

## **Socio-Economic Factors Influencing Antenatal Care Utilization in Zaria Local Government Area Kaduna State, Nigeria**

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### **Abstract**

*Antenatal care is a global strategy instituted to encourage adequate utilisation of healthcare services by women of reproductive age and particularly to reduce maternal mortality affecting the world. This paper examines the socio-economic factors influencing antenatal care utilization in Zaria Local Government Area Kaduna State, Nigeria. This study was anchored on Liberal Feminist theory to provide a theoretical explanation for the topic under investigation. Data for this study were obtained through the administration of questionnaire to respondents purposively selected in the study area. A total of 384 women were selected using the systematic and simple random sampling technique. Data were analysed using descriptive statistical techniques. Findings of this study reveal that the highest educational attainment of the respondents was secondary school with (38.1%) and respondent's husband with tertiary was (43.5%). A large proportion (52.4%) of the respondents are into business/trading, while 53.2% of the respondent's husbands are civil servant and 68.0% of the respondents get support financially from their husbands. Maternal mortality is common in areas where women are educationally disadvantaged and are not well informed about issues that concern their health as priority should be given to girl-child education, sustainable poverty alleviation programmes through income generating activities should be optimized.*

**Keywords:** Antenatal Care, Services, Utilization, Socio-economic Factor, Maternal Mortality

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### **Introduction**

In developing countries like Nigeria, more than five hundred thousand women die due to pregnancy related challenges every year (WHO, UNICEF and UNFPA, 2004). Maternal mortality is very high in Sub-Saharan African countries, having over 66% of maternal deaths which is globally used to determine a country's level of development. Several efforts including the initiatives of the International Safe Motherhood Initiative (SMI), International Conference on Population and Development (ICPD), Fourth World Conference on Women, among others, have been made towards addressing the yearly increase of maternal mortality in the region, yet both mothers and babies lose their lives during delivery. Particularly, the Millennium Development Goal was also launched to reduce maternal mortality

rate and achieve universal and equal access to reproductive health through access to quality antenatal care by women of all statuses.

Reducing the risks associated with pregnancy and childbearing has led to the adoption and practice of antenatal care and its services, however, service utilization by pregnant women is poor (AbouZahr & Wardlaw, 2000). Irma (1992) associates poor utilization of these antenatal care services to unavailability, inaccessibility, low quality of care, poor communication and other socio-demographic factors. In Nigeria, utilization of antenatal care services is a common routine for every pregnant woman and has drastically reduced maternal mortality rate to 0.3% per live birth (Harrison et al., 2005). However, in rural Nigeria, several modern facilities and services for addressing maternal health problems are lacking and where they are provided, they are poorly utilized by pregnant women (Kabir et al., 2005). On this note, Abouzahr and Wardlaw (2000) insist that wide disparity exists between developing and developed countries in terms of maternal health care.

Antenatal care (ANC) has been described as an important strategy to assure safe delivery, although obstetric uncertainties exist which may not be recognized during antenatal screening which is capable of causing serious conditions (Bhattia & Cleland, 1995; Bloom et al., 1999; Nuraini & Parker, 2005). The ANC has had profound impact on the use of healthcare services particularly for women of reproductive ages through offering of health information and services useful for improving the health of pregnant women, mothers and their babies (Chakraborty et al., 2002; WHO and UNICEF, 2003). The ANC involves taking the histories of previous and current pregnancies, checking the height, weight, blood pressure and abdominal palpation of the pregnant women. In addition, the ANC ensures that pregnant women are given proper advice on nutrition, adequately examined for oedema, free of malaria prophylaxis, get adequate distribution of iron and foliate supplements, vaccinated for tetanus toxoid and their urine tested for protein (Maine, 1991; Nuraini & Parker, 2005). The activities of ANC guarantee quality healthcare for reproductive women.

The levels at which ANC services are utilised determine the outcomes of pregnancies (Raatikainen et al., 2007). By implication, poor utilization of antenatal care translates to poor pregnancy outcomes, higher maternal and neonatal mortality rates. Therefore, adequate utilisation of the ANC services is fundamental to averting pregnant women's deaths because it guarantees access to quality healthcare and helps to determine the type of care needed to remain healthy during

pregnancy (Di, 2005). Importantly, the poor utilisation of the ANC services has influenced several researchers into knowing the responsible factors. Particularly, several studies have strictly looked at it from a clinical perspective without due consideration to socio-economic conditions and societal structures. These factors can be economic, social, cultural or even logistic in nature. Adeusi et al. (2014), assert that the health seeking behaviour of women of reproductive age specifically for pregnancies and childbirth is best determined by socio-economic barriers.

### **Statement of the Problem**

The health of mothers is important to the overall health of family members particularly, the children and aged persons. However, the health of these mothers are usually threatened by pregnancies, associated with many complications and have caused the deaths of many women. The Nigeria Demographic and Health Survey (NDHS, 2015), reported that more than 3% of deliveries in Nigeria occur at home with several pregnant women left in the hands of a few skilful attendants. Adegoke et al. (2012) report that Nigeria is one of the countries in the world with high maternal mortality rate, second to India in statistics. The problem has been traced to poor utilisation of ANC services which varies among the six-geopolitical zones in Nigeria. Adamu (2011) and Chubike (2013) affirm that problem of maternal mortality is worse in the rural parts of the country due to poor patronage to the poor functional primary health care facilities. Thus this study seeks to investigate the socio-economic factors influencing ANC utilization in Zaria LGA. This will lead to the formation of realistic suggestions which will help improve the utilization of antenatal health care services by pregnant women.

### **Theoretical Framework**

The paper adopted the liberal feminist theory. The liberal feminist argued that men and women are subjected to different and unequal situations in society. It is emphasised that the material resources, opportunities for self-actualization, social status and power for women are less or lacking compared to men. These inequalities cut across all classes, races, occupations, ethnicities, religions among others.

Risman (2004) expressed that labour is sexually divided into gender and spheres denoting “public” and “private” in modern societies and are constantly promoted and shaped by patriarchy. The primary responsibility of women is considered private, restricting them to home with limited resources while that of men is described as public, allowing them to have unlimited access to opportunities,

freedom, money, power and status over the women. Jegar (1983) submits that patriarchal ideology is a compelling force, changing women to unintentional and exploited mothers and emphasising that women generate genuine respect through motherhood. Risman (2004) reiterated that women are marginalised, discriminated and harassed in society due to the practices of limited education, low political participation, and restricted appearance in public places as well as low pay wages.

It is clear from the foregoing that the liberal feminist theory reveals the nature of constraints women suffer and the feminization of poverty. The liberal feminist theory was adopted for this study due to the fact the feminists see society as unequally structured, dominated and controlled by men. Thus, the theory exposes the patriarchal nature of the study area. The study area is a predominantly Hausa community where patriarchal ideology is entrenched; for this reason, the practices of discrimination and harassment of women is highly prevalent which make some men prevent their wives from utilizing antenatal care services

### **Study Area**

Zaria LGA is located from Latitudes 11° 0' - 11° 6' North of the Equator and Longitudes 7° 38' - 7°48' East of the Greenwich meridian. Zaria LGA lies on altitude of about 670m above sea level surrounded by a thick 14.9km wall, enclosing an area of approximately 1,600 hectares (Schwerdtfeger, 2007). Zaria is one of the ancient cities of Northern Nigeria. The study area has a total population of 406,990 with female and male population of 196,090 and 210,900 respectively (NPC, 2009). The major ethnic groups are Hausa and Fulani made of Muslims and Christians. Zaria is a cosmopolitan town occupied by people from various states. It is also a centre of learning as it is home to prominent higher educational institutions and Islamic schools.

### **Data Collection**

A reconnaissance survey was carried out in order to be well acquainted with the study area and the selected wards. The main instrument for the collection of data was through the use of structured questionnaire.

### **Sampling Design and Questionnaire Administration**

Zaria L.G.A has a total female population of 196,090 (NPC, 2009). Using the Krejcie and Morgan (1970) for determining sample size for finite population, the sample size for a population of 196,090 is 384. The survey covered women within ages of 15-49 years that are either currently pregnant or have had a baby during the

last five years. Some questionnaires were reluctant to participate in the study, as such only 370 copies of questionnaire were returned. The area of study was clustered into thirteen wards and arranged alphabetically.

### **Sampling Techniques**

Six wards were systematically selected as shown in Table 1. This is necessary because the area of study is quite large.

**Table 1: List of Wards in Zaria LGA and Selected Locations**

<b>Zaria Ciki Wards</b>		<b>Zaria Waje Wards</b>	
1. Anguwan Fatika		1. Dambo	
2. Anguwan Juma	×	2. Dutsen Abba	×
3. Kaura		3. Gyallesu	
4. Kwarbai A.	×	4. Kufena	×
5. Kwarbai B.		5. Tudun Wada	
6. Limancin Kona	×	6. Tukur-Tukur	×
		7. Wuciciri	

The multi- stage sampling technique was employed for this study. Zaria Local Government Area comprises 13 administrative wards namely; Kwarbai A, Kwarbai B, Limanci Kona, Kufena, Kaura, Dutsen Abba, Anguwan Juma, Anguwan Fatika, Tudun Wada, Tukur-Tukur, Gyallesu, Dambo and Wuciciri.

In order to have a good coverage of the problem under investigation, Zaria LGA was clustered into two: Zaria ‘Ciki’ (wards within the city) and Zaria ‘Waje’ (wards outside the city); this was because they are demarcated by the Zaria city wall. From above, the selected wards are Anguwan Juma, Kwarbai A, Limanin Kona, Dutsen Abba, Kufena and Tukur-Tukur. In each selected ward a comprehensive list of all the streets was compiled. However, in areas with element of rurality it was difficult to trace the street but foot paths were used and temporary numbers were given to households for the purpose of the study. Using simple random sampling technique, two streets from each of the six wards were selected and 17 houses from each main street were sampled. Simple random sampling technique was also used to select two households per house and two women of child bearing age were selected.

## Methods of Data Analysis

The data obtained was analyzed using descriptive statistics and presented in form of tables and percentages, using the Statistical Package for Social Sciences (SPSS) version 22.0.

## Results

### Socio-Economic Characteristics of Respondents

Table 2 shows that 93% of the respondents are Muslims and only 7% are Christian, this could be due to the fact that the study area is located in a Muslim dominated state in the northern part of Nigeria.

**Table 2: Socio-economic Characteristics of Respondents**

Characteristics	Frequency	Percentage
<b>Religion</b>		
Islam	344	93.0
Christianity	26	7.0
<b>Total</b>	<b>370</b>	<b>100.0</b>
<b>Occupation</b>		
Farming	4	1.1
Business/petty trading	194	52.4
Civil servant	67	18.1
Full time house wife	105	28.4
<b>Total</b>	<b>370</b>	<b>100.0</b>
<b>Highest educational attainment</b>		
No formal education	92	24.9
Primary	55	14.9
Secondary	141	38.1
Tertiary	82	22.2
<b>Total</b>	<b>370</b>	<b>100</b>

The Table further reveals that 24.9% of the respondents had no formal education. It is also important to state that the highest level of formal education of the respondents was secondary (38.1%). This signifies that formal education among women in area is consistent with the general characteristics of women in northern Nigeria as being less educated. This explains why 52.4% of the respondents engage

in business/petty trading as their occupation and considering the fact that little concern is given to western education especially for women.

**Table 3: Socio-economic Characteristics of Respondents' Husbands**

<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Husbands highest educational achievement</b>		
Qur'anic	83	22.6
Primary	53	14.4
Secondary	72	19.6
Tertiary	160	43.5
<b>Total</b>	<b>368</b>	<b>100.0</b>
<b>Husbands occupation</b>		
Business/petty trading	129	34.9
Civil servant	197	53.2
Driver	13	3.5
Mallam (clergy)/Carpenter	17	4.6
<b>Total</b>	<b>370</b>	<b>100.0</b>
<b>Husbands' monthly income</b>		
Below ₦10,000	134	36.2
₦10,000-₦19,000	42	11.4
₦20,000-₦29,000	21	5.7
₦30,000 – ₦39,000	45	12.2
Above ₦39,000	64	17.3
I do not know	61	16.5
<b>Total</b>	<b>370</b>	<b>100.0</b>

Table 3 shows that over forty percent (40%) of the respondents' husbands have attended tertiary institutions of learning; while 19.6% have attended secondary schools as their highest level of formal education. Occupation wise, 53.2% of them are civil servants; while 3.5% are drivers. Concerning monthly incomes of the husbands, the study showed that 36.2% earn N10, 000 or less, while 5.7% earn between N20, 000 and 29,000 monthly.

**Figure 1: Number of Visit**

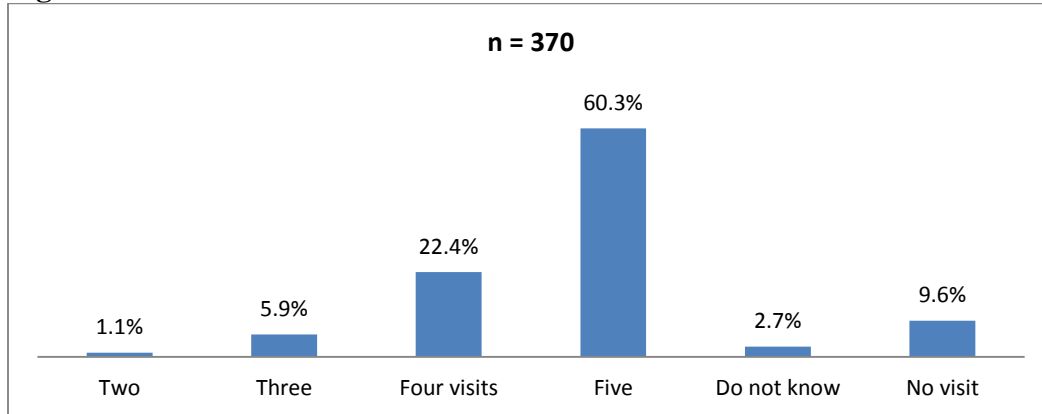
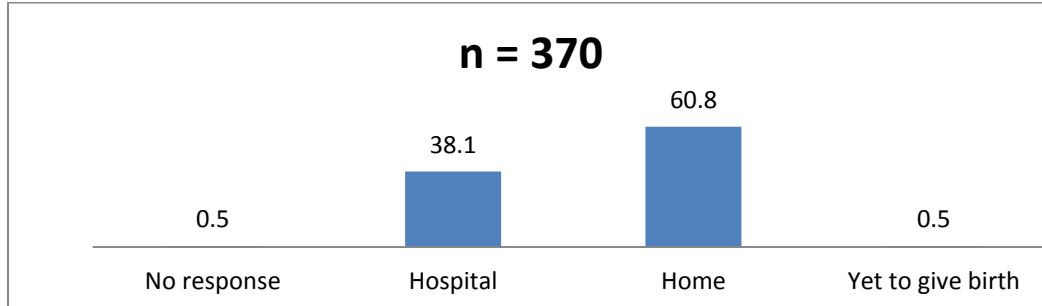


Figure 1 reveals that most of the respondents (60.3%) who utilize ANC services attended the clinic more than four times compared to a handful of 1.1% of the respondent who attended antenatal only twice before delivery.

**Figure 2: Respondents place of delivery**



The figure above shows that although most of the respondents utilize the ANC services but a significant proportion usually give birth at home with either the assistance of medical personnel, TBA or family members. This is attributed to the spouses' low level of income and the belief that women should be taken to the hospital only when complications develops. Despite adequate attendance of pregnant women to ANC, there is still increased rates of home deliveries which are attributed to quality of institutional deliveries, attitude of health care providers and cost of care.

### **Socio-economic Factors Affecting ANC Utilization**

Several socio-factors have been considered by different studies with regard to antenatal care service utilization, the study sought to find out the relationship between the highest level of formal educational attainment of the respondents and ANC utilization. This is presented in Table 4.

**Table 4: Respondents Highest Levels of Formal Educational Attainment and ANC Utilization**

<b>Highest level of formal education</b>	<b>ANC utilization</b>		<b>Total</b>
	<b>Yes</b>	<b>No</b>	
	<b>F</b>	<b>F</b>	<b>N</b>
	<b>%</b>	<b>%</b>	<b>%</b>
None	35	57	92
	38.0	62.0	100
Primary	46	9	55
	83.6	16.4	100
Secondary	129	12	141
	91.5	8.5	100
Tertiary	82	–	82
<b>Total</b>	100	<b>78</b>	100
	<b>292</b>	<b>21.1</b>	<b>370</b>
	<b>78.9</b>		<b>100</b>

**$X^2 = 12.690$**

**$df = 3$**

**$p = 0.005$**

Table 4 shows that respondents who have at least attended secondary school are more likely to use antenatal care services than those with no formal education. This also indicates that as the educational attainment of the respondent rises the percentage of those who utilized ANC rises.

**Table 5: Forms of Support Provided by Respondents' Husbands towards ANC Utilization**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Financial	228	68.0
Permission to attend ANC	84	25.1
Transportation to the center	<b>335*</b>	<b>100</b>
<b>Total</b>		

Concerning husbands support, the data above reveals that 68% of the respondents said their husbands gave them financial support; while 6.9% of the respondents said their husbands usually take them to the hospital on their antenatal care appointment days.

**Table 6: Respondents' Nature of work and Utilization of ANC Services**

<b>Nature of work</b>	<b>ANC attendance</b>		<b>Total n</b>
	<b>Yes F %</b>	<b>No F %</b>	
Farming	4 100	–	4 100
Business/ trading	181 93.3	13 6.7	194 100
Civil servants	66 100	–	66 100
House wife	91	15	106
<b>Total</b>	<b>342</b> <b>92.4</b>	<b>28</b> <b>7.6</b>	<b>370</b> <b>100</b>

**X<sup>2</sup> = 10.102**

**d f= 3**

**p = 0.008**

The Table presents analysis on the respondent's nature of work and utilization of antenatal care services. It reveals that the nature of work a woman engage in does not influence her attendance at the antenatal clinic in terms of the number of appointment she is able to meet up with before delivery. The chi- square indicates that there is no significant difference between the nature of work the respondents engage in and their utilization of ANC. The Table however, reveals that all (93.3%) respondents who engaged in business/ trading attended antenatal care.

**Table 7: Husbands' Educational Attainment and ANC Utilization**

<b>Husbands educational attainment</b>	<b>ANC utilization</b>				<b>Total n</b>	<b>%</b>
	<b>Yes F</b>	<b>%</b>	<b>No F</b>	<b>%</b>		
Quranic	76		7		83	100
	91.6		8.4			
Primary	45		8		53	100
	84.9		15.1			
Secondary	66		6		72	100
	91.7		8.3			
Tertiary	152		8		160	100
<b>Total</b>	95.0		5.0		<b>367</b>	<b>100</b>
	<b>339</b>		<b>28</b>			
	<b>92.4</b>		<b>7.6</b>			
<b>X<sup>2</sup> = 5.883</b>		<b>d f =3</b>		<b>p = 0.208</b>		

Table 7 shows that the husband's education does not significantly influence the use of antenatal care services by women. The chi square test revealed that there is no significant difference between the highest level of educational attainment of the respondents' husbands and antenatal care utilization because it was found that similar proportion of respondents' whose husbands' highest level of education was either Quranic or primary school utilized antenatal care services.

**Table 8: Husbands’ Type of Work and ANC Utilization**

Husbands’ type of work	ANC utilization				Total	
	F	%	F	%	n	%
Business/petty trader	121		8		129	
	93.8		6.2		100	
Civil servant	178		19		197	
	90.4		9.6		100	
Driver	11		2		13	
	84.6		15.4		100	
Mallam (clergy)	15		2		17	
	88.2		11.8		100	
Carpenter	13		1		14	
<b>Total</b>	86.7		7.1		100	
	<b>338</b>		<b>32</b>		<b>370</b>	
	<b>91.4</b>		<b>8.6</b>		<b>100</b>	
<b>X<sup>2</sup> = 24.368</b>	<b>df = 3</b>		<b>p = 0.000</b>			

Table 8 presents analysis on occupation of the respondent’s husband’s type of work and utilization of antenatal care services. The table reveals that a large proportion of the respondents’ husbands (90.4%) are civil servants and business men. The chi square test showed a significant difference between husbands’ type of work and antenatal care utilization. Therefore, suggesting that respondents’ whose husbands were employed or into businesses were more likely to utilize ANC services than those whose husbands’ engaged in other means of livelihood.

Having ascertained that most respondents utilized ANC services during pregnancy, the study sought to find out if the income of the respondents’ husbands influenced the use of ANC services.

**Table 9: Husbands' Income and Antenatal Care Utilization.**

Spouse income	ANC utilization		Total n %
	Yes F %	No F %	
Below N10,000	176 92.1	15 7.9	191 100
N10,000 –N 19,000	39 92.9	3 7.1	42 100
N20, 000–N 29,0000	17 81.0	4 19.0	21 100
N30, 000 – N 39, 000	42 93.3	3 6.7	45 100
N 40, 000 <sup>+</sup>	64 100	-	64 100
<b>Total</b>	<b>338 93.1</b>	<b>25 6.9</b>	<b>363 100</b>
<b>X<sup>2</sup>= 11.351</b>		<b>d f = 4</b>	<b>p = 0.000</b>

Table 9 presents analysis on the respondent's husband's income and utilization of antenatal care services. The table indicates that the respondents' husbands' income significantly influenced the respondents' utilization of antenatal care services. Since 100% and 93.3% respectively of the respondents whose husbands earned between 30,000 or more utilized antenatal care services more. Therefore, it can be deduced that although most of the men are employed as civil servants, the income of a significant proportion of them was relatively low. This was why some of them could not fully support their wife's ANC utilization; some women were forced to miss appointments.

**Table 10: Husbands' Educational Attainment and ANC Utilization**

Husbands educational attainment	ANC utilization		Total n	%		
	Yes F	%			No F	%
Quranic	76	91.6	7	8.4	83	100
Primary	45	84.9	8	15.1	53	100
Secondary	66	91.7	6	8.3	72	100
Tertiary	152	95.0	8	5.0	160	100
<b>Total</b>	<b>339</b>	<b>92.4</b>	<b>28</b>	<b>7.6</b>	<b>367</b>	<b>100</b>

$X^2 = 5.883$

$df = 3$

$p = 0.208$

Findings from the study also indicated that the educational status of the respondents' husbands did not determine the utilization of ANC by women. It can however be inferred from the table that, the level of the husbands' educational attainment did not significantly influence the support they gave their wives in terms antenatal care utilization since a large proportion of the respondents' husbands with Quranic (87.8%) and primary (90.0%) education supported their wives to utilize ANC services.

### **Discussion**

Concerning the relationship between the level of formal educational attainment and ANC attendance, the study revealed that the educational attainment of the women influenced their attendance of antenatal services a great deal. This shows that respondents who have at least secondary school level of education are likely to attend ANC clinic more frequently than those with primary education. This is linked to the fact that educated women are more enlightened to know the advantages of using ANC services on their health, a factor that will most likely influence them to seek for such services and make better choices concerning their health than those with no formal education. Navaneetham and Dharmalingam (2002) found significant association between education of women and receiving antenatal care in South India. Thaddeus and Maine (1994), also found that educated

women are better able to break away from traditional beliefs and utilize modern antenatal care in order to safe guard their own health.

Regarding socio-cultural factors affecting ANC utilization, data showed that they range from the respondent's level of formal education, husband's nature of job, husband's income and number of antenatal care visit. Others like Adamu and Salihu (2002) found that transportation difficulties, affordability of services, economic and cultural factors are major barriers to the use of antenatal care services.

On educational status and income of the spouses, it was found that most of the respondents' husbands have attended tertiary institutions and earn N10, 000 or less as monthly income. The bi-variate analysis on husbands' educational attainment and antenatal care utilization revealed that the husband's educational attainment does not determine the use of antenatal care services by their wives, therefore, the women utilized ANC services irrespective of their husbands' level of formal education. This finding differed from that of Awusi et al (2006). They argued that there is a great influence of the husbands' educational attainment on utilization of ANC services in Nigeria communities. Interestingly, findings from this study revealed that most men in Zaria Local Government Area (with no formal education) supported their wives' utilization of the available antenatal care services.

In line with the theoretical framework used to unravel the problem under study, it is clear from the findings that women's formal educational attainment is still low compared to their male counterpart. Although women are enlightened on the importance of ANC services and use the services that are available in their communities, they largely depend on their husbands because their socio- economic status is very low and they are poor. In view of the fact that the socio-economic status of the women and their husbands influence their activities of life, some women did not attend antenatal care. In the study area, part of the cultural practices like seclusion of women (purdah) prevented some women from utilizing modern health services. Thus, subjecting the women to patronizing unskilled health personnel.

## **Conclusion**

Maternal death is a known phenomenon in areas where women are educationally disadvantaged and are not well informed about issues that concern their health. The socio-economic factors that were found to be mainly significant are women's

education, occupation and husband's education, occupation and income. The study showed that women in Zaria Local Government Area perceived antenatal care services as an important care for the pregnant women. In addition, the level of formal education among women was found to be low; however, women in the study area significantly utilized ANC services. The levels of women's formal educational attainment and their husbands' income positively impact utilization of ANC services. Nevertheless, the outcome of pregnancies will improve considerably when adequate attention is paid to creating awareness on maternal health utilization and greater attention is given to the girl child education as emphasized in the second Millennium Development Goal.

### **Recommendations**

1. Education, particularly for girl-child, should be provided by governments to reduce the numbers of illiterate women. This is because the study findings found a significant influence of levels of education and utilization of antenatal care services.
2. There is a need for government and stakeholders in women affairs to target low-income women and provide measures to alleviate poverty to boost income generating activities.
3. Government at all level should intensify effort on sensitizing the public on the importance of utilization of antenatal care services on a continual basis in order to reach women with no formal education who are at risk of not attending ANC in order to have a healthy population and reduce drastically maternal mortality rate.

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