



Use of Antenatal Services among Women in Farming Communities in Kogi State

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Abstract

This study examined the use of antenatal services among women in farming communities in Kogi State, Nigeria. A multi-stage sampling technique was employed to collect primary data from 150 randomly selected farmers through the use of structured questionnaire. The data was analysed using descriptive statistics and logit regression model. Analysis of socio-economic variable revealed that majority (73.4%) of the respondents were below the age 40 years, with a mean household size of 6 members. About 94.7% of the respondents used antenatal care services covering an average distance of 4km in getting to nearest health facility. The study also revealed that majority (92.7%) of the respondents were aware of healthcare facilities availability and they mostly got their information from family members and friends. The use of antenatal care services among women was high and majority (95.3%) of the respondents had the knowledge of where antenatal centre is located. Also majority of the respondents visited those centres in their last pregnancy with frequency of visit between 1- 4 times. Previous visits, nearness to ANC centres and formal education positively influence the use of ANC services among women in the study area. High cost of antenatal services and poor level of information were found to be the most significant challenges facing women access to antenatal care services. We recommend that government should subsidize health care services for women in order to improve their affordability.

Introduction

It has been estimated that about a thousand women die on daily basis globally arising from complications during pregnancy or childbirth and that ninety-nine per cent (99%) of these maternal deaths occur in developing countries (Anjum et al., 2015; WHO, 2014). The World Health Organization reported that sub-Saharan African accounted for more than half of these deaths while about one third occurred in South Asia.

According to WHO about 20 per cent of global maternal deaths occurred in Nigeria. In 2015 the estimated maternal mortality ratio for Nigeria was over 800 maternal deaths per 100, 000 live births. The lifetime risk of dying during pregnancy, childbirth or postpartum/ post-abortion for a Nigerian woman is 1 in 22 while the lifetime risk most developed countries is 1 in 4900.

Within Nigeria, there are glaring differences in maternal mortality rates in urban areas compared to the rural areas. For instance, FGN and MDGs (2005) reported 351 per 100,000 live births for urban areas as against 828 per 100,000 live births in rural areas. There are also wide regional variations with the North East zone having the highest MMR with 1549 per 100,000 live births followed by the North West with 1025 per 100,000 live births, while the South-West and the South-East have MMR of 165 and 286 per 100,000 live births respectively (FGN and MDGs, 2005; NPC et al., 2003). In Nigeria the major causes of

maternal mortality are haemorrhage and sepsis accounting for 23 and 17 per cent respectively while malaria, anaemia, abortion, toxemia/eclampsia and obstructed labour accounted for 11 per cent each respectively (UNICEF & FGN, 2001). These statistics is a clear indication that maternal mortality is critical in Nigeria and that urgent action is required from all the stakeholders to address it.

One of the key parts of maternal health services is antenatal care. According to Nursing et al. (2012) antenatal care (ANC) is any care given to pregnant women before birth (i.e. care before birth) and includes education, screening, counselling, treatment, monitoring and promoting the well-being of the mother and foetus. The main focus of ANC is to provide women and their family necessary advice and requisite information that could keep them in good health during pregnancy, delivery, and postnatal recovery (Jalina et al., 2013). Any care given to pregnant women during pregnancy is very important both for the health of the mother and the development of the unborn baby. This also links the women and their families with a formal health system which increases their chances of using a skilled attendant particularly at birth and subsequently (Jalina et al., 2013). Antenatal care is regarded as a back bone of obstetrical services, important for the health of pregnant women and it is considered as one of the ways through which maternal and foetal complications are detected and managed (Shafqat et al., 2015).

Antenatal care affords providers of such services an opportunity of detecting, treating and/or preventing potentially dangerous complications (Vadnais et al., 2006). This means that the use of ANC services may lead to early detection and treatment for some of the causes maternal mortality such as infections, anaemia, malaria, HIV/AIDS, pre-eclampsia and eclampsia, severe bleeding, among others. For instance, studies have shown that complying with the intake of antenatal iron and folate supplements reduces the incidence of anaemia before parturition in pregnant women attending ANC (Brian et al., 2002; Dim & Onah, 2007). The recommended antenatal care visits with a trained doctor, nurse or midwife by the World Health Organization (WHO) during normal pregnancy is four. However, differences exist in the use of antenatal care services within countries especially between rural and urban areas (FGN and MDGs 2005; NPC et al., 2003; Ejembi et al., 2004; Abraham et al., 2001; Collins et al., 2001, among others). The reasons for differences are lack of awareness about ANC services, cost of services, lack of husband's/partner's consent and nearness/distance to the health facility (FGN and MDGs, 2005; NPC et al., 2003; Ejembi et al., 2004; Abraham et al., 2001; Collins et al., 2001). The use of antenatal services and the factors affecting it especially among women in farming communities in Kogi State has not been examined empirically by researchers in recent time. Examining the use of antenatal care services amongst women in farming communities is important because these women form a substantial number of women in developing countries and Nigeria in particular because majority of her population live in rural areas and are engaged in farming as their major occupation. It is believed that the outcomes of this study would guide policy makers and development partners especially non-governmental organizations championing the course of women on how to channel their scarce resources in achieving desired outcomes.

Methods

The study was conducted in rural areas of Kogi State, Nigeria. The State lies within latitudes 6°30'N and 8°48'N and longitude 5°23'E and 7°48'E. Kogi State has a total population of about 4,457,879 people as at 2016 using the state projected growth of 3% (NPC, 2006) and a land area of about 30,354.74 square kilometres.

There are twenty-one Local Government Areas in the State which are divided into four agricultural zones (A, B, C and D) by the Kogi Agricultural Development Project. Respondents for this study were obtained from these agricultural zones using a multi-stage sampling technique. In stage one, three (3) extension blocks were randomly selected from each of the Agricultural zone, making a total of 12 extension blocks. In stage two, three (3) extension cells were randomly selected from each block making a total of thirty six extension cells. In stage three, four (4) farm families were randomly selected from each cell. A total of 150 farm families were therefore used for this study. Descriptive statistics such as frequency, percentage and mean were used to describe socioeconomic characteristics of the respondents. A Likert-type rating scale was used to examine the level of awareness and challenges in the use of ANC while the logistic regression model was used to examine the factors that influence use of ANC. The Logistic regression model is expressed as:

$$Y = \alpha + \beta x_i + \epsilon \dots\dots (1)$$

Where:

Y = (1 if the respondents use antenatal care service; and 0 if otherwise)

α = constant, β = coefficient, x_i = independent variables, and ϵ = error term

Therefore:

$$\ln[p/(1 - p)] = \alpha + \beta x_i + \epsilon \dots\dots (2)$$

P = probability that the event Y occurs, p(Y=1)

$\ln[p/(1 - p)]$ = log odds ratio or logit

We express equation (2) as follows:

$$\ln[p/(1 - p)] = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \epsilon \dots\dots (3)$$

Where:

x_1 = Age (years)

x_2 = Number of births

x_3 = Previous use of ANC

x_4 = Nearness to ANC (km)

x_5 = Formal education

Results and Discussion

Socio-economic Characteristics of Respondents

The socio-economic characteristics of the respondents as presented in Table 1 revealed that majority of the respondents (40%) were within 21-30years of age, while 9.3% of the respondents were 50 years of age and above. This suggest early child bearing among women in the study location.

The household size of the respondents showed that most (47.3%) of the respondents had between 1-5 persons in their household, while 7.4% of the respondents had 11 and above members in their household with the mean of 6 person.

Table 1 also revealed that majority (93.3%) of the respondent are educated while 6.7% of the respondents had no formal education. The educational level of the respondents agrees with

Bergsjö, (2007) who reported that that mothers with higher education and socioeconomic status are more likely to utilize maternal care than non-educated in developing countries.

As presented in Table 1, most of the respondent (46%) gave birth between 4 -7 times while 12% of the respondents gave birth more than 8 times with average birth of 5 times. This could be related to the age range of majority of the respondents which were within 21-30years. It could also be due to available, accessible and effective family planning services within the study areas. Table 1 also shows that majority (81.3%) of the respondents gave birth through virginal delivery, 7.3% of the respondents used caesarean section while 0.7% of the respondents used vacuum extraction.

The study further revealed that majority (66%) of the respondents covered 5-7km before getting to healthcare centres while 3.4% of the respondent travels less than 4km before getting to healthcare centre, implying that majority of the respondents are not close to healthcare centres. Also majority (94.7%) of the respondents used antenatal care services in the previous time.

Table 1. Socioeconomic Characteristics of Respondents

A. Age	Frequency	Percentage	Mean/Mode
Below 20	4	2.7	
21-30	60	40	36 years
31-40	46	30.7	
41-50	26	17.3	
51-60	13	8.7	
61 above	1	0.6	
Total	150	100	
B. Household Size			
1 – 5	71	47.3	6 members
6 – 10	68	45.3	
11 and above	11	7.4	
Total	150	100	
C. Level of Education			
No formal education	10	6.7	
Primary education	38	25.3	Tertiary education
Secondary education	29	19.3	
Tertiary	70	46.7	
Total	150	100	
Number of Births			
1 – 3	63	42	
4 – 7	69	46	
8 – 10	17	11.3	5
11 and above	1	0.7	
Total	150	100	
Method of Birth			
Virginal delivery	122	81.3	
Caesarian section	11	7.3	Virginal delivery
Virginal Birth after caesarean			
Vacuum extraction	1	0.7	

Total	150	100	
Distance to the Nearest Health Facility			
Below 1	1	0.7	
2 – 4	4	26.7	4 km
5 – 7	99	66	
8 - 10	35	23.3	
11 and above	11	7.3	
Total	150	100	
Previous use of Antenatal Care Service			
Yes	142	94.7	
No	8	5.3	
Total	150	100	
Source: Field Survey, 2018			

Awareness and Sources of Information of Antenatal Care Service among Women

Table 2 reveals awareness and source of information of antenatal care service among women in the study area. As seen in the table, Majority of the respondents (92.7%) are aware of the antenatal centres in the study area, while 7.3% of the respondents are unaware of antenatal centres. Also majority of the respondents (63.3%) got their information from family and friends, 28.8% from radio while 7.9% of the respondents got their information from television.

Table 2. Awareness and Sources of Information of Antenatal Care Services among Women

Variable	Frequency	Percentage
A. Awareness of healthcare facilities		
Yes	139	92.7
No	11	7.3
Total	150	100
B. Source of information		
Radio	40	28.8
Television	11	7.9
Friends/family members	88	63.3
Total	139	100

Source: Field Survey 2018

Table 3. Use of Antenatal Care Services among Women

Variable	Frequency	Percentage
A. Awareness of Antenatal Service Center		
Yes	143	95.3
No	7	4.7
Total	150	100
B. ANC Visit During Last Pregnancy		
Yes	141	94
No	9	6
Total	150	100

C. Frequency of Visits Per Month		
Below 1	16	11.3
2 – 4	108	76.6
5 – 7	15	10.7
8 and above	2	1.4
Total	150	100
D. Beneficiary of Government Support		
Yes	36	24
No	114	76
Total	150	100

Source: Field Survey, 2018

Use of Antenatal Care Services among Women

Results in Table 3 revealed that majority of the respondents visited antenatal centre during their last pregnancy. Also, 76.6% of the respondents visited ANC 2 - 4 times during their last pregnancy while 1.4% of the respondents visited ANC more than 8 times during their last pregnancy.

As shown in Table 3, 24% of the respondents benefit from government support, while majority of the respondents do not benefit from any forms of government support. This implies that there is little or no government support for pregnant women in the farming communities.

Factors that Influence Use of ANC among Women

Table 4 presents the results of the binary logit regression of the factors influencing the use of ANC among women in the study area. The coefficient of previous visit to ANC was positively signed and significant at 1%. This implies that the likelihood of ANC use will increase with women who have previously visited health centre for ANC services. With increased experience, perhaps positive experience, women tend to visit health centre similar to ANC services when they eventually become pregnant. This finding agrees with Inter Press Service (2011), which reported that exposure to modern care givers is an important factor in attending antenatal care centres and choice of place of delivery. Expectant mothers in Ghana with at least four ANC visits were more likely to attend to antenatal care and hence having little complications during their pregnancy (Song, 2013). A similar finding was also reported among women in Kenya (Otieno, 2010).

The coefficient of nearness to ANC centre was also positively signed and significant at 5%. This implies that household closer to primary health centres and other health institutions in the farming communities are more likely to use ANC services than their counterparts in households that are not. This finding is not surprising owing to the poverty situation in most farming households.

The logistic regression estimates further revealed a positive and significant coefficient for formal education. Educated women could have access to information on ANC and perhaps have better understanding about its relevance. The implication of this is that education is an important factor in the dissemination of pregnancy-related health information among women. The findings of this study agrees with the report of Neupane & Nwaru (2014) who reported that low level of education and financial instability hindered some women's access to vital information regarding antenatal and delivery services, hence their inability to see the essence of attending these services.

Table 4. Estimate of the Binary Logistic Regression Factors Influencing use of ANC among Women

Variable	Coefficient	Z-value	P-value
Age	0.125	1.09	0.211
Birth	0.308	1.06	0.289
Previous Visit	0.188	3.86	0.000*
Nearness to ANC	0.194	2.01	0.045**
Formal Education	0.372	2.54	0.011*

Source: Field Survey, 2018. * $P < 0.01$, ** $p < 0.05$

Challenges Faced by Women in Assessing Antenatal Care Services

Table 5 revealed challenges commonly faced by women in assessing antenatal care service in the study area. Using a 4-point Likert scale, the result of the study indicates that high cost of antenatal services and poor level of information were considered to be significant challenges with a mean score of 2.66 and 2.44 respectively while religion and cultural beliefs were considered not to be significant.

Table 5. Challenges Faced by Women in Assessing Antenatal Care Service

Variable	4	3	2	1	Mean	Rank
	SA	A	D	SD		
Long distance to health centres	12	28	65	45	2.0	Significant
Poor level of information	24	48	48	30	2.44	Significant
High cost of ANC services	52	22	51	23	2.66	Significant
Religion and cultural beliefs	2	3	44	101	1.37	Not significant
Absence of qualified health personnel	19	16	45	70	1.89	Not significant
Transportation problem	24	14	57	55	2.05	Significant

Source: Field Survey, 2018

Conclusion

This study examined the use of antenatal services among women in farming communities in Kogi State, Nigeria. The study revealed that majority of the respondents were below the age of 40 years and were aware of ANC centres. Previous visit to ANC centre, nearness to ANC and formal education positively and significantly influence the use of ANC by women in the study area. This study also revealed that high cost of ANC services and poor level of information are the major challenges faced by women in assessing antenatal care services in the study area. Based on the findings of this study, we suggest that (1) Government should subsidize health care services for women in order to improve their affordability. (2) Government should build more health centres as a way of taking health care services close to the women in their communities in order to improve accessibility. The health care centres should be managed by professional health workers to attract service users. (3) Information on antenatal care should be made available to women through various communication channels and in their local languages. This will increase the awareness of the benefits of ANC.

References

- Anjum, F., Noor, N., & Bano, S. (2015). To Assess the Knowledge of Women in Regards to Antenatal Care. *Med. Forum* 26(2): 23-26.
- Brian, A. J. I., Ikechebelu, J. I., Onyejimbe, U. N., Amilo, G., & Adinma, E. (2002). Influence of Antenatal care on the haematocrit value of pregnant Nigerian Igbo women. *Trop. J. Obstet. Gynaecol* 19:68-70.
- Collin, S. M., Anwar, I., & Ronsmans, C. A. (2001). Decade of Inequality in maternity care: antenatal care, professional attendance at delivery and caesarean section in Bangladesh (1991-2000). *International Journal for Equity in health*.
- Dim, C. C., & Onah, H. E. (2007). The prevalence of anaemia among pregnant women at booking in Enugu, South Eastern Nigeria. *Medscape General Medicine* 9(3):11.
- Ejembi, C. L., Alti-Muazu, M., Chirdan, O., & Ezech, H. O. (2004). Utilization of maternal health services by rural Hausa women in Zaria environs, Northern Nigeria: has primary health care made a difference. *J. of Community Medicine and Primary health care* 16(2): 47-54.
- Jalina, L., Thounaojam, U. D., Panmei, J., Mukhia, S., and Devi, H. S. (2013). Knowledge and practice of ante-natal care in an urban area.
- Neupane, S., & Nwaru, B. I. (2014). Impact of antenatal care utilization on infant care practices in Nepal: a national representative cross-sectional survey. *Eur. J. Pediatr.* 173(1): 99-109.
- Nursing, G., Said, P., & Mukarramah, M. A. (2012). Antenatal care in primary health care centres. *J. Med. Sci.* 9(4): 4291-4299.
- Otieno, P. A., Kohler, P. K., Bosire, R. K., Brown, E. R., Macharia, S. W., & Stewart, G. C. (2010). Determinants of failure to access care in mothers referred to HIV treatment programs, Nairobi, Kenya. *AIDS Care* 22(6): 729–736.
- Shafqat, T., Fayaz, S., Rahim, R., & Saima, S. (2015). Knowledge and awareness regarding antenatal care and delivery among pregnant women. *J. Med. Sci.* 23(2): 88-91.
- Song, H., Cramer, E. M., McRoy, S., & May, A. (2013). Information needs, seeking behaviors, and support among low-income expectant women. *Women & health*, 53(8), 824-842.
- UNICEF and Federal Republic of Nigeria. Children's and Women's Rights in Nigeria: A Wake-up calls Situation Assessment and Analysis (2001). Abuja: National Planning Commission and UNICEF Nigeria, 2001, 46-51.
- Vadnais, D., Adrienne, K., & Noureddine, A. (2006). Women's lives and experiences: changes in the past ten years. Calverton, Maryland: *ORC, Macro.* 67-71.
- World Health Organization (2014). Maternal Mortality.
- World Health Organization (2015). Maternal Health in Nigeria: Generating Information for Action.