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## **Effects of Economic Status on Utilization of Maternal Health-care Services among Child-Bearing Age Mothers in North-Central, Nigeria**

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### **Abstract**

*This study assesses the effects of economic status on utilization of maternal health-care Services among child-bearing age mothers in North-Central, Nigeria. Ex-post facto research design was used for this study. Two (2) research questions and one (1) hypothesis guided the study. The population of six million, four hundred and thirty-five thousand, five hundred and six (6,435,506) respondents for the study consisted of all mothers of child bearing age in North central Nigeria. A sample size of one thousand, one hundred and fifty-two (1152) respondents were used for the study. A multi-stage sampling technique used to select the sample size. A close-ended questionnaire was used to obtain responses from the respondents. The instrument was reliable with 0.804. Descriptive statistics of means and standard deviations were used to answer the research questions. The formulated hypotheses were tested at 0.05 level of significance. The analysis of the result revealed that economic status significantly influenced the utilization of maternal healthcare services among mothers of child-bearing age in North-Central Nigeria ( $p = 0.00 > 0.05$ ). It was, concluded that economic status influenced the utilization of maternal healthcare services among child-bearing age mothers in North-Central zone, Nigeria. Following recommendation made that Cost alleviation for mothers of child bearing age utilizing maternal healthcare services should be put in place by the state governments to encourage them to patronize maternal healthcare services.*

**Keyword:** Maternal, healthcare services, utilization, women of child bearing age

### **Introduction**

Maternal and reproductive health services in health care delivery system constitute a large range of curative and preventative health services of particular importance to the health of women of reproductive age. It includes a range of services provided to mothers of child bearing age prior to conception, during pregnancy, during and after delivery (Lule, Ramana & Rosen, 2018). Mother of child bearing age enjoys the benefits of healthcare services when she attends AnteNatal Care (ANC) and delivers in appropriate health facility, whereby pregnancy must be supervised by a trained health personnel and labour attended to by a skilled birth attendant (World Health Organization, 2021). Furthermore, the mother on her part is expected to book early and attend adequate number of ANC prior to delivery, although, ANC attendance has been measured based on the proportion of mothers who have attended ANC at least once during pregnancy. This explains why World Health Organization (WHO) (2020), recommended that pregnant women should attend ANC at least 4 times starting from the first trimester. Consequently, some advocates have argued for the adoption of focused ANC care services, in which case a woman attends ANC four (4) times during pregnancy at specific intervals as recommended by WHO, which allows for adequate attention to be given to each pregnant woman while high risk pregnancies are better monitored (Villar & Bergsjo, 2019).



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The importance of utilizing maternal healthcare services particularly in developing countries cannot be overemphasized (Melkamu, 2018), for instance, ANC helps to ensure the wellbeing of the mother and fetus through early detection of risks in pregnancy, prevention of pregnancy and labor complications and ensures the safety of mother and child. Furthermore, it exposes mothers of child bearing age to counseling and education about their own health and the care of their babies. With the strong positive association that has been shown to exist between level of care obtained during pregnancy and the use of safe delivery care, ANC also stands to contribute indirectly to maternal mortality reduction (Babalola & Fatusi, 2018).

According to Syed, Goran, Max and Zarina (2011), individual economic status emerged as one of the major determinants influencing utilization of maternal healthcare services and healthcare expenditure among mothers of child bearing age. With low household incomes and dependency on cultivation as the major source of revenue, factors such as fees for care provider, cost of medicine and costs of transportation are obstacles in utilizing healthcare services. Similarly, Rahman, Kielmann, McPacke and Normand (2012), reported that economic status is one of the main determinants influencing the choice of treatment and care provider accessed by mothers of child bearing age. The need for maternal healthcare service varies in space and so the organization of provision necessarily has a special component. The spatial dimension is important in utilizing the maternal healthcare services since accessibility is a major determinant of the use of maternal healthcare services (Omachi, 2018). Death and illness related to pregnancy and childbirth are significant health problems in North-Central zone, Nigeria, particularly in rural areas (Doctor, 2017). North central zone is one among the 6 (six) geo-political zones in Nigeria that have been formulating various strategies such as safe motherhood and community involvement. However, for the government and other stakeholders to take suitable actions to improve maternal health care services successfully, accurate information towards the problem that relies on empirical investigation is needed.

### **Statement of the Research Problem**

The rates of morbidity and mortality among mothers of child-bearing age are avoidable through timely utilization of maternal healthcare services. Regrettably, utilizing skilled healthcare remains low in Nigeria, especially in North-Central Nigeria where home-based birth is the norm. Routine healthcare services, especially during the postpartum period are low. When mothers of child-bearing age use maternal healthcare services, they may prefer remedies from traditional healers rather than skilled health workers may be because of poor economic status. Economic status of mothers of child bearing age may determine if they can afford quality ANC service which will enable them gain access to good medical care during pregnancy and before delivery. But due to their poor financial status they may find it very difficult to access and afford these quality medical services. The existence of these problems prompted the researchers to ask the question, do economic status as a determinant really influence the utilization of maternal healthcare services? If yes, to what extent does a mother of child-bearing age utilize the maternal healthcare services within their society at large? At this point in time, no definite answers can be given to this question due to the existing gap in this research. Thus, the focus of this study hinges on the extent to which socio-demographic determinants could influence utilization of maternal healthcare services among child-bearing age mothers in North-Central zone, Nigeria.

### **Objectives of the study**

The objectives of the study are to assess:



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1. Economic status as determinant of utilization of maternal healthcare service among child bearing age mothers in North-Central zone.
2. Utilization of maternal healthcare services among child bearing age mothers in North-Central zone of Nigeria

### Research Questions

The following research questions were raised to guide the study:

1. What is the influence of economic status on utilization of maternal healthcare services among child-bearing age mothers in North-Central zone, Nigeria?
2. How often do child bearing age mothers utilize maternal healthcare services in North-Central zone of Nigeria?

### Hypothesis

The following hypothesis were tested at 0.05 level of significance

1. Economic status does not significantly influence the utilization of maternal healthcare services among child-bearing age mothers in North-Central zone, Nigeria.

### Methodology

Research Design: The descriptive survey research design of ex-post facto was used in this study. This research design was employed because the information gathered already existed with the respondents and, therefore, not under the control of the researcher.

### Population

The population for this study comprised of six million four hundred and thirty-five thousand, five hundred and six (6,435,506) respondents (National Bureau of Statistics, 2024) that is all mothers of child bearing age in the six (6) States of North-central zone and Federal Capital Territory Abuja, inclusive.

### Sample and Sampling Technique

The sample size for the study consisted of 1152 mothers of child bearing age which was drawn from the population of 6,435,506 mothers of child bearing age utilizing maternal healthcare services. To select the desired sample for this study, multistage sampling technique which involved stratified sampling techniques, simple random sampling, proportionate sampling and systematic sampling techniques were used. According to Research Advisor (2006), a population of more than 6,000,000, the sample size for the study is 384 at 5% margin of error and 95% confidence interval. Therefore, in order to make adequate generalization for this study the more the sample size, the better the coverage and therefore generalization of results. The suggested sample of 384 was therefore tripled (3) ( $384 \times 3 = 1152$ ).

### Instrument for Data Collection

The research instrument used for this study was a closed ended questionnaire titled: "Economic status as a determinant of maternal healthcare services among child bearing age mothers in North central zone, Nigeria". The questionnaire consisted of (2) sections. To score the responses of the respondents, as based on how they felt towards a particular item, the 4-point modified Likert scale was used as follows: Strongly Agree (SA) =4; Agree (A) =3; Disagree (DA) =2; Strongly Disagree (SD) =1. Therefore, any mean score of response that was 2.5 and above was considered acceptable or positive and any mean score of response that is below 2.5 was not acceptable but regarded as negative.



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### Validity of Instrument

In order to determine the face and content validity of the research instrument, the draft copies of the structured questionnaire were submitted to five (5) experts in the Departments of Human Kinetic and Health Education, Nursing Science and Veterinary Medicine of Ahmadu Bello University, Zaria for vetting.

### Pilot Study

To ascertain the reliability and internal consistency of the instrument for the study, simple random sampling was used to select sixty (60) mothers of child bearing age drawn from Kwara state which was not a sampled state used during the main study. The instrument was reliable with 0.804

### Data Collection

In order to achieve the purpose of the study, a letter of self-introduction was produced by the researchers introducing themselves and the purpose of the study to the sampled states and local government areas.

### Statistical Analysis

Mean and standard deviations were used to answer the research questions, while, Pearson’s Product Moment Correlation coefficient (PPMCC) test was used to test the null hypothesis. Hypothesis were tested at 0.05 level of significance.

### Presentation of Results

#### Research Question One

How often do child bearing age mothers utilize maternal healthcare services in North-Central zone of Nigeria?

**Table 1: Mean Score of Responses on Utilization of Healthcare Services among Child Bearing Age Mothers in North-Central zone, Nigeria**

S/N	Variable Name	Mean	Std. Deviation	Decision
1	How often was your blood pressure checked during antenatal care	2.93	1.12	Most often
2	Health personnel often educate me on the importance of nutrition during antenatal care	2.77	1.00	Most often
3	How often was your body weight measured during prenatal care	2.63	0.87	Most often
4	How often were you screened for malaria during prenatal care	2.59	0.85	Most often
5	How often is your fetal position checked during antenatal care	2.51	0.72	Most often
6	How often were you counseled and enlightened by health personal on the importance of nutrition during antenatal care	2.55	0.73	Most often
7	How often do you maintain personnel hygiene during prenatal care	2.88	1.10	Most often
8	How often do you go for physical examination during prenatal care	2.76	0.98	Most often
9	How often was your child taken for immunization during postnatal care	2.54	0.72	Most often
10	How often was your urine screened during prenatal care	2.50	0.72	Most often
<b>Aggregate mean score</b>		<b>2.67</b>	<b>0.88</b>	

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Table 1 shows that child bearing age mothers most often utilize maternal healthcare services as all of the mean scores of responses were above 2.50. The result in Table 2 revealed that the blood pressures of child bearing age mothers are most often checked during antenatal care. Aside the blood pressure of child bearing age mothers being checked during antenatal care, respondents also indicated that personnel hygiene is most often maintained, health personnel most often educate child bearing age mothers on the importance of nutrition during antenatal care and they often go for physical examination during prenatal care as indicated by mean scores of 2.88, 2.77 and 2.76 respectively. The aggregate mean score of 2.67 and standard deviation of 0.88 indicated that healthcare services are most often utilized among child bearing age mothers in North Central Zone of Nigeria. This is evident in the mean score of 2.64 which was greater than the benchmark mean of 2.50.

**Research question Two:** What is the influence of economic status on utilization of maternal healthcare services among child-bearing age mothers in North-Central zone, Nigeria?

**Table 1: Mean Score of Responses on Economic Factor Influencing Utilization of Healthcare Services among Child-bearing Age Mothers in North-Central zone, Nigeria**

S/N	Variable Name	Mean	Std. Deviation	Decision
1.	I always attend antenatal healthcare services at expected time because I have my transportation fare	3.50	0.95	Influenced
2.	The low cost of STD (HIV) screening motivate me to go for antenatal healthcare services	2.94	0.93	Influenced
3.	The low cost of drugs during postnatal healthcare services motivate me to go for healthcare services	2.85	1.03	Influenced
4.	I delay in screening for signs of complication (swollen lags and anaemia) during pregnancy for lack of money	3.06	1.13	Influenced
5.	I prefer consulting traditional healers because of inability to pay for checking of fetal position.	3.12	0.98	Influenced
6.	I resort to available home remedies during pregnancy because of lack of money to go for immunization against neonatal tetanus	3.01	0.97	Influenced
7.	I visit traditional healers for lack of money for urine screening	2.92	1.06	Influenced
8.	I make use of delivering care from traditional birth attendants for lack of money to go for skilled birth attendants	3.09	1.00	Influenced
9.	The low cost of high-quality services offered by nurses who receive delivery motivate me to go there for care often	2.88	0.95	Influenced
10.	I rarely attend postnatal healthcare center because it is expensive.	2.81	0.98	Influenced
<b>Aggregate mean score</b>		<b>3.02</b>	<b>1.00</b>	

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Table 2 showed that the respondents agreed that economic factors influenced the utilization of maternal healthcare services as all of the mean scores of responses were above 2.50. The most desired healthcare services has to do with modern maternal healthcare services which was influenced by the economic situation of the respondents as reflected in items 1, 2, 3 and 9 in which



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attendance was determined by variable transport fare, low cost of STD (HIV) screening, low cost of drugs during prenatal healthcare and low cost of high-quality services offered by nurses respectively. However, the economic factor has made the child bearing age mothers in North central zone of Nigeria to highly subscribe the services of the traditional antenatal services as against the modern healthcare services. This is reflected in items 4, 5, 6, 7, 8 and 10 in which they delay in screening, preferred traditional healers, resorted to home remedies, visit tradition healers, used tradition birth attendants and rarely attended postnatal healthcare services respectively. The aggregate mean score of 3.02 and SD of 1.00 indicated that economic determinants influence the utilization of maternal healthcare services among child bearing age mothers in North Central Zone of Nigeria. This is because the aggregate mean of 3.02 is greater than the benchmark mean of 2.50 set for acceptance of the statement.

**Hypothesis 1**

Economic status does not significantly influence the utilization of maternal healthcare services among child-bearing age mothers in North-Central zone of Nigeria

**Table 3: Correlation on Influence of Economic Status on Utilization of Maternal Healthcare Services among Child Bearing Age Mothers**

Variables	Mean	SD	Df	r-cal	p-value	Decision
Economic Determinants	30.18	6.99				
Utilization of Maternal Healthcare Services	32.93	8.48	1442	0.68	0.00	Influenced

r-crit at df (1442)= 0.09 P<0.05

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Table 3 revealed that the mean score of 30.18 with standard deviation of 6.99 for economic determinants against a mean of 32.93 and standard deviation of 8.48 for utilization of maternal healthcare services. The economic status positively influenced the utilization of maternal healthcare services, which was statistically significant ( $r = 0.68$ ,  $p = 0.00$ ). Based on the result, the null hypothesis which stated that economic status as determinant of maternal healthcare services does not significantly influence the utilization of maternal healthcare services among child-bearing age mothers in North-Central zone of Nigeria was, therefore, rejected. This is because the p-value of 0.00 was less than the 0.05 level of significance implying that economic status as determinant has influence on the use of maternal healthcare services among child-bearing age mothers in North-Central Zone of Nigeria.

**Discussion of Findings**

The findings of this study revealed that economic status significantly influenced the utilization of maternal healthcare services among child bearing age mothers in North Central Zone of Nigeria ( $P = 0.00$ ). This is in line with Syed, Goran, Max and Zarina (2011), study one economic Factors Influencing Maternal and Child Health Service Utilization in Mwingi. Observed that economic status emerged as one of the major determinants influencing utilization of maternal healthcare services and healthcare expenditure among mothers of child bearing age in Mwingi ( $P = 0.00$ ). Furthermore, economically disadvantaged mothers of child bearing age North central zone of Nigeria make less use of preventive care and screening services. Thus, morbidity and premature mortality are disproportionately concentrated among the economically disadvantaged mothers of child bearing age in North central zone of Nigeria. It's also agreed with explanations of Owoseni (2016), who examined the Factors Affecting the Utilization of Antenatal Care among Pregnant Women in Moba LGA of Ekiti State, Nigeria. The studies have demonstrated that mothers of child bearing age in Moba LGA of Ekiti



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State, Nigeria with high economic status are significantly more likely to utilize early and adequate maternal healthcare services than those with low economic status. In the same vein, Roberts (2013), conducted research on timing of first antenatal care attendance and associated factors among pregnant women in Arba Minch Town and Arba Minch District, Gamo Gofa Zone, South Ethiopia. The researchers indicated that household wealth plays an irrefutable role among mothers of child bearing age in Arba Minch District, Gamo Gofa Zone, South Ethiopia in terms of utilization of maternal healthcare services: rich households are up to five times more likely to utilize delivery care than poor households in North central zone of Nigeria. The finding of this study also agreed with Dagne (2010), who conducted research on the Utilization of maternal health care services in Nigeria.

### **Conclusion**

Based on the findings of this study, it was concluded that: Economic status influenced the utilization of maternal healthcare services among child bearing age mothers in North Central Zone of Nigeria.

### **Recommendation**

The following recommendation is hereby made in view of the conclusion of this study.

1. Cost alleviation for mothers of child bearing age utilizing maternal healthcare services should be put in place by the state governments to encourage them to patronize maternal healthcare services.

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