 (97.8)	198 (198.0)		
Negative	280 (304.8)	322 (297.2)	602 (602.0)	.143	.000
Total	405 (405.0)	395 (395.0)	800 (800.0)		

*P<.05; df (R-1)(C-1)= 1; Phi Coefficient (ϕ) = .143

The result of the analysis in Table 3 showed that the Phi Coefficient (ϕ) calculated of .143 and the Pearson Chi-Square (X^2) equivalent of 16.464 at 1 degrees of freedom was found to be greater than the p-value value of .000. Therefore, attitude significantly associates with prenatal preferences among pregnant women in Cross River State, Nigeria. This implies that differences in the respondents' attitude associates with prenatal preferences. It may also mean that respondents with positive attitude significantly relates significantly from those with negative attitude in their prenatal preference.

Research question two:

How does religious background associate with prenatal delivery preferences among pregnant women? The independent variable in this research question is religious background which was categorised into Christianity and other religions; while the dependent variable is delivery preferences among pregnant women. To answer this research question, the association between religious background and delivery preferences among pregnant women was analysed using Phi Coefficient (ϕ) with the following categories of delivery preferences: Skilled-Based Attendance (SBA) and Others (TBA, HBA, FBA).

TABLE 4: Summary of Phi Coefficient (ϕ) analysis of the association between religious background and delivery preferences among pregnant women in Cross River State, Nigeria n= 800

Religious Background	Prenatal Delivery Preferences among Pregnant Women				
	SBA	Others	N	(ϕ)	P-value
Christianity	349 (404.8)	253 (197.2)	602 (602.0)		
Others	189 (133.2)	9 (64.8)	198 (198.0)	.345	.000
Total	538 (634.0)	262 (166.0)	800 (800.0)		

*P<.05; df (R-1)(C-1)= 1; Phi Coefficient (ϕ) = .345.

The result of the Phi Coefficient (ϕ) analysis in Table 4 showed that the ϕ calculated of .345 and the Pearson Chi-Square (X^2) equivalent of 95.037 at 1 degrees of freedom was found to be greater than the p-value value of .000. The result is statistically significant. Therefore, religious background significantly associates with delivery preferences among pregnant women in Cross River State, Nigeria. This implies that differences in the respondents' religious background significantly relates with the delivery preferences among pregnant women in Cross River State, Nigeria.

II. DISCUSSION OF FINDINGS

The result of the statistical analysis revealed that attitude significantly associates with delivery preference among pregnant women in Cross River State, Nigeria. This could be so due to the fact that attitude is a believe or behavior that makes or mars the difference between underachievement and accomplishment. This finding is in consonance with that of Kehinde (2016) who carried out a study on attitude to studies and conflict management in Nigerian tertiary institutions with specific reference to Lagos State University, Ojo Lagos. The study findings revealed that conflict management has engendered stakeholder participation in decision-making and conflict resolution in the selected universities. The study also showed that students' attitude to schooling influences their disposition to conflict management. Also, the performance of the conflict management board in LASU and AAUA has recorded significant progress in terms of managing crisis and peace building. Conflicts may be healthier than one with no observable conflict. Conflicts occur at all levels of interaction, at work, among friends, with families, between relationship and among

partners. When conflict occurs, the relationship may be weakened or strengthened.

The finding of Marks (2015) on attitudes and social adjustment also supported this study. Results indicated that vast majority of respondents agreed that school should provide a stimulating environment, where students feel comfortable and safe, are satisfied with their teachers and derive joy and pleasure from learning. Isagh (2011) study on attitude to studies and inter personal conflicts among undergraduates in tertiary institutions in Benue state supported the study. The data collected were analysed using independent t-test, statistics and the result showed that attitude to studies significantly influence inter personal conflicts among students.

Araromi (2013) who examined the attitudes of undergraduate students to the study of French language as a general study course in Nigerian tertiary institutions using Ajayi Crowther University, Oyo, Nigeria is in line with the present study. The results showed that students' area of specialization has influence on their attitudes towards French language. The study also proved that there is no significant difference between the male and female undergraduate students' attitude towards French language. The results further revealed that there is a significant difference in students' attitudes and the knowledge of French language. It was recommended that the Government should make French language compulsory in all tertiary institutions in Nigeria as part of efforts to make Nigeria English-French bilingual nation.

The finding obtained from analysis of research question two showed that religious background significantly associates with delivery preference among pregnant women in Cross River State, Nigeria. This could be as a result of the fact that prenatal preference is not dependent in one's level of religiosity or religious background. The study on family engagement in religious activities and students' interest in cult activities by Ojo (2022) aligns with the present study. The data was analyzed using analysis of variance (ANOVA), the calculated F-ratio was 1.75 at a significant level 0.053 and 647 degrees of freedom which are not significant (p>05). Thus, the study accepted the null hypothesis that students from religious practicing home do not have interest in cult activities in school. It concluded that parents, should consider religious activities in the home very important not only for themselves but for the good of the children and the society at large.

The study of Bekomson and Ntamu's (2019) study was to find out if religious value orientation has any influence on social adaptability of students contradicted the present study. The result of the analyses revealed that religious value orientation significantly influences all the dimensions of students' self-efficacy except social self-efficacy. Ojong (2019) who studied the influence indoctrination and anti-social behaviour among class seven pupils in South-West province of the republic of Cameroun with 688 pupils as sample also contradicted the present study. The study among other findings revealed that pupils who are low in anti-social behaviour were those from high religious indoctrination homes while respondents from low indoctrination homes were high in anti-social behaviour in schools. The researcher concluded that parents' religious indoctrination of children is not harmful if it could be well directed. Again, Achi and Ntamu's (2019) study on religious value orientation and self- efficacy with regards to social self-efficacy, academic self-efficacy, language self-efficacy and moral self-efficacy contradicted the present study. The result of the analyses revealed that religious value orientation significantly influences all the dimensions of students' self-efficacy except social self-efficacy. Based on the findings of this study, it was recommended that teachers should encourage students to belong to social groups in school, to enable them develop skills that will help them build their social competence and also engage students in religious discussions and activities that will help them build up a positive religious standing that will guide their activities.

III. CONCLUSION

The study concentrated on attitude, religious background and prenatal delivery preference among pregnant women in Cross River State, Nigeria. Over all, it was concluded that there is a significant association between attitude, religious background and prenatal delivery preference among pregnant women in Cross River State, Nigeria.

Implication for Midwifery in Nigeria

Understanding attitude and religion in dichotomized prenatal preferences in Nigeria can have several educational implications:

1. Health education: PHCs can provide comprehensive health education, including prenatal care and reproductive health, to empower women and students with knowledge.
2. Cultural sensitivity: Midwives can be sensitive to diverse prenatal preferences and values, promoting a respectful and inclusive healthcare environment.
3. Support for expectant parents: Midwives can offer support services and resources for expectant parents, helping them navigate their safe prenatal delivery journey.

IV. RECOMMENDATIONS

The results obtained from testing the hypotheses guided the researcher to make the following recommendations:

1. Health agencies should implement culturally sensitive health education campaigns, emphasizing the importance of skilled healthcare professionals.
2. Pregnant women should inculcate positive attitude so as to help them embrace socially acceptable primary health care programmes in the society.
3. Midwives should design prenatal programmes that will enhance the interest women of all religious background in their choice of skilled birth attendants.

REFERENCES

[1] Achi, M. & Ntamu, O. (2019). The upsurge of recidivism and the penitentiary institutions in Nigeria. *International Journal of Business and Social Science, 7* (6), 184-193.

[2] Amaike, B. (2022). *Education as a Correlate of Life Satisfaction among Retired Older People in Lagos State, Nigeria*. Retrieved from https://uaps2011.popconf.org/papers/110358.

[3] Araromi, M. O. (2013). Attitudes of undergraduate students to the study of French Language as a general course in Ajayi Crowther University, Oyo, Nigeria. *Studies in literature and language, 7* (2), *93-100*

[4] Ayambem, F. B. (2023). Midwives Population and Antenatal Care (Anc) Service Provision in Cross River State, Nigeria: A Quantitative-Qualitative Approach. *Malaysian Mental Health Journal, 2*(2), 63-70.

[5] Ayambem, F. B. (2019). Midwives Population and Service Provision: An Assessment of Primary Health Care Level in Cross River State. An unpublished M.Sc thesis of the Department of Nursing Science, University of Calabar.

[6] Bekomson, A. N. & Ntamu, B. A. (2019). Religious value orientation and self-efficacy among secondary school students in cross River State, Nigeria. *Global Journal of Educational Research, 18*(2), 67-79.

[7] Berg N, Lundgren, O, Karvonen S, Lindmark, T (2023). Pathways from problems in adolescent family relationships to midlife mental health via early adulthood disadvantages – a 26-year longitudinal study. *PLoS ONE 12*(5), e0178136. https://doi.org/10.1371/journal.pone.0178136.

[8] Carvalho, S. (2018). *Acceptability and susceptibility of the WHO focused antenatal care package in Kenya.* Washington, D.C.: Publication Council.

[9] Dairo, M. D. & Owoyokum, K. E. (2020). Factors affecting the utilization of antenatal care services in Ibadan, Nigeria. *Benin Journal of Postgraduate Medicine, 12*(1), 3-16.

[10] Doherty M. E. (2020). Midwifery care: Reflections of midwifery clients. The Journal of Perinatal Education, 19(4), 41–51 10.1624/105812410X530929

[11] Eke, P. C., Ossai, E. N., Eze, I. I., & Ogbonnaya, L. U. (2021). Exploring providers' perceived barriers to utilization of antenatal and delivery services in urban and rural communities of Ebonyi state, Nigeria: A qualitative study. *PloS one*, *16*(5), e0252024. https://doi.org/10.1371/journal.pone.0252024

[12] Esan, D. T., Ayenioye, O. H., Ajayi, P. O., & Sokan-Adeaga, A. A. (2023). Traditional birth attendants' knowledge, preventive and management practices for postpartum haemorrhage in Osun State, Southwestern Nigeria. *Scientific Reports*, *13*(1), 12314.

[13] Esuabana, S. B. Duruamaku-Dim, J. U., Anake, P. M. Ngwu, M. E. Effiong, O. B. & Okpechi, P. A. (2023). Family Counselling and Pre-Marital Sexuality Among In-School Female Students in Calabar Metropolis, Nigeria. RES MILITARIS, 13(3), 1886–1911. Retrieved from https://resmilitaris.net/index.php/resmilitaris/article/view/3676.

[14] Esuabana, S. B. (2019). Parental harmony and students' tendencies to social behaviour in University environment in Cross River State, Nigeria. *Journal of Global Research in Education and Social Science, 3*, 186–192.

[15] Esuabana, S. B. (2020). Family related variables and undergraduate students' tendencies to social behaviour in university environment in Cross River State, Nigeria. The Guidance and Counseling Perspective. *Annual Research & Review in Biology*, 50-61.

[16] Esubana, S. B., Ekeng, E. B. & Ubi, G. M. (2021). Validation of Safety Guidelines Adopted for COVID–19 in Nigeria: The Guidance and Counseling Perspective. *Annual Research & Review in Biology, 36*(2), 50-61.

[17] Esuabana, S. B. (2019). Patterns of domestic violence and its implications for family rearing among women in Nigeria: The case of Calabar Metropolis. *Asian Journal of Arts, Humanities and Social Studies, 2*(2), 37-41.

[18] Farnaz, Y. (2023). The Evaluation of the Effect of parent's Life Attitude on Social Adjustment. *Journal of school counselling, 2*(4), 1-22.

[19] Isagh, E. (2011). State of academic facilities and its influence on teachers' job stress in Tamale polytechnic. *African Journal of Business Management, 10*(2), 24-31, 28.

[20] Joia, P., Rosaly, C., Araujo., Tamara L. JN., & Maeve, W. (2020). Social and structural determinants of health inequities in maternal health. Journal of Women's Health. Feb 2021.230-235.http://doi.org/10.1089/jwh.2020.8882

[21] Kehinde, J. C. (2016). Study habits, interest and secondary school students' tendency to cheat in examination in Benin City. Unpublished M. Ed Project, University of Benin.

[22] Lawn, U. & Kerber, N. L. (2016). Development of Emergent of Literacy and Early Reading Skills In Preschool Children: Evidence from a Latent Variable Longitudinal Study. *Journal of Developmental Psychology*, 36 (5), 596-611.

[23] Lippman L, Guzman,L, Dombrowski K.J., kinukawa, A.,Schwalb, R.& Tice, P. (2018). *Parents Expectation and Planning for college: National center for Educational Statistics*, Institute of Education sciences, U.S Department of Education. Washington. D.C.

[24] Marks, A. (2015). Examining the teacher efficacy and achievement goals as predictors of Turkish student teachers' conceptions about teaching and learning. *Australian Journal of Teacher Education, 34*(1), 6-17.

[25] Murray-Davis B, Macdonald H, Reitsma A. & Coubrough M. (2017). *Deciding on home or hospital birth: result of the Ontario choice of birthplace survey. Midwifery 2017;30:7. Available from: http://www.ncbi.nlm.nih.gov/pubmed/24613009*

[26] Ndiyo, N. A. (2016). *Foundations of Statistics and Computer Applications*. Calabar: Wusen Publishers.

[27] Newberg, A.B., & Newberg, S.K. (2018). .A neuropsychological perspective on spiritual development. In E.C. Roehlkepartain, P.E. King, L. Wagener, & P.L. Benson (Eds.), *The Handbook of Spiritual Development in Childhood and Adolescence* (pp. 183-196). Thousand Oaks, CA: Sage Publications.

[28] Nigeria Demographic and Health Survey, NDHS, 2023). Demographic and Health Survey Joint publication of ICF International. http://dhsprogram.com/pubs/pdf/FR293/FR293.pdf .

[29] Ogunyomi, N. E. & Ndikom, S. A. (2016). Perceived factors influencing the utilisation of traditional birth attendants' services in Akinyele Local Government, Ibadan, Nigeria. Paper prepared for the Fifth Annual African Studies Workshop "Cross Currents in Africa University of Pennsylvania, Philadelphia, PA.

[30] Ojo, F. T. (2022). Family engagement in religious activities and students' interest in cult activities. Unpublished M.Ed Thesis, Lagos State University Lagos.

[31] Ojong, B. E. (2019). The influence of religious indoctrination in the home and anti-social behaviour among class seven pupils in South West Province of the Republic of Cameroon. Unpublished Ph.D Thesis,

[32] Omer, S., Zakar, R., Zakar, M.Z. et al. (2021). The influence of social and cultural practices on maternal mortality: a qualitative study from South Punjab, Pakistan. Reprod Health 18,97 https://doi.org/10.1186/s12978-021-01151-6.

[33] Orokpo, M. O, Sunday, U. B. & Neji, G. N. (2024). Institutional Variables and School Security Effectiveness for Sustainanle Peace in Calabar Education Zone, Cross River State:

Implication for Educational Measurement and Evaluation. *Knowledge Review, 40*(1), 206-220.

[34] Orokpo, M. O. & Sunday, U. B. (2023). Prevalence of Health Challenges among the Aged in Southern Cross River State, Nigeria: Implications for Educational Research in Counselling services. *Prestige Journal of Education, 6*(2), 198-209.

[35] Pervin, F. & Pearline, L. I., (2024). *Class context and family relations: A cross-national study.* Boston: Little Brown.

[36] Reuben, E. G., & Edu, A. M. A. (2020). Socioeconomic Determinants of Women's Choice of Place of Delivery in Cross River State, Nigeria. *European Scientific Journal, ESJ*. Retrieved from https://eujournal.org/index.php/esj/article/view/12874

[37] Santana, F. A., Lahm, J. V., & Santos, R. P. D. (2015). Fatores que influenciam a gestante na escolha do tipo de parto. *Revista Da Faculdade De Ciências Médicas De Sorocaba*, 17(3), 123–127.

[38] Shorter, R. L. (2016). Family Environment Variables and Adjustment Outcomes in Appalachian Youth: The Moderating Role of Participation in Extracurricular Activities. *Published in final edited form.*

[39] Society for Family Health (SFH) (2023). *Statement on the second meeting of the International Health Regulations with Emergency Committee regarding maternal mortality in Nigeria.*

[40] Suitor, J. J., Plikuhn, K., Gilligan, M., & Powers, K., (2020). Care-giving, perceptions of maternal favoritism, and tension among siblings. *The Gerontologist, 54(4)*, 580–588.

[41] Sunday, U. B., Beshel, C. & Chidozie, V. N. (2025). Binary Dichotomization of Educational and Non-Educational Variables using Coefficient of Association (A) Matrix with Secondary School Students in Calabar South Local Government Area, Cross River State, Nigeria. *International Journal of Education, Management Sciences and Professional Studies, 1*(2), 190-203.

[42] Sunday, U. B., Obambon, A. A. & Udemba, E. C (2023). Application of Coefficient of Statistical Association (A) Tabulation in Dichotomized Non-Variable and Educational Attributes in Calabar South Local Government Area, Cross River State, Nigeria. *African International Institute of Business Valuers and Management (AFRIVAM), 4*(5), 67-79.

[43] Sunday, U. B. & Etuk, I. S. (2024). Statistical Analysis of Marital Adjustment: An Evaluation of Sustainable Peace among Upper Basic Education (UBE) Teachers in Akwa Ibom State, Nigeria. *Journal of Qualitative Education, 16*(1), 175-196.

[44] Sunday, U. B. & Neji, G. N. (2023). Incidence of Cyberbullying Behaviour among Students of Tertiary Institutions in Akwa Ibom State, Nigeria. *Prestige Journal of Education,6*(2), 151-167.

[45] Sunday, U. B. (2025). Assessment of fair testing practices among basic education teachers in South-South States of Nigeria. *International Journal of Contemporary Social Science Education (IJCSSE), 6*(1), 141-156.

[46] Sunday, U. B. (2025). Comparative Analysis of Selected Post Hoc Tests on Students' Class Level, Age and Mathematics Achievement in Calabar Education Zone of Cross River State, Nigeria. *Journal of Educational Review, 16*(1), 27-38.

[47] Ugal, R. F., Ugabi, M. M. & Awah, W. E. (2022). The effects of cost of care and maternal health outcome of traditional birth attendants among urban dwellers of Obudu.

[48] UNAID (2016). Review of data from people living with HIV stigma index surveys conducted in more than 65 countries.

[49] UNFPA (2016) Maternal health fact sheet. https://www.unfpa.org/maternal-health.

[50] World Health Organisation (2019). World Health Statistics 2019: A field survey summary from Nigerian urban and rural communities.www.worldhealthorgnisation.org.

[51] World Health Organization (2022). *Making Pregnancy Safer: The critical role of the skilled attendant: A Joint Statement by WHO, ICM and FIGO.* Nigeria: World Health Organization; p. 71