

Original Article

## Factors Influencing Place of Birth among Mothers Attending Infant Welfare Clinic at Iberekodo Primary Health Care Center, Abeokuta, Ogun State, Nigeria

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### Abstract

**Introduction:** the place of birth could influence the outcome of labour and childbirth; hence it is very important that a woman makes the right decision as regard her place of giving birth to safeguard both maternal and child wellbeing.

**Aim:** this study assessed the factors influencing the choice of place of birth among women attending an infant welfare clinic in Nigeria.

**Sample:** convenience sampling technique was used to select 100 participants for the study.

**Setting:** the study was carried out at the Infant Welfare Clinic of Iberekodo Primary Health Centre, Abeokuta in Ogun State, Nigeria

**Tool:** a closed-ended structured questionnaire with 4 sections was used to gather data.

**Result:** study findings showed that only 24% of the mothers had hospital-based delivery compare to 76% of the respondents who had non-hospital-based delivery (including religious centers 48%, home of tradition healers 26%). Findings also revealed no significant relationship between mother's educational attainment and her choice of place of birth  $\chi^2(1, N = 90) = 0.26, p = 0.05$ ; and between parity and choice of place of birth  $\chi^2(1, N = 90) = 0.57, p = 0.05$ . However, husband, parents and parents' in-laws (56%), cost and affordability (85%), nearness to health facility (52%), staff attitude (69%), convenience (59%) among others were found to influence choice of place of birth.

**Recommendations:** cost reduction of perinatal services in health facilities and community sensitisation through holistic community outreach that will bring the primary health centre closest to the community is highly recommended.

**Keywords:** Choice, Place of birth, Hospital-based delivery, Non-hospital-based delivery.

### Introduction

Safety during childbirth is the ultimate goal of motherhood, and the joy that comes to the family when labour ends with no complications is enormous. On the other hand, this joy could be cut

off by any of several possible complications that can occur during childbirth. Depending on the environment and the skills of the attending caregiver, complications of childbirth can range from mild pain to fatal occurrences, and such complications could be detrimental to the mother

as well as the child. The rates at which these pregnancy and birth-related complications occur vary round the globe, with some parts recording far more maternal deaths than others. According to a WHO report in 2008, it was estimated that approximately 1000 women in the globe die each day from pregnancy related causes, 99% of them in developing countries and more than 50% in sub-Saharan Africa with most deaths occurring around the time of delivery (WHO, 2008). Right from the declaration of the erstwhile Millennium Development Goals (MDGs) in 2000, many countries have striven to reduce maternal and child mortality. Unlike most developed countries that have achieved the MDGs on maternal and child mortality, third world nations in sub-Saharan Africa are still grappling with high maternal and child mortality as high as 1 in 39 maternal deaths compare to 1 in 3800 in developed world (WHO, 2012). The situation is even worse in Nigeria where 1 out of 13 women has a risk of dying from pregnancy and childbirth (UNICEF, 2015). The place of birth plays a major role in determining the outcome of labour and childbirth and as such cannot be overemphasised. Hence, it is of high importance that a woman makes the right decision as regards place of birth. 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. Although the outcome of birth is much pleasant in hospital-based deliveries, many studies, including Bashir (2012), have consistently shown that majority of women prefer the non-hospital-based birth, with only a few preferring to give birth in the hospital. This observation is especially true of pregnant women in the sub-Saharan Africa where hospital-based birth rates rank among the lowest in the world. Demographic and Health Survey of 2008 showed that only 47% of women delivered in a health facility in 28 sub-Saharan African countries. Several factors have been identified to influence the choice of place of birth among women. Mrisho et al. (2008) reported that

younger pregnant women were more likely to utilise hospital-based facility than older women; Bashir (2012) opined that a major barrier to pregnant women's utilisation of hospital-based delivery has to do with their financial condition. Other socio-demographic characteristics such as women autonomy, literacy level and parity have also been implicated to influence women's decision on choice of place of birth.

Envuladu, Agbo, Lassa, Kigbu and Zoakah (2012) in their study revealed that 40% of the participants had their last birth at home. Many home births are undertaken by people who are not trained to monitor progress of labour, conduct safe delivery, detect deviation from normal and make prompt referral, thus putting the safety of the pregnant woman and the baby at risk. Notwithstanding, the numerous dangers associated with home birth, studies have shown that most women still prefer to give birth at home. This study is, therefore, carried out to identify the factors that influence choice of place of delivery among pregnant women in Abeokuta.

**Objective:** The study was carried out to identify factors influencing choice of place of birth among women attending Infant Welfare Clinic at Iberekodo, Abeokuta including the rate of hospital-based birth and non-hospital-based births, and identify the factors that influence the choice of place of birth among mothers attending Infant Welfare Clinic, Iberekodo.

**Research Questions and Hypotheses:** To meet the objective, the following questions and hypotheses were raised: What is the rate of hospital-based birth among mothers attending Infant Welfare Clinic, Iberekodo? What is the rate of non-hospital-based birth among mothers attending Infant Welfare Clinic, Iberekodo? What are the factors that influence the choice of place of birth among mothers attending Infant Welfare Clinic, Iberekodo? There is no significant relationship between parity and choice of place of birth at 0.05 level of significance and there is no significant relationship between a woman's educational level and her choice of place of birth at 0.05 level of significance.

## Methods

**Design, setting and participants:** This study utilised the descriptive, quantitative research design. The study was carried out at Iberekodo Primary Health Centre, situated in Iberekodo Community in Abeokuta North Local Government Area of Ogun State. Iberekodo is about two kilometers away from Akomoje which houses the local government secretariat. Iberekodo Primary Health Centre was established in 1960, and serves as the only public health facility in the local government; it is one of the oldest in the capital city of Abeokuta. It provides maternal and child health care to the community and its environs. The sample size was calculated using Taro Yamane formula. The output of the sample size calculation formula [ $N = (613/1 + 613 \times 0.1^2 = 613/1 + 6.13 = 613/7.13)$ ] showed that at least 86 participants were required. However, to make up for attrition values, the size was rounded off to 100. Using a convenience sampling technique, respondents were drawn from mother who visited the infant welfare clinic of Iberekodo Primary Health Centre between July 2016 to April 2017. Inclusion criteria were any woman who have been delivered of a child, attending the infant welfare clinic at Iberekodo Primary Health Centre, willingness to participate in the study, and ability to speak, understand and write in English and/or Yoruba.

**Tool:** The instrument used for data collection was a structured questionnaire divided into three sections - A, B and C. Section A gathered the socio-demographic data of respondents, section B contained questions that elicited information on where the respondents gave birth to their last babies, and how satisfied they were with their birth experience in the places chosen and section C dealt with factors that influenced the place of birth that they chose in section B.

**Validity and reliability of instrument:** Face and content validity of the instrument was determined by experts in Maternal and Child Health, to ensure reliability, the instrument was pre-tested on 20 mothers attending the infant welfare clinic of Federal Medical Centre Abeokuta, with a Cronbach's Alpha Coefficient value of 0.71.

**Data analysis:** Data were coded and analysed using the SPSS Program Version 21.0 (IBM Corp.

Armonk, New York, USA). Frequency, mean, percentages and standard deviation were used to describe participants' demographic characteristics and answer the research questions asked. The two hypotheses were tested using Chi-square.

**Ethical considerations and procedure:** Ethical clearance was obtained from Babcock University Research and Ethics Committee and a formal permission to utilise the Iberekodo Primary Health Centre from the head of the centre. Informed consent was obtained from the participants after informing them of their rights to withdraw from the study at any time without consequences. Data collection took place on the clinic days of infant welfare clinic, the respondents were addressed, detailed explanation on the purpose of the study and the manner in which the questionnaire should be filled was stated and participants were allowed to willingly participate in the study. Repeated visit was made to the clinic until the desired sample size was attained.

## Results

A total of 100 participants enrolled into the study. Participants that were older than 29 years but less than 36 years accounted for the largest age group (59%). More than half of the participants (51%) have had a form of tertiary education compare to about a quarter (24%) with secondary education only. Conversely, less than a quarter (15%) of the respondents' husbands had tertiary education compare to more than a quarter (33%) with secondary education. Over half of the respondents (53%) have given birth to three children compare to less than a quarter (21%) with fewer than 3 children. See Table 1 for detail demographic variables.

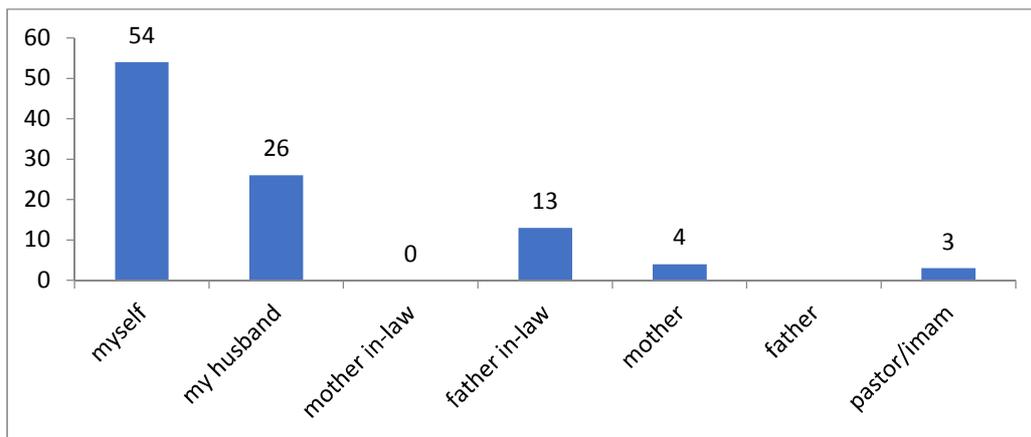
### Responses on who decided where respondents had antenatal care during their last pregnancy:

Majority of the participants (54%) were the ones that solely decided where they went for their antenatal care during pregnancy as against about a quarter (26%) who were decided for by their husbands and less than a quarter (20%) that were decided for by either their mothers, fathers-in-laws and pastors/imams (Figure 1).

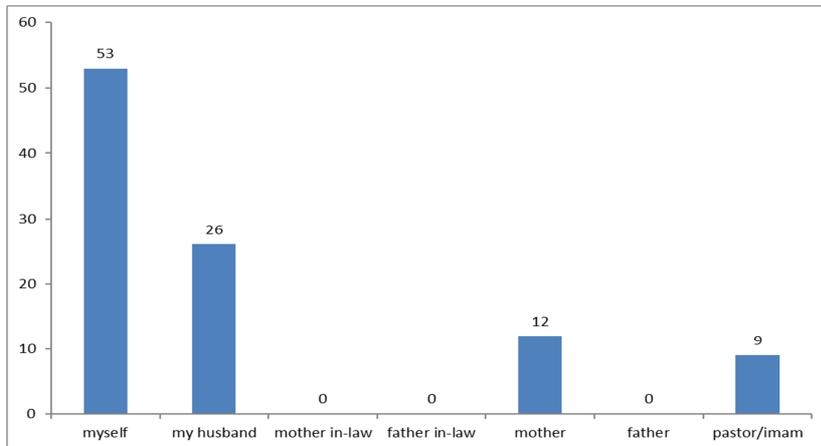
**Table 1: Socio-demographic data of the respondents**

<i>Parameters</i>		<i>Frequency</i>	<i>N= 100% Percent (%)</i>
<i>Age</i>	15-19 years	6	6
	20-24 years	10	10
	25-29 years	18	18
	30-34 years	28	38
	34-49 years	21	21
	40 years >	7	7
<i>Highest educational qualification</i>	No formal education	5	5
	<i>Primary school</i>	20	20
	Secondary school	24	24
<i>Occupation</i>	Tertiary institution	51	51
	Not employed	24	24
	Self employed	35	35
	Formally employed	38	38
<i>Husband's education</i>	Invalid/no response	3	13
	No formal education	9	9
	Primary School	17	17
	Secondary school	33	33
<i>Number Children</i>	Tertiary institution	15	15
	1	13	3
	2	8	8
	4	53	53
	5 >	10	10

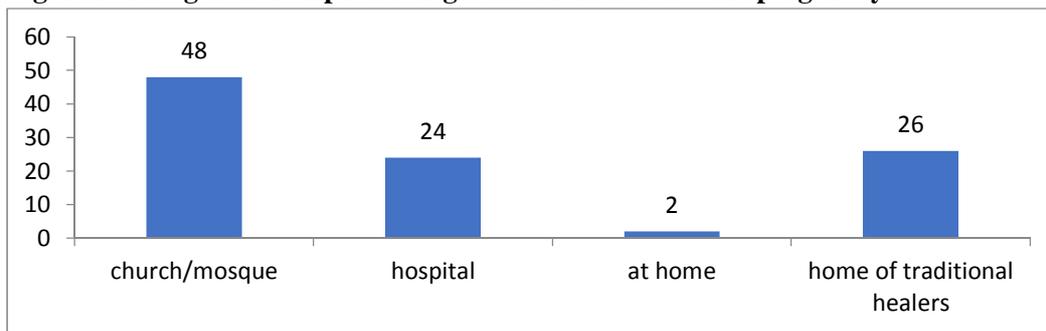
**Fig. 1: Who decided where respondents had antenatal care during their last pregnancy**



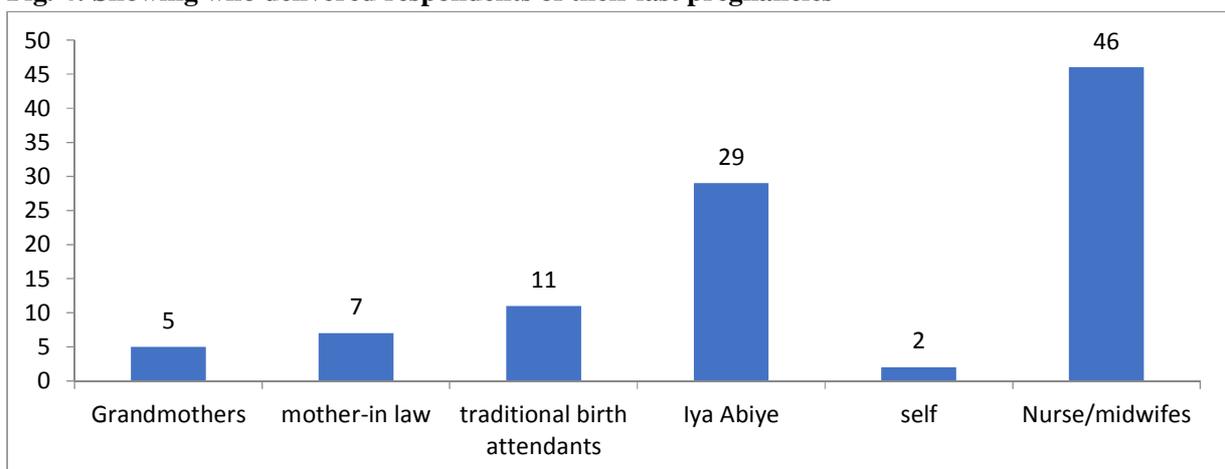
**Fig. 2: Who decided where respondents got delivered of their babies**



**Fig. 3: Showing where respondents got delivered of their last pregnancy**



**Fig. 4: Showing who delivered respondents of their last pregnancies**



**Table 2: Factors influencing choice of place of delivery**

	Yes	No	Invalid/Response
<i>It was a choice impressed on me by husband/parents/parents-in law</i>	5 6 ( 5 6 % )	4 1 ( 4 1 % )	3 ( 3 % )
<i>I just found myself there</i>	2 5 ( 2 5 % )	7 2 ( 7 2 % )	3 ( % )
<i>The cost was fair and affordable</i>	8 5 ( 8 5 % )	1 0 ( 1 0 % )	5 ( 5 % )
<i>They have good equipment/drugs</i>	4 7 ( 4 7 % )	3 4 ( 3 4 % )	1 9 ( 1 9 % )
<i>The place is near my home</i>	5 2 ( 5 2 % )	3 7 ( 3 7 % )	1 1 ( 1 1 % )
<i>The staff there are polite and friendly</i>	6 9 ( 6 9 % )	2 1 ( 2 1 % )	1 0 ( 1 0 % )
<i>They are always available</i>	7 4 ( 7 4 % )	2 1 ( 2 1 % )	5 ( 5 % )
<i>Labour started at night</i>	4 4 ( 4 4 % )	4 9 ( 4 9 % )	7 ( 7 % )
<i>They are able to see vision</i>	5 8 ( 5 8 % )	3 9 ( % )	3 ( 3 % )
<i>They offer protection from misfortunes and demonic attack</i>	5 7 ( 5 7 % )	3 7 ( 3 7 % )	6 ( 6 % )
<i>Their services are convenient</i>	5 9 ( 5 9 % )	3 5 ( 3 5 % )	6 ( % )
<i>They give traditional medicine</i>	3 8 ( 3 7 % )	5 7 ( 5 7 % )	5 ( 5 % )
<i>I had problem in my last delivery and was told to deliver here</i>	3 0 ( 3 0 % )	6 6 ( 7 0 % )	4 ( 4 % )
<i>My fear of birth complications</i>	5 1 ( 5 1 % )	4 6 ( 4 6 % )	3 ( 3 % )
<i>They have qualified staff</i>	6 3 ( 6 3 % )	1 6 ( 1 6 % )	2 1 ( 2 1 % )

**Table 3: chi-square test of significance for educational status**

	Value	Df	Asymp.
<i>Pearson Chi-</i>	2.712	2	.258
<i>Likelihood</i>	2.706	2	.258
<i>Linear-by-Association</i>	.344	1	.558
	<i>N. of valid</i>		100

**Table 4: chi-square test of significance for parity**

	Value	Df	Asymp.
<i>Pearson Chi-</i>	1.094	2	.579
<i>Likelihood</i>	1.474	2	.478
<i>Linear-by-Association.</i>	.767	1	.381
	<i>N. of valid</i>		100

**Responses on who decided where respondents got delivered of their babies:** When it came to choosing place of birth, slightly more than half of the respondents (53%) indicated that the choice was theirs compare this to those whose spouse (26%), mothers (12%) and pastor/imam (9%) chose the place of delivery for them. See Figure 2. For the rate of hospital-based delivery and non-hospital-based delivery of respondents' last delivery (see Figure 3) almost a quarter (24%) had hospital-based delivery compare to over two third (76%) of the respondents having their babies in non-hospital-based homes/institutions. A further breakdown of the non-hospital-based delivery revealed that churches/mosques accounted for almost half (48%) of the deliveries while deliveries at the homes of traditional healers accounted for over one fourth (28%) and meager (2%) had been delivered of their babies at home. In terms of personnel that attended to respondents during their last delivery, a little above half (54%) of the study population did not have skilled personnel attending to their delivery contrast with almost half (46%) of the respondents who had their deliveries attended to by nurses/midwives (Figure 4). Concerning factors that influences the choice of place of birth as seen in Table 2, the three factors that ranked the most were cost (85%), availability/nearness (74%) and staff attitude (69%).

### Tests of Hypotheses

Chi-square tests of significance were carried out in the study to test two hypotheses. The results are shown below.

**Hypothesis 1:** There is no significant relationship between a woman's educational attainment and her choice of place of birth.

The result of the chi-square test of the above hypothesis revealed that a woman's educational attainment and her choice of place of delivery are not significantly related  $\chi^2(1, N = 90) = 0.26, p = 0.05$ . Thus, accepting the null hypothesis (Table 3).

**Hypothesis 2:** There is no significant relationship between parity and choice of place of birth

The result of the chi-square test of the above hypothesis showed that no significant relationship exists between a woman's parity and her choice of place of delivery  $\chi^2(1, N = 90) = 0.57, p = 0.05$ . Thus, accepting the null hypothesis (Table 4).

### Discussion

The socio-demographic profile of the respondents in this study presented notable findings that are worthy of discussion. First, the literacy level of respondents was very high. Second, the educational profile of the respondents contrasted sharply with their husbands'. Findings showed that only 30% of the husbands had tertiary education. Third, despite the high literacy level (51%) of the respondents, only 24% of the total number of women that participated in the study reported that they were delivered of their babies in a health facility. This finding is not in line with Aremu et al. (2011) study, which reported that a highly educated population of pregnant women is likely to utilise skilled birth delivery services more than their uneducated counterparts owing to their understanding of the benefits of skilled birth attendance and another study by Envuladu et al. (2011), which reported a 60% hospital delivery rate among pregnant women in Northern Nigeria. Given the fact that the literacy level of the participants in the study of Envuladu (2012) is lower than those who took part in this present study, it is logical to suggest that mothers' choice of place of delivery has more to do with other factors than their educational profile. This is supported by the first hypothesis that was tested in this study, which found out that the level of education of mothers does not significantly influence their choice of place of birth. The majority of the participants (76%) in this study utilised non-hospital-based delivery. This finding is in line with the finding of Bashar (2012) who observed that majority of women prefer non-hospital-based deliveries to hospital deliveries. The study also found that even though only 24% of the participants had hospital-based delivery, 46% of the respondents indicated that they were delivered

of their babies by Nurses/Midwives. While it is possible that the mothers have every chance of mistaking a quack nurse for professional nurses and midwives, the likelihood of such error seems less among this present population, given the high literacy level of the women and the present awareness campaign in the state which is directed at educating the populace to identify quack nurses and the dangers that they pose. Therefore, to have 46% of deliveries taken by nurses and midwives could mean that these nurses and midwives had an affiliation with these non-hospital delivery centers. Findings on factors that influence the choice of place of delivery showed the major factors to include influence of family members (such as the husbands, parents and in-laws), cost of services, attitude and respect shown by staff, availability, nearness to home, the women's belief that the staff are qualified and spiritual endowments of the handlers such as their ability to see visions and protect respondents from misfortunes among others. This is in agreement with previous study Majority of the determinants found in the present study agree with findings of previous study by Envuladu et al. (2012). In that study, the researchers reported that as high as 93.6% of respondents considered the cost of hospital bill before making a decision concerning where to put to bed (Envuladu et al., 2012). Nearness to home as a factor in our study was also supported by the report of Alemayehu (2014), who submitted that distance to health institution was a major factor considered by pregnant women in an Ethiopian metropolis before making choice of delivery site. This could account for why the number of hospital-based delivery is low in our study because traditional birth attendants, in the form of spiritual leaders, local midwives are well-known, within reach and well-embedded in most communities in Nigeria. Thus, they are easily patronised by pregnant women at the expense of hospital-based institutions. Similarly, Nwokolo (2014) indicated that convenience and availability are important factors affecting choices of delivery sites among a population of women in Southeastern Nigeria. The impact of culture and tradition in the choice of delivery centers for pregnant women are really glaring in this study. Half of the respondents (50%)

had their last deliveries in spiritual homes; while, more than 75% indicated their desire to use spiritual homes as delivery centre for their subsequent pregnancies. A plausible reason is that in Africa, mystical believes surround health care issues like pregnancies.

### Conclusion

Findings from the study showed that majority of the mothers did not patronise hospital-based delivery based on certain factors such as cost, nearness to homes, and beliefs that birth attendants outside the hospital were equally skilled, among other factors. Majority of them were also satisfied with the non-hospital-based deliveries that they would subscribe to such services in their subsequent pregnancies. The majority of the participants, even though were highly educated, still opted for non-hospital-based delivery. These findings have a subtle implication for nursing/midwifery practice. It suggests that, in every intervention that the health professionals devise to improve institutionalised deliveries, no assumption must be made to exclude literate mothers from illiterate mothers. It also simply means that every health education, counseling and attitudinal change programmes must target both the educated, not educated, primigravidas as well as multigravidas. Assumptions that such interventions should focus less vigorously on women of higher educational status, or based on their parity may be counterproductive.

### Recommendations

Based on the findings from the study, the researchers recommend that:

1. cost of perinatal care in the clinics and hospital should be subsidised
2. health care workers such as nurses and doctors should change their attitude and attempt to be friendly to clients
3. Nurses should be careful not to indirectly encourage non-hospital-based deliveries by delivering women in churches and homes.
4. Nurses and midwives need to take leading roles in the promotion of attitudinal change and corrections of misconceptions that intending

mothers have concerning hospital-based delivery services.

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