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Factors Influencing the Choice of Delivery Setting Among Nursing Mothers Attending Primary Health Care Centre in Ilishan, Ogun State, Nigeria

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Abstract:- The success of child birth after the period of pregnancy is associated with the place of delivery setting. It is recommended that pregnant women deliver their babies at an approved setting and supervised by a qualified midwife or personnel. However, pregnant women are usually influenced by several factors which influence their choice of delivery setting. This often leads to various degrees of delivery outcomes which could either be good or bad.

The aim of the study is to investigate the factors influencing the choice of delivery setting among nursing mothers attending primary health care center in ilishan Remo, Ogun state. Descriptive cross-sectional design was adopted for this study and convenient sampling technique was used to select 187 nursing mothers attending primary healthcare center in Ilishan, Ikenne Local government of Ogun State. The researcher designed questionnaire with 30 close ended questions divided into four sections which was used to collect data from the residents. Ethical clearance to conduct this study was obtained from Babcock University Ethical Review Committee and informed consent was obtained from participants. Data collected was analyzed using Statistical Package for Social Sciences (SPSS - Version 25).

The result from the study revealed that the following socio-demographic variables significantly influence choice of delivery; Age (p=0.000), ethnic group (p=0.000), Marital Status (p=0.000), Religion (p=0.000), Educational level (p=0.000). The study also showed that majority (72.2%) of the respondents indicated that their husbands have positive influence on their choice of place of delivery. Furthermore, the findings reveals that socio cultural factors has an influence on choice of delivery of nursing mother ($R = .984$; $R^2 = .968$; $F(1,6722)$; $Sig. = 0.000$).

The study concluded that socio-demographic variable such as age, marital status, educational level, ethnic group influenced the choice of delivery setting. Also the study found that socio-cultural factors and economic factors influenced the choice delivery setting among nursing mothers and women of reproductive age in Ilishan remo, Ogun State.

Also, the study recommends adequate sensitization program is needed to help the women of reproductive age in Ilishan concerning the benefit of child birth in a hospital setting or primary healthcare. Community leaders, church and Muslim leaders should be encouraged to enlighten their followers on the need to always chose the hospital instead of going to places not recommended or adequate enough for delivery.

Keywords:- *Delivery Setting, Nursing Mothers, Socio-Cultural and Socio-Economic Factors.*

I. INTRODUCTION

➢ *Background to the Study*

The joy of every pregnant woman as well as her family is when the pregnant woman delivers her baby successfully without any arising complications that can put the both lives in danger. However, for a delivery to be successful without any complication from the stages of labor, the delivery setting which is the place of birth should be highly considered as it has a great influence on outcome of the pregnancy. Also, the rates at which birth-related complications occur vary around the globe, with some parts recording far more maternal deaths than others as a result of the delivery setting of choice.

The place of delivery has a major influence on the outcome of pregnancy, labor and childbirth hence, it cannot be overemphasized. The right decision concerning the place of delivery among women is very important. Akoto (2013) opined that the place of birth can either be hospital-based which is under the care of a professional and competent maternal and child health personnel, or non-hospital-based undertaken by unskilled individual, traditional birth attendant or branded quack. Non-hospital-based delivery may take place at home, religious centers or other designated places.

Globally, Hospital-based deliveries have increased from an average of 51% in 2000 to more than 76% in 2015 (Nkhana-Salimu & Abdulsalam-Anibilowo, 2017). But, this is still low. In Eastern Europe and Central Asia, 97% of births are institutional. Similarly, there is high population of institutional based deliveries among women in Western Europe with a record of 99%, Latin America and the Caribbean 94% and in East Asia and the Pacific, 90% of births occur in health facilities (UNFPA, 2010). In contrast, in sub-Saharan Africa, only 56% births occur in a health facility, with an urban-rural gap of over 30 percentage points (78% and 46% respectively) (Montagu D, Yamey G, Visconti A, Harding A, Yoong J 2011).

Hospital-based deliveries are low across Africa. In fact, the proportion of health facility delivery between 1995 and 2011 were in the range of 5-15 % (Kitui, Lewis & Davey, 2013; Katung et al., Davey, 2013). Approximately 800 women still die from preventable causes related to pregnancy and childbirth every day and 99% of all maternal deaths occur in Africa. Somaliland is one of the worst maternal mortality rate in the world: 1,000 - 1,400 maternal deaths per 100,000 live births with an infant mortality rate is 73 per 1,000 births while the under-five mortality is approximately 117/1,000 (UNICEF, 2014).

Anecdotal review and analysis of 2007 to 2009 figures for Ogun State showed a State level Maternal Mortality Ratio of 179 per 100,000 live births and Infant Mortality Ratio, Perinatal Mortality Ratio and Under-5 Mortality Ratio of 69/1000, 21/1000 and 27/1000 live births respectively. Though most deliveries take place at health facilities (30.7% public and 44% private), the percentage of Traditional Birth Attendants (TBA). Home delivery is still significant (24.8%) and in most situations, cases are often referred from this source to health facilities when it is already too late (Rabiatu sager et al 2019).

Nevertheless, several factors have been reported to directly or indirectly influence the choice of delivery setting among nursing mothers. Among this factors includes: socio-economic factors such as income, job, and educational level. Socio-demographic factors such as age, parity and sociocultural factors such as culture, religion and beliefs have all been seen as great influence to why some women will decide to give birth at home rather than go to the hospital.

However, despite the numerous studies globally especially in western world, there is dearth in literature on the factors influencing place of birth in Ogun state, Nigeria.

The choice of birth setting has been identified to be a major contributor to the surge in maternal mortality rate especially in African countries like Nigeria where there is huge health infrastructural gap. Hence, this research seeks to identify the factors that informs and influences the choice of delivery setting among nursing mothers in the primary health care center in ilishan, Ogun state.

➢ *Significant of the study*

The findings of this study may have both theoretical and practical implications for the future of suitability of place of delivery in Ilishan, Ogun State. Theoretically, the study may contribute to the advancement of knowledge about factors influencing choice of delivery setting in Ilishan Primary health centre, Ogun State. The study might also have practical significance in that, it may assist in determining the level of utilization of skilled birth attendants and Traditional Birth Attendants at birth. The findings may be of immediate benefit to the Ministry of Health in the formulation of future public health policies aimed at integrating Traditional Birth Attendants in the health system as agents of change to enhance places of delivery. Similarly, results of this study may enlighten the public especially mothers and spouses on the importance of considering a suitable and safe place of delivery. In addition, this can lead to appropriate interventions by non-governmental organizations and other key stakeholders that have established or intend to establish reproductive health programs. The study may also form a base on which others can develop their studies based on the gaps identified.

➢ *Objectives of the study*

- *Broad objective*

The broad objective of the study is to investigate the factors influencing the choice of delivery setting among nursing mothers attending primary health care center in ilishan Remo, Ogun state.

- *The specific objectives*

The specific objectives of this study are to:

i. identify the demographic factors that influence the choice of delivery setting among nursing primary mothers attending health care center in Ilishan Remo, Ogun State.
ii. Assess the spousal influence on the choice of delivery setting among nursing mothers attending primary health care center in Ilishan Remo, Ogun Sate.
iii. Examine the influence of socio cultural factors on the choice of delivery setting among nursing mothers attending primary healthcare center in ilishan Remo, Ogun state.
iv. Assess the influence of socio economic factors on choice of delivery setting among nursing mothers attending Primary health care center in Ilishan Remo, Ogun State.
v. Assess the delivery setting among the nursing mothers attending Primary health care center in Ilishan Remo, Ogun State.

➢ *Research Hypotheses*

The hypotheses to be tested in this study are:

H1: there is no significant relationship between the demographic factors and the choice of delivery setting among nursing mothers.
H2: There is no significant relationship between the socio-economic factors and the choice of delivery setting among nursing mothers.
H3: There is no significant relationship between the spousal influence and the choice of delivery setting among nursing mothers

II. LITERATURE REVIEW

This chapter involves the existing literatures by other researchers which are in line in the area of research that was conducted. This chapter is also about evaluative report of information which is found in the literature related to this research project. The review will describe, summarize, evaluate, and clarify the literature. This chapter consists of the conceptual framework which is talking about different definitions, concept as regards this research topic. The theoretical frame work which is talking about different theories as regards this research, the empirical framework which is about the different conclusions drawn by the researchers concerning this study and summary of this review.

This chapter contains the review of literature relevant to the present study that has been done. Sources of this review include journals, electronic and printed sources, categorized as follows;

A. Socio Demographic factors influencing women's choice of place of delivery

Different socio-demographic factors influence women's choice of place of delivery. They include:

- *Age Factor*

Age is frequently seen as a proxy for accumulated experience, including the use of health services. The relationship between a woman's age and the use of medical services has been established to be inconsistent across studies, owning to greater exposure to and knowledge of modern healthcare, younger women may make more use of modern healthcare facilities than the older ones. Several studies indicated that older women are less likely to use skilled delivery assistance (Akpotor, 2019). In addition, Yoseph & Abebe (2020), in their study established that mothers below 40 years were most likely to use institutional delivery services than older mothers. This is possible due to the fact that younger women had no previous experiences in giving births and might have great fear of complications relating to pregnancy, labour and child birth. On the other hand, older mothers have had repeated birth experiences thus, they might not need to be assisted by skilled health professionals. This is consistent with Ganle et al., (2019), which suggest that pregnant women between the ages of 20 and 34 years were more likely to use a health facility for delivery.

- *Parity and birth order factor*

Parity is defined as the number of times that a woman has given birth to a fetus with a gestational age of 24 weeks or more (Ononokpono & Odimegwu, 2014). Mukhtar, Nelofar, and Quansar (2018) in their study disclosed a significant relationship between parity and use of health care facility for the childbirth. High parity was a predisposing factor for home delivery among the study participants of the study. Similarly various studies showed that institutional delivery is much more common for first childbirths than for subsequent births. These findings were consistent with the results of a study conducted in rural areas of Tamil Nadu, India by Ravi et al, (2015). High parity can draw on their maternity experiences and may not feel the need to receive professional care if previous delivery were uncomplicated. The first birth is known to be more difficult and the woman has no previous experience of delivery. Often a high value is placed on the first pregnancy and in some settings, the woman's natal family helps her get the best care possible.

Similarly, Egharevba and Pharr (2017) resolved that having more children have been seen to be associated with a decreased likelihood of using the healthcare facility. This may be linked with more experience and confidence with childbirth by some women. Women and families with more children may also be less likely to be able to afford healthcare facility delivery due to other financial commitment of their large families.

- *Educational level factor*

According to Egharevba and Pharr (2017), educated women are more likely to choose hospitals for birth as revealed in previous studies. Ayamolowo et al., (2020) in a study, emphasized that improved access to healthcare services and utilization required a higher level of maternal education. Similarly, NDHS (2018) reported that maternal education has a strong effect on facility delivery as only 14% of births to mothers with no education were delivered in a health facility as compared to the 88% of births in the health facility to mothers with more than a secondary education. In addition, Mukhtar, Nelofar, and Quansar (2018) noted that, women with no educational background are most likely to deliver at home and respondents with higher level of education are most likely to utilize the healthcare delivery services.

Agbo et al, (2013) opines that education has a positive role it plays on women of reproductive age. The researcher asserts that educated mothers are most likely to use hospital facilities for their deliveries other than the uneducated. Also, the findings of Alemayehu & Sendo (2016), Ravi & Kulasekaran (2015) reported that the educational status of mothers influences the choice of place of delivery. However, higher level of education among females can explain the better awareness of the need for healthcare during birth of the child and utilization of healthcare delivery utilization. When women are more educated they can identify and choose the kind of service they want through considerable empowerment to make decisions, and a greater level of awareness of maternal health issues (Mwaniki et al., 2012). A progressive drop in home births was detected when moving from primary level to the tertiary level with a corresponding increase in births at health facilities, illustrated by tertiary level educated mothers recording only 25% home deliveries as opposed to 75% facility births (Yidana & Mustapha, 2014).

Also, the husband's educational status is also a significant factor related with the use of health facilities during births. Mother's whose husbands had at least primary school education were nearly 4 times more likely to utilize institutional delivery services. This finding is in agreement with studies done in different places in Ethiopia and Nigeria. The possible explanation for this evidence could be, for

example, literate husbands are more likely to discuss with their wives on issues including pregnancy and labor and reach at a consensus, and may give their wives freedom to decide the place of delivery and may even be the one who insist and support the mother to have a health facility delivery (Yoseph et al., 2020). Many women from Nigeria's Northern region are uneducated, which may contribute to the increased maternal mortality rate experienced in this region (Ariyo et al., 2017). In the North West and North East regions 69% and 64% of women respectively, have little or no education compared to 8% and 5% in South West and South East regions respectively.

- *Religion factor*

Christian women (90, 86%) were more likely to use supervised delivery services as compared with those who profess Islamic (76, 54%) and traditional (18, 51%) faith. The findings are consistent with Muhammad and Tepanata (2018), in his study they found out that religion is a significant determinant of the place of delivery. Christian pregnant women were found to have much higher odds of giving births in a facility than their Muslim counterparts.

According to Al-Mujtaba, Cornelius, Hadiza, Okundaye, & Olusegun, (2016), low rates of maternal health service utilization in African especially Nigeria have been linked to women's socioeconomic dependency on men, and unequal gender relations arising from religious and cultural influences. Spirituality and faith-based practices play an integral role in coping with psychological difficulties in illness, health-seeking behaviors and child birth . Religious influences may therefore explain some of the disparities in uptake of available healthcare services within or between some populations (Hussen, Tsegaye, Argaw, Andes, & Gilliard, 2014).

As of 2015, Nigeria has a population of over 182 million people (Population Reference Bureau, 2015). The country has evolved into a Christian-dominated South (with 84.4% Christians) and a Muslim-dominated North (with 81.8% Muslims), while the North-Central middle belt has a more equitable distribution of the major religious faiths (42.0% Muslims, 56.0% Christians, and 2% other religions) (Alemayehu and Sendo (2016). Healthcare-seeking behaviour with respect to antenatal care and choice of place of delivery differs greatly between the Muslim-dominated North and the Christian-dominated South. The proportion of pregnant women attending the WHO-recommended antenatal visits is highest in the South (76.8–89.0%), followed by North-Central (66.0–76.0%), and least in the North (35.5–51.9%) [National Bureau of Statistics]. Al-Mujtaba, et al. (2016) contend that most of the core Muslims in the north don't give their spouse the privileged to obtain skilled medical attention especially during child delivery.

Religious leaders also influence women's choice on utilization of maternal health services (Esienumoh, Akpabio & Etowa, 2016). Some Christian religious leaders refuse christening ceremonies for children not delivered in the church/faith-based health facilities, while others urge their followers to have faith in God for divine interventions to deliver without medical interference despite indications of maternal or infant risk (Ugwu & de Kok, 2015). The religious beliefs that evil forces, spiritual attacks, and the couple's sins may complicate the delivery process such that some pregnant women even abscond from the hospital to deliver in churches (Fabusiwa et al., 2016)

- *Place of Residence*

Residence in resource-poor settings in rural areas is strongly associated with poor maternal heath indicators. Place of residence of a woman, whether rural or urban could affect the place of delivery (Mahama, 2019). Place of residence is also a well –recognized factor that can affect a woman's use of health care service. Living in urban cities increases the probability of pregnant women using skilled birth attendants at delivery (Akpotor, 2019). Previous studies show that the utilization of facility-based delivery is usually affected by socio-cultural norms and several other factors including cost, long-distance, accessibility, availability, and quality of the services (Yaya, Bishwajit, Uthman, & Amouzou, 2018). Place of residence and distance of residence to health services are cardinal because the lack of readily available means of transport bars some women from visiting health facilities even during childbirth (Muhammad and Tepanata 2018). The study conducted by Roro et al., (2014) indicated the lack of means of transport related to poor roads and unavailability of ambulance services was a contributing reason for home delivery. However, a well organized emergency medical facilities form the foundation of properly functioning maternal referral systems. A supportive network of maternity referral systems is required for Ghana's lower level health facilities like district hospitals and CHPS compounds for them to function more effectively and efficiently (Awoonor-Williams et al., 2015).

Availability of good road, appropriate transportation, information, and communications technologies are factors which determine the efficiency of maternal referral systems; these factors are deficient in many parts of Nigeria. Rural areas have the most inefficient maternal referral systems because of the limited access to emergency obstetric care as a result of scarce resources, long distances to health facilities, and poor or lack of transportation and good road networks (Gething et al., 2012).

B. Socio-Cultural Influence:

Ethnicity and religion are often considered as markers of cultural background and are thought to influence beliefs, norms and values in relation to childbirth, use of health facility service and women's status. Besides, certain ethnic or religious groups may be discriminated against by staff, making them less likely to use services (Alemayehu and Sendo (2016). Adatara, Strumpher, Ricks, and Mwini-Nyaledzigbor (2018) explained that women in some cultures may avoid facility delivery due to cultural requirements and seclusion in the household during this time of "pollution" or because of specific requirements around delivery position, warmth, and handling of the placenta.

Socio-cultural factors impact perceptions of health and illness, health beliefs and practices, health-seeking behaviours, and decision making on where delivery should

take place (Esienumoh, Akpabio, & Etowa, 2016). Since cultural practices and views affect different aspects of life for instance social relationships and community functioning other than health, sociocultural factors/practices should not be overlooked if a reduction in maternal mortality rate is to be achieved (Ariyo, Ozodiegwu & Doctor, 2017; Lang-Balde & Amerson, 2018). Some of the sociocultural factors that influence health-seeking behaviour and choices or lead to women's social exclusion include male dominance and gender discrimination/inequality (Ariyo et al., 2017; Azuh, Azuh & Iweala, 2017).

Male dominance or gender discrimination may be displayed in the form of preference for a male child and/or large family size (Lang-Balde & Amerson, 2018). The desire for a large family leads to high parity and increased predisposition to maternal morbidity and mortality. In Nigeria, specifically, preference for a male child is a shared practice that illuminates gender inequalities across the different ethnic groups (Osezua, 2016) and women continue to bear children until a male heir is born (Mberu, 2017).

Cultural practices that compromise nutritional health, such as protein and non-protein food restrictions and eating limits or food taboos in pregnancy common among diverse ethnic groups in Nigeria (Odekunle, 2016). Childbirth practices, such as inserting herbs into the birth canal for cleansing or use of concoctions for labour induction, also exist (Shamaki & Buang, 2015). These herbal concoctions may increase the risk of hemorrhage if used to hasten labour without full cervical dilatation.

C. Socio Economic Influence

In a study by Osezua (2016) it was found that a woman's occupation determines her wealth status that has a direct relationship with the place she delivers her baby. Birth to women in the highest quintile of the wealth index are more likely to be delivered in a health facility, while those in the lowest quintile are most likely delivered at home since they cannot afford health unit services. Wealthier women are probable to attend antenatal care services and receive information on services available and thus deliver in a health unit. Mothers who attend antenatal care four or more times are more likely to deliver at a health facility than their counterparts who do not attend antenatal care (Odekunle, 2016).

Studies have shown that women who are formally employed are more likely to give birth in health facilities while others indicate that, farming women are less likely to have skilled attendance at delivery than women in other occupations (Mberu, 2017; Lang-Balde & Amerson, 2018). This may be as a result of limited financial means and health services in rural areas. Furthermore, Esienumoh, Akpabio, and Etowa, (2016) asserts that, the price of arranging emergency transportation can be very expensive. These costs include the price of hiring a private vehicle and fuel expenses. The opportunity cost, or loss of productive time of the person accompanying the sick woman, can also pose an obstacle. Osezua (2016) found that it was mainly economic disparities that influenced choice of delivery setting. He noted that mothers deliver at home because they are not able to pay the fees charged at health units. In a Nigerian study, 41% of the mothers who did not deliver in hospital explained that they could not afford the hospital bill, and 31% said they had inadequate transportation possibilities (Awoonor-Williams et al., 2015).

Muhammad and Tepanata (2018) established that cost has often been shown to be a barrier to service use and also influences the source from which care is sought. Socioeconomic indicators such as urban residence, household living conditions, household income, and occupational status have also proven to be strong predictors of a woman's likelihood of using reproductive health services. Therefore, women who are professionals are more likely to use the services of skilled birth attendants as compared to nonprofessionals.

D. Delivery Setting Globally and Africa

Globally about 830 women die every day due to preventable pregnancy related causes, 99% of this occurring in developing countries (Who, 2015). The maternal mortality ratios (MMR) show huge discrepancies between the developed (16 per 100,000 live births) and the developing nations (240 per 100,000 live births), and more than half (56%) of these maternal deaths occur in the sub-Saharan Africa. Muhammad and Tepanata (2018) stated that the maternal mortality shows grater discrepancy within sub-Saharan countries. The large number of maternal deaths, especially in developing countries, has been attributed to the low levels of maternal health care seeking behavior, as evidenced by low proportions of antenatal care utilization and extremely low deliveries attended by a skilled-person. Despite the encouraging trends in antenatal care service utilization coverage, delivery in health facilities is still challenging in developing countries. Several studies have presented that poor availability of resources and services as the major cause of underutilization of maternal health services. Daniel. Diana, and Mark, (2014) posits that in some settings, even if the services are readily available, these facilities are not always available to women of some socio-economic classes (Mberu, 2017). In Sri Lanka, maternal mortality has followed a downward trend from 2 100 per 100 000 live births in 1981 to 240 in 1995 (Osezua, 2016). This decline is attributed mainly to high rate of institutional deliveries (90%) attended by midwives. A similar situation is also obtained in Sweden where low maternal mortality is attained through the training of community midwives to conduct delivery assistance to poor women and offering them the option of having a safe and inexpensive home delivery.

In Africa maternal mortality is estimated at 251, 000 women who die annually from pregnancy and child birth related conditions. For every maternal death there are at least thirty women who suffer short or long term disabilities. Most maternal deaths occur during child birth and in the immediate postpartum period. To avert this situation, all women should have access to basic maternity care during pregnancy and delivery, which includes (Akpotor 2019). In many developing countries large proportion of deliveries take place outside the

formal health care system often assisted by a relative or Traditional Birth Attendant.

Lang-Baldé and Amerson, (2018) established that developing countries shows a large proportion of deliveries without skilled attendance and how they contribute to high maternal mortality and morbidity. A study in South Eastern Nigeria shows a total of 52% deliveries outside health institutions while 47.1% delivered with health institutions. Twenty seven percent (27%) of the women had no formal education, 37.4% had primary education, 13.5% had secondary education and 21.5% had post-secondary education. Choice of place of delivery may be influenced by educational level and place of residence. Another study in rural Nigerian community reveals the same. Among the 225 randomly selected mothers, private maternity centre was the most preferred place of delivery (37.3%), then traditional birth attendant (25.5%), and government facility (15.7%).

E. Common Delivery Setting in Nigeria

The different delivery location options available to women in Nigeria (and other developing countries) include institutional delivery – delivery in a health facility such as teaching hospital, state hospital, general hospital, primary healthcare center, private owned hospitals and non-institutional delivery – delivery at home, church, traditional birth attendant's (TBAs) home or at make shift private clinics owned by poorly trained or untrained people. Different studies have reported prevalence of non-institutional deliveries of 39%–61% (Ishola, Owolabi & Filippi, 2017). Determinants of choices of childbirth locations by women have been explored by numerous studies. Factors associated with home birth among women in sub-Saharan Africa include poor access to health facilities, cost of healthcare services, attitude of healthcare workers, educational level of the women, husband's educational level, parity, lack of privacy, fear of surgery, cultural practices, rural residence, low economic status, religious beliefs and lack of female autonomy (Obidike, & Eroh, 2020).

F. Neonatal Death in relation to choice of delivery setting

Nigeria has one of the highest maternal and neonatal mortality rates in the world with over 40,000 maternal deaths occurring yearly. The lifetime risk of dying in pregnancy and childbirth is 1 in every 22 women which is higher than almost anywhere else in Africa or in the world. Despite Nigeria's level of economic development, she has not recorded a commensurate rapid progress in saving the lives of women and newborns from preventable deaths during pregnancy and delivery (WHO, 2015). The birth outcome and quality of life of neonates after delivery are often dependent on the choice delivery setting. It has been found that, women who deliver in health facilities with access to skilled birth attendants have better outcome with reduced risk of maternal and neonatal morbidity and mortality compared to those who deliver outside the health facilities (Al-Mujtaba et al., 2016). It is sad to note that more than 50% of births in developing countries like Nigeria are reported to take place at home. According to Johnson, Obidike, and Eroh, (2020) Majority of maternal and neonatal mortalities are associated with preference of delivery in places other than the hospital. Many of these deaths can be prevented with access to health facility and skilled birth attendants (Odekunle, 2016).

G. Maternal Mortality in relation to choice of delivery setting

World Health Organization (2012) defined maternal mortality as the death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related or aggravated by the pregnancy or its management but not from accidental or incidental cause. Even though, the United Nations International Children Emergency Funds, reported that from 1990 to 2015, the global maternal mortality ratio (MMR) declined by 44 % from 385 death to 216 deaths per 100,000 live birth, according to UN inter-agency estimates. This translates into an average annual rate of reduction of 2.3%. While impressive, this is less than the "Goal 3: Ensure healthy lives and promote well-being for all at all ages" in the new Sustainable Development Goal (SDGs) agenda through 2030 (Maternal Health Task Force).

WHO & UN, (2019) reports that in Nigeria, maternal mortality is bewildering. The country account for about 2.64% of the world's population is also the country where nearly 20% of the global maternal deaths happen. The Nigeria Demographic and Health Survey (NDHS, 2008), puts the statistics of maternal mortality ratio in Nigeria at between 704 per 100,000 or 1500 per 100,000 live births depending on the region. The north has the highest ratio. It is obvious that maternal health as well as death has a huge impact on the baby, the health and wellbeing of the family, the community and the society at large. Maternal deaths are the most extreme consequence of poor maternal health. However, due to inadequate care during pregnancy, delivery or the first crucial hours after birth, more than 30 million women in developing regions suffer from serious diseases and disabilities (Akpotor, 2019). In fact, world records indicate that one-third of the global maternal deaths occurred in Nigeria and India (Trends in Maternal Mortality, 2015).

Similarly, According to the World Health Organization (WHO), Nigeria has the second highest number of annual maternal deaths in the world in 2010 and contributed 14% of all maternal deaths globally (Sageer, Kongnyuy, & Adebimpe, 2019). Nigeria has a maternal mortality ratio of about 814 per 100,000 live births as at 2015 (WHO, 2015). Within Nigeria, Maternal Mortality Rate (MMR) figures differs between geo-political zones, with southwestern Nigeria having one of the lowest rates of preventable Maternal and Perinatal deaths according to the National Demographic and Health Survey (NDHS) data (Sageer, Kongnyuy, & Adebimpe, 2019).

All these can be attributed to how the delivery setting greatly has an effect on the outcome of pregnancy as well as delivery comparing the statistics gotten from deliveries at home to those in the health facilities.

III. RESEARCH METHODOLOGY

A. Study Design

In this study, descriptive cross-sectional survey research design was adopted to investigate factors influencing the choice of delivery setting among nursing mothers in Primary healthcare center in ilishan Remo, Ogun State. The design was suitable for this study because it is economical, simple, and clear. It will also help to identify the problems associated with this study, make comparison, evaluate and collect information in the study.

B. Target Population

The target population is nursing mothers attending the infant welfare clinic in primary healthcare, center, ilishan Remo, Ogun State. The target population for this study consists of 295 nursing mothers that was selected randomly within a span of two months from the primary healthcare center, ilishan Remo, Ogun state.

C. Inclusion Criteria

All nursing mothers attending the infant welfare clinic at the primary healthcare centre ilishan, Ogun State that are willing to participate in this research study.

D. Exclusion Criteria

These includes women that have not given birth prior to this study and nursing mothers that are not willing to participate in this research study

E. Sample Size Determination and sampling technique

The study involved 295 nursing mothers attending infant welfare clinic that were selected from ilishan Primary health centre, Ogun state at the time of the study.

The sample size was determined using the use of Taro Yamane's method:

The total population was 295

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

Where N = Population size, e = margin of error which is usually 0.05 and n= sample size. This is more objective and defendable.

$$n = \frac{295}{1+295 \times (0.05)2}$$

$$n = \frac{295}{1+0.7375} = \frac{295}{1.7375}$$

N =169.78 approximately 170

To take care of the attrition, 10% of the calculated sample size was added to give a new sample of 187; Therefore, 187 nursing mothers attending primary healthcare center in ilishan Remo, Ogun state were selected for the study.

F. Method of Data Collection

- *Development of Instrument and Methods of Data Collection*

Quantitative data was collected using a semi-structured questionnaire, which was self-administered. The instrument is designed after a review of the literature. Each respondent was given a maximum of 40 minutes to complete the questionnaire after which it was collected. This is to ensure their responses are genuine and enough time is given to understand the research topic.

Structured questionnaire consisting of 30 closed ended questions in 3 sections was used in gathering data for this study.

SECTION A: This is focused on demographic data which includes age, religion, ethnicity, and marital status.

SECTION B: This gathered data on sociocultural factor that influence the choice of delivery setting which includes culture, family and society.

SECTION C: This gathered data on socioeconomic factor that influence the choice of delivery setting which includes financial level, job etc.

SECTION D: This gathered data on spousal influence on the choice of delivery setting.

G. Validity and Reliability

- *Validity*

This was done using the following steps:

A draft of the questionnaire was constructed by consulting relevant literature. The draft instrument undergoes an independent review from peers and experts in the field of nursing for face validity. Supervisor's review was also used to perfect the instrument and content validity. Special care was taken to monitor the quality of data collected through supervision during collection of data.

- *Reliability of the Instrument*

Reliability is the accuracy or precision of a research measuring instrument. The questionnaire was reviewed for quality and consistency. It was pre-tested (by 10%, of intended respondents at ilishan ward 2) to ascertain suitability and appropriateness to field situations determine whether the questions were clear and simple enough for participants' comprehension and determine the trend in the response of the participants and the amount of time it took to administer the questionnaire. At the end of the exercise, questions that were not easily understood was reframed, those that were found to be irrelevant were removed and adequate spaces was provided for responses.

The pretest questions were analyzed using the SPSS version 25. The reliability was calculated using the Alpha Cronbach's test.

H. Data collection procedure

A letter of introduction was obtained from the school of nursing science, Babcock University. It was duly signed and taken to the primary healthcare centre in ilishan Remo, to obtain approval to carry on with the study. Participants were informed about the purpose, course and benefits of participating in the study. Due consent was obtained and respondent were given questionnaires to fill. The researcher awaited the participants while the questionnaire was filled to ensure correct filling before it was retrieved. Several repeated visits were made until desired sample size was attained.

I. Data analysis procedure

Data was collected, coded and analyzed by a statistician, using descriptive statistics of frequency and simple percentage. In addition, the null hypothesis in the study was tested, using Chi square, at 0.05 level of significance.

J. Ethical Consideration

Ethical approval was obtained from the Babcock University Health Research Ethics Committee BUHREC) Ilishan Remo for approval and to administer the questionnaire. A letter of introduction and permission from the school was taken to the research and ethical committee of the primary health Centre, Ilishan and an approval to conduct the study was obtained. The respondents' consent were obtained after provision of adequate, clear and complete information about what the study entails.

A written informed consent was obtained from each participant. Ethical standard principle were adhered to in order to ensure confidentiality. Names of the respondent and any other personal identifiers will not be written on the copies of questionnaires. Participants were informed that participation is voluntary and that data collected is mainly for research purposes. Anonymity and confidentiality of responses was ensured.

IV. DATA ANALYSIS AND RESULTS

One hundred and eighty-seven (187) copies of questionnaire were distributed and returned and validated for analysis. The chapter is presented under the following sub-headings:

Table 4.1 Respondent's demographics data

N=187			
DEMOGRAPHIC	**CATEGORY**	**FREQUENCY (f)**	**PERCENTAGE (%)**
AGE	15-24 years	68	36.4
	25-34 years	71	38.0
	35-49 years	33	17.6
	50 & above	15	8.0
Ethnicity	Yoruba	66	35.3
	Hausa	36	19.3
	Igbo	67	35.8
	Others	18	9.6
Marital status	single	29	15.5
	cohabiting	14	7.5
	married	121	64.7
	separated	10	5.3
	divorced	4	2.1
	widowed	9	4.8
Religion	Islam	70	37.4
	Christianity	91	48.7
	Traditional	20	10.7
	Others	6	3.2
Educational Level	Primary	40	21.4
	Secondary	62	33.2
	Tertiary	63	33.7
	None	22	11.8
Have you delivered before	Yes	165	88.2
	No	22	11.8
Number of children	1-2	81	43.3
	3-4	68	36.4
	5-6	23	12.3
	7-8	11	5.9
	9 & above	4	2.1
where did you deliver 1-2	PHC/hospital	93	49.7
	Church	20	10.7
	TBA	30	16.0
	my home	44	23.5

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Reasons for delivering outside the hospital	Cost of hospital bill	48	25.7
	Unfriendly attitude of health workers	12	6.4
	Unexpected labour	31	16.6
	Distance of health centre	16	8.6
	Failure to attend ANC	6	3.2
	No reason	74	39.6
Number of people in your household	2-4	77	41.2
	5-7	54	28.9
	8-9	48	25.7
	10 & above	8	4.3
Occupation	Civil servant	22	11.8
	Framer	21	11.2
	Trader	74	39.6
	House wife	70	37.4

The result from table 4.1 reveals that about 36.4% of the respondents are between the ages 15-24 years, about 35.8% of them are Igbo, about 64.7% are married, and about 48.7% are Christians. From the table also it can be seen that about 33.7% of the respondents had tertiary education, most (88.2%) of the respondents have had children before, about 43.3% of them have 1-2 children and majority (49.7%) of them had their children at a PHC/hospital.

Most of the respondents (39.6%) stated that they had no reason for delivering outside of a hospital, about 41.2% of them had a household made up of 2-4 members and most of the respondents (39.6%) are traders.

Table 4.2: What are the demographic factors that influence the choice of delivery setting place among nursing mothers attending primary healthcare center in Ilishan Remo, Ogun state?

Variables			
	X^2- Value	**d.f**	**p-value**
Age	38.579	9	0.000*
Ethnic group	58.637	9	0.000*
Marital Status	32.637	15	0.000
Religion	79.046	9	0.000
Educational level	63.010	9	0.000
Household members	15.048	9	0.090
Occupation	54.359	9	0.000

The result reveals that the following socio-demographic variables significantly influence choice of delivery; Age (p=0.000), ethnic group (p=0.000), Marital Status (p=0.000), Religion (p=0.000), Educational level (p=0.000) while Household members was insignificant (p=0.090).

Table 4.2.0 Socio-cultural factors

	N=187		
Items	**Category**	**Frequency**	**Percentage**
My family structure does not support me delivering in the hospital	True	64	34.2
	False	123	65.8
My culture supports delivery at the TBA centre	True	58	31.0
	False	129	69.0
The behavior of nurses has prevented me from giving birth in a hospital of health care centre	True	75	40.1
	False	112	59.9
Since I do not trust the nurses and doctors with my child I prefer to deliver outside the hospital	True	53	28.3
	False	134	71.7
My culture forbids women to be seen by male health workers, therefore I prefer to give birth in places outside the health facility	True	61	32.6
	False	126	67.4
I believe giving birth at home is better as it is common in my society	True	85	45.5
	False	102	54.5

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The table 4.2.0 above shows the responses of the respondents on the socio-cultural factors affecting choice of delivery setting. From the table it can be seen that most (65.8%) disaffirmed to the fact that their family structure does not support the use of hospital for delivery, about 69.0% also stated in disaffirmation that their culture supports the use of TBA centre for delivery, about 59.9% negated the idea that the behavior of nurses prevents her from using the hospital or PHC for delivery, also about 71.7% refused that the prefer to deliver outside of the hospital because they do not rust nurses and doctors with the birth of their child.

Furthermore, the table shows that 67.4% disaffirmed that their culture doesn't forbid women to be seen by male health workers, hence prompting them to use outside the health facility for delivery and about 54.5% stated that they do not believe giving birth at home is better

Table 4.3.0 Socio-Economic Factors

	N=187		
Items	**Category**	**Frequency F**	**Percentage %**
Level of monthly income	5000-10000	69	36.9
	11000-30000	51	27.3
	31000-50000	18	9.6
	51000-70000	9	4.8
	71000-90000	12	6.4
	90000& above	28	15.0
The high cost of transportation has hindered me from delivering my child in the hospital	Yes	84	44.9
	No	103	55.1
Because of my low economic status I feel intimidated therefore I prefer to deliver my child outside the hospital	Yes	96	51.3
	No	91	48.7
The total cost of delivery is too high therefore I can't afford it	Yes	113	60.4
	No	74	39.6
In your opinion is delivering in the hospital affordable	Yes	41	21.9
	No	146	78.1
Do you take part in decision making in terms of choice delivering setting in household matter	Yes	150	80.2
	No	37	19.8

The table 4.3 above shows the responses on the socio-economic factors affecting choices of delivery settings. The respondents in majority (36.9%) indicated they earned 5000-10000 naira monthly, about 55.1% stated that the high host of transportation to the hospital wasn't a hindering factor to them, about 51.3% stated that they feel intimidated due to their low economic status hence was a hindering factor to them, majority 60.4% stated that the high cost of delivery was a reason why they do not deliver in the hospital as they can't afford it, about 78.1% stated that the delivery in the hospital wasn't affordable to them and about 80.2% stated that they took part in decisions about delivery in their household. socio cultural factors influence the choice of delivery setting among nursing mothers attending primary healthcare center in ilishan Remo, Ogun state?

Table 4.3.1 Regression analysis of the socio cultural factors influencing the choice of delivery setting among nursing mothers attending primary healthcare center in ilishan Remo, Ogun state

Variables	***B***	***T***	***Sig***	***R***	***R^2***	**Std. Error of the Estimate**
(Constant)	.851	5.076	.000	.984[a]	. 968	.849
Socio cultural factors	.951	81.989	.000			
a. Dependent Variable: choice of delivery						

➢ *Interpretation*

The result in Table 4.3.1 reveals that the independent variable has a positive coefficient, which is an indication that socio cultural factors has an influence on choice of delivery of nursing mother ($R = .984$; $R^2 = .968$; $F(1,6722)$; $Sig. = 0.000$).

TABLE 4.4 Spousal influences as a factor

	N=187		
Items	**Category**	**Frequency F**	**Percentage %**
My husband often prevents me from delivering my baby in the hospital	True	68	36.4
	False	119	63.6
My husband and other relatives often insist on a particular delivery setting outside the hospital	True	56	29.9
	False	131	70.1
I as a woman do not get to have a say as to where my baby will be delivered	True	40	21.4
	False	147	78.6
I participate fully in making decision on where my baby should be delivered	True	126	67.4

	False	61	32.6
Due to my husband tradition I am prevented from giving birth in the hospital	True	65	34.8
	False	122	65.2
My husband occupation/schedule prevents me from giving birth in the hospital	True	28	15.0
	False	159	85.0
My husband does not approve giving birth in the hospital	True	38	20.3
	False	149	79.7

Table 4.4 above shows that about 63.6% of the respondents indicated that their husband don't prevent them from delivering their babies in the hospital, about 70.1% stated that their husbands and relatives doesn't insist they have their babies in a particular setting outside the hospital, about 21.4% stated that they do not have a s say where their baby will be delivered as a woman, and about 67.4% indicated that they fully participate in decisions about their choice of delivery setting. The table also shows that about 65.2% disaffirmed that their husband's tradition prevented them from giving birth in a hospital, about 85.0% disaffirmed likewise that their husbands schedule/occupation prevents them from going to the hospital from delivery and about 79.7% stated that their husband does approve giving birth in the hospital.

Table 4.4.1 Spousal influence

Value	Score	Frequency	Percent	Remark
Mean Score = 4.7±1.5	(≥6)	135	72.2	Positive
Min=1, Max=6	(<6)	52	27.8	Negative
Total		187	100.0	

The spousal score was rated on a 7-point rating scale with majority (72.2%) indicating positive influence.

- *Hypothesis testing*

Hypothesis One: there is no significant relationship between the demographic factors and the choice of delivery setting among nursing mothers.

Table 4.2: Relationship between the demographic factors and the choice of delivery setting among nursing mothers.

Variables			
	X^2- Value	**d.f**	**p-value**
Age	38.579	9	0.000*
Ethnic group	58.637	9	0.000*
Marital Status	32.637	15	0.000
Religion	79.046	9	0.000
Educational level	63.010	9	0.000
Household members	15.048	9	0.090
Occupation	54.359	9	0.000

The inferential statistics was tested using chi-square analysis at 0.05 p-value. The result reveals that the following socio-demographic variables significantly influence choice of delivery; Age (p=0.000), ethnic group (p=0.000), Marital Status (p=0.000), Religion (p=0.000), Educational level (p=0.000), occupation (p=0.000).

Hypothesis two: There is no significant relationship between the socio-economic factors and the choice of delivery setting among nursing mothers.

Table 4.2. Relationship between the socio-economic factors and the choice of delivery setting among nursing mothers.

Variables			
	X^2-Value	**d.f**	**p-value**
Level of income	72.966	15	0.000*
High cost of transportation	58.898	3	0.000*
Because of my low economic status, I feel intimidated therefore I prefer to deliver my child outside the hospital	33.630	3	0.000*
The total cost of delivery is too high therefore I can't afford it	46.392	3	0.000*
In your opinion is delivering I the hospital affordable	5.399	3	0.145
Do you take part in decision making in terms of delivering settings I household matter	14.578	3	0.002*

*** Significant association at p < 0.05**

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The inferential statistics was tested using chi-square analysis at 0.05 p-value. The result reveals that socio-economic variables significantly associated with Level of income (p=0.000), High cost of transportation (p=0.000), low economic status (p=0.000), decision making in terms of delivering settings (p=0.002).

H3: There is no significant relationship between the spousal influence and the choice of delivery setting among nursing mothers

Table 4.2.2: Pearson Product Moment correlation showing the relationship between the spousal influence and the choice of delivery setting among nursing mothers

Variables	Mean	Standard Deviation	N	R	P	Decision
Spouse	4.7487	1.59500	187	-.363**	0.05	.000
choice of delivery setting	2.13	1.261				

r=-.363**N= 187 p< 0.05*

From the results presented above revealed that there was a significant relationship between the spousal influence and the choice of delivery setting among nursing mothers (r=-.363**, p<0.05). Therefore, the hypothesis will be rejected.

V. DISCUSSION OF FINDINGS

A. Introduction

This chapter presents the discussion of the findings of the research, conclusion drawn from the study, the implication of the study to nursing, recommendations and suggestions for further study are also highlighted.

B. Discussion of findings

- *Research question one*

What are the demographic factors that influence the choice of delivery setting place among nursing mothers attending primary healthcare center in ilishan Remo, Ogun state?

The result from the study revealed that the following socio-demographic variables significantly influence choice of delivery; Age (p=0.000), ethnic group (p=0.000), Marital Status (p=0.000), Religion (p=0.000), Educational level (p=0.000). this in line with the findings of Adenyuma (2020), the study found that age of mother and marital status affect the choice of place of delivery. The study also noted that most married people are more likely to choose their previous place of delivery if it was successful. Ajah, Onu, Ozumba and Ekwedigwe, (2019) also found a similar result. Their study reported that marital status, age, educational attainment were all significant in predicting the choice of place of delivery.

- *Research question two*

How does the spouse influence the choice of delivery setting among nursing mothers attending primary health care center in Ilishan Remo, Ogun Sate?

From the result, majority (72.2%) of the respondents indicated that their husbands have positive influence on their choice of place of delivery. This result is consistent with the findings of Almaz, Nahom, and Yordanos, (2019) who evaluated the factors determining choice of place of delivery: analytical cross-sectional study of mothers in Akordet town, Eritrea. The result showed that there were spousal influence on the choice of deliver however most of the respondents confirmed that their spouses positively influenced them. Similarly, Adenyuma (2020) found that most educated men do not mandate their wives on the choice of place of delivery.

- *Research question three*

How does socio cultural factors influence the choice of delivery setting among nursing mothers attending primary healthcare center in ilishan Remo, Ogun state?

The result in Table 4.3.1 reveals that socio cultural factors has an influence on choice of delivery of nursing mother (R = .984; R^2 = .968; F (1,6722); Sig. = 0.000). This findings is consistent with the findings of Atinge, Balogun and Ogunnowo (2020) who found a significant influence between socio economic factors and the choice of delivery setting. Also the study of Mahama (2019) is in line with the findings of this study. The study showed that there is a significant effect of socio cultural factors on place of delivery among nursing mothers.

- *Hypothesis one*

The result reveals that the following socio-demographic variables significantly influence choice of delivery; Age (p=0.000), ethnic group (p=0.000), Marital Status (p=0.000), Religion (p=0.000), Educational level (p=0.000), occupation (p=0.000). this is similar with the findings of Egharevba and Pharr (2017) who reported that the choice of delivery setting was influenced by include socio-demographic characteristics such as low level of parental education, ethnic group. Similarly, NDHS (2018) reported that maternal education has a strong effect on facility delivery as only 14% of births to mothers with no education were delivered in a health facility as compared to the 88% of births in the health facility to mothers with more than a secondary education. Ayamolowo et al., (2020) findings is consistent with this study. The study found that maternal education is significantly associated to choice of delivery settings.

- *Hypothesis two*

The result reveals that some socio-economic variables significantly associated with Level of income (p=0.000), High cost of transportation (p=0.000), low economic status (p=0.000), decision making in terms of delivering settings (p=0.002). This finding is consistent with the findings of Osezua (2016) who reported that a woman's occupation determines her wealth status that has a direct relationship with the place she delivers her baby. Furthermore studies such as Mberu, 2017; Lang-Balde & Amerson, 2018 reported that

women who are formally employed are more likely to give birth in health facilities while others indicate that, farming women are less likely to have skilled attendance at delivery than women in other occupations. Also the findings of Esienumoh, Akpabio, and Etowa, (2016) is similar with the findings of this study. The study established that the price of arranging emergency transportation can be very expensive. These costs include the price of hiring a private vehicle and fuel expenses.

➢ *Hypotheses three*

The findings revealed that there was a significant relationship between the spousal influence and the choice of delivery setting among nursing mothers ($r=-.363^{**}$, $p<0.05$). This result corroborates the findings of Sageer, Kongnyuy, & Adebimpe (2019) who found that spousal influence greatly affects the choice of delivery settings. In addition, the findings of Akpotor (2019) is consistent with the findings of the is research. The study concluded that the husband has a lot of role to play in choosing the delivery setting of the wife.

C. Summary

In summary, the study is to investigate the factors influencing the choice of delivery setting among nursing mothers attending primary health care center in ilishan Remo, Ogun state. Several related literature were reviewed and Health belief model (HBM) was the adapted framework for the study. A descriptive cross-sectional design was adopted for the study, while one hundred and eighty seven women of reproductive of age at ilishan primary health center in ilishan Remo, Ogun state were selected for the study. A well-structured questionnaire was used to collect data and the obtained data were presented on frequency-percentage table while the inferential statistics in terms of hypotheses were tested with Pearson moment correlation and chi-square at 0.05 level significance.

VI. CONCLUSION

The study concluded that socio-demographic variable such as age, marital status, educational level, ethnic group influenced the choice of delivery setting. Also, the study found that socio-cultural factors and economic factors influenced the choice delivery setting among women of reproductive age in Ilishan remo, Ogun State.

➢ *Implication to nursing:*

The implication of this study to nursing highlighted the fact that health professionals has a role to play in sensitizing the mothers on the need to choose the hospitals or primary healthcare available to them for their child delivery.

RECOMMENDATIONS

1. Adequate sensitization program is needed to help the women of reproductive age in Ilishan community concerning the benefit of child birth in a hospital setting or primary healthcare. Also, intensify education aimed at increasing family involvement in selecting the right place for women to deliver with minimal risk. There should be robust public health education in the rural communities as well. This will go long way to inculcate some sense of ownership in the people to own and as well patronize the health facilities, where obstetric complications could be diagnosed early enough for the necessary interventions or referral.
2. Community leaders, church and Muslim leaders should be encouraged to enlighten their followers on the need to always chose the hospital instead of going to places not recommended by the physician or adequate enough for delivery.
3. Government should make cost of delivery cheap to enable more women to use the hospital facility.
4. Organize frequent in-service training for the staff of health facilities on communication and good interpersonal relationship with their clients and endeavor to provide services that meet the expectations of these clients.

➢ *Suggestions for Further Studies*

This study was conducted among residents of local government area, Ogun State. The study could be replicated for community members of other local government areas of the state and other states of the federation.

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