

Knowledge of Maternal and Child Health Services Among Women of Child Bearing Age in Nasarawa State, Nigeria

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Abstract

Health care system aiming to reduce pregnancy and child related morbidity and mortality should focus on maternal and child health services utilization. This study examined knowledge of Maternal and Child Health Services (MCHS) among women of child bearing age in Nasarawa State, Nigeria. A multi-stage systematic random sampling technique was adopted and a pre-tested structured questionnaire was administered to 680 representative respondents from three local government areas. The data was analyzed using simple descriptive statistics. Medical experts (75.4%) and the radio (46.3%) were identified as the most common source of information on MCHS and awareness campaigns among the respondents. Most women attend Antenatal Care (ANC) to check the health status of fetus and mother (69.3%). A total of 31.3% of the mothers began ANC visit within 4-6 months while those that visited four (4) times and above accounted for 68.4%. The study established that participants had good knowledge of the number of times expected for ANC visit, but had low level of awareness on the gestational age to start ANC. Findings also revealed that exposure of the study participants to MCHS campaign messages from the different sources to a large extent impacted on their knowledge of antenatal care visit and reason for the visit in a health facility in many ways. There is enough evidence to suggest that media campaigns are not a major source of disseminating information on MCHS to the public in the study area, since 75.4% of the respondents identified medical experts as their main source of information about the services. The provision of information on MCHS through the radio is recommended because radio can be listened to by several people at same time and, radio listening habit is increasingly becoming common place on mobile platforms.

Keywords: Knowledge, Maternal and Child Health Services, Women, Child Bearing Age, Nasarawa State.

Introduction

Maternal health services are comprehensive health care services concerned with the entire maternity cycle. It is concerned with the care of the woman during antenatal, intranatal, postnatal and the inter-conceptional periods (Assfaw, 2010). Maternal health according to World Health Organization (WHO, 2017) refers to the health of women before and during pregnancy, at childbirth and during the postpartum period. Appropriate antenatal care is one of the pillars of Safe Motherhood Initiatives, a worldwide effort launched by the World Health Organization (WHO) and other collaborating agencies in 1987 aimed to reduce the number of deaths associated with pregnancy and childbirth (World Bank, 2007). It highlights the care of antenatal mothers as an important element in maternal healthcare as appropriate care will lead to successful pregnancy outcome and healthy babies. All pregnant ladies are recommended to go for their first antenatal

check-up in the first trimester to identify and manage any medical complication as well as to screen them for any risk factors that may affect the progress and outcome of their pregnancy.

According to World Health Organization (WHO, 2016), reducing pregnancy and child-related morbidity and mortality depends upon ensuring that women have access to quality care before, during and after childbirth. However, worldwide, 30% of women aged 15-40 do not received Ante-Natal Care (ANC) in 2010. Forty six percent are in South Asia while 34% are in Sub-Saharan Africa. Globally, it is estimated that more than (40%) of all pregnant women were not receiving early antenatal care in 2013 (Moller, Petzold, Chou & Say, 2017). In 2014, on average only 52 percent of pregnant women in the developing regions received the recommended number of antenatal care visits during pregnancy. The 2015 Millennium Development Goals Report indicated that progress has been particularly slow in sub-Saharan Africa, where coverage levels have stagnated over the past two decades, with a small increase to 49 per cent of pregnant women receiving the recommended care.

In high-income countries, virtually all women have at least four antenatal care visits and are attended by a skilled health worker during childbirth and receive postpartum care. In 2015, only 40% of all pregnant women in low-income countries had the recommended antenatal care visits (WHO,2016; UNICEF,2019). It was similarly reported by UNICEF (2019) that worldwide, 62% of pregnant women received the WHO recommended minimum 4 antenatal visits during 2010–2016. However, the attainment of the recommended ANC visits varied between and within countries, Low-Middle Income Countries (LMICs) with Nigeria inclusive reporting lower percentages (WHO, 2016). About 295 000 women died during and following pregnancy and childbirth in 2017. Majority of deaths (94%) occurred in low-resource settings, and most could have been prevented (WHO, 2019). Sub-Saharan Africa and Southern Asia accounted for approximately 86% (254 000) of the estimated global maternal deaths in 2017. Sub-Saharan Africa alone accounted for roughly two-thirds (196 000) of maternal deaths, while Southern Asia accounted for nearly one-fifth 58 000 (WHO, 2019).

In Nigeria, the antenatal care policy follows the latest WHO approach to promote safe pregnancies, recommending at least four ANC visits for women without complications. However, a report by National Population Commission (NPC, 2014) shows low (33.8%) utilization of maternal and child health services in Nasarawa State. This was similarly revealed in 2018 that Nasarawa State also had low utilization of maternal and child health services at 42.7% on the average (NPC, 2019). The report by Nigeria Nutrition and Health Survey (NNHS, 2018) also, revealed the average maternal and child health utilization at 63.1%. Less than half of children (39.1%) have received all basic vaccinations in Nasarawa State (NPC, 2019).

Health knowledge is a vital element to enable women to be aware of their health status and the importance of maternal care. Thus, considerable amount of literature on female reproductive health have identified the importance of MCHS (World Bank, 2007; Assfaw, 2010; Moller *et al*, 2017; NPC, 2019; WHO, 2019; Damilola, Peace, Nnamdi, Jamike, Abdulqudus & Obinna, 2022). Knowledge of MCHS enables women to see the benefits of these services and be aware of the care they receive (WHO, 2010). It also allows them to ensure that they are getting adequate service, no matter the level of the hospitals that they go to. However, sometimes, good knowledge does not always imply that there would be good utilization of MCHS (Rosliza & Muhamad, 2011). Lack of proper knowledge on when to go for an antenatal could lead to women starting care in the later

stages of pregnancy, further putting them at risk of easily preventable complications. The World Health Organization (WHO), through its 2002 ANC model known as “focused ANC,” recommends that the first visit should be in the first trimester, and it has also been recommended nationally by the Nigerian Ministry of Health. Despite this, however, many women start ANC late in pregnancy for various reasons, with 62% and 12% starting in the second and third trimesters, respectively (Aliyu & Dahiru, 2017).

To address low knowledge of MCHS, communication intervention in this regard is very important. This is more so, there is now overwhelming evidence that the provision of relevant information on maternal health is highly desirable for an effective intervention and utilization. One of such evidences show that the mass media frequently cover health related topics, are the leading source of information about important health issues, and are targeted by those who aim to influence the behaviour of health professionals and patients (Grilli, Ramsay & Minozzi, 2009).

Statement of the Problem

Despite the different policies and programmes implemented in Nigeria and Nasarawa State, on maternal and child health services, there is still poor utilization of maternal and child health services which results to high maternal/child morbidity and mortality in the state. The 2014 NPC report shows that 40.1% of women in Nasarawa State delivered in health facility; women who delivered by a skilled provider constituted 40.7%; children who receive all basic vaccinations were 20.1%, percentage of women and births with a postnatal checkup in the first two days after birth was 49.4% and 18.9%) respectively. The report reveals low knowledge and utilization of maternal and child health services in Nasarawa State (33.8%). This was similarly revealed by NPC (2019) that Nasarawa State also have low utilization of maternal and child health services at 42.7% on the average and 39.1% of children have received all basic vaccinations in the state (NPC, 2019).

The knowledge of Maternal and Child Health Services (MCHS) among pregnant women has played a major role in the reduction of maternal and perinatal mortality in women of reproductive age (Damilola et al, 2022). Yet, studies on women in Nigeria tend to address utilization of maternal health services in general terms with skeletal reference to child health services (Moore, Alex & George, 2011; Aigbe, 2011; Yusuf & Ibrahim, 2015; Abubakar & Samuel, 2015). A literature search found no study that focused on women knowledge of maternal and child health services in Nasarawa State. Thus, this study that identified the level of knowledge of MCHS among women in the reproductive age group in Nasarawa State was conducted to fill this gap. This will serve as baseline knowledge and will help to draw attention to the areas where the media and health workers should focus, when educating women about maternal health to improve the utilization of these services.

Objectives of the Study

The main purpose of this study is to assess the knowledge of maternal and child health services among women of child bearing age in Nasarawa state, Nigeria. The specific objectives are to:

- i. identify medium/media of exposure to maternal and child health services messages among women of child bearing age in Nasarawa State
- ii. Assess mothers’ knowledge on reasons and period for antenatal care visit
- iii. Examine knowledge on health facilities to access maternal and child health services

Conceptual Clarifications

Maternal Health Services

Maternal health services are comprehensive health care services concerned with the entire maternity cycle. It is concerned with the care of the woman during antenatal, intranatal, postnatal and the inter-conceptual periods (Assfaw, 2010). It aims to deliver essential health care for pregnant women, new born babies and children to reduce maternal and child deaths in line with Sustainable Development Goals (SDGs).

The utilization of maternal health care services in this study is described in relation to the requirements by WHO (2004) which only considers it medically satisfactory when women:

- i. receive antenatal care during the first trimester of their pregnancy period
- ii. undertake four (4) or more antenatal visits before delivery of their children
- iii. are attended to at delivery by trained medical personnel/practitioner
- iv. deliver in a health facility

Child Health Service: it provides prevention and early intervention services for parents or carers of children from birth to eight years. The utilization of these services is an important health issue with regard to the well-being and survival of both the mother and the child during pregnancy, child birth and postpartum period (WHO, 2012). Child health services are important because children are vital to the nations present and its future. Thus, parents in all ramifications are usually committed to providing every advantage possible to the children in their families and to ensuring that they are healthy and have opportunities that they need to fulfill their potential. Center for Disease Control and Prevention (1999), reported that there have been steady increases in the proportion of immunized children therefore making both acute mortality and long term disabilities to be reduced greatly. This is an indication that whatever communication tools or methods used has to a large extent been yielding positive results.

Women of Child Bearing Age: This refers to women who can get pregnant and bear children from puberty when they start getting their menstrual period to menopause when they stop getting it. The average woman's reproductive years are between the ages of 12 and 50 years. The maternal mortality rate of women in the United States shows that black women have the three chances of dying from pregnancy related complications than white women. Nigeria has made progress in the last two decades in reducing maternal deaths, but the number of women who die in pregnancy or from complications associated with child birth remains high (NPC, 2019) This is still a far cry from the set goals as within Nigeria, there are disparities among regions and Northern Nigeria has a far higher maternal mortality rate than the western part of Nigeria and this can be attributed to factors such as poverty, culture, low educational levels and lack of investment in health systems. Communication is key to ensure that women of child bearing age avail themselves to primary health care to ensure that their pregnancies are monitored before their due dates. This can be achieved through radio jingles and programmes.

The Theory of Reasoned Action

Ajzen and Fishbein (2003) developed a versatile behavioural theory and model in 1980 called the Theory of Reasoned Action (TRA). This theory was adapted from understanding attitudes and predicting human behaviour. To them, communication and outreach theories can help us to

develop our outreach programmes by giving a clear picture or understanding of human communication and human behaviour. In this theory, a person's attitude towards a behaviour that consists of a belief that a particular behaviour leads to a certain outcome as well as an evaluation of the outcome of that behaviour.

Ajzen and Fishbein (2003) are also of the view that if the outcome seems beneficial to the individual, he/she may then intend to or actually participate in a particular behaviour. Also, included in one's attitude toward behaviour is his/her concept of the subjective norm. Subjective norm is a person's perception of what others around them believe that the individual should do. In its purest essence, subjective norm is a type of peer pressure. Whether or not a person participates or intends to participate in any behaviour is influenced strongly by the people around them. These people may include friends or a peer group, family, co-workers, religious congregation members, community leaders and even celebrities. This intention is determined by two major factors: the persons attitude towards the behaviour (i.e. beliefs about the outcomes of be bahaviour and the value of these outcomes) and the influence of the person's social environment or subjective norm (for example, beliefs about what other people think the person should do, as well as the person's motivation to comply with the opinions of others.

Intentions develop from an individual 's perception of behaviour as positive or negative together with the individual 's impression in the way the society perceives the same behaviour (Ajzen, 2002). According to Ajzen (2006) personal attitude and social pressure shape intention, which is essential to performance of a behaviour and consequently behavioural change. Attitudes towards health action are based on beliefs about the likely outcomes of the action and evaluation of those outcomes.

The TRA theory would involve an individuals' opinion and perspectives about a certain health risk and their behavior constitute a risk. The implications and relevance of the TRA to this study is that, the theory may be applied in MCHS utilization concept to understand the influence of health communication interventions on women's knowledge on MCHS; how it is understood by women, their behaviors towards risk factors, and their willingness to utilize MCHS to avoid maternal and child mortality. This theory can be used as a useful guide for designing intervention strategies that will favorably influence the attitude, and change or maintain behaviour of women towards use of MCHS. The media communication messages should target misconceptions and improve knowledge of women concerning MCHS to match their practices and patronage of the services.

Methodology

Nasarawa State with its headquarters in Lafia, is located in the Central Region of Nigeria. It lies between latitude 7° 45' and 9° 25'N of the equator and between 7° and 9° 37'E of the Greenwich Meridian. The state is one of the leading minerals producing states in the country hence, it is appropriately called the "Home of Solid Minerals. Nasarawa State has highly prospective for growth and development considering its strategic location and proximity to Abuja, the Federal Capital Territory of Nigeria. The state is predominantly agrarian with land area of 27,116.8 square kilometers and population of 2,886,000 in 2022 according to NPC estimate.

Study Design, Sampling and Data Collection

The study was a descriptive cross-sectional study carried out in 2020. An open-ended questionnaire was used to source data from 680 mothers, aged 15 - 49 years with at least a child 0-12 months in Lafia, Akwanga and Kokona LGAs in the state; contacted through a multistage systematic sampling procedure. In the first stage was the stratification of the state into Senatorial Districts. The second stage involved the use of simple random sampling technique of balloting without replacement to select one LGA in each of the three senatorial districts. Thereafter, three wards were selected from each LGA, this provided a total of nine (9) wards located in three Local Government Area in Nasarawa State. In each of the selected ward; household listing was undertaken and systematic sampling was used to select households. In the third stage, purposive sampling method was used to select a woman of child bearing age that had at least one child from 0- 12 months, using a sample interval of four, starting from the first household and every fourth household was chosen. In a household with more than one woman with at least one child from 0-12 months, the first to be sighted and willing to participate was administered with a questionnaire. A total of 680 women of child bearing age from nine (9) wards were selected proportionally, representing 10 per cent of the study population (Table 3.1). This sample size was determined using Nwana's (1992) rule of thumb which states that when the population is a few thousands, 10% of it can be used.

Table 1: Wards, Estimated Female Population and Number of Respondents Sampled

LGA	Ward	Estimated Female Population	Number of Households	Total Sampled
Lafia	Shabu	9,021	1013	112
	Agyaragu Tofa	8,960	881	66
	Adogi	7,013	504	48
Akwanga	Akwanga East	8,705	802	116
	Andaha	6,300	509	60
	Moroa	5,881	442	60
Kokona	Garaku	6,090	628	116
	Haderi	5,601	499	62
	Kofa Gwari	5,442	432	40
Total	9	63,013	5,710	680

Data Analysis, Reliability and Validity

Descriptive analysis was performed by using frequencies and percentages. To ensure internal consistency, reliability test for the knowledge of MCHS were performed giving the Cronbach's Alpha value of 0.806. Pretesting of the questionnaire was conducted among 45 women in Akwanga, prior to data collection to assess the face validity of the questionnaire.

Results and Discussion

Socio- Economic and Demographic Characteristics of Respondents

The socio- economic and demographic characteristic of participants is described in Table 2. About half (50.6%) were urban residents while 49.4% were from rural areas. Majority (72.8%) of the respondents were aged 15-35 years, had secondary education (42.4%) and were into business/petty

trading (47.9%). Most (72.1%) earned below the Nigeria minimum wage of ₦18,000. The low income will influence on low utilization of maternal and child health services in the study area. This finding agreed with the study of Fagbanigbe, Akanbienu, Adebowale, Olumide and Korter (2013) (2011), which demonstrates a direct relationship between socio-economic status and health outcomes, with lower socio-economic status being linked with lack of access to care and low utilization of care leading to poorer health outcomes.

Table 2: Socio- Economic and Demographic Characteristics of Respondents

Variable	Characteristics	Frequency	Percentage
Locality status	Rural	336	49.4
	Urban	344	50.6
Age group	15-20	90	13.2
	21-25	158	23.2
	26-30	158	23.2
	31-35	90	13.2
	36-40	88	12.9
	41-45	62	9.1
	46-49	34	4.0
	Educational Status	No formal education	170
Primary		136	20.0
Secondary		288	42.4
Tertiary		86	12.6
Occupation	Farming	176	25.9
	Private worker	78	11.5
	Government employee	22	3.2
	Business/Trading	326	47.9
	Others	78	11.5
Monthly income (Naira)	Below 18,000	490	72.1
	18,000-38,000	84	12.4
	39,000-59,000	34	5.0
	Above 59,000	72	10.5

Exposure to Maternal and Child Health Services Messages

The study also explored and identified respondents' exposure to MCHS messages (Table 3). A total of 95.9% of the respondents affirmed that they have heard about MCHS and from different sources. This high level of knowledge and awareness is consistent with other studies from rural areas in Western Africa (Adewoye, Musa, Atoyebi & Babatunde, 2013; Afaya, Azongo & Dzomeku, 2020). This study produced higher scores than a similar study conducted in Ilorin, which observed that over two-thirds of the respondents (87.7%) were aware of ANC services (Adewoye, et al, 2013). It also showed higher scores than a study conducted in Ghana that recorded 79.2% of women sampled as having good knowledge (Afaya et al, 2020).

Medical experts (75.4%) were identified as the most common source of information on MCHS and awareness campaigns among the respondents. This indicates that the source of information concerning maternal and child health services among sampled respondents is from reliable and genuine source. This is also, because a significant number of the participants in this study attend ANC in health facilities. This was followed by the radio (46.3%) and Friends/Relations (23.2%). Other sources of information identified in this study were television (16.7%), newspapers (10.4%), magazine (5.8%), social media platforms (11.5%), mobile phone (6.3%), posters (4.7%), handbills (5.2%) and Posters/Sign post (6.6%).

Reporting medical experts as the major source of information on MCHS was also documented reported by Fagbamigbe *et al* (2013) in their study on practice, knowledge and perceptions of antenatal care services among pregnant women and nursing mothers in South-West Nigeria, who found that 45.0% of the respondents stated that health workers were their source of information on antenatal facility, while 12.4%, 19.1%, 19.3% and 2.2% indicated that the family, friends, relatives and news were their source of information about antenatal care. This study is not in line with the finding by Yang, Yoshitoku, Harun and Junichi (2010) which stated that 76.6% of the women that participated in the study heard about antenatal care and its importance from traditional birth attendant's while 48.6% heard it from health personnel and 33.7% heard it from mass media (radio, TV, poster and brochure). Amosu *et al* (2011), in their study of South-West zone of Nigeria posited that 12% of their participants obtained their information from the internet, 28% by attending health seminars while 16% could not say how they received the information.

Table 3: Respondents Exposure to Maternal and Child Health Services.

Variable	Characteristics	Frequency	Percentage
Ever heard of MCHS	Yes	652	95.9
	No	28	4.1
Source of Information	Medical Experts	492	75.4
	Radio	302	46.3
	Television	109	16.7
	News Paper	68	10.4
	Magazine	38	5.8
	Social Media platforms	75	11.5
	Mobile Phone	43	6.3
	Posters	32	4.7
	Friends/Relations	158	23.2
	Handbills	34	5.2
	Posters/Sign post	43	6.6

Knowledge on Reasons and Period for Antenatal Care Visit

Table 4 shows the mothers responses to the question on knowledge regarding reasons and period of antenatal care visit to a health facility. This was done to ascertain whether the study participants exposure to MCHS messages impacted on them. Table 4 showed that most women reason for attending ANC is to check the health status of foetus and mother (69.3%). Others opined that their reason for visit was for diagnosis and treatment of complication in pregnancy (23.8%), prevent complications in pregnancy (23.6%) and to check for danger signs/child abnormality (19.6%). Mothers' knowledge in this study is lower than results reported by Amosu *et al* (2011) in their study on the acceptance and practice of focused antenatal care by health care providers in the South-West zone of Nigeria, where 94% of the respondents agreed that the goal of focused antenatal is to prepare the pregnant mothers for delivery and possible complications.

On knowledge of age of pregnancy (gestational age) before starting ANC visit revealed that 43.8% did not know the exact time to start ANC visit, followed by those that mentioned 1-3 months (28.2%), 4-6 months (20.5%) and the least were those that reported 7-9 months (14.7%). The finding indicates that participants in this study have a low level of awareness on the gestational age to start ANC. This is similar to the survey by Yang *et al.*, (2010) on factors affecting utilization of antenatal services among women in Khan district, Xiengkhouang province, Lao PDR which stated that 73.9% of the women who participated in the study, lacked sufficient knowledge on antenatal care. But the finding disagreed with the survey by Rosaliza and Muhamad (2011) on

knowledge, attitude and practice on antenatal among Orang Asli women in Jempol, Negeri Sembilan which recorded that, majority of women knew that pregnant women need to go for antenatal checkup and should be done in the first three months.

The lack of proper knowledge on when to go for an antenatal by some women in this study could lead to women starting care in the later stages of pregnancy, further putting them at risk of easily preventable complications(Damilola,*et.al*,2020). The World Health Organization (WHO), through its 2002 ANC model known as “focused ANC,” recommends that the first visit should be in the first trimester (WHO, 2010), and it has also been recommended nationally by the Nigerian Ministry of Health. Despite this, however, many women start ANC late in pregnancy for various reasons, with 62% and 12% starting in the second and third trimesters, respectively (Aliyu & Dahiru, 2017).

Also, the findings that some women in this study could not mentioned correctly when to go for antenatal to access ANC services for the first-time during pregnancy points toward not a promising future for attaining the best reproductive health practices, as set out by the WHO (World Antenatal Care Trial Research Group, 2002). The participants in this study that did not have the correct knowledge should be educated on the right time to access MCHS.

The knowledge level of respondents on the number of ANC visits before delivery showed the dominance of those who reported above 4 times (68.4%), followed by 4 times (28.8%) while those that do not know the exact number of visits accounted for 15.3%. Those that mentioned 3 times and 2 times accounted for 19.6% and 14.4% respectively. This signifies that respondents’ have good knowledge of the number of times expected for ANC visit. This contrasts with the findings by Amosu *et al* (2011) in the South-West zone of Nigeria, where 80% of the respondents were not aware of focused antenatal care.

Findings also revealed that exposure of the study participants to MCHS campaign messages from the different sources to a large extent impacted on their knowledge of antenatal care visit and reason for the visit in a health facility in many ways. This is because most women reason for attending ANC is to check the health status of foetus and mother (69.3%), with good knowledge of the number of times (above 4 times) expected for ANC visit (68.4%). These are encouraging results and give credence to the idea that if knowledge of MCHS among women in the study area is increased, the rate of utilization of these services will also increase, consequently leading to an increment in safe deliveries and reduction in maternal mortality. This also means that the media messages created good educational and learning opportunities on reasons for attending ANC to check the health status of foetus and mother and the number of times expected for ANC visit among the participants in this study that need to be strengthened. However, the finding indicates that participants have a low level of awareness on the gestational age to start ANC.

Table 4: Knowledge of Reason and Period for Antenatal Care Visit

Variable	Characteristics	Frequency	Percentage
Reason(s) of ANC Visit	Sickness	220	33.8
	Check the health of foetus and mother	452	69.3
	Check for danger signs/child abnormality	128	19.6
	Diagnosis and treatment of complications in pregnancy	162	23.8
	Check if baby is growing well	136	20.8
	To be immunized against tetanus	109	16.7
	Provision of nutritional supplements like folic acid and ferrous sulphate	98	15.0
	Save life of mother and child/safe delivery	264	40.1
	Get medicine to prevent malaria	26	3.8
	Learn how to care for new born.	146	22.4
	Prevent complications in pregnancy	154	23.6
	I don't know	48	7.3
Age of pregnancy to start ANC visit	1-3 months	184	28.2
	4-6 months	204	31.3
	7-9 months	96	14.7
	I don't know	286	43.8
Number of ANC visit before delivery	I don't know	104	15.3
	2 times	94	14.4
	3 times	128	19.6
	4 times	188	28.8
	Above 4 times	446	68.4

Source: Field Survey, 2018

Knowledge on Health Facilities to Access Maternal and Child Health Services

Respondents were asked if they know the health facilities that they could access maternal and child health services (Table 5). On health facilities to access ANC services, the results revealed that 73.3% indicated public hospitals. This was followed by PHC (47.2%), private hospitals (16.2%), private clinic (20.2%) and maternity homes (4.9%). On health facilities where delivery services can be accessed, most (72.4%) reported government hospital, PHC (31.6%), private hospitals (16.7%), private clinic (16.5%) and maternity home (7.9%). Health care facilities reported by respondents where postnatal care services are accessible include government hospitals (73.6%), PHC (38.9%), private hospital (16.2%), private clinic (13.6%), and maternity home (6.6%). Overall maternal and child health services are mostly accessible in government health facilities, this is because services are cheaper and more available. This is more so that government funds their health facilities, pay good salary and also have skilled and well qualified health personnel that can handle complicated maternal and child health conditions compare to private health care facilities.

Table 5: Knowledge on Health Facilities to Access Maternal and Child Health Services

Variable	Characteristics	Frequency	Percentage
Health facilities with Accessible ANC Services	PHC	308	47.2
	Private clinic	132	20.2
	Gov't hospital	478	73.3
	Private hospital	106	16.2
	Maternity home	32	4.9
Health facilities with Accessible Delivery Services	PHC	266	31.6
	Private clinic	108	16.5
	Gov't hospital	472	72.4
	Private hospital	109	16.7
	Maternity home	52	7.9
Health facilities with Accessible Post-natal care Services	PHC	254	38.9
	Private clinic	89	13.6
	Government hospital	480	73.6
	Private hospital	106	16.2
	Maternity home	43	6.6

Conclusion

The knowledge of Maternal and Child Health Services among pregnant women has played a major role in the reduction of maternal and perinatal mortality in women of reproductive age. Majority of women of reproductive age in Nasarawa State heard about MCHS and medical experts and the radio are the most common source of information about the services and awareness campaigns among the respondents. Women attend ANC mainly to check the health status of foetus and mother. Most of the participants attended antenatal care, began ANC visit between 4-6 months and went for ANC four (4) times and above. The lack of proper knowledge on when to go for antenatal care by some women in this study could lead to women starting care in the later stages of pregnancy, further putting them at risk of easily preventable complications.

Recommendations

Based on the findings of the study, the following recommendations were made:

- i. The provision of information on MCHS by the radio is recommended, because radio can be listened to by several people at same time and, radio listening is increasingly becoming common place on mobile platforms.
- ii. Advertisers and health care practitioners need to find better ways of improving advertising messages so as improve the patronage of MCHS. This is due to the finding of this study which showed that some women lack proper knowledge on when to go for an antenatal care.
- iii. MCHS should be made affordable in both private and health facilities. This is because most women in this study earned below the ₦18, 000 Nigeria minimum wage, which may affect MCHS utilization while the women should also have positive attitude towards the utilization of the services.

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