

An Assessment of Satisfaction with the Accessibility of the Provided Neonatal Healthcare Services among Women of Child-Bearing-Age in Northern Nigeria

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Abstract: This study assessed the satisfaction with the accessibility of the provided neonatal healthcare services among women of child-bearing-age in northern Nigeria. To achieve the purpose of the study one research objective and its corresponding research question were raised. One sub-hypothesis was postulated and tested at 0.05 level of significance. The study adopted cross sectional facility based survey research design. The population of the study comprised the entire women of child bearing age in the region which is estimated as 25,539,366. Multi-stage sampling technique was used to select a sample 653 women of child-bearing age for the study, but only data from 653 duly filled and retrieved instruments were analyzed. Data was collected using researcher developed questionnaire made up of eight items. The developed instrument was validated by five experts in the field of public health and the reliability index 0.91 was determined using Cronbach alpha method. Descriptive statistic of frequency counts, percentage, mean and standard deviation were used for organizing demographic characteristics and item analysis while the postulated sub-hypothesis was tested using χ^2 . The results showed that accessibility to the place of the treatment have significant influence on the satisfaction with the provided neonatal healthcare services in northern Nigeria. It was recommended among others that neonatal healthcare services should be made accessible to the satisfaction of women of child bearing age through proper location and providing motorable road at all seasons.

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I. Introduction

Distance to health facility is either a push or pull factor that plays an important role in utilization of neonatal care services. It enables mothers to have the means of getting access to vital medical services. The issue of access to neonatal care services may be facilitated or hindered by the location and distance of the service from the client. In most rural areas in Africa, one in three women lived more than five kilometres from the nearest health facility (Nemet, 2009). The scarcity of vehicles for transporting them, especially in remote areas, and poor road conditions can make it extremely difficult for women to reach even relatively nearby facilities. Walking is the primary mode of transportation in some areas including the women in labour (World Bank, 2002). Though that there is improvement now, but Awoyemi, et al. (2011) opined that accessibility of health services has been shown to be an important determinant of utilization and satisfaction with health services in developing countries.

Convenience of access to healthcare is an important determinant of maternal satisfaction in developing countries (Ajala, et al. 2005; Awoyemi, et al. 2011). The access includes distance, connectivity and availability of public transport between residence and facility (Bielen & Demoulin, 2007). In a study on patient perception of quality in selected private facilities in Nigeria, location of the facility near the residence and convenient timings led to greater satisfaction among women utilizing it for neonatal services (Ajala, et al. 2005). Similarly, one of the major reasons for satisfaction with home delivery by Traditional Birth Attendants in Bangladesh was the convenience of access as they lived in the neighbourhood (Chakraborty, et al. 2003). All evidences have been conclusive on convenience of access significantly influencing maternal and newborn satisfaction with health care services in Nigeria Ghana, Bangladesh, Indonesia and Sri Lanka (Ajala, et al., 2005; Andaleeb, et al., 2007; Boshoff, & Gray, 2007; Akter, et al., 2008; Ahmed & Verber, 2011; Chib & Chen, 2011). However, it did not have any significant effect on maternal and newborn satisfaction in India (Ganguly & Sharma, 2014). A number of studies in developing countries have documented strong evidence that the physical proximity of

health care service can play an important role in the satisfaction to utilize provided newborn healthcare services (Buor, 2003). Bulatao and Ross (2010) opined that the need to improve services is greater in rural areas. Only 39% of rural women were estimated to have adequate access to the average service item, as opposed to 68% of urban women. Rural women were especially disadvantaged in respect of the treatment of emergency obstetric conditions.

In addition to the long distances away from health facilities, the poor condition of the roads was a major concern for mothers who gave birth particularly for those living in remote areas (Chib & Chen, 2011). Most of those living in remote villages were not satisfied as accessing the facility remained a hiccup for utilizing the services. Moreover, longer travel times and greater distances to health centers in rural areas constitute barriers to satisfaction for visiting healthcare facilities (Ajala et al. 2005). They further asserted that rural people often waste a lot of time getting to the nearest available health care centre of which they have to trek long distance on many occasion because they are often faced with the problem of reliable means of transportation. Awoyemi, et al., (2011) study also confirmed that in rural areas distances to health facilities for remote populations, the difficult terrain, lack of roads and means of transport and costs of transport (particularly for emergency cases) make MNCH services poorly accessible; moreover rural dispensaries and health clinics usually do not provide MNCH services are some of the factors that affect women satisfaction in Kogi State, Nigeria.

The study further shows that inadequate supply of public health care facilities (both human and infrastructural) in some localities has a link with the women dissatisfaction (Camacho, 2006). Moreover, some health facilities no systems are in place for referral of emergency for obstetric and paediatric cases (Fanan & Felix, 2014). Ambulance services may not available for most HFs and where ambulances are available at PHC offices or HFs there are no resources for fuel, maintenance and repair. No means of communication are available at HFs to call for emergency transport (Bielen & Demoulin, 2007; Buor, 2010). Hiring a local vehicle in case of emergency is highly expensive this could significantly affect the satisfaction as the provision of services is somewhat inefficient (Buor, 2010).

A study showed that public and private health care facilities are sparsely provided in many regions within Kogi State, Nigeria. Such regions with difficult terrain and physical environment are often neglected. This makes the distance between the rural dwellers and the health care centre far apart, given the transportation problem experience in these areas, and its attendant cost (Awoyemi, et al., 2011). The study further added that distance of available hospital from home also has an inverse relationship with the utilization of private hospitals. This reveals that the more the distance of available hospital from home, the less the utilization of private hospitals and the more the rural dwellers will show preference for self- medication treatment and become less satisfied. In addition, The World Bank Group, et al., (2002) reported that satisfaction with the services provided by PHC facilities is low in all studied states Bauchi, Cross River, Kaduna and Lagos. Less than 50% of households were satisfied with the availability of drugs, equipment, medical supplies, and staff. The pattern of satisfaction across states also mirrors the availability of the equipment and supplies in the health facilities across states. Households in Bauchi and Kaduna were the least satisfied, followed by Cross Rivers and Lagos. Furthermore, the study shows that satisfaction with waiting time, information provided regarding disease control and care, and with information on facility management was highest in both Cross River and Lagos compared to Bauchi and Kaduna which were in the study area.

Nigerian dailies reported that many residents in northern Nigeria were complaining bitterly on the inaccessibility to the healthcare facilities which atimes leads to loss of lives. Dailytrust, (Sunday, December 9, 2017) reported that women in Hayin-Kogi Mishigi, Igabi Local Government Area of Kaduna State faced hardships while some die while trying to cross river in canoes to access medical facilities particularly those in labour. These forced the residents of this and similar areas to depend 100% on canoes as a means of transportation even during emergencies at night. Similarly, reported another tragedy by Dailytrust, (Tuesday, November 14, 2017) revealed that a woman delivered a baby while being taken to a hospital in Wushishi town, in Wushishi Local government area of Niger state lost the child in a boat mishap which capsized on river Kaduna. It is against this background that this study is designed to assess the satisfaction with the accessibility of the provided neonatal healthcare services among women of child-bearing-age in northern Nigeria.

Research Objective

- To assess the satisfaction of accessibility of the provided neonatal health care services among women of child-bearing-age in Northern Nigeria.

Research Question

Are the provided neonatal health care services accessible to the satisfaction of women of child-bearing-age in Northern Nigeria?

Research Hypothesis

The following sub-hypothesis was postulated to guide the conduct of the study:

HO₁: Accessibility to the health care facility will not influence the satisfaction with the provided neonatal health care services among women of child-bearing-age in Northern Nigeria.

II. Methodology

This study adopted cross sectional facility based survey research design. The population comprised the entire women of child-bearing-age in Northern Nigeria which was estimated to 117,572,820 womwn of child bearing age. The sample of the study was determined as given by Krejcie and Morgan (1970) that a sample of 384 WCBA is sufficiently enough to represent 100, 000 and above at the alpha level of 0.05. However, all the sample size was increased to 672 women of child-bearing-age.

Multi-phase sampling procedure was used using stratified random sampling to select six states, two from each of the three geo-political zones in Northern Nigeria.

Phase II- purposive sampling technique was used to select all the available tertiary health facilities in the selected states regardless of its location in the state.

Phase III- The next stage was the selection of Local Government Areas. Two LGAs from each of the selected state in the northern Nigeria were selected using simple random sampling again.

Phase IV- simple random sampling technique was used to select health facilities in the selected states for the study as contained in Table 2.

Table 1: Distributions of the Women of Child-Bearing-age that were Selected from Representative LGAs in the Selected HC Facilities

Northern Political Zones	Geo-States	LGAs	Rural Respondents	Urban Respondents	Total
North-East	Bauchi	Bauchi	28	28	56
		Katagum	28	28	56
	Gombe	Dukku	28	28	56
		Gombe	28	28	56
North-West	Kano	Tarauni	28	28	56
		Gaya	28	28	56
	Kaduna	Lere	28	28	56
		Ikara	28	28	56
		Jos North	28	28	56
North-Central	Plateau	Mangu	28	28	56
		Benue	28	28	56
			Katsina-ala	28	28
	Total	12	336	336	672

Phase VIII:- Simple random sampling technique was also used to select women of child bearing age during routine immunization (RI) services in the various selected health care facilities using slips of papers as in phase VI.

Researcher-developed questionnaire based on 4 point Modified Likert scale made up of 45 items on satisfaction with the provision of neonatal health care services among women of child-bearing-age in Northern Nigeria, tagged PONEHESAS was used to collect information. This instrument elicit information on satisfaction with the provided neonatal health care services and was divided into two sections A and B, Section ‘A’ sought information on demographic information of the respondents while sections ‘B’ was sought information on the satisfaction with the accessibility to the place of treatment. The statements in the questionnaire were keyed in a positive response. Therefore, the degrees of responses were ‘Very Satisfied’ which merits 4 Points; ‘Satisfied’ merits 3 points; ‘dissatisfied’ merits 2 points and ‘very dissatisfied’ merit 1 point. The basis for making decision was 2.5. Any score above the mean of 2.5 was considered positive and anything below it, is regarded as negative in this study. The instrument was validated by five experts in the field of the study. All corrections, suggestions and comments were incorporated in order to have a valid instrument and 0.91 reliability indexes was found using Cronbach alpha coefficient determined. Descriptive statistics of frequency count and percentage were used to organize the demographic characteristics of the respondents. Item analysis has been done using mean and standard deviation. The postulated hypothesis was analysed using t-test at 0.05 level significance. All data collected for the study were analyzed using SPSS.

III. Results

The information on demographic characteristics of the selected women of child-bearing-age for the study in northern Nigeria is contained in table:

Table 2 Frequency and Percentage on Demographic Information of the Research Participants

	Frequency	Percentage
Residential Location		
Urban	326	49.9
Rural	327	50.1
Total	653	100.0
Educational Status		
Had no formal Education	189	28.9
Had Formal Education	464	71.1
Total	653	100.0
Occupational Status		
Working Class	328	50.2
Non Working Class	325	49.8
Total	653	100.0
Birth Order		
1 Only	225	34.5
2 – 4	218	33.4
5 and above	210	32.2
Total	653	100.0
Geo-political Zone		
North East	217	33.2
North West	221	33.8
North Central	215	32.9
Total	653	100.0
Source of Newborn Care		
Maternity	109	16.7
PHC	142	21.7
CHC	126	19.3
GH	113	17.3
FMC	84	12.9
UTH	47	7.2
Others	32	4.9
Total	653	100.0

Table 2 shows the frequency and percentage of demographic characteristics of women of child-bearing-age in northern Nigeria. With regards to the residential location of the research participants 326 (49.9%) were from urban areas while 327 (50.1%) were from rural areas. Similarly, with regards to their educational status 189 (28.9%) had no formal education while 464 (71.1%) had formal education. Moreover, 328 (50.2%) are working class mothers while non working class were 325 which accounts for (49.8%). With regards to their parity, 225 (34.5%) had only child; 218 (33.4%) had only 2 – 4 children and 210 (32.2%) had five children and above. Two hundred and seventeen (33.2%) were from north eastern region; 221 (33.8%) were from north-western geopolitical zone and north central region has 215 which accounts for (32.9%). Most of the research participants relied on primary and secondary health care facilities: Maternity 109 (16.7%); PHC 142 (21.7%); CHC 126 (19.3%); GH 113 (17.3%); as their source of newborn care while very few seek neonatal care from FMC 84 (12.9%); UTH 47 (7.2%) and Others 32 (4.9%).

Table 3 Frequency Counts, Percentage and Mean on Responses on Satisfaction with the Provision of Neonatal Healthcare Services on Accessibility to the Place of Treatment among Women of Child-bearing Age in Northern Nigeria

Items	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	Mean
Distance to the health facility	114(17.5)	185(28.3)	166(25.4)	188(28.8)	2.35
Location of the health facility	149(22.8)	201(30.8)	163(25.0)	140(21.4)	2.55*
Availability of communication services	171(26.2)	223(34.2)	137(21.0)	122(18.7)	2.68*
Free communication service for emergency calls	12(1.8)	64(9.8)	241(36.9)	336(51.5)	1.26
Travel time and outcome occur in transit	115(17.6)	145(22.2)	243(37.2)	150(23.0)	2.35
Road condition in all seasons to the					2.48

health facility	135(20.70)	157(24.0)	245(37.5)	116(17.8)	
Availability of ambulance for emergency situation	33(5.1)	110(16.8)	222(34.0)	288(44.1)	1.83
Availability of public transport system always	112(17.2)	164(25.1)	243(37.2)	134(20.5)	2.39
	Average Mean			2.28	

*** Satisfied**

Table 3 shows the frequency counts and percentage on responses on satisfaction with accessibility to the place of treatment among women of child-bearing age in northern Nigeria. Distance to the health facility has a mean of (2.35); Location of the health facility has a mean of (2.55); Availability of communication services has a mean of (2.68); Free communication service for emergency calls has a mean of (1.26); Travel time and outcome occur in transit has a mean of (2.35); Road condition in all seasons to the health facility has a mean of (2.48); Availability of ambulance for emergency situation has a mean of (1.83); Availability of public transport system always has a mean of (2.39); and the overall mean of 2.28 which is also negative, below 2.5 the average mean.

Sub-hypothesis

HO: Accessibility to the health care facility will not influence the satisfaction with the provided neonatal health care services among women of child-bearing-age in Northern Nigeria.

The information to answer the stated research question and test the postulated sub-hypothesis is contained in table.

Table 4: Chi-Square Contingency Table on Satisfaction with Accessibility to the Place of Treatment among Women of Child-Bearing-Age in Northern Nigeria

Items	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	X ² Cal
Distance to the health facility	114(105.1)	185(143.6)	166(207.5)	188(184.3)	664.4
Location of the health facility	149(105.1)	201(143.6)	163(207.5)	140(184.3)	
Availability of communication services	171(105.1)	223(143.6)	137(207.5)	122(184.3)	
Free communication service for emergency calls	12(105.1)	64(143.6)	241(207.5)	336(184.3)	
Travel time and outcome occur in transit	115(105.1)	145(143.6)	243(207.5)	150(184.3)	
Road condition in all seasons to the health facility	135(105.1)	157(143.6)	245(207.5)	116(184.3)	
Availability of ambulance for emergency situation	33(105.1)	110(143.6)	222(207.5)	288(184.3)	
Availability of public transport system always	112(105.1)	164(143.6)	243(207.5)	134(184.3)	

***Significant X² cal value = 664.4, df, 21 > X² tab 32.67 at .05 significant level**

Data in Table 4 reveals the Chi-square contingency analysis on satisfaction with accessibility to the place of treatment among women of child-bearing age in northern Nigeria. The X² cal value (664.4, df, 21 > X² tab 32.67) at .05 level of significance. The result shows that accessibility to the place of treatment had significant influence on the satisfaction with accessibility to the place of treatment among women of child-bearing age in northern Nigeria. Therefore, the hypothesis which stated that accessibility to the place of treatment will not influence the satisfaction with the provided neonatal health care services among women of child-bearing-age in Northern Nigeria is rejected. This answers research question four and verifies sub-hypothesis three.

With regards to the accessibility to the healthcare services, the finding showed that it has influence on satisfaction with the provided neonatal health care services among women of child-bearing-age in northern Nigeria. This outcome is not surprising as many evidences have been conclusive on convenience of access, significantly influence maternal satisfaction with health care services in Nigeria, Ghana, Bangladesh, Indonesia and Sri Lanka (Ajala, et al., 2005; Andaleeb, et al., 2007; Boshoff, & Gray, 2007; Akter, et al., 2008; Ahmed & Verber, 2011; Chib & Chen, 2011). In addition, Awoyemi, et al., (2011) had already reported that nearly 80

percent of rural women in Nigeria live more than five kilometres from the nearest hospital and many have no way to get to health facilities except by walking or canoeing to cross rivers to access healthcare services. Moreso, a number of studies in developing countries have documented strong evidence effect of proximity to the health on satisfaction with the provided newborn healthcare services (Buor, 2003; Feikin et al., 2009). This outcome is in consistent with Bielen and Demoulin, (2007) which revealed that distance and connectivity availability of public transport between residence and facility triggers satisfaction with healthcare services. The finding also agrees with Ajala, et al. (2005) and Awoyemi, et al. (2011) studies which reported that convenience of access to maternity care are important determinants of maternal satisfaction in developing countries. However, the finding disagrees with Ganguly and Sharma, (2014) finding which found that it did not have any significant effect on maternal satisfaction in India. The finding did not also contradicted Awoyemi, et al., (2011) study which confirmed that in rural areas distances to health facilities for remote populations, the difficult terrain, lack of roads and means of transport and costs of transport (particularly for emergency cases) make MNCH services poorly accessible which affect women satisfaction in Kogi State, Nigeria.

IV. Conclusion

Based on the findings made, following conclusions were made:

- Accessibility to the healthcare services has significant influence on the satisfaction with the provided neonatal health care services among women of child-bearing-age in northern Nigeria.

V. Recommendations

Based on the conclusions made, the following recommendations were proffered:

- ✓ Neonatal healthcare services should be made accessible to the satisfaction of women of child bearing age through proper location and providing motorable road at all seasons.
- ✓ Governmental organizations should strive to improve and maintained the provision of neonatal healthcare services to the satisfaction of women of child bearing age regardless of their demographic characteristics (educational status, residential location, occupational status, birth order and geo-political zone of residence) in northern Nigeria.

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