



Maternal health services expectation and experience in rural communities of Bauchi state, Nigeria

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Abstract

Healthcare and other services are the functional pre-requisite for healthier maternal process. In the past decades there was a dramatic improvement in the access and utilization of basic services, especially among mothers, owing to improved maternal health. Still, there was a challenge of limited access to service among rural mothers. This paper looks into this challenge using survey method. The findings reveal that majority of the pregnant women in rural areas experienced low access and utilization of maternal healthcare, especially antenatal and postnatal care from medical doctors. As well as poor transportation system, lack of access to health information and other essential services. A situation that negatively affected maternal health. The paper recommends for new strategies that will naturally address some of the factors depriving those mothers from accessing the services. Such as training and recruiting of new healthcare providers, especially medical Doctors.

Keywords: Access, health, maternal, services

1. Introduction

Pregnant women require some basic services to run a healthy life, irrespective of their status and the geographic location of their societies. These basic services include a functional healthcare system, qualitative education, electricity, portable drinking water, electricity, good transportation system and good road network, as well as communication, which are mostly provided by the government or constituted authority. Basic services are defined as those services that enable a good, acceptable standard of living in communities and make it easier to create conditions that promote maternal and public health and safety such as good housing, education, health care, social welfare, road network, transportation, portable drinking water and sanitary environment with refuse and waste removal system (Chipo, Tholag, Catherine, & Charles, 2010). The need for a service for the poor in an informal settlement, are both local and global priorities articulated in the

sustainable development goals (SDGs). Particular emphasis was placed on basic service access and responsible use aimed to achieve universal and equal access to safe drinking water and sanitation, functional healthcare system, as well as good housing which are considered as the backbone for a healthier pregnancy and delivery.

According to the WHO, pregnant women and delivering mothers must receive a globally recognized level of healthcare and other services in order to promote maternal health. This comprises a sequences of antenatal care (ANC) appointments, and the delivery in a healthcare facility in the hands of professional birth supporters, and providing postnatal services to both the mothers and their babies. Early detection of issues of maternal morbidities, and prevention of likely complications, vitamin supplementation, and, most importantly, the opportunity for healthcare workers to connect with and support women during a key period are all possible with ANC

(WHO, 2016). Additionally, it is a noted fact that these services are the functional pre-requisite for healthier maternal process. However, many women could not have access to these services. It is common knowledge that access to and utilization of healthcare services has improved in recent decades, particularly among mothers, as a result of improved maternal and childcare practices, nutritional practices, and increased availability of low-cost services. Nonetheless, some societies had limited access to and utilization of maternal healthcare and services. Women in remote rural communities, in particular, remain vulnerable and underserved. (Nuamah, Agyei-Baffour, & Mensah, 2019).

Women access to services could be understood in number of ways, the financial access, geographical access and the cultural access. The financial access is the opportunity for the pregnant women to afford the payment of maternal services. According to some studies, women in low-resource settings do not receive the full spectrum of maternal health services, including antenatal care (ANC), skilled birth attendance, and postnatal care (PNC) (Gulliford et al., 2002). Geographic access to services is related not only to the distribution of infrastructure in a given region, but also to the actual provision of services at the facilities. It should also be accessible to pregnant women. Many pregnant women cannot maintain the routine antenatal visit due distance of healthcare facility, couple with lack of good road network and poor transportation system. A practice that is in disagreement with the WHO/UNICEF pregnancy guideline reflected on their 2003 joint report, which recommends that pregnant women should attend at least four (4) formal antenatal care services during each pregnancy. The visits are divided into three trimesters: the first, second, and third trimesters. (Chimatiro, et al., 2018). Similarly, others have their kid deliver along the journey to healthcare facility.

While cultural access is concerned with shaping women's behavior in order to encourage them to use services, particularly healthcare and education resources, in order to improve their maternal health. Despite the importance for antenatal care, delivering in the hands of professional health worker and postnatal care, still many cultures and societies restrict the mothers from accessing orthodox care. A research study discovered still there are some societies in Nigeria that their ethnic beliefs, customs and traditions were blocking pregnant women from the use of orthodox medicine (Ewhrudjakpor, 2008).

The Maternal health is poor within low-income households and in low-income nations, the projected lifetime risk of maternal mortality is significantly higher. Low income and lack of creative power to support a livelihood leads to a lack or limited access to quality healthcare services and other living necessities, as well as homelessness or inadequate housing, all of which contribute to poor maternal health, which eventually led to mortality (Jeong, Jang, Park, & Nam, 2020). In Nigeria, millions of families are unable to afford adequate healthcare, a good education, safe drinking water, and nutritious food. Many people in Nigeria, especially, the women are exposed to a poor environment with high disease and infection, which can lead to an increase in maternal mortality cases. The insecurity situation in northern Nigeria, as well as illiteracy and low income in the region can also be among the influencing factors (Aregbeshola, 2021).

The problem of access to services among pregnant and delivering mothers is one of the global challenges that many scholars given a special attention, particularly in the low-income countries. Because most causes of maternal morbidity and mortality can be avoided if women receive timely, appropriate care from qualified health professionals. Maternal health services (MHS), which include antenatal, delivery, and postnatal care, can be extremely

beneficial in preventing maternal health problems. (Pant, Smriti & Koirala, Saugat & Subedi, Madhusudan & Again, Ems, 2020). Many researchers share thoughts and opinion that lack or poor access to basic services, is the one of the factors that negatively affect maternal health, however, some did not provide empirical proof. This paper tries to bring empirical prove to these raised concerns.

2. Literature Review

Basic services are public service delivery systems that meet basic human needs such as drinking water, sanitation, hygiene, energy, mobility, waste collection, health care, education, and information technology. There is widespread agreement that basic social services are the foundation for good health and human development. Indeed, they are now recognized as basic human rights. However, there is a growing division between these consensuses, particularly among low-income countries. According to one report, there is an annual shortfall of up to \$80 billion between what is spent and what should be spent to ensure universal access to these essential services. Governments frequently make boastful claims about how much money they spend on health and education, housing services, when in fact, not all of these services benefit the citizen (UNICEF, 2021). Accessibility is concerned with the relationship between the distribution of services and the location of the clients. Transportation options and patient travel time are also included in this dimension. According to research, the distance that women must travel to access services, including healthcare can be a significant barrier (Anyinam, 1987; Baker et al., 2017; Otupiri et al., 2018; Obrist et al., 2007).

A study conducted in the United States that examined the 50-year trend of maternal mortality based on documented disparities from a broader range of racial/ethnic, natality, socioeconomic, and geographic locations. The study found an increase in maternal mortality from 1969 to 1982,

followed by a decrease from 1999 to 2017. This was due to medical advances (such as the use of antibiotics, oxytocin to induce labor, safe blood transfusion, and better management of hypertensive conditions during pregnancy). Furthermore, the data show a link between improved nutrition and healthcare access and lower maternal mortality. Nonetheless, Black women, women from lower socioeconomic groups, and rural women continue to face unacceptable rates of maternal morbidity and mortality. (Singh, 2020).

According to the findings of a research study conducted in some African countries, maternal mortality rate is closely related to access to skilled health personnel, while the proportion of births attended by skilled health professionals was found to be a strong determinant using Bayesian network analysis. The study also show how maternal mortality is affected by access to healthcare services. It is well known fact that rural communities have a higher rate of maternal mortality. Because of a shortage of healthcare professionals, primarily due to low pay, a lack of basic amenities in many of these rural areas, and a lack of incentives to encourage the retention of health workers, as is practiced in high-income countries. As a result, hypertensive disorders and postpartum haemorrhage that occur during pregnancy or birth. There aren't enough health professionals to handle these complications, which eventually lead to maternal mortality (Yaya et al., 2021). Antenatal and postpartum care are critical for assessing complications and providing health education and promotion to help women and children stay healthy in the future. It is important not only in the immediate postpartum stage (0-1 day), but also in the early (2-7 days) and late (8-42) periods (Al Hadi et al., 2023).

A study on Policies and actions to improve maternal health in Nepal: using several documents on various aspects of safe motherhood in Nepal, including policy directives, implementation plans, safe

abortion, competent health workers, incentive guidelines, gender issues, maternal death surveillance, communication strategy, maternal nutrition, quality, and respectful maternal care, was conducted. The study identified seven themes as contributing factors to poor maternal health: four supply-side workers (inadequate and unskilled human resources, poor infrastructure and maintenance, inaccessible health facilities, and negative provider attitudes) and three on the demand side (inadequate and unskilled human resources, poor infrastructure and maintenance, inaccessible health facilities, and negative provider attitudes) (lower utilization by poorer families, lack of perceived need, and persistent unsafe abortion). (Rajendra et al., 2022).

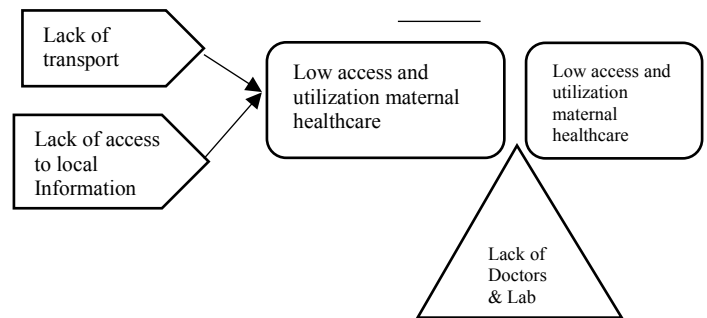
In Nigeria and most Third World countries, there has been a growing outpouring of concern about issues development, particularly those relating to infrastructure and basic services such as healthcare facilities, schools, and road networks, among others. The problem is more prevalent in rural Nigerian communities. These disparities also played a significant role in the high rate of maternal mortality, particularly in rural areas (Ering et al., 2014). Despite the fact that there is a lack of or insufficient infrastructure, particularly among low-income individuals and in rural areas. However, some societies are recruiting volunteers to provide some kind of service to others, particularly in the areas of providing basic healthcare assistance, developing community schools, local roads and re-building collapsed culverts in some cases (Frank & Bassey, 2017).

Similarly, Meh et al. (2019), conducted a study in Nigeria that looked into the causes of maternal mortality in both the south and northern regions. The study discovered that the increase in maternal mortality in the northern part was related to poor access to healthcare services, because most women in the north are less likely to give birth outside healthcare facility than women in the south.

The region's insufficient and poor-quality health services, as well as a shortage of health workers and sub-standard emergency obstetric care services, have resulted in an increase in deliveries outside of health facilities, increasing the risk of maternal mortality. More so, Poor birth preparation and non-utilization of maternal health care services may have a direct impact on maternal mortality and morbidity, with serious consequences for communities. Many women do not use prenatal services, and many of them give birth at home with the assistance of traditional birth attendants (Ope, 2020).

Conceptual framework

This conceptual framework attempt is to reveal the relationship existing between the variables in this study. The framework demonstrates how a lack of transportation and access to local information via radio and television affects access to maternal healthcare services. While limited access to maternal healthcare services, lack of medical doctors and laboratories negative affect maternal health.



Theoretical framework

This paper was guided by the theory of relative deprivation, which describes a deprivation situation in which one demographic segment of the population is deprived of goods or services to which they believe they are entitled, either due to their geographic location, socioeconomic status, or gender, while another demographic segment of the population enjoys such goods or services. According to Runciman (1972), a sense of relative deprivation can have serious consequences for people's

attitudes and perceptions of service delivery, particularly for pregnant women who require those services the most. Indeed, it has the potential to spark social movements and protests as people band together to demand a fair share of the system. The backdrop for the protest is social deprivation and a lack of basic services, both of which continue to harm the majority of individuals and communities.

Given the events in Nigeria, one could argue that a sizable number of Nigerians are not only denied access to basic services, but are also excluded from mainstream activities and processes that lead to the provision of such services, particularly rural women. Given this, government intervention is necessary for a complete system overhaul. (Freire, 1970) contend that communities and individuals must be active agents in their own development rather than passive recipients of insufficient governmental or institutional assistance. This shift to a more proactive approach to development should not only improve the poor's basic living conditions, but also empower them as active stakeholders and responsible members of engaged communities. A civilized and effective mechanism for citizens' voices to be heard should emerge as a result of this democratization process.

3. Methodology

This research study adopted survey method; data were collected from the respondents. A cross-sectional survey was adopted as the research design. This design is favored because it allowed the researcher to collect data from a large population using a sample drawn from that population. This study collected data from women of reproductive age between 15 and 49, who were living in seven local government areas that makeup Bauchi North Senatorial District. Namely Gamawa, Giade, Itas-Gadua, Jama'are, Katagum, Shira and Zaki local governments. Questionnaires were shared with this segment of population. The study

targeted 800 participants, however only 764 of the respondents filled and returned the questionnaires. While qualitative data was gotten 24 from healthcare workers across the public healthcare facilities in the zone.

4. Results and Discussion

4.1 Results

Table 1 Displayed the respondents' responses on women's access to services on a two-point scale of YES or NO. This aspect of the study sought to ascertain whether the women have free access to antenatal healthcare services in their community; the results revealed that 626 of the respondents (82.3%) stated that they did not receive healthcare services in their community. Some respondents stated that they must travel to urban and semi-urban areas for healthcare services. Other 133 respondents, (17.4) said Yes, they were having healthcare services in their community, whereas, 2 respondents (0.3%) did not respond to this question. In item b which attempted to determine whether the women are accessing free standard post-natal healthcare services in their community, the findings showed that 609 of the total study respondents (79.8%) indicates No, some 150 of the study respondents (19.7%) said Yes, they were having free standard post-natal healthcare services in their community. While other 4 respondents (0.5%) did not respond to this question.

In item c, which was to determine if the healthcare centre attended by the pregnant women have a functional laboratory, the study data shows that 519 of the study respondents (67.9%) said No, there was no functional laboratory in the facilities they visited. Other 245 of the study respondents (32.1%) indicates Yes, the facilities they visited have a functional laboratory. More so, on item d, which determines whether the healthcare facility attended by the pregnant women has, trained medical doctor, result showed that 603 of the respondents (78.9%) said No, there was no Medical Doctors in the facilities they were having their

antennal services. Other 151 of the respondents (19.8%) said Yes, there were Medical Doctors in the facilities they were visiting. While 10 respondents (1.3%) did not respond to this part of the questionnaire. Similarly, when the respondents were asked in item e, which determines whether the healthcare facility attended by the women has trained nurses' community health workers and midwives, result shows that 589 of the respondents (76.9%) thick Yes, there was trained healthcare workers in the facilities they were taking their antennal services. Other 175 of the respondents (23.1%) said No, has no trained nurse's community health workers and midwives. The research results also show in item f, which determines if the women community has a good road network, which can make transporting delivering mothers very easy, result showed that 393 of the study respondents (51.5) said Yes, they have a has a good road network that link their community with urban area, where the secondary healthcare centre is located. Other 371 of the respondents (48.5%) thick No, that their community lack a good road network, which make it very difficult to transport delivering mothers seeking healthcare attention. Furthermore, item g, which determines whether the women are usually having health education through electronic media, like Television and Radio the findings of this study revealed that 601 of the study respondents (78.6%) said No, they were not accessing any electronic health education. Some 157 of the respondents (20.6%) said Yes, they were having electronic health education, via Radio. While other 6 of the respondents (0.8%) did not thick any options for this question. In item h, which determines whether women access to services reduce the risk of maternal mortality, the study findings revealed that 598 of the respondents (79.1%) said Yes, that access to services reduce the risk of maternal mortality. Other 162 of the respondents (20.3%) said No, meaning they

don't agree that lack of access to basic services cause maternal mortality. Whereas, other 4 of the respondents (0.6%) did not respond to this question.

Table 1: Measuring scale on Women's access to service and their maternal health status

ITEM	YES		NO	
	f	%	f	%
Access to free standard anti-natal healthcare	133	17.4	629	82.3
Access to post-natal care	150	19.7	610	79.8
Availability of functional laboratory	245	32.1	519	67.9
Attended by medical doctor	151	19.8	603	78.9
Attended by trained nurses and midwifes	589	76.9	175	23.1
Good road network and transportation system	371	48.5	393	51.5
Access to health information through Radio and Television	157	20.6	601	78.6
Access to basic services reduce improve maternal health	598	79.1	162	20.3

Source Field data (2022)

The independent variable in this study is women's access to services, while the dependent variable is the maternal health. Both variables were measured continuously and simple linear regression statistics was used to test at .05 level of significance and the result is presented in table 2. The results revealed R-value of .308^a, adjusted R² = .094; p < .05 for relationship between women's access to services and poor maternal health in Bauchi North Senatorial District of Bauchi State. The R-value (Correlation coefficient) of .308^a shows a significant positive relationship between women's access to services and poor maternal health. The result implies that the better the women's access to services, the lower the maternal problems would be in in Bauchi North Senatorial District of Bauchi State and vice versa. The Correlation coefficient represents a standardized measure of an observed degree of relationship between variables. It is a commonly used measure of the size of an effect, and that values of ±.1 represent a small effect, ±.3 is a medium effect and ±.5 is a large effect. Furthermore, the R² -value of .094 imply that 9.4% of total variance is accounted for

by predictor variable (women access to services).

The regression ANOVA revealed that the F (2, 762) 20.977; $p < .05$, is significant. This implies that there is a linear association (relationship) between predictor variable

(access to services) and poor maternal health. The adjusted R^2 (.093) shows some shrinkage of the unadjusted value (.094) indicating that the model could be generalized on the population.

Table 2: Summary of simple linear regression analysis: women's access to basic services and poor maternal health

Variables	Sum of Squares	df	Mean square	F	R	R ²	Adjusted R Square
Access to services status							
Regression	391.798	2	391.798	20.977	.308 ^a	.094	.093
Residual	20395.977	762	18.678				
Total	20787.774	764					

a. Predictor variable: (Constant): women's access to services

b. Dependent Variable: poor maternal health

4.2 Discussion of Findings

The study discovered that there were number of intermediary factors that influenced access to service, while limited access to these standard services has negative influence on maternal health, especially among the rural mothers. These factors were both internal and external. The internal factors include lack of functional laboratories, lack or inadequate medical Doctors, while the external were distance to healthcare facilities, lack of access to health information especially, through local radio and television, as well as lack of good transportation system. The results reveal that majority of the respondents, 629 (82.3%), were not accessing free standard antenatal services. So also, other 610 respondents (79.8) said they were not having free postnatal care.

The findings of this study are consistent with the findings of a study conducted in Oman by Amal et al 2023), which identified some challenges that negatively impacted maternal health and later reported that a lack of attention to antenatal and postnatal care was one of the major factors. Furthermore, postnatal care was referred to as the "Cinderella" service of maternity

care. This highlights postnatal care as an undervalued and underutilized component of the maternity care continuum. Similarly, Ope, (2020). Findings show poor birth preparation and non-utilization of maternal health care services may have a direct impact on maternal mortality and morbidity, with serious consequences for communities. Many women do not use prenatal services, and many of them give birth at home with the assistance of traditional birth attendants. Additionally, Postnatal care has long been overlooked as an essential component of the continuum of reproductive, maternal, newborn, and child health services (Langlois, Dey, Iaia, & Sacks, 2023).

According to the data, 519 of the respondents (67.9%) reported that the facilities they were visiting did not have a functional laboratory, and 603 (78.9%) reported that there was no medical doctor in their facility. The majority of the 589 study participants (76.9%) were attended by a trained nurse, midwife, or community extension health worker. This result corresponds with Meh et al (2019) which discovered insufficient and poor-quality health services, as well as a shortage of health workers and sub-standard emergency

obstetric care services, have resulted in an increase in deliveries outside of health facilities, increasing the risk of maternal mortality. Likewise, Rajendra et al. (2022), which identified seven themes as reasons for poor maternal health: four on the supply side (inadequate and unskilled human resources, poor infrastructure and maintenance, inaccessible health facilities, and negative provider attitudes) and three on the demand side (lower utilization by poorer families, lack of perceived need, and negative provider attitudes) (lower utilization by poorer families, lack of perceived need, and negative provider attitudes).

Furthermore, the data show that 601 of the respondents (78.6%) were unable to access health information via radio or television. Furthermore, qualitative findings revealed that the majority of rural women do not have access to local radio or television. Only pregnant women in the Azare Katagum local government have access to radio and television, while the remaining study areas do not have functional television or radio stations. The findings agreed with those of a Yemen study, indicating that increasing women's maternal health knowledge is an important step toward improved maternal health. Nonetheless, a study was conducted. Researchers in Yemen discovered that conflict had hampered the delivery of health information to rural women, as well as their knowledge and attitudes toward maternal and child health. were very low (Hyzam, et al. 2023).

5. Conclusion and Recommendations

The socio-political system and geographic preference have negatively influence maternal health. Such as the non-distribution of adequate healthcare facilities in some rural areas. preference for urban postings among the medical doctors. In some areas, there is a lack of laboratories, road networks, poor transportation system. As well as other essential services. The rate

of maternal morbidity and mortality in this area is alarming, being the major indicators of poor maternal health. Despite government efforts to address some of these challenges, more strategies are needed to address some of the constraints that were preventing women from accessing service, particularly in rural areas. Such as training and recruitment of new medical doctor, introduction of mobile maternal care service (Tricycle ambulance) and rebooting community radio and television among others.

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