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Issues in Maternal Health Facilities Utilisation in Sokoto State, Northern Nigeria.

Muazu A. SHAMAKI[1], Olatunji ALABI[2]

[1]Department of Geography,Faculty of Social Sciences,Usmanu Danfodiyo University, Sokoto
[2]Department of Demography and Social Statistics,Federal University, Birnin-Kebbi
* Corresponding author: mashamakisa@yahoo.com, masmakisa@udusok.edu.ng
Email: yomistorii@yahoo.com

Abstract
This paper examined the issues influencing utilisations of maternal health facilities for improving the quality and health of women in Sokoto State, Northern Nigeria. Nigeria has been identified as the world's second-highest contributor of global maternal deaths with highest cases from the northern region compared to the southern region. A structured questionnaire was administered to a sample of 315 women aged 15-49years from a target population of 89,831 in the study area.Using SPSS version 22 package, descriptive statistics and cross tabulation were used for analysis of data.The findings showed there were a total of 121 antenatal care centres in the study area. Critical Analysis indicatedwomen utilisation of services was generally low with only 31.1% of the respondents for antenatal care services, 29.8% for delivery care service, and 26% for postnatal care services. In conclusion, due to inadequate distribution of maternal health facilities in the study area and lack of permission from husband to obtain health care service by the women, the rate of home delivery was on the high side. Therefore, the study recommended implementation of regional interventions that allowed for equitable distribution of maternal health care facilities across the region and campaign for behavioural change towards modern health care facilities utilisations focussing on males/husbands so as to improve the situation.

Introduction

Utilisation of maternal health care is the measure of women's use of maternal health care services available to them which is central to improving their quality of life. The implications of low utilisation of maternal health care services on quality of life of women of child bearing age in particular and the health related indicators of level of development of a country in general, cannot be overemphasized. For example, studies by Shamaki et al, (2013) show there are only 538 health facilities distributed within the 3 tiers of health care delivery systems in the whole Sokoto State. They added that maternal mortality ratio was 2,151/100,000 live births while the mean age at dead was 27 years.Similarly, studies by Alabi et al, (2017); NPC and ICF International, (2014); and Barros et al, (2012) have shown that mothers who deliver at health facilities are more likely to have positive pregnancy outcome than those delivering at home or elsewhere. However, only thirty-six percent of births in Nigeria were delivered at health facility in 2013. Generally, the maternal and child health indicators are poor in Nigeria and more worrisome in northwest Nigeria comprising Sokoto State. The contribution of this to the poor maternal and child health indicators in the state cannot be over

emphasized.Furthermore, despite general improvement in antenatal care attendance by pregnant women, majority of them still delivers at home. For instance, ninety-four percent of pregnant women delivered at home in 2013 in Sokoto State (NPC and ICF International, 2014).

The challenge is of more concern when most of such deliveries (85%) were attended to by traditional birth attendance (TBA) with little or no skill to ensure safe delivery. Literature review further shows that weak health system (infrastructure, adequate number of skilled health personnel (especially female health workers) and equipment), poor referral system and sub-standard emergency obstetric care (EmOC) among others are factors supporting high home delivery in the State (Fapohunda and Orobaton, 2013).Although, many studies (Ononokpono & Odimegwu, 2014; Etukudo & Inyang, 2014; Roost, 2010) have statistically associated the use of maternal health care with several socio-demographic factors, includingage, maternal education, residency, poverty, marital status, ethnic background, parity, female autonomy, and provision of health insurance, scholars have argued that the relationship is not always clearly defined. (Ononokpono & Odimegwu, 2014; Roost 2010). However, availability of health care facilities is a fundamental step for overcoming maternal health related problems among women and at the same time for understanding the relationships among various factors determining utilisation. Thus, the Federal Government intervention of provision of Primary Health Care (PHC) in all Local Government Areas (LGAs) of the country to improve health care services generally. However, the quality of services, affordability and accessibility remains an issue.

In another development, physical access may not be the only barrier to utilisation of maternal health facilities but also the underlying human behaviour and culture. In the light of this, Acuna et al. (2012) disclosed that utilisation of health services is influenced by health needs, gender, socioeconomic status, ethnicity, and cultural factors. There is dearth of studies to understand the factors or issues influencing the low maternal health care services utilisation in Sokoto State despite the recurring poor maternal and child health indicators in the State. The most recent of such few studies focussing on predictors of low maternal health care services utilisation in Sokoto State was over a decade ago (Audu et al., 2002) and before then Shehu (1992). There are a number of healthcare services provided by facility types in Sokoto state and how frequently the services were rendered (Shamaki, 2015). He added that these services include the Antenatal care (ANC), Postnatal care (PNC), delivery, child welfare, family planning, HIV counselling and testing, immunisation and so on. The facilities that offer these services include PHC, general hospitals (GHs) and few others that are distributed in both rural and urban areas of the state (Shamaki, 2015). This study therefore intends to investigate both human/cultural issues and facilities availability influencing utilisations; antenatal care, postnatal care, and deliveryservices from modern health facilities in the study area. Thus, the study is timely and necessary in order to hasten the progress of improving on the maternal and child health indicators in Sokoto State. Studies and programme focusing on encouraging and improving maternal health care services utilisation is urgently needed if the State will achieve the Sustainable Development Goal 3 (target 1 and 2) by year 2030.necessary.

Research Methods

Sokoto State, northwest Nigeria is one of the 36 states that make up the Federal Republic of Nigeria. The State has 23 Local Government Areas (LGAs) divided into three Senatorial Zones. Beside Sokoto metropolis, which is the State capital, most of the areas are rural areas and thus have deficient social amenities like poor road network, poor and inadequate water supply among others. In terms of health care facilities, majority of the facilities are Primary Health Care centres (PHC). Sokoto State has one of the most worrisome maternal and child health indicators with less than one percent using any form of contraceptive (NPC and ICF

International, 2013) thus, the rationale for choosing the state as the study area for the study.

This study adopted a mixed mode with a cross-sectional quantitative approach in data collection using a questionnaire and Focus Group Discussion (FGD) qualitative approach. Focus groups can be useful to obtain certain types of information especially when circumstances would make it difficult to collect using other methods to data collection (Hancock, 2002). In this study, the FGDs are organized in 6 sessions for both females and males at different times and locations sequentially for a period of 1.5 to 2 hours in line with Hancock, (2002). A total of 45 females who participated, with 20 from Sokoto town, 10 in Tambuwal and 15 in Isa are involved. Similarly, on the part of husbands or males the same procedure was also followed and conducted the FGD across the three different localities for 45 of them accordingly. A simple random sampling method was used in selecting three LGAs from the three senatorial zones of the state. However, the sample size of 315 women aged between 15-49 years was determine using; Yamane's formula $=n = \frac{N}{1+Ne2}$

Where: n = sample size, N = population size and e = acceptable sampling error,(Yamane 1967), from a sample frame of a list of households listing sampling frame 89,831 obtained from the National Bureau of Statistics, 2010.

A simple worded questionnaires was administered to the selected women of reproductive for the study. Also, verbal informed consent was obtained from related organisations, households and traditional birth attendants and in particular from the respondent for their participation and used of photographs in this study. Using the latest IBM-SPSS version 22 statistical software program for analysis of data, descriptive statistics and cross tabulation were employed to analyse the levels of utilisation of maternal health care services in the different senatorial zones and at the same time, assessed whether or not there was adequate utilisation of these services by women. Furthermore, the study aims to identify the types, number and levels of health facility observed in different communities under the study area. The information extracted from different items was based on the responses reported by the respondents. The maternal health care services explored in this study were categorised into three: antenatal, delivery and postnatal care services. In order to improve on the maternal and child health outcome, a woman is expected to access and utilise at least any of the services close to her.

Results

Table 1Availability and number of ANC services centres observed in the study area

Region	Location	PHC	Clinic	GH	MCH/Tertiary	Dispensary
East	Isa	5	0	1	1	2
Central	Sokoto	24	51	1(Sp. hosp)	3	25
South	Tambuwal	4	0	1	0	3
Total		33	51	3	4	30

Source: Field Work 2015

Table 2 Health facility accessed and utilised by respondent in the community

		Accessed by Respondents			
Type	**Observed**	**Respondent**	**%**	**Valid %**	**Cumulative%**
PHC	33	64	20.3	20.3	20.3
General hospital	3	105	33.3	33.3	53.7
Tertiary	3	15	4.8	4.8	58.4
MCHC	1	29	9.2	9.2	67.6
Dispensary/clinic	81	98	31.1	31.1	98.7
Others	0	4	1.3	1.3	100.0
Total	121	315	100.0	100.0	

Source: Field Work 2015

Table 1 shows a total of 121 different types of antenatal care centres observed across the designated locations of the study area. It reveals that the Sokoto city located in the Sokoto central zone has the highest number of ANC services centres of 104 while Isa has a total of nine and lastly, is Tambuwal with a total of eight centres. In addition, during the FGD in Sokoto south geopolitical zone the respondent confirms that there are numerous health centres in the region but lack of qualified health workers and drugs discourage the access and utilisations of services of the clients. While table 2 provide the types of health care facilities located in various places of the study area which were accessed and utilised by women respondents. The analysis reveals that the highest proportion of respondent (105) that constitute 33.3 percent of the population have General hospital around them and which they usually visit for obtaining services. Whereas only 15 respondents that constitutes 4.8 percent of the women population obtain their services from the tertiary health facilities. However, maternal and child healthcare centres are designed for women and children alone, but the analysis reveals that only 29 respondents that constitutes 9.2 percent have such privilege facilities. This is grossly inadequate especially when we compare to the teaming population of women and children in the state. In contrast, 31.1 percent of the respondents have dispensary and clinic while the primary health care centres constitute 20.3 percent. Others that constitute 1.3 percent of the respondents have no any health centre designated in their communities.

Table 3 presents utilisation services of maternal health facilities among women in the study area. It shows that for ANC 217 women, or 68.9 percent of the total respondents, scored 0, which means they do not attend ANC services at pregnancy. Conversely, only 98 women or 31.1 percent of the respondents scored 1 (yes), which means they attend ANC during pregnancy. Similarly, for skilled delivery care, 221 women, or 70.2 percent of respondent scored 0, meaning they do not go for delivery at any health care centre. While 94 women or 29.8 percent of respondents scored 1 (yes), which means they received delivery care less than 5 months prior to this research. And, when this issue was discussed among male respondents (husbands) in the FGD conducted across the zones, 80 percent of them confirmed that they would not like their wives to deliver at the health centre except if God destined it to be so. Only less than 20 percent of them assert that whenever they noticed a sign of labour with their wives they usually rush them to the hospital. Moreover, the table also reveals 233 women, or 74 percent of respondents scored 0, meaning they do not go for PNC services to the health care centre after they have delivered. Conversely 82 women or 26 percent of respondents scored 1 (yes), which means they do go for postnatal services to the health care centre. Generally, this results indicates low utilisation of health facilities among women in northern Nigeria.

Table 3. Utilisation of Maternal Health Care Facilities

Type of maternal health utilisation	Parameter	N	%
Antenatal care services	No	217	68.9
	Yes	98	31.1
	Total	315	100.0
Skilled delivery care	No	221	70.2
	Yes	94	29.8
	Total	315	100.0
Postnatal care services	No	233	74.0
	Yes	82	26.0
	Total	315	100.0

Source: Field Work 2015

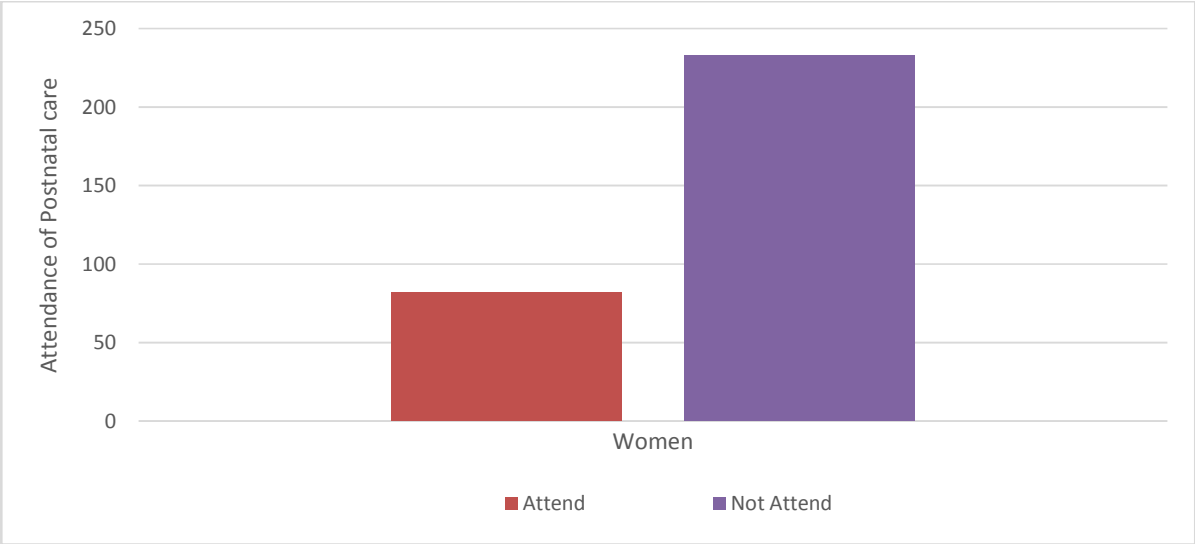

Figure 1 Postnatal care visits by women
Source: Field Work 2015.

Table 4 provides the level or number of ANC visits among women who attend ANC and PNC services at given facility. The analysis reveals that only 8 women constituting 8.2 percent made the require number of visits by receiving services as directed by the health care workers. Comparing with total respondents of 315 the result shows that only 2.5 percent of women attend ANC services regularly in the whole Sokoto, northern Nigeria. Majority of who attend ANC service (33.7 percent) attend only two numbers of visits per pregnancy while 17.3 percent of them visit only ones. Although a substantial number (27.6 percent) visits four times per pregnancy, it is quite not good enough for the ANC services. This issue of low ANC attendance greatly determines the utilisation of health facilities and is a major reason in the high rate of maternal mortality of the region. Similarly, the level or number of PNC visits among women in Sokoto State shows only 82 women go for PNC visits out of a total of 315 respondents. However, the analysis reveals contrary to the expectation as

only one woman constituting 1.2 percent made required number of visits by going to health centre as scheduled by health care workers. Majority of them (68.2 percent) make only a visit per delivery while 21 respondents that constitute 25.6 percent make two visits throughout the period after a delivery. Moreover, the rest 4 respondents constituting 4.9 percent make 3 visits after delivery. Thus, in view of the total 315 respondents for this study, this finding show that only 0.3 percent of women attend the required postnatal visit in the study area.

Table 5 presents reasons or factors determining utilisation of health care facilities by women in Sokoto, northern Nigeria. The analysis of the result shows that majority (30.5 percent) report that difficulty to get permission from their husband prevents them to obtain services. While respondents who mentioned their reason as not willing to go for services by the women themselves constitutes up to 22.5 percent. The physical distance to health facilities constitutes 15.2 percent, lack of money was least and forms 14 percent while the presence of male health worker (socio-cultural) at the facility attracts 17.8 percent. In terms of skilled delivery, it also reveals majority of women (90) or 29 percent could not deliver at the health centre due to permission by husband. Conversely, the lowest proportion of 45 women or 14 percent is due to lack of money by both the husbands and wives. Moreover, in between the highest (permission) and the lowest (money), other reasons include not use to the culture by women 25 percent, distance to health centre 17 percent, and transport accounting for 16 percent of the respondents.

Finally for the postnatal care also majority (27.9 percent) confessed that lack permission from husbands prevent them from having the services at the health centre since to them they are healthy and alright. Whereas, use of traditional care such as herbs and potassium pap accounts for 26.7 percent of the respondents. Other reasons like considering modern care as not important constitutes 18.7 percent, lack of money 16.8 percent and lastly, not willing to go even if permission is granted by husband forms 9.8 percent of the respondents. See Fig. 2 for graphical representation of reasons for not receiving PNC services

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Table 4 Number of ANC and PNC visits per pregnancy by women

Type of utilisation	**Number of visit**	**N**	**%**
Antenatal care services	Once	17	17.3
	Twice	33	33.7
	Three times	13	13.3
	Four times	27	27.6
	Always	8	8.2
	Total	98	100.0
Postnatal care services			
	Once	56	68.2
	Twice	21	25.6
	Three times	4	4.9
	Always	1	1.2
	Total	82	100.0

Source: Field Work 2015.

Table 5. Issues influencing the utilisations of maternal health care facilities

Type of utilisation	Reason for not Receiving Services	N	%
Antenatal care services			
	Lack of money	44	14.0
	Distance to health facility	48	15.2
	Presence of male worker	56	17.8
	Not willing to go	71	22.5
	Permission from husband	96	30.5
	Total	315	100.0
Skilled delivery care			
	Lack of money	45	14.3
	Distance to health facility	52	16.5
	Not use to it	78	24.8
	Difficulty in transport	50	15.9
	Permission from husband	90	28.6
	Total	315	100.0
Postnatal care services			
	Lack of money	53	16.8
	Not important	59	18.7
	Use of traditional care	84	26.7
	Not willing	31	9.8
	Permission from husband	88	27.9
	Total	315	100.0

Source: Field Work 2015.

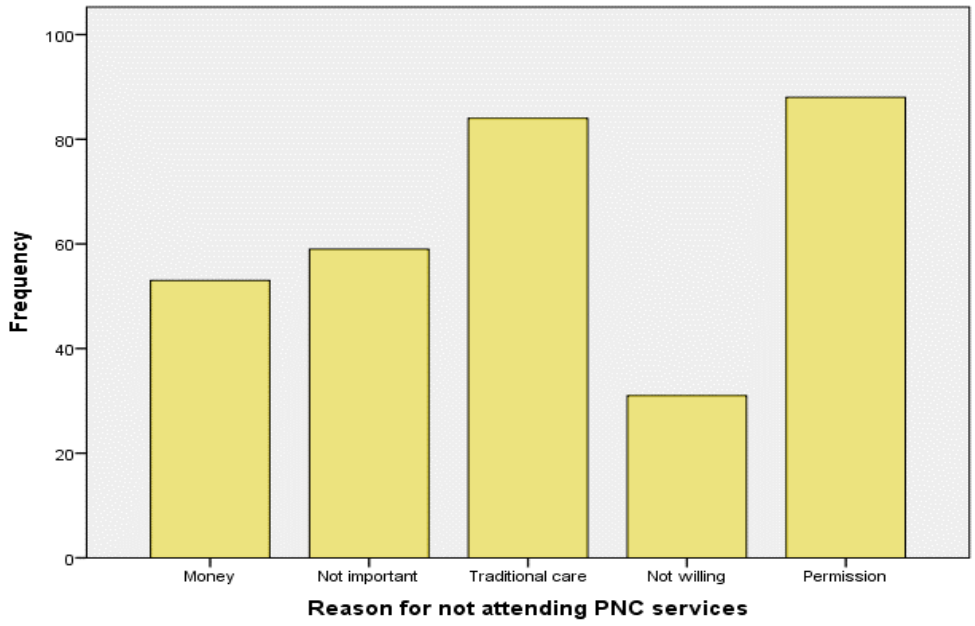

Figure 2.Reasons for low turn-out in PNC services by women
Source: Field Work 2015.

Table 6 shows the types of health facilities providing maternal health services for women in the study area. It reveals that General hospitals provide more services with the highest number (32) of visits by pregnant women followed by Dispensary/clinic with 29. On the other hand, PHC has 20 while MCHC which supposed to receive highest number of clients has only 8. Tertiary facility has 7 and the other unspecified category has the least (2) number. Furthermore, for PNC, it also indicates General hospital receives the highest number (33) of visits for service followed by Dispensary/clinic with 21 or 25.6 percent. Whereas, the PHC and MCHC recorded 13 and 9 respondents respectively, the Tertiary health facility has 5 while others unspecified category have the least (1) number of respondents that constitute 1.2 percent. These results indicate the levels of maternal health services provided by the available health facilities in Sokoto, Northern Nigeria. See Figure 3 A cross-section of women receiving services from General hospital Tambuwal.

Table 6 Health facilities available and use for routine services

Type of utilisation	Type of facility	Number of visits by woman	%
Antenatal care visit			
	PHC	20	20.4
	General hospitals	32	32.7
	Tertiary	7	7.1
	MCHC	8	8.1
	Dispensary/clinic	29	29.6
	Others	2	2.1
	Total	98	100
Postnatal care (PNC) services			
	PHC	13	15.8
	General hospital	33	40.2
	Tertiary	5	6.1
	MCHC	9	11.0
	Dispensary/clinic	21	25.6
	Others	1	1.2
	Total	82	100

Source: Field Work 2015.

The use of maternal health facilities varies considerably among category of women. And, to further underst and the patterns of maternal health care services utilisation in Sokoto, Northern Nigeria the women respondents are divided into two categories; the primigravida and multigravida. The primigravida is a woman that has pregnancy for the first time in which those with only first born experience are also considered in this group for this study. While, multigravida is a pregnant woman who has been pregnant for two or more times prior to this research, irrespective of the birth order. In this regard, out of all the respondents, this study revealed that primigravida constitutes 21.3 percent while multigravidas are 78.7 percent.

Figure 3: A cross-section of some women receiving ANC services during their visits at the health centre in Tambuwal community, Sokoto State. Permission for the study and use of photograph was sought from the Ministry of Health, Sokoto (MOH) in a letter reference number SKHREC/01/014 issued on 16th January, 2014.
Source: Field Work 2015.

Table 7 Utilisation of maternal health facility according to women category

Type of utilisation	Parameter	Category group of woman		Total	%
		Primigravida	Multigravida		
Antenatal care services	Never	45	160	205	65.1
	Attend	22	88	110	34.9
	Total	67	248	315	100
Skilled delivery care	Not used	51	161	212	67.3
	Used	16	87	103	32.7
	Total	67	248	315	100
Postnatal care services	Never	43	181	224	71.1
	Attend	24	67	91	28.9
	Total	67	248	315	100

Source: Field Work 2015.

Table 7 presents maternal health facilities utilisation according to two categories of women in this study; the primigravida and multigravida. The analysis shows that there are a total of 67 respondents in the first category of women constituting 32.8 percent who attend ANC while 67.2 never attend. Whereas the second category has highest number of respondents (248) in which 35.5 percent of them attends ANC services while 64.5 never

attends. Further analysis shows that out of the total of 67 primigravida only 16 that constitute 23.9 percent had utilised modern health care in terms of skilled delivery care while 76.1 percent had home deliveries usually with the TBA's. Similarly, in the multigravida category out of 248 respondents, 87 of them that constitute 35.1 percent delivered at the facility whereas the 64.9 percent delivered outside the health centre.

Finally, in terms of postnatal care service 35.8 percent of the primigravida attend postnatal service while 64.2 do not attend and in the category of multigravida, only 27.1 percent fairly attend the services while most of them (72.9 percent) do not go for services after delivery of their babies. In fact, FGD conducted in southern Sokoto revealed that a respondent stated that "her sister was pregnant and delivered at home with the TBA due to absence of her husband at home" during the time, and before they knew she was having a blood shortage that consequently led to her death due to overflow.

Discussion

The finding of this study demonstrated the significance on availability facilities and human factors/issues in utilisation of maternal health facilities in Sokoto State, Nigeria. The study uncovereda total of 121 antenatal care centres across all designated locations of the study area in which Sokoto city in the Sokoto central zone has the highest proportion of 104 while the eastern and southern Sokoto zones have nine and eight centers respectively. Thus, the available maternal health centres in the study area are grossly inadequate to meet the intended health improvement among women requiring maternal services. And eventually, the finding has revealed that the substantial proportion of respondents obtain maternal health services from the General hospitals around them and which are observed to be lacking necessary facilities. In terms of utilisation of health facilities by women, only 31.1 percent of the respondents attend ANC during pregnancy while majority do not attends. Also 29.8 percent of respondents utilised health care facilities during delivery in less than 5 months prior to this study whereas 70.2 percent delivered at home. This low skilled delivery was reaffirmed during the FGD in the Sokoto south zone where most women stressed that "delivering at hospital is assumed to be exposure of one's privacy and incurring of unnecessary expenditure to the family", hence, no woman would like to deliver at the hospital except with medical problem. This finding was in line with TSHIP (2014) who asserts that 95 percent of deliveries by women in Sokoto state take place at home while only 5.1 percent use skilled birth attendants.And, indeed the beliefs of most women during the study indicate that a successful delivery is for woman who normally delivered her baby in her room without any form of skilled assistance.

In terms of PNC, majority of respondents do not attend while only very few of them do attend. Generally, these results indicate low utilisations of health facilities among women in Sokoto northern Nigeria. Further analysis on utilisations of facilities among women, reveal that only a few number of respondents made the required number of visits for ANC out of a total 315 respondents. The result further shows that fewer number of women attend ANC services regularly in line with minimum requirements per pregnancy. Similarly for the PNC, very insignificant number of the women made required number of visits to health centre as scheduled by health care workers implying that for a whole study population, only 0.3 percent of women attend postnatal visit as required in the study area.

Researches carried out indicate various factors such as lack of money, distance to facility as well as presence of male health worker at facility, lack of permission from husband among other reasons could determine the level of health facilities utilisation. Surprisingly, this study reveals permission of husband is the greatest determinant of maternal health facilities utilisation among majority of women in this study. To be more precise, it was found that significant proportion of women have difficulty to get permission from their husband

to obtain ANC services. While for skilled delivery service it was 29% of the respondents and consequently 27.9% of women confessed the same lack of permission from husbands prevent them from having the services at the health centre since to them they are healthy and alright.

In this study, analysis of utilisation of health facilities by category of women indicates that more multigravida attends ANC that the primigravida, similarly, for delivery at health facility, more multigravida received skilled delivery while it was fewer for primigravida or first timers. However the story has changed in the case of PNC where primigravida has highest attendants of health facilities and the multigravida was least. In overall this study revealed that multigravida utilised more health facilities compared to primigravida in Sokoto State, northern Nigeria. This contradicts Green et al. (2009), who found that young women were more likely to use ANC services than older women since they were said to be 'first timers and therefore inquisitive about labour, pregnancy and delivery'.

Conclusion

This study therefore investigates both human issues and facilities availability influencing utilisations of modern health facilities in the study area. The utilisations were divided into three main categories comprising antenatal care, delivery care and postnatal care services. It was found out that issues/factors such as lack of money, distance to health facility, presence of male worker, not willing to obtain the services by woman and husbands permission abounds in the study. This greatly contributes to the existing low utilisations of modern health facilities among women aged 15 to 49 in Sokoto State. In the three types of utilisations, lack of outstanding husband's permission for a woman to obtain services as and when required constitute the major obstacle to services utilisation. Also, other prominent issues include availability of the facility and category or age of the women. In order to hasten the progress of improving on the maternal and child health indicators issues/factors husband's permission was found to be very significant complemented by limited number of facilities. Therefore, regional interventions that allow equitable distribution of maternal health care facilities should be implemented as well as campaign for behavioural change with more emphasis on males/husband. This will no doubt raise both males and women's sociocultural status and economic perspectives and consequent improving modern health facilities utilisations in the region and the country generally.

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