UTILISATION OF MATERNAL HEALTH SERVICES IN THE PUBLIC SECTOR VS INFORMAL PRIVATE SECTOR IN NIGERIA

BY

OBIPI SIYEOFORI CHARITY KIT ROYAL TROPICAL INSTITUTE VRIJE UNIVERSITEIT AMSTERDAM

UTILISATION OF MATERNAL HEALTH SERVICES IN THE PUBLIC SECTOR VS INFORMAL PRIVATE SECTOR IN NIGERIA

A thesis submitted in partial fulfilment of the requirement for the degree of Master of Science in Public Health

Ву

Obipi Siyeofori Charity

DECLARATION

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LIST OF ABBREVIATIONS

ANC Ante-natal Care

CBHI	Community-Based Health Insurance		
CHEW	Community Health Extension Worker		
СНО	Community Health Officer		
IPS	Informal Private Sector		
JCHEW	Junior Community Health Extension Worker		
JSY	Janani Suraksha Yojana		
LMICs	Low-middle-income countries		
PHF	Public Health Facility		
MHS	Maternal Health Services		
MMR	Maternal Mortality Ratio		
MNCHW	Maternal, Newborn, and Child Health Week		
OOPE	Out-Of-Pocket Expenditure		
PNC	Post Natal Care		
SDG	Sustainable Development Goal		
SRH	Sexual and Reproductive Health		
SSA	Sub-Sahara Africa		
UNICEF	United Nations International Children's Emergency Fund		
WGT	Women's Group Training		
WHO	World Health Organization		

DEFINITION OF TERMS

Ante-natal care: The care received by a pregnant woman from a skilled health worker to ensure a healthy mother and child (1).

Informal Private Sector: "Unlicensed, unregulated MHS providers such as TBAs for profit maximization" (2).

Maternal Health: The woman's health throughout pregnancy, childbirth, and the postnatal period (3).

Maternal Health Services: Special health services received by women before and during pregnancy, childbirth, and after childbirth—— Pre-conception care, ANC, delivery, and PNC (4,5).

Post-Natal Care (PNC): The care given to a woman immediately after childbirth and within the 42 days of life (6).

Public Sector/Public Health Facilities: Facilities that offer health care to the general population and are owned and controlled by the government. These include general hospitals, and primary health centres (7).

Skilled Attendant: A licensed health professional that has undergone formal training in acquiring the relevant skills and knowledge to care for women and newborns during pregnancy, childbirth, and postnatal (8).

Traditional Birth Attendant: A person in the community without formal training that provides care to women during pregnancy, childbirth, and after childbirth; they are independent and do not belong to the health system (8).

Utilisation: The use or consumption of services provided (7).

ABSTRACT

Background: High maternal mortality remains a serious public health problem in Nigeria, with a key contributor being the lack of utilisation of skilled attendants for maternal health services. Despite the availability of qualified skilled attendants at public health facilities, women continue to use the informal private sector for maternal health services which poses a risk to their health.

Objective: To explore the factors that influence the utilisation of MHS in the public and informal private sectors and identify strategies to improve maternal health service utilisation in Nigeria.

Method: A literature review using databases from google scholar, VU Library, google, and PubMed published in English not older than 20 years. Andersen's model of service utilisation (1995 version) was used to analyse and present the findings.

Results: Younger women of 15-24 years, those with higher parity, low educational levels, and low-income level are more likely to use the informal private sector. Barriers to using public health facilities include lack of drugs, negative attitudes and lack of health workers, high cost, and transportation problems. Furthermore, women in rural areas suffer higher costs when receiving maternal health services.

Conclusion: The use of maternal health services is critical to achieving sustainable development goals. Thus, the need to address the barriers to utilisation, the synergy of interventions is needed to combat these challenges.

Recommendation: Health workers should be trained to have a positive attitude; government should provide programs that enhance financial security.

Keywords: Utilisation, maternal health services, informal private sector, public sector, public health facilities, Nigeria.

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INTRODUCTION

The choice of this topic has been influenced by my several years of work experience as a healthcare provider in rural communities. It was disturbing and challenging to deal with the complicated cases of maternal health issues and their outcomes due to women going to the informal private sector and later being rushed to the facilities with badly managed pregnancies and deliveries.

This study is very important in the context of Nigeria because the non-utilisation of PHF for maternal health services (MHS) has been a major contributing factor to the high maternal mortality ratio in the country. It is necessary to comprehend the factors responsible and devise strategies to improve MHS utilisation at the PHF to reduce the current trend of maternal mortality in Nigeria.

Maternal health care is considered very important as it is one of the sustainable development goals (SDGs) to be achieved by 2030. A lot of programs are ongoing yearly to achieve this goal, such as Maternal, newborn, and child health week (MNCHW) done twice a year to increase access to service utilisation. MNCHW is a week designed to provide integrated and free services and interventions for pregnant women and children between 0-59 months old. It is aimed at improving the health and wellbeing of mothers, newborns, and early children by providing a complete variety of integrated health services and treatments. However, there is not much achievement as the targeted women still don't use these services.

This thesis is organised into five chapters: country's background information in chapter one, chapter two consists of the problem statement, justification, objectives, and methodology, chapter three shows results from the literature, and analyses strategies to improve MHS utilisation, chapter Four contains a discussion and limitation, and chapter five presents conclusion and recommendations.

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CHAPTER ONE

1: BACKGROUND

This gives a brief background and key information about Nigeria's demography, geography, socioeconomic status, and health sector.

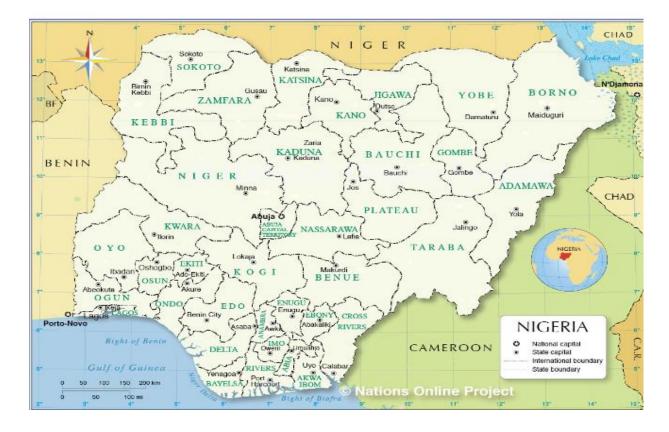
1.1 Demography

The total population of Nigeria is 221,084,124 people with 49.5% women and 50.5% men (9,10). The total population of people living in the rural area in Nigeria is 51% (11), percentage of women living in the rural area in Nigeria is 49.5% (12).

1.2 Geography

Nigeria possesses a total land mass of around 923,768 sq. km with a density of around 212.04 individuals per sq. km. It consists of 36 states, including Abuja as its capital state. It has a border with Niger in the north, Chad and Cameroun in the east, the Gulf of Guinea of the Atlantic Ocean in the south, and Benin in the west (see Figure 1). It constitutes of lowlands in the southern region, hills, and plateaus in the central region, plains in the Northern region, and mountains in the South-East region (13).

Figure 1: Map of Nigeria (14).



1.3 Socio-economic status

The number of Nigerians living below the poverty line continues to rise due to the deteriorating economic environment, as they are faced with massive development challenges (15,16). 53% and 9% of the people living in rural and urban areas respectively live below 1.90 USD per person a day (17,18). Agriculture was previously an essential component of the Nigerian economy until crude oil was discovered and became the leading source of earnings. Although, since the beginning of covid-19 pandemic, Nigeria has reduced oil revenue which has led to a budget fall. This is also worsened by the insecurity ongoing in the form of Boko-haram in the Northern region and incessant kidnapping in the Southern region, all these have hampered the capacity of the government to fund essential services such as MHS. Additionally, the removal of fuel subsidies by the present government has made life more difficult for many Nigerians (15,19). The literacy rate is 77.62%; women's literacy rate is greater in urban than in rural areas (20,21). 90% of women are educated in the urban area as against 49% of their counterparts in the rural area (22).

1.4 Health Sector

"A health system is an organised framework for the servicing of the health care needs of a given country" (23). The health sector in Nigeria is structured in primary, secondary, and tertiary health facilities which are managed by the local, state, and federal government respectively (18,24–26). The health sector is also pluralistic with public and private health providers that can either be formal or informal (27). The health human resource in the public sector consists of doctors, nurses, community health officers (CHOs), community health extension workers (CHEWs), junior community health extension workers (ICHEWs), and others (28,29). Apart from the nurses/midwives and doctors, the CHOs are also recognised as skilled birth attendants. They are allowed to provide MHS due to the implementation of task shifting and sharing policy (29). The provision of health care is the concurrent responsibility of the three tiers of government, where the financing is done by both federal and state governments (25,27). However, most of the health expenses are borne by the individuals as out-of-pocket expenditure (OOPE) as there are limited health insurance services available (30). The health sector is also faced with limited resources (human and financial) given that for the past decades after the "Abuja declaration", an average of 4.7% is being allocated to health from the national budget (30).

CHAPTER TWO

2: PROBLEM STATEMENT, JUSTIFICATION, OBJECTIVES, AND METHODOLOGY

2.1 PROBLEM STATEMENT

MHS is one of the maternal and child health programs that focus on the health of women. It covers preconception, antenatal, delivery, and post-natal care. The utilisation of MHS is crucial for lowering maternal mortality and improving maternal health outcomes (32). However, Nigeria still has one of the highest maternal mortality ratios (MMR) in the world, even though MMR has decreased globally (33). According to WHO, global maternal deaths have declined from 342 to 223 deaths per 100,000 live births within the year 2000-2020 (34). Nigeria accounts for 20% of all maternal deaths worldwide, with an estimated 287,000 maternal deaths each year (35,36). The utilisation of MHS in health facilities can help to prevent the occurrence of most of these deaths among women (37).

To lower the maternal mortality ratio, increasing access to and use of MHS is identified as one of the most important strategies (38). The Nigerian government has initiated numerous actions toward improving maternal health outcomes, including enacting laws to expand access to and use of MHS and training more qualified birth attendants (39). However, MHS utilisation in Nigeria is still far from ideal, especially in rural areas where access to maternal health care is poor (40).

The main source of MHS for women in rural Nigeria is the informal private sector (TBAs) (41). They are crucial in delivering care for women during pregnancy, delivery, and postpartum and are frequently the first point of contact for women seeking MHS in rural areas (42). However, they frequently lack formal training and might not have the expertise or tools to manage pregnancy-related complications, impacting maternal health negatively (43).

The public sector, on the other hand, comprises health facilities and services owned and operated by the government (44). These facilities offer various MHS such as preconception and antenatal care, skilled birth attendance, emergency obstetric care, and postnatal care. However, many women in rural Nigeria face barriers to accessing and utilising the public sector for MHS (42).

Nigeria is faced with high maternal mortality due to pregnancy-related complications; this has become a major public health challenge (45). Among the factors contributing to this difficulty is the low utilisation of MHS in public health facilities (PHF), especially in rural areas where access to care is limited. Many women in Nigeria prefer to use the informal private sector (IPS) providers, such as traditional birth attendants (TBAs) in home deliveries, or private maternity centres for MHS (46). The use of IPS has become prevalent in the country despite the availability of PHFs that are staffed with trained skilled birth attendants and modern equipment (41,47). However, IPS may pose risks to maternal health due to inadequate training, equipment, and referral systems, including harmful practices such as the use of herbs and concoctions to facilitate dilatation and make baby strong, unsterilised instruments and poor hygienic environment (48,49).

In Nigeria, only 43.3% of deliveries occur in facilities, and less than 40% of these births take place in PHF. The percentage of women who use PHF for MHS varies across urban and rural locations as well (50). According to the 2013 Nigerian Health Demographic Survey (NDHS) study, 80% of urban women used skilled attendants for ANC compared to 45.6% of rural women. Also, 61.7% of urban women used skilled attendants for delivery as against only 21.9% of rural women. It also showed that compared to women living in urban areas, more rural women (77%) used IPS for MHS (21). The NDHS study for 2018 stated that 26% of women used PHF for childbirth in the rural area as compared to 61% of their counterparts in the urban area. 43% of deliveries were assisted by a skilled provider, while more than 50% of deliveries were assisted by TBAs and family relatives. Additionally, 42% of women had PNC within two days, while 44% had PNC within forty-two days (22). Below is a trend of place of delivery over ten years from 2003-2013, and a distribution of place of birth in 2018, as seen in figures 2 and 3 respectively.

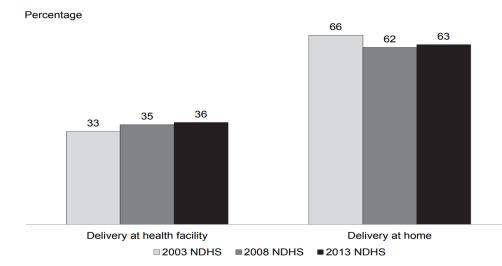
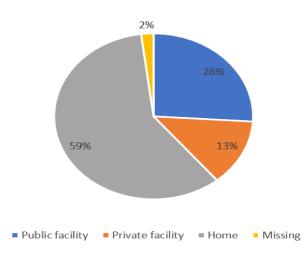




Figure 3: Distribution of birthplace in Nigeria 2018 (22).



2.2 JUSTIFICATION

The high maternal mortality ratio in Nigeria is a critical public health concern that can be addressed by increasing the use of MHS (51). However, the utilisation of MHS in Nigeria remains unsatisfactory despite efforts of the government, especially in rural regions where many women rely on the informal private sector (IPS) as their primary source of MHS. In Nigeria, both the public and IPS play important roles in the provision of MHS (47,52).

Some studies have investigated the utilisation of MHS in Nigeria, however, there is a dearth of a good understanding of the factors that influence women's choice of these two sectors for MHS. More so, the contribution of the IPS has been neglected and the focus is on the public sector only (53,54). Therefore, it is essential to analyse and compare the utilisation of MHS in the public and informal private sectors in Nigeria and to identify the factors that influence women's choice of a service provider. This study attempts to fill this information gap by analysing the factors that influence the choices women make to obtain MHS from the public sector or IPS. Understanding the factors that influence this decision-making process is critical for establishing specific interventions and policies to increase MHS utilisation and, thus, improve maternal health outcomes in Nigeria. This research can give valuable information that can inform reliable approaches for improving the utilisation of MHS across the country by identifying the positive and negative attributes of both sectors and analysing possible discrepancies. Furthermore, the findings from this study will help policymakers and service providers to establish effective measures to enhance MHS availability and utilisation in public sectors and to achieve the country's sustainable development goals resulting in improved health outcomes for women and children (55). There is also an absence of literature on the comparison of MHS utilisation between the public and IPS in Nigeria. The study will propose policies and recommendations to improve the utilisation of MHS in both sectors and to reduce maternal mortality in Nigeria.

2.3 RESEARCH OBJECTIVES

2.3.1 General objective

To explore factors that influence MHS utilisation in the public and informal private sectors (TBAs) and identify strategies to improve MHS utilisation in Nigeria.

2.3.2 Specific objectives

- 1. To analyse the factors influencing the choice of MHS provider in Nigeria
- 2. To identify the barriers to utilisation of MHS in the public sector in Nigeria
- 3. To identify strategies that can be adopted to improve MHS utilisation in Nigeria

2.4 METHODOLOGY

This research used a review of relevant literature of both grey literature and peer-reviewed articles from journals, dissertations, theses, and government papers. The search engine used PubMed/Medline, VU library, google scholar, google, and websites to obtain relevant information on MHS utilisation. Keywords/search terms are "maternal health service", "utilisation", "informal private sector", "public health facility", "TBAs", "Nigeria", Sub-Saharan", "LMIC", "developing countries", "global", "rural", "urban". Boolean words were repeatedly used to search for literature (see Annex 1).

INCLUSION AND EXCLUSION CRITERIA

- 1. Studies done in the last twenty years were considered given their relevance to this research.
- 2. Articles written in English were used because they are more conversational to the researcher.
- 3. Studies conducted in Nigeria and other countries with similar features were considered.
- 4. Qualitative, quantitative, or mixed studies conducted in rural and urban settings were considered to give a broad understanding of MHS utilisation in PHF and IPS.

5. In this study MHS can refer to any of the services (ANC, delivery, PNC) or all the services, given that some studies discussed either or all of them.

6. Although MHS consists of pre-conception care, this study will only consider ANC, delivery, and PNC due to the availability of data for these components in articles on MHS.

2.5 CONCEPTUAL FRAMEWORK

Several service utilisation frameworks were reviewed for relevance and usefulness to this study. They include the socio-economic status model, health belief model, Donabedian's model, and Anderson's behavioural model of health service utilisation. The first two emphasize the role of socioeconomic status as well as individual belief as key determinants of health service use (56), while Donabedian's framework focuses on the evaluation of the quality of care only and not utilisation (57). However, the Anderson behavioural model of service utilisation focuses on both service utilisation and health outcomes. It provides an in-depth structure that considers a variety of factors impacting health service utilisation, such as population characteristics: predisposing factors (individual characteristics such as maternal age, parity, and education), enabling factors (resources that are available to help individuals to access health service, such as income, the distance of health facility), and need factors (related to individual's perceived need for health services such as problem during pregnancy). It also has the environment which are health system factors that influence users' perceptions this includes the attitude of health professionals, availability of health professionals at the service delivery point, and availability of medical supplies (58,59). Using this framework, a wide range of determinants that may influence the choice of MHS provider can be analysed. The model will aid in the identification of discrepancies in the utilisation of MHS among various population groups. Disparities may arise in Nigeria between rural and urban areas, different income levels, and different age groups. Understanding these differences may help in the development of specific programs to enhance equal health access and utilisation.

This model also has health outcomes such as clinical and satisfaction outcomes. The clinical outcomes have to do with the change in overall health status while the satisfaction outcomes refer to the individual's perception of the health service they received, which involves communication with providers, accessibility of care, and overall satisfaction with the care provided.

Based on the Anderson model of service utilisation, the following factors will be analysed: maternal age, parity, level of education, income level, physical access to PHF/IPS, knowledge of dangers of pregnancy, health workforce (availability and attitude of health care providers), and availability of medical supplies. These factors have been considered for analysis due to how they have been sufficiently discussed as core issues in the literature on MHS utilisation in Nigeria. However, this study will not consider the clinical outcomes due to the study method. These clinical outcomes could be well captured using a different study method.

ENVIRONMENT POPULATION CHARACTERISTICS

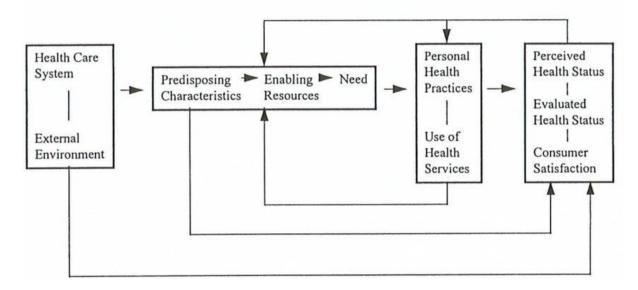


Figure 4: The Anderson model of health service Utilisation 1995 (59).

CHAPTER THREE

3: FINDINGS

In this chapter, the Andersen model of health service utilisation framework has been used to analyse factors contributing to MHS providers' choice in Nigeria. The model was used to break down the diversity of factors that go into a person's decision to use MHS, allowing for a more thorough examination of the positive and negative influencers between the public sector and the informal private sector, in this case, Traditional Birth Attendants (TBAs) in Nigeria. The factors have been analysed under the broad categories reflecting the framework structure; population characteristics (predisposing characteristics, enabling factors, and need factors) and environment (health system).

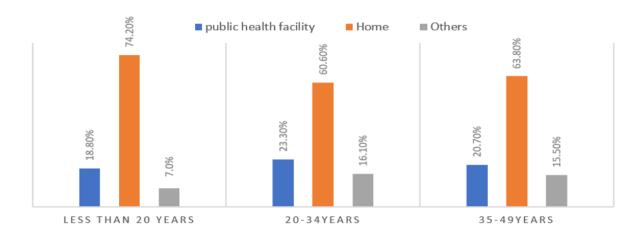
3.1 PREDISPOSING FACTORS

The highlighted predisposing factors focused on maternal age, parity, and level of education. These factors influence the choice of MHS provider for utilisation.

3.1.1 Maternal Age

In Nigeria, there is a substantial correlation between age and MHS provider choice. Young maternal age of 15-24 years is associated with the use of IPS (53,60) Women of 25-34 years have higher odds of using MHS at the PHF compared to younger women of 15-24 years (61). According to UNICEF, 28% of Nigerian women get pregnant before the age of 18 years (62). This is a "high-risk" age group for pregnancy and childbirth. Furthermore, according to the 2013 NDHS report, these younger women are less likely to use MHS at the PHF (21). This may be seen as a concern, given the potential risk associated with high-risk pregnancy. Below is Figure 4 showing the place of birth by age:

Figure 5: Distribution of birthplace by age in Nigeria (21).



Conversely, another study reported that the odds of Utilising IPS are associated with increasing age (63). Older women are less likely to use MHS at the PHF (64). Similarly, a study conducted among women in Sub-Sahara Africa revealed there is an association between the use of IPS and increasing age (65).

In Cameroun, maternal age is a determinant of the choice of MHS provider. The older a woman is, the greater the probability of using PHF (66).

A study in Ghana suggested that women above 20 years of age are less likely to use the PHF for MHS compared to younger women of 15-20 years (67), while in Burkina Faso women between the age 21-49 years were less likely to use MHS at the PHF compared to young women of 15-20 years (68). In Liberia, younger girls are less likely to use the PHF for MHS given that about 26% of these pregnancies are unwanted. Hence, this impacts their health-seeking behaviour, making them opt for IPS (69). Additionally, in Guinea, maternal age had a substantial impact on MHS usage. Older women 45-49 years of age were less likely to use MHS at the PHF than younger women 15-19 years of age (70).

Overall, the choice of MHS provider and age is not consistent across different countries in Sub-Sahara Africa. This could be linked to other factors being interplayed in the different study environments such as size and age of the study population.

3.1.2 Parity

In Nigeria, evidence showed women with higher parity are less likely to use MHS at the PHF (54,61). Additionally, other studies conducted in showing the trends of MHS utilisation reveal, women with no/low parity are more likely to use PHF for MHS compared to their counterparts with higher parity (60,61). Such women could have the perception that they have gotten enough experience related to childbirth, hence may not need the services of a skilled health worker at the PHF.

Similarly, in Liberia and Ghana, women with higher parity are less likely to use PHF compared to their counterparts with less parity for MHS (67,73). In addition, studies done in Cameroun, Mali, and Sierra Leone had findings that show the association of increasing parity with decreased use of MHS at the PHF (73–75). Another study in Nigeria confirmed that women with higher parity are less likely to use the PHF for MHS compared to women with less parity (76).

3.1.3 Level of Education

The NDHS 2018 reported that women with formal education are more likely to use the PHF for MHS (22). The use of IPS for MHS is associated with women with low/no formal education as such women may have low-income levels (53,64). A low level of education in women increases the likelihood of using IPS, while a higher level of education increases the likelihood of using PHF for MHS (76–78).

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In Ghana, women with formal education were more likely to use PHF for MHS as compared to those with no formal education(79,80). Additionally, another study in Ghana reported that the level of education of a woman's partner has a strong influence on the choice of an MHS provider. Women have a higher likelihood of using PHF for MHS when their partners have a higher level of education. In contrast, when a partner's level of education is low, women are less likely to use PHF for MHS (81).

A systematic review conducted in Sub-Saharan Africa established that a higher educational level in women is a strong determinant to use PHF for MHS. It further revealed that women whose husbands have high education were more likely to use PHF for MHS (82). A multi-country cross-sectional analysis showed how women's and partners' level of education influences the choice of MHS provider. Women with a higher level of education or partners with higher education have a greater likelihood to use PHF for MHS as compared to their counterparts with no formal education (83). In Sierra-Leone, the use of PHF for MHS by women with secondary/vocational education is 2.35 times higher compared to women with no form of education. It further indicated that women having partners with primary education are 2.38 times more likely to use the PHF for MHS compared to those whose partners have no formal education (75).

3.2 ENABLING FACTORS

Individuals may have access to MHS when they have the means to do so, the enabling factors considered include knowledge of danger signs of pregnancy, income level, and physical access to a PHF/IPS.

3.2.1 Knowledge of danger signs of pregnancy

In a study by Yahya, *et al* (2019), there is evidence that knowledge of pregnancy complications is significantly associated with the choice of MHS provider (84). There is a high probability of Utilizing MHS at the PHF by women with knowledge of danger signs in pregnancy compared to those who don't know (85). According to Ogunmodede *et al*, (2013), women get health information from different sources of which the PHF is one (86).

Also in Liberia knowing the dangers of pregnancy influences women Utilizing MHS at the PHF compared to their counterparts without knowledge of danger signs in pregnancy (87). Such women without knowledge of the dangers of pregnancy are more likely to use the IPS for MHS (66). Additionally, in Nigeria, women who know danger signs in pregnancy are two times more likely to use PHF for delivery compared to those who don't. The study further revealed that younger women of less than 20 years have little knowledge of danger signs in pregnancy (88). This could be due to not using MHS at the PHF, where they would have gotten the correct health information.

3.2.2 Income level

There is a substantial relationship between the level of income and utilisation of MHS at either the PHF or IPS in Nigeria. Several documents have shown that women with a high level of income have a 3.4 times likelihood

to Utilise MHS at the PHF compared to women with a low-income level (64,76,89). Another study revealed the inability to pay for MHS by women influences their choice in the use of IPS (90). This further reveals that the services of IPS are cheap compared to the PHF, and the mode of payment is very convenient given that IPS service providers can be paid in instalments (47,63,91). Additionally, low income is strongly related to the use of MHS within the home with the aid of TBAs (64). Women from rich households are 3.42 times more likely to use the PHF for MHS compared to their counterparts from poor households (76). The level of income as it influences the choice of MHS provider is shown in Table one (1).

Monthly income (₦)	Current and future patronage of IPS (TBA)YesNoTotal		
Less than 10,000	105	4	109
11,000 - 49,000	39	4	43
50,000-99,000	12	0	12
above 100,000	0	0	0
Total	156	8	164

Table 1: Relationship between the use of IPS and level of income in Nigeria (92).

In Nigeria, income level is anticipated to have a positive association with the choice of MHS provider, urbanrural divide showing inequality in income (93). Women with higher incomes may have more tendency to use PHF, because of their ability to pay for those direct and indirect costs such as diagnostic services, drugs, and transportation. These women have better job opportunities that will provide high salaries due to living in urban areas. Also, these women are more likely to live closer to a PHF. In contrast, women in rural areas with low income may rely on IPS due to financial constraints and restricted access (93,94).

The average cost of delivery in the PHF is between ₦5,000 - ₦18,000 (US\$25-US\$90) given that not all PHFs in the country provide free MHS programs. Other compulsory requirements are demanded by the nurses for deliveries such as disinfectants, gloves, sanitary pads, and others, amounting to ₦2,850 (US\$14.25). This occurs even in areas where there is a free MHS program (95). Conversely, the IPS can collect between ₦500 - ₦1000 (US\$1.39-US\$2.78) or foodstuffs (41).

However, women with low income have higher odds of using PHF in Burkina Faso. This could be due to the maternal health financing scheme put in place (68). The health financial scheme will limit financial constraints

for women to access MHS at the PHF. A study in the Northern part of Nigeria reported that women's average wages are lower than half a dollar per day while the average cost of MHS is about US\$ 1.92 and US\$ 9 for postnatal and delivery respectively (96).

3.2.3 Physical Access to PHF/IPS

Physical accessibility to public transportation and location are all important considerations when choosing a provider. Women have the option of receiving MHS in places that are more convenient for them in terms of distance from home or accessibility through public transportation. According to NDHS (2008), one in three women have difficulties accessing a PHF due to distance, transportation, and bad road network (97). This could be due to the uneven distribution of PHF, for example, a study done in the North Eastern part of Nigeria revealed that a population of 18,723 and 21,343 have five facilities and one dispensary respectively (98,99).

In Nigeria, studies reveal that IPS is more accessible, as they are located very close to the people especially in the rural areas (63). Another study in Kaduna State also suggested that distance to PHF is related to not using MHS at the PHF. Women living far from the PHF are more likely to use IPS for MHS (100). The distance travelled could cost about \$300 (US\$ 1.90), and in terrain that is hard to reach, the transportation can cost about \$5,000 (US\$ 32) (101,102).

Studies in Ogun State and Delta State reported, a distance of less than 30 minutes' walk to a PHF will increase the odds of being used for MHS (103,104).

In Burkina Faso, the use of PHF for MHS was higher among women living nearer to PHF (68), women living more than 10km from the PHF have decreased odds of using the PHF for MHS as compared to those living within 5km in Sierra Leone, Mali and Niger (105). The distance to PHF from where women live poses a challenge in using MHS as well as the cost of transportation.

According to a study conducted in Guinea, women living in rural areas are less likely to Utilize the PHF for MHS due to the distance of the PHF from their place of home when compared to their counterparts in urban areas where the PHF is placed close to their residence (70).

A respondent from a study conducted in Ghana had this to say "You know when you attend ANC regularly it makes you deliver your baby with ease. "There was a day I planned going for ANC but that very morning, my brother passed away. I used to walk to the hospital for ANC and always find it difficult when my appointment is due. For me, I believe that if the distance to the health facility is far it discourages others to Utilise ANC services" (106). The closest PHF is around 12 kilometres away from any of the communities in the rural areas. Pregnant and breastfeeding mothers in these communities describe how the high cost of traveling to access or use birthing facilities leads numerous families to choose other options (107). This may likely not be the case in the urban/peri-urban areas.

3.3 NEED FACTORS

The need factors include the frequency of ANC visits and problems during pregnancy.

3.3.1 Frequency of Ante-natal care (ANC) visits

ANC is one of the maternal health services being offered by both the PHF and IPS. Often, women use this particular service at the PHF but opt for IPS for childbirth (108). A study by Ogbo *et al*, (2020) showed that women with more than four visits were less likely to use IPS for delivery compared to those with no/less visits (71). Studies in Nigeria and Benin showed that 56% of women with a minimum of four ANC visits had childbirth in a PHF, compared to 40% of women with less than four ANC visits. It further showed in retrospect, 87% of women who ended up giving birth in a health facility used ANC frequently (76,109). Thus, the women not using the PHF to deliver may be unaware of the dangers that are related to it or may have challenges in accessing the PHF.

Another study in Nigeria suggested women with at least four ANC visits were more likely to use the PHF for delivery and post-natal compared to those who never attended (76). Similarly, in Gambia, women with more ANC visits are more likely to use the PHF for childbirth compared to their counterparts with less ANC visits (110). However, a study in Nigeria suggested that the use of PHF for ANC doesn't imply using it for other MHS due to cost. Showing that while some women may opt to receive ANC at PHF, this does not guarantee that these women will keep visiting the facility for other MHS, such as childbirth or postnatal care. The main reason for this disparity in Utilisation is due to cost.

3.3.2 Problem during Pregnancy

Another key aspect is the perception of a demand for MHS. Women's opinions of their own need for MHS could vary based on some factors such as the presence or absence of problems during their current pregnancy. Women who believe they require better medical care are more likely to MHS at the PHF to have access to advanced technology and specialized staff (111).

A study in the southern part of Nigeria showed problems during pregnancy or previous history of complications during pregnancy influences the use of MHS at the PHF (112). Another study, in contrast, reported that women Utilise the IPS when they perceived that there is a problem such as breech (abnormal position of the baby in the uterus) believing that they can change the position (90). In a qualitative study conducted in southwest Nigeria, it is claimed that the 'aseje' (a special concoction made from herbs) reduces difficulties during pregnancy and labour and keeps pregnant women healthy. Thus, women Utilize the IPS when they experience problems during pregnancy compared to the use of PHF (113).

"The perception was generally held that some complications are better treated by traditional doctors. Explaining this point further, a male decision-maker described how women patronized both traditional health care providers and skilled professionals: "Once they detect that the baby is lying across in the belly, they go to traditional doctors for care, and they usually change the position of the baby to normal position" (85).

In Cameroun, women demand MHS at the PHF when they perceive their pregnancy is at risk (66). This indicates that women who believe they'll need higher quality healthcare are more likely to go seek out facilities and providers who have a variety of modern technology and specialised personnel.

3.4 HEALTH SYSTEM FACTORS

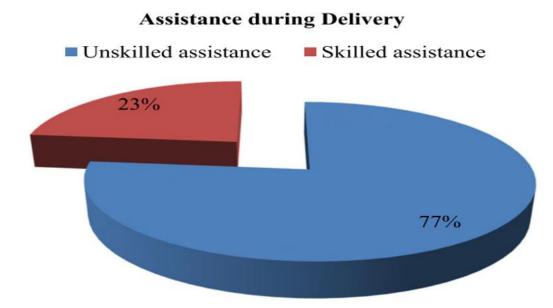
The health system factors considered were the availability of health professionals, the attitude of health professionals, and the availability of medical supplies. This is due to the impact these factors have on the choice of service provider and contribute largely to the perception formed in the individual.

3.4.1 Availability of skilled health professionals

The availability of skilled birth attendants such as midwives, nurses, doctors, and others has been a major determinant of MHS utilisation. A study in Nigeria reveals that IPS becomes the practical choice when providers in PHF are unavailable or inadequate. Most of the PHFs according to the findings from this study have only one nurse/midwife, and some have no nurse at all, and there is no residential accommodation for providers on the premises of many of the PHFs (114). The lack of health professionals has prevented 24-hour service provision at the PHF, where 0.33 health workers are proportionate to one thousand population as against the recommendation of WHO of 2.5 health workers per one thousand population (115–118).

The disparities in the distribution of health workers between the rural and urban areas have influenced the use of IPS in especially the rural areas as against the urban area (64). According to NDHS, in 2008 skilled health workers distributed to the rural areas was 27.7% as against 65.4% in the urban areas (21,119,120). A situation assessment of human health resources in the public sector established that there is 12% and 19% access to doctors and nurses respectively among rural dwellers. Those living in urban areas have about 2 and 3 times higher access to nurses and doctors respectively (121). This has led to the increased use of IPS in the rural areas as shown in Figure 6, given that health workers decline to go to the rural areas (117,122,123). This could be due to the urban-rural divide that shows gaps in the standard of living, opportunities, technologies, infrastructure, and salary level.





In Ghana, according to Dapaah, et al (2019), the unavailability of health professionals was the most important determinant in women not making use of MHS at the PHF (124). Similarly, another study in Ghana documented, the lack of skilled workers in most rural regions prevents the use of PHF for MHS (125).

3.4.2 Attitude of health professionals

MHS providers' attitudes and behaviour are an important component of quality because they influence both positively and adversely how women, their partners, and families view and experience maternal health care (126). The attitude of health workers toward their clients shows a strong influence on MHS Utilisation (112). Several documents have shown that the unfriendly attitude of health workers made women Utilise the IPS for MHS (114,127). Another study further reported, about 74.1% of women who did not complete their ANC and later gave birth at the IPS were due to the unfriendly attitude of the health workers such as verbal abuse, and disrespect (112,128). A respondent from a study has this to say *"You weren't complaining when you were having sex, don't complain now"* (129). According to women, IPS provides service with compassion compared to the health workers at the PHF (113).

A qualitative study in Ghana found out, women Utilize the IPS for MHS because they provide service with empathy as against midwives in the PHF (106,130). A multi-country systematic review done in different parts of Africa, Asia, and the Pacific showed that the negative attitude of MHS providers at the PHF has been responsible for women not using the PHF. It further revealed that service providers from the PHF display rudeness to women who came for MHS. Other forms of negative attitudes displayed were beating, slapping, and pulling the hairs of women when they are not following instructions, especially during delivery (126).

Research in Ghana reported that high level of verbal abuse and poor communication discourages women from using PHF and limits their readiness to share information about their health status when they must use them. Respect is an important component diminishing that engagement (131).

3.4.3 Availability of drugs/medical supplies

According to a study in southern Nigeria, the lack of drugs at the PHF was the reason why women chose to use the IPS for MHS. Many times prescribed drugs were not available, making women buy drugs elsewhere (132). This is a result of an open market system that is operational in Nigeria, which allows drugs to be procured, distributed, and sold by anyone (133,134). Similarly, another study conducted in Northern Nigeria showed that most of the PHF lack drugs as well as basic equipment such as a thermometer, sphygmomanometer to monitor blood pressure (127). This could be due to the poor funding associated with the health sector.

A study in Gambia also documented that lack of drugs or other medical supplies were factors that made women not Utilise the PHF in consequent times (135). This implies that previously the PHF was used for MHS, but the constant unavailability of the drug prevents women from using it further.

3.5 STRATEGIES TO IMPROVE MHS UTILISATION AT THE PHF IN NIGERIA

3.5.1 Community-based health insurance scheme (CBHI)

CBHI is a type of micro health insurance, which is a broad term for health insurance aimed at people with limited access and very poor. It is the pooling of cash to reduce the expense of health services, thereby preventing catastrophic spending (136). This will help to address the financial constraints that are associated with the non-utilisation of MHS at the PHF. Rwanda has been successful with this strategy, where about 74% of households were enrolled in CBHI. This led to a 78% increase in the Utilisation of MHS in Rwanda (137–139). Additionally, a study in Ethiopia documented the increase in service utilisation and protection from financial risk as being associated with CBHI (140,141).

3.5.2 Cash Transfer Program

Cash transfer programs are aimed at providing money to poor households with/without conditions, interestingly many countries are currently deploying the programs at a fast pace. Hence, recognized as the largest program used in social assistance (142). This can be done by identifying people that are qualified for the program based on specified criteria such as income, residency in underserved areas, or other socioeconomic indicators. This will remove the barriers that women face in the course of seeking care (143).

Another way is by developing an extensive program plan that includes the conditions for financial transfers, such as the number of required prenatal care visits and facility-based deliveries. For example, the Janani Suraksha Yojana (JSY) program in India gives women money with the condition of having three or more ANC

visits and childbirth at the PHF (144). The report shows an increase in utilisation, however, the evaluation didn't show an impact on maternal mortality.

A conditional cash transfer can also be used in the context of giving money to each pregnant woman that is being referred to a PHF by the IPS. This approach was used in Somaliland, they were also trained to be health promoters and are linked to the PHF. They played the role of advising women to use the PHF and the dangers of home delivery. There was an increase in the utilisation of MHS from 779 to 3,276 between 2009 and 2012 (145). In Nigeria, such an approach was also adopted in Abiye's initiative which resulted in an increase in MHS utilisation at the PHF. However, the program suffered sustainability due to a lack of continuity in government (146).

3.5.3 Transportation Support Plan

Transportation is an important aspect of access to health because it is the bridge between women's homes and the PHF. Poor road networks and the lack of regular means of appropriate transportation have reduced access to MHS especially those in the rural areas (147). The evidence established, the distance to travel from place of residence to PHF is a major challenge.

The use of health rangers with the task of reaching all pregnant women where they lived, worked, and played was an intervention used in Nigeria (Abiye's initiative program). Each pregnant woman was assigned to a health ranger throughout the pregnancy and after childbirth. The health rangers were to follow up with these women through home visits, and motorbikes were given to them to facilitate this function. The motorbikes were also used to bring women from the community for ANC and delivery. During home visits, women were also taught the importance of using the PHF for MHS. In addition, tricycles were also given to the health rangers for referral. This intervention recorded significant success in improving MHS utilisation in Ondo state, Nigeria. In the first year, 1.217 pregnant women were registered of which 1,099 delivered using the PHF. From 2010 to 2012, 47% reduction in maternal death, and an increase in the use of skilled birth attendants from 43.3% in 2008 to 69.9% in 2012. Although, there was no provision of boats for the riverine areas during the initial period (148,149).

Ghana implemented the community-based health planning and service (CHPS) intervention to deliver quality and equitable health services to all Ghanaians, particularly the poor, those in rural and hard-to-reach places. The intervention highlights the importance of promoting community health, particularly that of women and children. It focuses on mobile health delivery, that is, bringing health service to the doorsteps instead of the normal institutional way of service provision. A resident community health officer (CHO) and a nurse accompany clients to their towns and homes to provide services. However, this intervention didn't make provisions for the transportation of women to the facility, as well as the use of ambulances during emergencies (150).

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3.5.4 Promoting positive attitude through Community Engagement

The negative attitude of health workers undermines the quality of care and the effectiveness of the efforts in the promotion of maternal health. In addition, it deprives the right of the woman from receiving MHS with respect and dignity (151).

community engagement is essential for sustainable and equitable health programs and has been proven to be effective for feedback mechanisms and improvement of MHS utilisation (152,153).

In Ghana, Community members were used to obtain feedback on maternal health services and health worker attitudes. The intervention involves community members evaluating the quality of healthcare services in the health facilities. The evaluation was based on the clients' interactions with service providers, Staff attitude was one of the components assessed by the community members. Community members were asked to express their satisfaction or dissatisfaction with the services received using a "cartoon illustrated" five-point Likert Scale scorecard. This improved the quality of services provided (153–155).

3.5.5 Scaling up Human Resources

The health workforce is critical to a country's response to many health challenges. Reaching a larger percentage of the population and enhancing the quality of care needs equal attention to the administration and management of the health workforce. Balancing population health needs requires a supply of competent and motivated health workers who are both fit for purpose and fit to practice in the country context, thus achieving universal health coverage. This includes the change of attitude regards to working in remote and rural areas that have health equity and equality challenges (156,157).

The Human Resources for Health Strategic Plan (2007-2011), which incorporated the dimensions of accessibility, acceptability, and quality, was implemented to enhance deploying and retention approaches, accreditation, regulation, licensing, and staff continual professional development. This led to an increase in the health workforce in Ghana, about 14,000 health professionals of different cadres (nurses, midwives, physicians) were trained and employed which represents four times the population growth during that period. This strategy had global recognition (156).

3.5.6 Drug Revolving Fund

Drug Revolving Funds (DRFs) is a system in which the initial fund is reinvested to replenish medical supplies, ensuring access to people in need. DRFs aim to increase the availability, cost, and long-term viability of highquality health products (158).

In Sudan, the RDF has expanded from 60 PHFs to nearly all the PHFs in Khartoum State, considerably improving access to medical supplies. Despite most families are more than 5 kilometres from the nearest RDF facility. RDF medications were found to be inexpensive by users, with the average prescription costing only 2% of the lowest

monthly government salary (159). Currently, states in Nigeria are putting up activities to revive the DRF system in collaboration with United States Agency for International Development (USAID) (158).

3.5.7 Women's Group Training (WGT)

This is an approach to engage women and train them on skills for social and economic empowerment. Additionally, information on sexual and reproductive health and rights is also discussed to improve the health and well-being of women especially those in rural areas. Women in rural areas have limited economic activities such as subsistence farming, and petty trading compared to the women in urban areas. This approach provides a medium for women to discuss their problems and proffer solution through a participatory discussion (160).

According to WHO, this is one of the actions to improve maternal and child health. A meta-analysis showed the effect of WGT in the use of MHS. It is aimed at changing norms as it engages women in discussions regarding rights, birth preparedness, empowerment through education, and skills acquisition. The evaluation of this approach showed it has the potential of reducing maternal mortality (161,162).

Additionally, the United Nations Population Fund (UNFPA) had such a women's group training program in Ghana and Kenya. Women were empowered using the platform of fashion as means to promote women's empowerment and sexual and reproductive health (SRH). Through this approach, women were equipped with relevant skills in fashion and knowledge of SRH which may help improve maternal health outcomes. However, its impact on MHS utilisation has not been evaluated in Ghana and Kenya (163). Such programs have the potential to improve the economic situation of women and increase women's knowledge of SRH.

3.5.8 Voucher Program

Voucher programs are approaches used to increase demand for health services utilisation. It is aimed at increasing purchasing power of women with low income who might be marginalised due to financial incapability or ignorance(164). A systematic review conducted across different countries in the LMICs has proven voucher programs in increasing service utilisation including MHS (165).

CHAPTER FOUR

4: DISCUSSION AND LIMITATIONS

4.1 DISCUSSION

In this discussion chapter, the many factors that influence the choice of MHS providers in Nigeria are considered. This study analysed population characteristics (predisposing, enabling, and need factors) and the environmental (health system) factors related to MHS utilisation in Nigeria. The study not only complements previous research that has specifically investigated associated determinants of MHS use in Nigeria, but it also compared PHF and IPS on the use of MHS in Nigeria.

Based on the findings, factors influencing the use of MHS in Nigeria will be discussed under the followings: level of income, physical access, attitude of health workers, availability of health workers, and medical supplies. These factors play significant roles in influencing the choice of MHS provider. Hence, necessitating measures aimed at improving or mitigating them.

4.1.1 Level of Income

Income level has been found to be associated with MHS utilisation, with higher-income women being more likely to use PHF due to their capacity to afford the direct and indirect expenses involved with MHS. Women with lower income levels, on the other hand, were more likely to choose IPS due to financial restrictions and the simplicity of payment methods.

According to the findings of the study, women who come from low-income households have many tendencies to use IPS for MHS in the future (see Table 1). Women with low income may find it difficult to budget for transportation costs which have been heightened due to the removal of subsidies, especially if women must visit health facilities frequently. As in the case of ANC, where women are required to attend at least four to eight visits. Their inability to attend these times limit the chances of early detection of abnormalities during pregnancy, resulting in negative maternal health outcomes. Moreso, regular ANC visits increase the likelihood of receiving vital information, preventive care, and early diagnosis of any potential pregnancy issues. This increases her knowledge of danger signs in pregnancy, thereby enhancing her making informed decisions regarding her pregnancy. This increased awareness and preparedness may drive women to choose PHF for childbirth because they believe they will have better access to advanced technology and skilled professionals to deal with any issues that may develop during delivery.

Additionally, the financial load may discourage women from using MHS at the PHF, especially if the fees are perceived to be expensive. The cost to keep up with daily basic needs of life has not been easy coupled with the cost of distance to access MHS, given the present economic situation. The effort to improve women's income levels is imperative, especially with disparities between rural and urban areas. Given that women in

rural areas have limited opportunities for economic activities compared to their counterparts in urban areas. The direction of efforts on strengthening the WGT program has been proven effective in empowering women economically through vocational skills and increased knowledge of SRH. Such groups will provide opportunities for women to be independent financially and make women aware of problems during pregnancy. For example, they will be aware of high-risk pregnancies as it relates to age and parity. Other strategies proven to be effective in addressing the poor economic situation of women are the cash transfer and voucher programs.

Findings from this study provided evidence that a higher level of education in women and/or their partners is associated with the use of PHF for MHS. Given that such women are more likely to get better economic activities and support systems that will increase their income level. This increased financial capability allows women to bear the expenses of services provided, increasing their use of PHF for MHS. Women with higher levels of education have a greater likelihood to be aware of pregnancy-related danger signs and complications. This increased understanding empowers women to make informed decisions by seeking MHS from skilled providers, resulting in positive maternal health outcomes.

Promoting formal education for girls is an important step toward empowering more young women to complete secondary school. Providing educational opportunities is a means of empowering girls to make informed decisions about their maternal health. This will mitigate the prevalence of pregnancy before the age of 18 years. Furthermore, capacity-building programs, such as vocational training, can provide women with lifetime abilities that promote financial security, resulting in higher use of MHS. The positive relationship between improved educational levels and socioeconomic status is also critical in using MHS. Women's livelihoods improve greatly when they acquire access to higher education and employable skills. This improves their ability to afford and receive MHS, resulting in better maternal health outcomes.

Women's group training has proven to be an important strategy where girls and women are enlightened on the power of education. Such training also raises awareness and creates opportunities for financial autonomy.

4.1.2 Physical Access

Physical access to PHF and IPS has a substantial impact on MHS utilisation in Nigeria. The distance between women's houses and PHF, the availability of public transportation, and the location of PHF all have a part in determining whether women choose PHF or IPS for their maternity health needs (see Figure 7). Women are more likely to choose IPS in rural areas, where PHFs are frequently far, indicating the necessity of enhancing aids for mobility and ensuring that PHFs are properly located to facilitate accessibility.

The lack of PHF in some rural and remote areas of the country is a big concern. Even in regions where PHF exists, it may serve numerous surrounding communities, resulting in extensive distances that operate as barriers to access and use of MHS. Due to the distance barrier, women from these communities may resort to

IPS as a more accessible option. Also, in rural areas, transportation options may be restricted, infrequent, or absent making it difficult for people to access PHF.

Thus, improving physical accessibility is critical to increasing MHS utilisation, particularly in rural areas. Some strategies identified are transportation aid and the use of health rangers in these underserved areas. MHS utilisation is projected to improve because of bringing health services closer to people, as women would have easier access to skilled provider care during pregnancy, childbirth, and the postnatal period. However, the sustainability of such strategies may require high political will and continuity in governance which is often lacking in the country.

4.1.3 Attitude of Health Workers

The attitude of health workers has been found to have a significant influence on the choice of MHS provider in this study. Several studies documented that the negative attitude of health workers has become a barrier to the utilisation of MHS at the PHF. On the other hand, the provision of MHS with compassion, respect, and empathy has pulled many women to use the IPS for MHS.

From the findings, the negative attitude of health workers made about 74.1% of women did not complete their ANC visits. It shows how dissatisfied they were with the attitude and interactions of the health workers during service delivery. Thus, making them feel uncomfortable and discouraged for subsequent visits. Consequently, compromising the quality of care, and opting for options of service providers that may endanger their health.

The provision of scorecards to community members to evaluate the attitude of health workers providing services to them has been suggestive of improving the attitude of health workers. This empowers the women to give feedback on their experiences and interaction with a particular health worker, thereby making the health worker behave respectfully and provide client-centered care. By incorporating members of the community in the evaluation process, health workers can better understand the needs and expectations of the people they serve and make changes that are required to improve the overall quality of health services delivered.

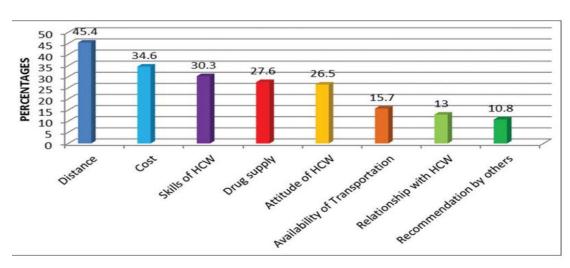
Using scorecards to analyse health workers' attitudes could be a valuable tool in enhancing client satisfaction and improving health workers' conduct. It may contribute to a more respectful and empathic health environment, which can lead to improved health outcomes and patient-provider relationships.

4.1.4 Availability of Health Workers and Medical Supplies/Drugs

The availability of health workers and medical supplies have been seen to be strong factors that influence the choice of MHS providers in this study. The PHF is faced with issues of inadequately skilled health workers due to migration in search of better-paying jobs. Even the ones that are available are not proportionately distributed, the rural areas continue to face the dilemma of not meeting health workers in the facility after

making many efforts to travel a long distance. This is because most health workers are frequently not willing to live in rural areas. Training, employing, and effective retention strategies such as better salaries, incentives, and good living and working environments especially in the rural areas could mitigate this challenge in the country.

According to the findings, the unavailability of drugs in PHF is a substantial barrier to women using it for MHS. Pregnant women may seek MHS from IPS with the impression of no need to travel far to a facility when drugs are not always available to meet their health needs. Conversely, drugs are always available at the IPS given the poor drug regulatory policy in existence in addition to the easy physical access. The constant lack of drugs has created a sense of dissatisfaction and consequently may lead to negative experiences for women, hence impacting their choice of provider. This indicates that if drugs are always available at the PHF, then women may use them for their MHS. Thus, the DRF system being put in place could address drug unavailability resulting in increased MHS utilisation at the PHF (see Figure 7).





Andersen's model of health service utilisation has been very comprehensive in capturing the relevant factors that contribute to the utilisation of MHS in both PHF and IPS. With the use of this framework, there is evidence of findings in this study that are like findings from other studies on MHS utilisation in other LMICs. No doubt, it is suitable for a holistic approach to the study of MHS utilisation in Nigeria and other countries. However, in this study, the application of the model which considers the interaction between population characteristics and environment in influencing the choice of MHS provider may not be fully executed in its original form due to limitations in the availability of data.

Summarily, there is a need to combine strategies in addressing the problem (see Figure 7) of low utilisation of MHS at the PHF. This is possible to accomplish through the government's commitments and increased sense

of accountability in duty bearers (health workers) in Nigeria. Strategies that have shown a positive impact in addressing the low use of the PHF for MHS should be adopted.

4.2 LIMITATIONS

The study design, and literature review nature enabled some probability judgments to be drawn due to complete reliance on the availability and quality of existing literature, this may introduce bias.

The research was limited to the utilisation of MHS in the IPS and PHF, hence the Utilisation of MHS by other providers was not prioritised.

There is also a paucity of data on some of the factors that influence MHS utilisation in Nigeria and similar countries.

The study is limited to time, and as such may have not done an extensive search. This may have an impact on the selection and analysis of the sources obtained.

There are aspects of the framework that is not used due to the study method, those aspects can be effectively used if this study had involved primary data collection.

CHAPTER FIVE

5: CONCLUSION AND RECOMMENDATION

5.1 CONCLUSION

Findings from this study have shown that several factors contribute to the non-utilisation of MHS at a PHF in Nigeria. These include young maternal age, particularly between 15 and 24 years, lack of education which can lead to a lack of knowledge concerning the importance of maternal health services, and high parity. Also, financial constraints such as low income and high cost, particularly in rural areas due to transportation costs and costs for MHS deter women from using MHS at PHF.

Furthermore, negative attitudes of health workers, combined with physical inaccessibility and lack of drugs/medical supplies, provide considerable barriers to MHS utilisation at PHF. To increase the utilisation of MHS at PHF, it is critical to establish focused initiatives that effectively address these barriers.

Several strategies can be implemented to improve MHS utilisation at PHF in Nigeria. Strategies aimed at expanding the health workforce, and improving financial support, and physical accessibility are required. Additionally, interventions to encourage positive attitudes among health professionals, creating drug revolving funds, and expanding women's group training programs can all help to improve the quality and utilisation of MHS in the country.

By adopting these strategies, governments and stakeholders can work toward increasing MHS utilisation at PHF, decreasing maternal mortality, and providing equal access to quality maternal health for all women. Collaborative efforts, long-term funding, and regular evaluation of such strategies will be critical to accomplishing these objectives and improving maternal health outcomes.

5.2 RECOMMENDATIONS

By the findings of this study, some recommendations were made aimed at improving the utilisation of MHS at the PHF.

HEALTH WORKERS

Encourage Positive Attitudes: Health personnel should be trained and sensitized to give pregnant women with respectful, compassionate, and empathic care. Positive attitudes can influence women's perceptions of PHF and increase their use.

Engage in Community Outreach: Health workers should engage in community outreach to underline the importance of ANC visits, facility-based births, and PHF utilisation for MHS. Community outreach activities can raise awareness and eliminate preconceived notions.

Enhance availability of drugs: Health workers need to advocate for adequate stocks of essential drugs and medical supplies at PHF. Maintaining a steady supply will improve care quality and encourage women to use the PHF for MHS.

POLICY MAKERS/MINISTRY OF HEALTH

Community-Based Health Insurance Schemes (CBHI): Government should develop and expand CBHI programs to provide financial security for women seeking maternal health care. This will ensure that financial barriers are minimised, making PHF more accessible to women.

Increase Human Resource Capacity: Government should invest in hiring and maintaining skilled health workers, particularly in underserved areas. The provision of incentives, educational opportunities, and better working conditions can all help to keep health workers motivated.

Enhance Transportation Support: Create transportation support plans to overcome geographical barriers and ensure that pregnant women have easy access to PHF.

Create Cash Transfer Programs: Set up and carry out cash transfer programs with precise conditions for ANC attendance and facility-based delivery. Such rewards will motivate pregnant women to use PHF for MHS. Expand cash transfer programs to IPS as a bonus package, this will motivate them to refer women to the PHFs promptly.

The government should work better to make MHS free or subsidised for all pregnant women in all PHFs in the country and ensure that no extra cost in the purchase of items for nurses or midwives. IPS can be linked with PHF to allow for greater oversight of their services, and faster referral services.

Community Engagement: Government should increase community engagement that primarily targets health workforce issues, and address complaints effectively. Engaging with communities is crucial for the government to effectively address challenges faced by community members as well as health workers. The government should establish mechanisms to handle any grievances or concerns that may arise, thereby fostering a positive relationship with communities. By taking a proactive approach, the health system can provide improved services and outcomes to the communities it serves.

RESEARCHERS

Analyse Intervention Impact: Researchers should carefully analyse the effectiveness of different interventions targeted at increasing MHS utilisation at PHFs. This can provide useful information to policymakers and practitioners.

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Attitudes of Health Workers: Research should focus on understanding health workers' attitudes toward pregnant women and how this affects their use of PHF. Finding possibilities for improvement can help to direct training and capacity-building efforts.

Challenges and Facilitators Research: Researchers should research and describe the specific barriers and facilitators impacting MHS utilisation at PHF in various circumstances. This is going to provide evidence-based data for specific interventions.

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ANNEX 1: SEARCH TABLE Table 2: LITERATURE SEARCH PROCESS

Source	Keywords based on objectives		
	Objective 1	Objective 2	Objective 3
Google Scholar	(Factors influencing	(Barriers to utilisation	"Strategies to improve
	MHS in Nigeria) AND	of MHS at the PHF in	MHS in LMIC" OR
	(Factors influencing the	Nigeria OR Hindrances	"Interventions to
	choice of MHS provider	in using MHS) AND	improve MHS utilisation
	in Nigeria OR antenatal	(Obstacles for MHS	in West Africa''
	care OR determinants	usage OR child delivery	
	of the choice of skilled	OR facility-based	
	birth attendant)	delivery)	
PubMed	" MHS utilisation in	"Poor use of MHS in	"Ways to increase MHS
	Nigeria", "predisposing	Nigeria", non-Utilisation	utilisation in LMIC"
	factors determining	of MHS in LMIC"	
	choice of providers"		
VU library	"Enabling factors in the	"Barriers of MHS	" Improvement of MHS
	choice of MHS provider	utilisation in Nigeria",	utilisation in Nigeria"
	in Nigeria'', "Need	"Factors hindering	
	factors for MHS	childbirth at the PHF"	
	utilisation"		
Google	"Factors responsible for	"Hindrances in using	(Approaches to increase
	choosing MHS provider	MHS at the PHF",	MHS utilisation) AND
	in Nigeria'',	"Barriers in using PNC	(Interventions for MHS
	"Determinants of MHS	in Nigeria''	utilisation OR Improving
	choice provider in		MHS utilisation).
	Nigeria''		
Ministry of Health	"Utilisation of MHS in		"Recommendations to
website, WHO website,	Nigeria''		improve MHS
NDHS website, UNAIDS			utilisation"
website			