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**MATERNAL UTILIZATION OF HEALTH CARE SERVICES. THE CASE OF  
NALERIGU IN THE NORTH EAST REGION OF GHANA**

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## ABSTRACT

Maternal Health Care Services refers to the health of women during pregnancy, childbirth and the postpartum period. Maternal healthcare includes antenatal care (ANC), skilled birth attendance and postnatal care (PNC). This study is designed purposely to assess maternal attitude and the factors that influence maternal utilization of health care services in Nalerigu in the East Mamprusi Municipality of North East Region -Ghana. The study was an analytical cross-section design. A sample size of 200 women in maternity who were from and within Nalerigu was conveniently sampled for the study and a questionnaire was administered as a tool for the data collection. The socio-demographic characteristics of the study participants showed most respondents (57.5%) were within the age range 25-35 years which is an indication that women of reproductive age were the active participants. Findings also revealed that; educational level of the respondents showed most women attained Senior High Secondary Education. Some other respondents gained JHS & primary education (37.5%) with a few other indicating they have never attained any formal education. Regarding respondents attitude towards maternal health care services, majority (78%) of them said they attend maternal health services such as ANC at least thrice during pregnancy. Others (22%) indicated they do not attend ANC services. The study further revealed respondents were given information on nutrition during pregnancy (97.5%), HIV/AIDS (78.5%), progress of pregnancy (94.5%), pregnancy danger signs (95.5%), care of the baby (93.5%), family planning (6%) and among several others. In conclusion, the utilization of maternal health care services was generally high among the respondents and only a small proportion did not regularly exploit the services. This study recommends that, the East Mamprusi Municipal health directorate should intensify education and awareness on maternal health care and its importance especially among women in the rural communities.

Key words; maternal health, utilization, childbirth, attitude, awareness, and women.

## 1. INTRODUCTION

One of the key responsibilities of the third United Nations (UN) Sustainable Development Goals (SDGs), is to reduce maternal morbidity and mortality to reasonable levels (Yaya et al., 2018). Maternal health is a well-recognized aspect of women's health and includes antenatal care (ANC), skilled birth attendance and postnatal care (PNC) (Birmeta et al., 2013; Yaya et al., 2018). Despite this, most women in many developing nations are prone to pregnancy related complications, premature births and maternal death. The unavailability and adequate utilization of maternal healthcare services in most areas still remain the main cause most maternal health problems (Kalule-sabiti et al., 2015). Inadequate maternal health services utilization in developing world results in more than half a million maternal deaths during pregnancy, childbirth or even before the due day to delivery (Birmeta et al., 2013). In the Sub-Saharan Africa, low earnings, poor livelihood, poor nutritional diets, poor access to health services, inadequate health personnel, bad roads are the most predicaments to maternal mothers (Dapaah & Nachinaab, 2019). This projected sub-Saharan Africa to have the highest maternal death ratio of 640 per 100,000 live births (UNFPA, UNICEF, WHO, 2012). In every maternal deaths, about 18 separate women are exposed to various morbidities with long-term social impact, physical and psychological trauma (Idris et al., 2013). Improved maternal health is an important recipe for women's health and wellbeing, yet due to low and inadequate utilization of health care services and other determinants of maternal healthcare, women in most rural areas still suffer (Sanogo & Yaya, 2020; Solanke et al., 2015). Reducing maternal morbidity and mortality and their new-born babies is an important target in the achieving of Sustainable Development Goals (Nuamah et al., 2019). Various interventions such as iron and folic supplementation for pregnant women, vitamin A for their newly born babies and other prophylaxis intervention have improve maternal and child healthcare (UNFPA, UNICEF, WHO, 2012). Regardless of these developments, every year, about 287,000 women die of pregnancy-related causes worldwide

(Idris et al., 2013). These is as a result of underutilization and little access to pregnant women to healthcare services, and also linked to social, economic, and cultural factors (Kalule-sabiti et al., 2015). Ghana has seen the introduction of a free maternal health policy implemented in July 2008 under the National Health Insurance Scheme (NHIS) to improve maternal health outcomes (Ghana Statistical Service, 2010). The policy provide free health care services to all pregnant women during and after pregnancy for 3 months (Dalinjong et al., 2018; Nuamah et al., 2019). Nonetheless available statistics in the East-Mamprusi Municipal Health Directorate indicated maternal mortality declined 131 per cent from 295 deaths per 100,000 live births in 2011 to 81 deaths per 100,000 live births in 2015, while skilled assisted deliveries also increased in the district (Ghana Statistical Service, 2010). Despite efforts made towards universal coverage, there are still challenges with access to and utilization of maternal health care (Novignon et al., 2019). This study aimed at investigating maternal attitude and the factors that influence maternal utilization of health care services in Nalerigu in the East Mamprusi Municipality of North East Region -Ghana.

## **2. METHODOLOGY**

### **2.1 Study area/setting**

The study was carried out in Nalerigu Township and at the public health unit of Nalerigu Baptist Medical Center in the East Mamprusi Municipality of the Region. The Municipality is the most densely populated district in the North East Region with a population of 149,779 as at 2019 which includes over 10 ethnic groups and all the three recognized religious sects with the Mamprusi's being indigenes and the majority religious group being Christianity.

### **2.2 Study design and participants**

A cross-sectional design was used for the study. The study participants included 200 women within the community that access the health facility. The study Participants also included female

students of Nalerigu College of Nursing and Midwifery who were mothers and access maternal health care services at the facility. All the study participants were either pregnant or nursing mothers since that was the criteria used in selecting women in their reproductive age as the study participants.

### **2.3 Sampling and Data collection techniques**

Simple random sampling was used to select the study centers while systematic sampling technique was used to recruit participants from the town and those who visited the health facility. Participants were selected and briefed on the study for informed consent and for participation in the study. This was to allow every woman in maternity to have a chance of being selected. Data collection lasted over a month and a total of 200 women were interviewed in the study. A structured questionnaire was used to collect data on socio-demographic characteristics of the study participants. The questionnaire also assessed the level of attendance of maternal health care service, to find the relationship between maternal knowledge and utilization of antenatal care and postnatal care services amongst women of reproductive age and to identify the determinants of delivery care utilization among women of reproductive age. The questionnaire was translated to respondents who could not understand English Language. And participants were also assured of the confidentiality of the data.

### **2.4 Data Analysis**

Responses from study respondents' were coded and entered into SPSS v.25. Data was analyzed based on the responses and presented in various forms such as frequency tables and bar charts.

### **3.5 Ethical considerations**

Informed consent was sought from the Municipal Health Directorate, the health center and the traditional authority in the community. Participants were also educated on the purpose of the

study and approval was granted from all participants before any information was taken. Confidentiality of information was ensured among participants who were involved. No part of this study was physically invasive and data collected was used for its purpose.

## **2.6 Limitations of the study**

During the data collection, some women gave correct answers which showed good scores but were different in reality while others too refused to answer sensitive questions. The selection of subjects was also based on simple random sampling; the size of the study may therefore not be large enough to generalize the results. Another weakness of this study is the recall bias of the study subjects.

## **3 RESULTS AND DISCUSSION**

### **3.1 Introduction**

The data collected on this study was analyzed using descriptive statistical methods and presented in tabular forms under specific headings for clarity. The socio-demographic characteristics of all the 200 study participants in a table 4.1 below shows the study respondents (57.5%) were within the age range 25-35 years which is an indication that women of reproductive age were the active participants. Some other women were under the ages of 25 years (32%) and 35 years (10.5%) respectively. Age of the mother may directly be linked to utilization of maternal health care services. Mothers within the ages of 25-35 years are more likely to deliver in health facilities than their more elderly women above 35 years since they constitute the active age group (Onasoga et al., 2014). Findings also revealed that; educational level of the respondents showed most women attained Senior High Secondary Education. Some other respondents gained JHS & primary education (37.5%) with a few other indicating they have never attained any formal education. The level of education of mothers towards their views to attending health care

services may impact their health and unborn child since they are enlighten on their health needs. This shows maternal educational is an important determinant of that influences utilization of maternal health care services (MHCS) among the respondents under study (Onasoga et al., 2014). Again the study is in assertion with a study conducted in Ghana which revealed; the use of ANC is linked to maternal educational level in most rural areas (Arthur, 2015; Dhakal et al., 2007). Regarding the occupation of the study participants, majority (60%) of the participants were government employees, whereas the remaining 40% were self-employed. Majority (97%) of the women were married whereas a few others were single and devoiced.

**Table 1: Socio- demographic characteristics of respondents**

Characteristics	Frequency (n)	Percentage (%)
<b>Maternal age (years)</b>		
Under 25yrs	64	32
25-35yrs	115	57.5
More than 35yrs	21	10.5
<b>Educational level of mothers</b>		
None	21	10.5
Low (Primary & JHS)	75	37.5
High (At least SHS)	104	52
<b>Religion</b>		
Christianity	134	67
Islam	48	24
Traditional	18	9

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**Occupation**

Self-employed	80	40
Government employed	120	60

**Marital Status**

Married	194	97
Single/Divorce	6	3

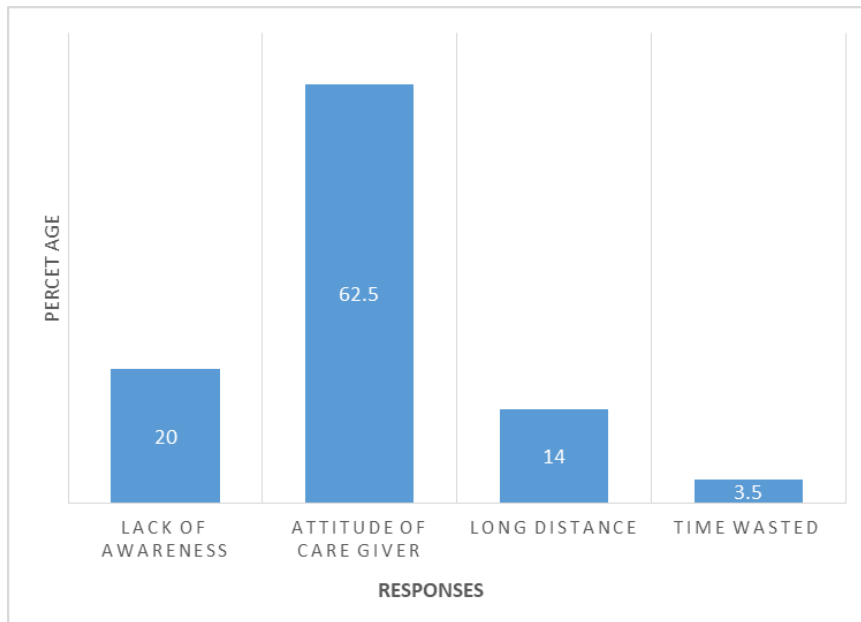
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**3.2 Maternal attitude towards maternal health care services**

Regarding respondents attitude towards maternal health care services, majority (78%) of them said they attend maternal health services such as ANC at least thrice during pregnancy. Others (22%) indicated they do not attend ANC services. They attributed their irregularity and inability to attend ANC services due to the following factors; lack of awareness, the attitude of the care giver, distance from home to clinics and the time wasted at care centers due to long queues.

The attitude of the health care provider and previous experience of the mothers about the care received, also influence utilization of maternal health services. This is comparable to study conducted in Ethiopia that; reasons for non-attendance of maternal health services such as ANC were lack of awareness, not being sick, household chores, long time spent at services, and confidence in the care giver (Arthur, 2015; Birmeta et al., 2013; Rn & Bnsc, 2022).





**Figure 1: Reasons for Not Attending Maternal Health Care Services**

### 3.3 Services Received During maternal health care services

Regarding the services received by the study respondents during maternal health care clinics are revealed the following; TT vaccinations; prophylaxis IPT (an antimalarial) drugs, Insecticide Treated Net (ITN) and health advice were the services they benefited from. The study also revealed respondents were given information on nutrition during pregnancy (97.5%), HIV/AIDS (78.5%), progress of pregnancy (94.5%), pregnancy danger signs (95.5%), care of the baby (93.5%), family planning (6%) and among several others as shown in Table 3. The views of respondents on the type of MCHS received at the study area is contrary to a study conducted in the Talensi District of the Upper East region that; About 22.7% of respondents said the type of maternal health care services (MHCS) received by women were laboratory tests or medications, 32.5%, with others 35% received both laboratory test and medication as MHCS during their last visit (Dapaah & Nachinaab, 2019).

**Table 2: Maternal Health Care Services**

Services received at ANC clinic	Frequency	Proportion (%)
Height and Weight measurement	200	100
Blood pressure	197	98.5
Hemoglobin	151	75.5
Iron tablet	187	93.5
Tetanus toxoid injection	40	20
Deworming tablet	121	60.5
IPT (antimalaria)	186	93
ITN (Insecticide treated net)	21	10.5

Others	15	7.5
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**Table 3: Information received at maternal health clinics**

<b>INFORMATION GIVEN AT ANC CLINIC</b>	<b>FREQUENCY</b>	<b>PROPORTION (%)</b>
Nutrition in pregnancy	195	97.5
Care of the baby	187	93.5
Family planning	12	6
Best place of delivery	186	93
Complications in Pregnancy	168	84
What to do during complications/ Pregnancy danger signs	191	95.5
Counseling on HIV/AIDS	157	78.5
Progress of Pregnancy	189	94.5

#### **4. CONCLUSION**

The utilization of maternal health care services was generally high among the respondents. Majority of the respondents utilized modern antenatal care service. The study respondents attributed their irregularity and inability to attend maternal health care services e.g. ANC services due to the following factors; lack of awareness, the attitude of the care giver, distance from home to clinics and the time wasted at care centers due to long queues. The study also revealed respondents were given information on nutrition during pregnancy, HIV/AIDS, progress of pregnancy, pregnancy danger signs, care of the baby, family planning and among several others

#### **5. RECOMMENDATIONS**

In line with the findings, some recommendations are as follows: Ghana Health Service and more especially the East Mamprusi Municipal health directorate should intensify education and awareness on maternal health care and its importance. The East Mamprusi Municipal health directorate in collaboration with the communities should review and strengthen maternal health care services as a top priority for public health action and as a way to reduce maternal mortalities and complications in pregnancy.

#### **Acknowledgement**

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### **Author contributions**

MB drafted the first version of the manuscript and critically revised the manuscript. MB,SSZ, and DA conceptualized and designed the study, reviewed and revised the manuscript. DA, IF and SS also contributed to the data analyses. MB and SS revised the manuscript. All authors read approved the final manuscript and accountable for the work as submitted.

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### **Availability of data and materials**

Not applicable

### **Declarations**

### **Consent to participate**

Informed consent was sought from the Municipal Health Directorate, the health center and the traditional authority in the community. Participants were also educated on the purpose of the study and approval was granted from all participants before any information was taken. Confidentiality of information was ensured among participants who were involved. No part of this study was physically invasive and data collected was used for its purpose.

### **Consent for publication**

Not applicable.

### **Competing interests**

The authors declare that they have no competing interest

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