

## Original Research Article

### Demand and Significance of Informal Postnatal Care Support System in Lagos state: A Feasibility Study

#### ABSTRACT

**Aims:** To make a research case for an innovative intervention by evaluating the demand and determinants of informal postnatal care and support.

**Study design:** This was a descriptive cross-sectional study.

**Place and Duration of Study:** The study was carried out in Itire and Yaba in Lagos State, Nigeria. Data collection lasted for two weeks.

**Methodology:** A semi-structured questionnaire was used for data collection. A total number of 249 women were chosen using estimated extrapolations from secondary data that had been collected on women of reproductive age. Respondents were recruited based on convenience and willingness to take part. We carried descriptive statistics and correlation coefficient tests on the cleaned data..

**Results:** More than half of the respondents, 54% were from Itire while 46% were from Yaba; 90% were between 25–44 years. Seventy-eight percent of the women had vaginal delivery, and 26% underwent a caesarian section; about 13% reported delivery complications. More than half (52%) of respondents' families gave postnatal support, 37% received postnatal support from in-laws and 8% from multiple sources. During the postnatal period, 65% of the respondents reported doing exclusive breastfeeding, while 35% reported giving milk and other feeds. Only 9% of women used chlorhexidine gel for newborn cord care. Majority of the respondents, 76% used methylated spirit and 15% used herbal mix heated on kerosene lanterns or various kinds of toothpaste and other substances. Only 19% of the women had begun family planning. Though the majority (94%) found the postnatal support received helpful; 65% were open to professional help. Willingness to use professional postnatal support was significant among respondents who had delivery complications ( $p=0.02$ ) and those who were from the Yaba axis ( $p=0.03$ ).

**Conclusion:** The findings revealed an information gap when compared to standard recommended postnatal practices and a demand for professional guidance hence the need for innovative approaches to equip women and their informal support with adequate postnatal information

**Keywords:** Determinants, Demand, Informed, Postnatal support, Information

## 1. INTRODUCTION

The postnatal period refers to the period after the delivery of a child. It is a critical period for both the mother and child involving the puerperal period which refers to the hour after the delivery till 42 days after; during which the uterus and the mother's body is expected to have adjusted to the pre-partum state [1]. According to the WHO guidelines on postnatal best practice developed in 2006 and updated in 2013 [2], the postnatal visit represents an opportunity for providers to facilitate healthy breastfeeding practices, screen for postpartum depression, monitor the newborn's growth and overall health status, treat childbirth-related complications, counsel women about their family planning options and refer the mother and baby for further assessment if the need arises.

The updated 2013 guideline now recommends at least three postnatal visits following the 24 hours after delivery in the following sequence; on day three (48–72 hours), between days 7–14 after birth, and six weeks after birth. This guideline also recommends home visits by health professionals (such as physicians, nurses and auxiliary nurses) for mother and newborn in the first week after birth [2]. Postnatal care particularly prevents most maternal and child morbidity and mortality at the early period after birth. Care given in the postpartum period assists health care providers to detect post-delivery problems and to give treatments timely. Shortage of care during this period could cause ill health, disabilities and deaths [3]. Most maternal deaths occur in developing regions. It accounts for approximately 99% of the global maternal deaths in 2015, with Sub-Saharan Africa alone accounting for 66% followed by southern Asia with 22% [4].

Sub-Saharan Africa alone accounts for approximately two-thirds of the estimated maternal deaths in 2017 and contributes largely to estimated global infant deaths [5]. Deaths can occur of the critical periods of antenatal, intrapartum and postnatal. In sub-Saharan Africa, only about 48% of women deliver their babies with the help of a skilled birth attendant and even fewer women and newborns (less than half) receive postnatal care visits within 2 days of childbirth [8]. An analysis of demographic and health survey data from 23 sub-Saharan African countries found that only 13% of women who delivered at home received post-natal care within 2 days of birth. This could be due to lack of knowledge about postnatal care, lack of professional postnatal care services or under-utilization of postnatal care services [5]. This leaves a question to be answered- where do the 87% get their postnatal care.

The gap in postnatal care may be due to many reasons. One of such is the paucity of health care personnel to attend to the increasing population of mother and child. According to the World Health Organization, Nigeria has densities of nurses, midwives and doctors which number cannot meet the demand for essential health services [6]. This paucity therefore may cause a concentration of available health workers to health facilities with an unintended neglect of home based care and visits as recommended in the complete maternal journey. From another paucity perspective, even when community-based care is carried out through donor funded projects, emphasis still appears to be around antenatal services and delivery as shown in documented pilots [7]. One major explanation of the 87% gap in postnatal care may therefore be because of the delegation of postnatal care to the rear due different social determinants highlighted. Furthermore, Nigeria with over 250 ethnic communities [8] shaped by varying norms and practices have a common culture of celebrating the newborn which attracts the gathering of family and friends. Observation and anecdotal reports show that many homes rely on an informal support system (family and friends) and influence the care of mother and child after discharge from the hospital. This may lead us to assume that the gap in postnatal care above is most likely filled by the communal support from informal circles. The informal support systems discharge the postnatal care practices based on exposure, attitude to health, and information available. The outcome of these informal practices on mother and child may therefore be positive or negative during this crucial point of care depending on the gap with standard recommended postnatal practice according to World Health Organization (W.H.O) [2]. There is however a dearth of information regarding the actual effects of informal support on postnatal services.

In achieving the Sustainable Development Goal 3 (SDG3), two of the targets aim to reduce maternal mortality ratio and to end preventable deaths of newborns and children under the age of five years by 2030 [5]. As Nigeria intends to achieve this goal alongside other countries who have the recommended focus of antenatal, intrapartum and postnatal care, attention should therefore be given to the events of the postnatal period and its determinants of care as a case establishment for postnatal care in maternal and child survival. This study, therefore, aims to document:

- The current determinants of postnatal care services in Nigeria.
- The effect of these current postnatal determinants on postnatal outcomes
- If the demand for qualified health professionals for home based postnatal services exists

## 2. METHODOLOGY

### 2.1. Study Population

Itire community is a mostly slum neighborhood in Surulere overseen by a traditional king, the Onitire of Itire and under the Itire/Ikate Local Council Development Area (LCDA). Yaba is a town in Lagos Mainland Local Government area of Lagos State known for its vibrant commercial, academic and professional activities. These locations were chosen to compare and contrast the health-seeking behaviours of women living in a town with better access to healthcare and women living in a slum who may have constraints to seeking healthcare services.

**Table 1: Distinguishable characteristics of the sample population.**

	CHARACTERISTICS	YABA	ITIRE
1.	Income Level	<i>Middle Income</i>	<i>Low income and Poor</i>
2.	Living Area	<i>Mostly commercial</i>	<i>Residential and Commercial</i>
3.	Community Type	<i>Town</i>	<i>Slum</i>

### 2.2. Study Design

A descriptive cross-sectional study was carried out to make a research case for an innovative intervention by evaluating the demand and determinants of informal postnatal care and support among nursing mothers

#### 2.2.1. Study Population

Information of 249 women were extrapolated using estimated extrapolations from secondary data that had been collected on women of reproductive age within the communities selected <sup>7</sup>.

#### 2.2.2. Inclusion Criteria

Women who had live births within the last 2 years were considered eligible participants for the study.

#### 2.2.2. Exclusion Criteria

Nursing mothers whose date of delivery had exceeded 2 years. .

### 2.3. Data Collection/Analysis

A semi-structured, interviewer and self-administered questionnaire was used to collect information among women who delivered a child within the past two years between March 2019 to November 2019. Women who were unable to read and understand the questionnaires on their own, based on their level of education were assisted using the interviewer-based approach while those who could literate filled the questionnaires by themselves

. The data generated was entered in Excel software and analyzed using SPSS version 23. Data was presented as frequencies, percentages and charts. Chi-square test was used to assess the degree of association of categorical variables. All p-values < 0.05 were considered statistically significant.

## 3. RESULTS AND DISCUSSION

### 3.1 Results

#### 3.1.1 Age distribution of mothers

Some respondents declined to mention their ages (n= 224). The largest age group was among the young adult women between the ages of 25 – 44 years which also represent the age group within the childbearing age range. The age group with the least number of respondents-; age group 45 - 64 years. (Fig. 1).

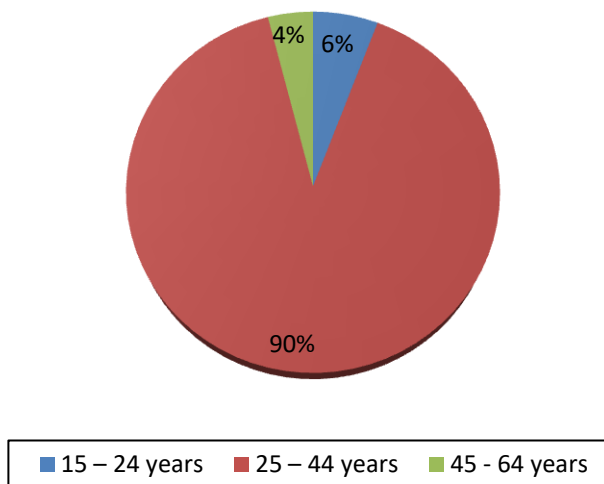


Fig. 1. Age distribution of respondents

#### 3.1.2. Background characteristics

About 35% of respondents were within the Professional category of the International Standard Classification of Occupations, 8<sup>th</sup> version (ISCO-08); which includes corporate workers, teachers, school administrators among others, while the artisans and craftsmen/women were the second-largest category (33%). Two-thirds of all respondents had completed some sort of post-secondary school education including tertiary and postgraduate colleges. Only 4% of respondents had not gone beyond a primary school education (Table 2).

**Table 2. Distribution of mothers by some demographic characteristics**

<b>Demographic Characteristics</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>Area of residence</b>		
Yaba	110	56
Itire	139	44
<b>Ethnic group</b>		
Yoruba	174	70
Igbo	39	16
Others	35	14
<b>Occupational Categories</b>		
Professionals	86	35
Crafts and related trade workers	82	33
Technicians and associate professionals	19	8
Clerical Support Service	15	6
Elementary Occupations	15	6
Managers	12	5
Service and Sales Workers	12	5
Unemployed	5	2
Skilled agricultural workers	2	1
<b>Level of education</b>		
Primary	9	4
Secondary	75	30
Tertiary	164	66

### 3.1.3. Clinical factors

Almost all respondents reported that they had utilized some antenatal care services during their last pregnancy. Approximately a quarter of respondents had only one child while a third of respondents had two children. Half of all respondents reported that they visited private health facilities for their antenatal care, while others were divided between public health facilities (42%) and traditional birth attendants/religious houses (8%). About half of the respondents (50.8%) utilized the public health facility at delivery while 10% used traditional birth attendants (TBAs), religious houses, at home, or in transit.

**Table 3. Distribution of respondents by clinical factors.**

<b>Clinical Factors</b>	<b>%</b>
<b>Parity</b>	
1	24.5
2	33.0
3	28.0
≥ 4	14.5
<b>Antenatal care utilization</b>	
Yes	99.6
No	0.4
<b>Complications during antenatal</b>	

<b>care</b>	
Yes	12.0
No	88.0
<b>Health facility visited for antenatal care</b>	
Private-owned facility	42.2
Government owned facility	50.2
TBAs* and Religious houses	7.6
<b>Delivery centre</b>	
Private-owned facility	39.5
Government owned facility	50.8
TBAs* and Religious houses	9.7
<b>Mode of delivery</b>	
Caesarian section	25.7
Vaginal delivery	74.3
<b>Delivery complications</b>	
Yes	13.1
No	86.9

\*TBAs = Traditional Birth Attendants

### 3.1.4 Postnatal Care

Nine out of ten respondents reported that they received postnatal care from non-health professionals. (Fig. 2). The informal networks (non-healthcare professionals) reported having delivered postnatal care services included: Respondent's family (52%), Husband and In-Laws (37%), Multiple sources (8%), Other sources – Hired helps, neighbors, and religious designate (3%) (Table4).

Close to two-thirds of respondents reported that the informal support (i.e. support from non-health professionals) they got for postnatal care lasted more than a month. Other respondents reported duration of less than a week, a week and 2 – 4 weeks as depicted in Fig.3.

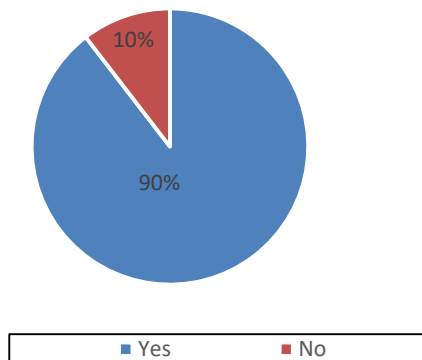
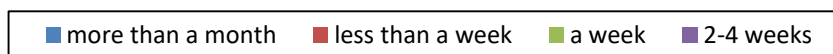
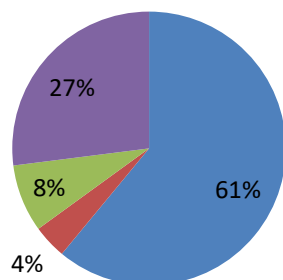


Fig. 2. Postnatal care utilization

Table 4. Sources of postnatal care services.

Postnatal care provider	Percentages (%)
Respondent's Mother	52.0

Husband and In-laws	37.0
Multiple sources	8.0
Other sources (hired helps, Neighbours and religious Designate)	3.0



**Fig. 3. Postnatal care duration**

### 3.1.4.1. Determinants of postnatal care utilization

Respondents who were identified as *Yoruba* seem to utilize the help of support for postnatal care services than ethnic groups. A chi-square test shows a statistically significant association between ethnicity and utilization of post-natal care ( $p = 0.002$ ) (Table 5)

**Table 5. Factors associated with postnatal care utilization**

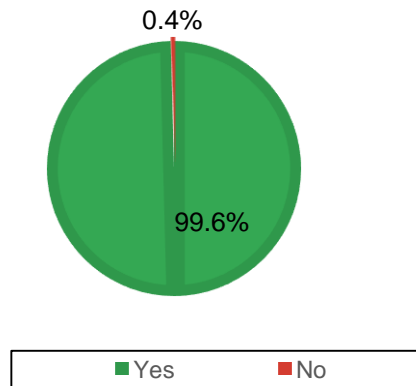
Factors	PNC Utilization			<i>p-value</i>
	No	Yes	Total	
<b>Number of children</b>				
1	0	49	49	
2	8	58	66	
3	12	44	56	
$\geq 4$	5	24	29	
<i>Total</i>	25	175	200	
<b>Ethnic group</b>				0.002
Yoruba	12	162	174	
Igbo	8	31	39	
Others	6	29	35	
<i>Total</i>	26	222	248	
<b>Area of residence</b>				

Itire	20	119	139	
Yaba	6	104	110	
<i>Total</i>	<i>26</i>	<i>223</i>	<i>249</i>	

### 3.1.4.2. Outcomes of Current Postnatal Care Services Received

#### Immunization

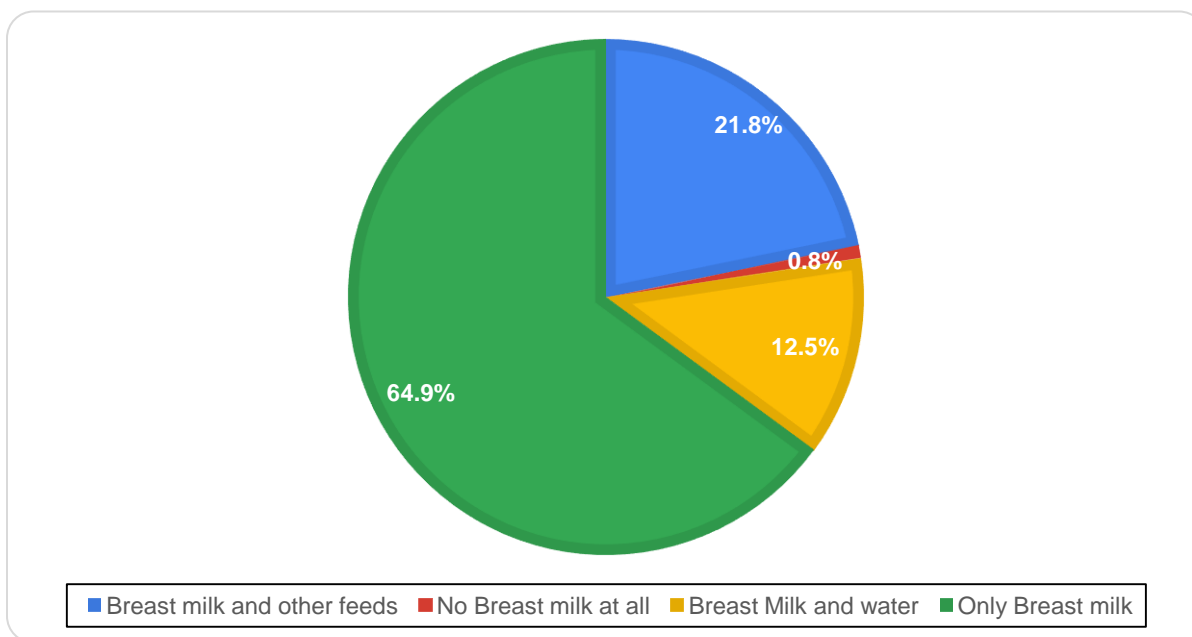
Almost all respondents commenced some sort of immunization for their newborn babies(Fig. 4).



**Fig. 4. Distribution of mothers who got their babies immunized**

#### 3.1.4.3 Breast Milk Exclusivity

Close to two-thirds of respondents (64.9%) reported being exclusive with breast milk for their newborn babies for up to six (6) months. There was a significant relationship ( $p = 0.04$ ) between those who had some postnatal care services and those who reported breast milk exclusivity. The longer duration of postnatal care (>1 month) further influenced breastmilk exclusivity for the 6 months. (Fig. 5)



**Fig. 5. Distribution of mothers who imbibed breast milk exclusivity**

### 3.1.4.4 Cord Care

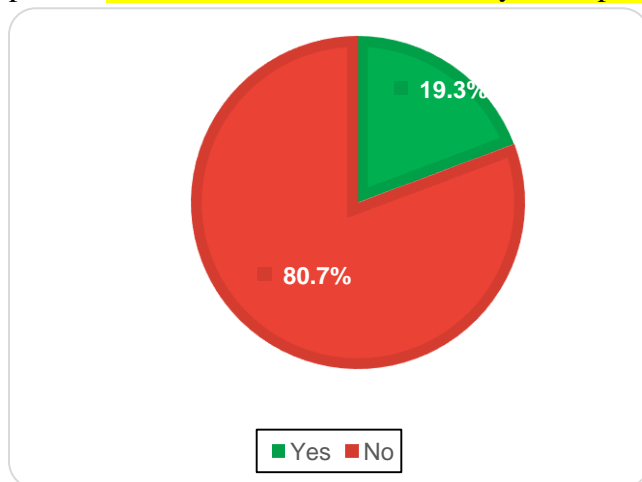
Methylated spirit was the most common cord cleaning agent used by over three-quarter of the mothers. A chi square test shows that there was no statistically significant association between utilization of postnatal care services and the selection of cord care methods as given in Table 6.

**Table 6. Correlation between PNC utilization and cord care**

Cord care	PNC Utilization		Total value	P-
	Yes	No		
Chlorhexidine gel	22	0	22	0.38
Herbal mix heated on a lantern	15	0	15	
Methylated spirit	164	23	187	
Otherse.g.Olive Oil,Toothpaste,Water,Mentholatum.	20	2	22	
<b>Total</b>	<b>221</b>	<b>25</b>	<b>246</b>	

### 3.1.4.5 Family Planning

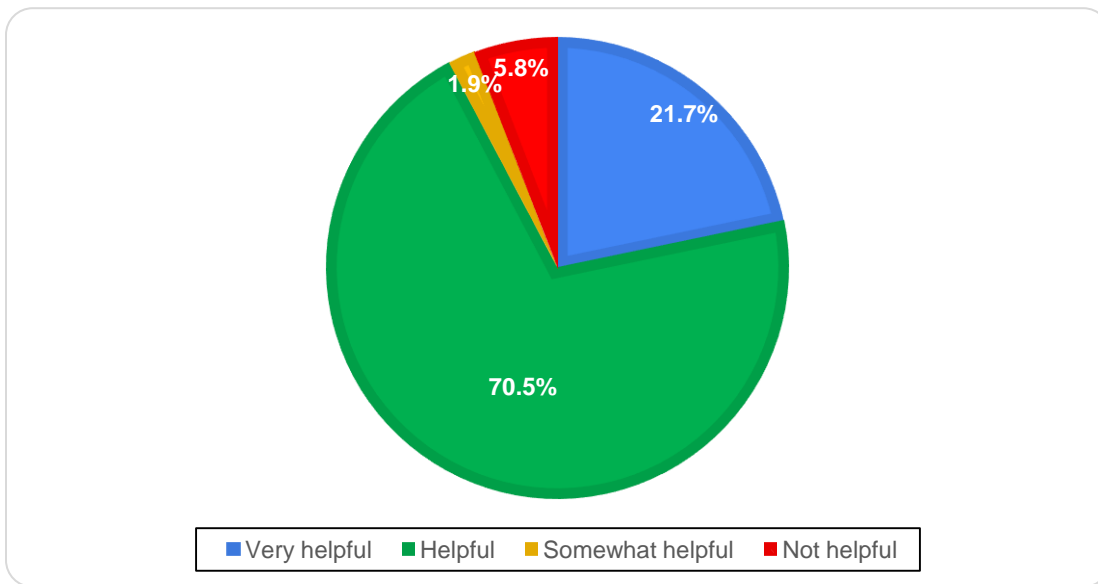
Only 19% of respondents reported having used any family planning method during and after the postnatal period. Postnatal services received may be responsible for the choice to use or not use family planning (Fig.6).



**Fig. 6. Family planning utilization**

### 3.1.4.6 Postnatal Care Received

Almost all respondents considered the postnatal care they received as being somewhat helpful to very helpful. Only 5.8% did not find the postnatal care services they received helpful in any way ( Fig. 7).

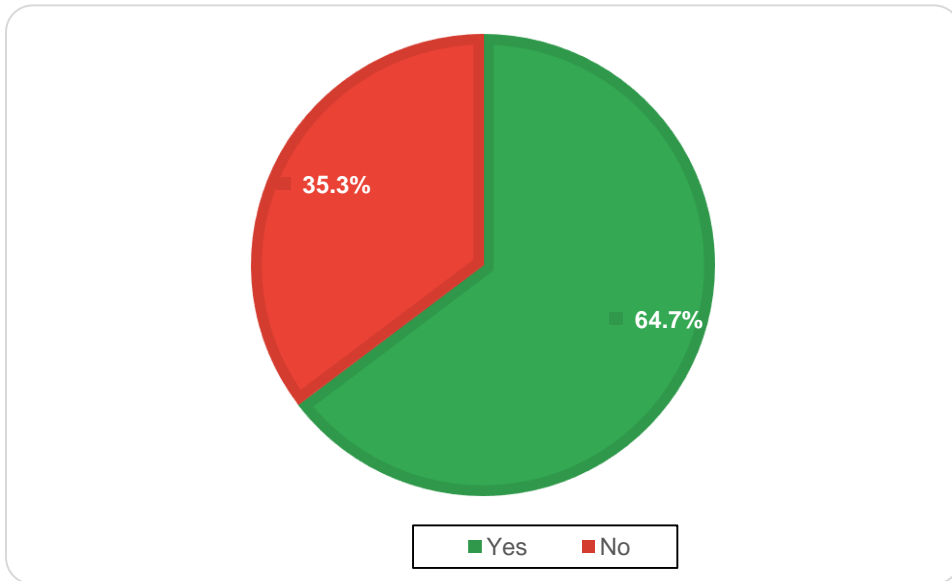


**Fig. 7. Perception of mothers towards Postnatal care**

### 3.1.4.7 Demand for Qualified Postnatal Care Personnel

Close to two-thirds (64.7%) of respondents reported that they would utilize qualified postnatal care personnel for subsequent pregnancies (Fig 8)

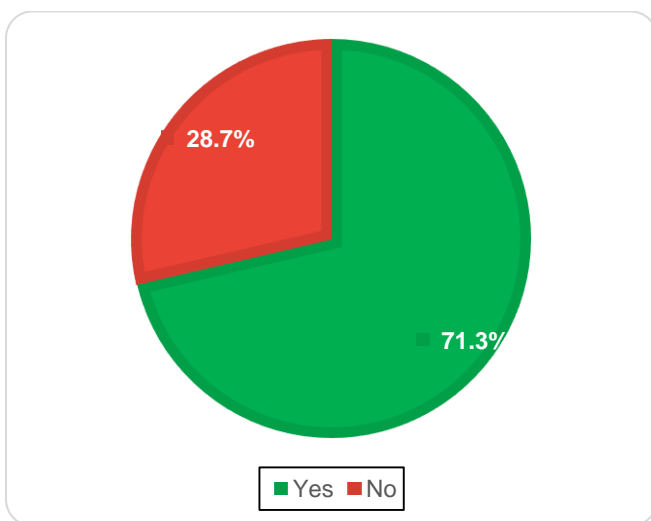
Key factors influencing their decision to utilize qualified postnatal care personnel for subsequent pregnancies included the educational level of the respondent: There was a statistical significance between respondents who had finished secondary school and utilization postnatal care from qualified personnel ( $p = 0.001$ ). There was no statistical significance between respondents who had had their antenatal care in public hospitals and the need to utilize qualified postnatal care personnel in their subsequent pregnancies ( $p = 0.002$ ), but respondents who delivered in private hospitals had a statistical significance to utilize qualified personnel ( $p = 0.003$ ). Respondents who reported complications during the antenatal period showed a statistical significance to utilize qualified postnatal care personnel during subsequent pregnancies ( $p = 0.02$ ). Respondents from Yaba area were also showed a statistical significance to utilize postnatal care from qualified personnel in subsequent pregnancies ( $p = 0.04$ )



**Fig. 8. Distribution of demand for qualified postnatal care personnel**

### 3.1.4.8 Willingness to Pay

Over 70% of respondents indicated that they are willing to pay a fee for postnatal care delivered by qualified personnel (healthcare professionals such as physicians and nurses) (Fig.9). Respondents who had completed secondary school education or less were less willing to pay than those who had higher education ( $p = 0.006$ ). Respondents who had complications during delivery were also more willing to pay for qualified personnel ( $p = 0.003$ )



**Fig. 9. Distribution of mothers willing to pay for informal postnatal care services.**

### 3.2 Discussion

The respondents were women of reproductive ages, 25-44 which falls within the documented age group for reproductive women[3]. The most common occupational category among the women surveyed was 'professional'. This included women in corporate worlds, teachers and administrators. An explanation for this could be that both study areas are known for commercial activities which create an enabling environment for women with such professions. Due to the nature of immunization delivery (starting at birth), it is impossible to say if postnatal care influenced these immunizations. Further studies would do well to focus on vaccine completion for age. The majority of the women were from Southern Nigeria, with more Yoruba tribe (Southwest) than the Igbo tribe (Southeast). This is explained by the location of the study as Yaba and Itire, Lagos is located in Southwest Nigeria. The women of Togolese origin were also identified in the study. It is worthy of note that the Itire community is home to several Togolese women who have been residents for trade purposes. Most women in the study had completed a post-secondary certification, indicating a high literacy rate among respondents.

Antenatal visits were recorded in almost all women surveyed (98%), making this observation similar to those recorded for other low-middle income countries where an average of 79% was documented to have had a skilled provider visit at least once during their pregnancy [9]. A multilevel analysis of data from 36 sub-Saharan countries also reported antenatal care visits during pregnancy as 89.26% [10] similar to what was observed in this study. This is however in contrast to what is observed in Nigeria where ANC utilization is 61%. This may be because this study was carried out in a relative urban environment [11].

This study recorded that respondents showed more confidence in the antenatal care and information given by private health facilities as compared to traditional birth attendants and religious homes. It is discussed that both private health facilities and traditional homes grant easier access to healthcare as compared to the public health facility where many processes are encountered that increase waiting time. It is recorded that more women choose private health facilities for their delivery centre and this could be accounted for by the swift response and reduced waiting time in private hospitals.

Comparing services reported to have been received by the respondents to the WHO updated guideline on postnatal care and services; 52% of the women got their postnatal services from informal networks (family, in-laws) as opposed to care from trained health personnel such as matrons and community health workers as recommended by W.H.O [2]. The exact services respondents mentioned were; counseling and guide on cord care, breastfeeding, bathing of the child, immunization regimen, growth monitoring, wound care and family planning.

In this study, only 9% of the women used chlorhexidine gel as recommended by WHO, 76% used methylated spirits, while 15% used herbal mixtures on lanterns, toothpaste and others. 65% of the women reported having given the recommended 6 months exclusive breastfeeding; others 35% gave milk with other feeds. Only 19% of the women had commenced family planning at the time of the study. These statistics correlate with earlier reports of low family planning use among women in Nigeria [15].

Though the majority of the women (94%) felt that the postnatal help they got from the support was useful, about 65% of them agreed that they could use professional help to guide if available. It may be inferred that their opinion about the usefulness of the support gotten was merely from the perception of not having a total grasp of the standard postnatal care services which has been reduced to house chore-like caring of the mother and child. This study showed a significant correlation ( $p=0.022$ ) among women who had delivery complications and openness to professional help. The study also showed a significance between residence (Yaba) and openness to professional support. This may be because many of the respondents in Yaba were met in their offices and can be considered to be career people who would need to be back to work after delivery.

## 4.0 CONCLUSION

This feasibility study has established the current determinants for postnatal services in Nigeria and the gap in postnatal services. The study also shows the demand for qualified postnatal care services, a general expectation that such services be discharged as a public service. It is therefore recommended that mothers coming for antenatal care be enlightened on standard postnatal practices for optimal maternal and child survival. The need for an urgent innovative, cost effective approach to link women and their informal circles to qualified health professionals is imperative.

## 5.0 ETHICAL CONSIDERATION

Ethical approval was obtained from the Institutional Review Board of the Nigerian Institute of Medical Research. Informed consent was sought from all participants after the study has been duly explained to them. Only those willing to take part had questionnaires administered to them.

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