## IMPACT AND PROSPECTS OF MATERNAL HEALTH CARE SERVICES ON MATERNAL HEALTH IN ZARIA LGA OF KADUNA STATE, NIGERIA

**BY**

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**Abstract**
*This study was conducted to examine the impacts and prospects of maternal health care services on maternal health in Zaria LGA of Kaduna State, Nigeria. To accomplish this goal, Descriptive survey research was used. A sample size of 384 respondents from Zaria LGA with a population of two hundred and eighty-seven thousand, nine hundred and seventy (287,970) was selected through multi-stage sampling procedures of simple random and accidental sampling techniques. The instrument was validated by jurors in Health Education Department. The reliability of the instrument was done using the Cronbach alpha coefficient with 0.78 points obtained. 384 copies of the questionnaire distributed were analysed using descriptive statistics of frequency count, simple percentages, mean and one-sample t-test. The result of the study revealed that the impact of maternal health care services on maternal health is significant (p<0.05), and the prospects of maternal health care services on maternal health have perceived by mothers is significant (p<0.05). Base on the conclusion, it was recommended that the Government should revitalise maternal health care facilities and prioritise women's education on maternal health care services. In addition, policy should be made on family planning services and reduce the cost of prenatal, antenatal and postnatal services to enhance the usage of maternal health services which will hereby improve maternal health.*
*Keywords: Impact, Prospects, Maternal health, Care services and Maternal health*

**Introduction**
Maternal health according to the World Health Organization (WHO) (2010) refers to a woman's physical well-being throughout pregnancy, delivery, and the postpartum period. Prenatal, perinatal, and postnatal care for the mother and child up to the age of five years are all included in maternal health. When a woman is pregnant, her health situation is significantly more complicated (Azuh et al., 2017). According to WHO (2019), the maternal mortality rate is far too high. In 2017, over 295 000 women died during and after pregnancy and childbirth. The vast majority of these deaths (94%) happened in low-resource areas, and the majority of them could have been avoided. In 2017, maternal fatalities in Sub-Saharan Africa and Southern Asia accounted for over 86 per cent (254 000) of all maternal deaths worldwide. Approximately two-thirds of maternal deaths (196 000) occurred in Sub-Saharan Africa, whereas approximately one-fifth occurred in Southern Asia (58 000). Meanwhile, it has been discovered that prompt postnatal care for mothers and children lowers maternal and newborn mortality rates (WHO, 2020).

Globally, maternal mortality has reduced from 151 deaths per 100,000 live births in 2019 to 152 deaths per 100,000 in 2020, with 52 per cent of all maternal deaths occurring in Sub-Saharan Africa (SSA), primarily among impoverished, illiterate, and disenfranchised rural people (Bill & Melinda Gate Foundation, 2021). Nigerians account for around 20% of maternal mortality, although making up only 2% of the world population, ranking first in Africa and second only to India internationally. This is exacerbated by the region's weak economic foundation and internal conflicts (Abdul'Aziz, 2008). According to the WHO (2020), Nigeria has a Maternal Mortality Ratio (MMR) of 814/100,000 live births, with differences among the country's six geopolitical zones. A Nigerian woman's lifetime chance of dying during pregnancy, labour, postpartum, or post-abortion is one in 22, compared to a lifetime risk of one in 4900 in affluent countries. This is a high rate when compared to other African countries. South Africa, Namibia, Algeria,

and Egypt had respective MMRs of 300/100,000, 200/100,000, 97/100,000, and 66/100,000 (WHO, 2020). According to the Maternal, Newborn and Child Health Programme (MNCH2) (2021), the MMR for Kaduna state was 1025/100,000 live births. Pregnant women are the most vulnerable segment of this population, so it is vital to address their needs, access and desired outcomes.

According to WHO (2017), Maternal Health Care Services (MHCS) comprise prenatal care, competent delivery attendance, and postnatal care, as well as health education programs offered during pregnancy, birth, and the postpartum period. The MHCS encompasses preconception, pregnancy, birth, and postpartum care, among other elements of family planning. Preventive, promotion and early identification of women who are at high risk of disease and mortality throughout pregnancy, labour, and postpartum are the main goals of maternal health care services (Olugbenga-Bello et al., 2013). Prenatal care, on the other hand, preserves pregnant women's health, particularly their nutritional status, and helps them avoid pregnancy-related issues. It also includes care for expectant mothers throughout labour and delivery, preferably by a nurse, midwife, or doctor. Furthermore, family planning ensures the mother's adequate recovery from previous childbirth and increases the child's chances of survival, whereas postnatal care includes maternal health care services following delivery, including newborn baby health monitoring (Garba, 2015). Meanwhile, the biggest barriers to getting maternal health care services in Nigeria have been highlighted as high out-of-pocket expenses and poverty (National Health Insurance Scheme, 2010).

Maternal health care services coverage expansion is critical. Alfonso et al. (2015) opined that there's reason to believe that boosting maternal healthcare coverage alone won't be adequate to avoid maternal and fetal death. Both supply- and demand-side strategies are required to improve maternal health care access. By upgrading the health system, supply-side initiatives strive to increase the quality and quantity of services provided. Demand-side strategies, which attempt to boost service consumption, have an impact on individual and community health behaviours (Alfonso et al., 2015). Preventing maternal mortality and morbidity requires the use of maternal health care services. Both industrialized and developing nations have documented low usage of maternal health care facilities and higher risks of obstetric problems among pregnant teenagers (Upadhyay et al., 2014). Muchabaiwa et al. (2012) reported a piece of substantial evidence that excellent health in general, and maternal health in particular, may play a significant role in poverty alleviation and human development. Women's health requires special care to minimize consumption declines linked to the death of a mother, as shown in Nigerian homes (Muchabaiwa et al., 2012).

## Statement of the Problem

Maternal mortality in developing countries continues to be a serious public health problem and contributes to the low life expectancy in Nigeria. According to National Health Insurance Scheme, the ineffectiveness and inefficiency of the Nigerian maternal health care system are mostly due to inadequate budgetary allocation and mismanagement of few resources allotted to health care. However, this situation is bleak since the National Demographic Health Survey (NDHS) indicated that just 36% of deliveries were given in a health facility and 38% were attended to by a competent delivery attendant, implying that only 38% uses the maternal health care system (NPC, 2014). Nigeria has an MMR of 814/100,000 live births while Kaduna state accounts for 1025/100,000 live births (WHO, 2020; MNCH2, 2021). Despite the high maternal mortality rate in Nigeria during the last two decades, little is known about the effect and approaches to resolving the issues associated with the usage of maternal health care services in Nigeria. Thus, the provision of quality Maternal health care services remains critical in ensuring the health of mothers. The rising concern in Nigeria about improving maternal health has sparked a desire to research on impact and prospects of maternal health care services on maternal health in Zaria LGA of Kaduna State, Nigeria.

## Purpose of the Study

The purpose of this study is to examine the impact of maternal health care services on maternal health as well as assess the prospect of maternal health care services on maternal health in Zaria LGA of Kaduna State, Nigeria.

## Research Questions

The study answered the following specific research questions:

1. What are the impacts of maternal health care services on maternal health in Zaria LGA of Kaduna State?
2. What are the prospects of maternal health care services on maternal health in Zaria LGA of Kaduna State?

**Research Hypotheses**

Based on the research questions, the following hypotheses were formulated:

$H_{01}$: There are no significant impacts of maternal health care on maternal health in Zaria LGA of Kaduna State.

$H_{02}$: There are no significant prospects in maternal health care as perceived by mothers in Zaria LGA of Kaduna State.

**Methodology**

A descriptive survey research design was used for this study. The Population of the study comprised all mothers of reproductive age (15-49) in Zaria LGA of Kaduna State, Nigeria. According to the Kaduna State Bureau of Statistics (KDBS) (2018), the projected total population of females in Zaria LGA by 2020 is approximately two hundred and eighty-seven thousand, nine hundred and seventy (287, 970). A sample size of 384 was chosen to reflect the total population through a two-stage sampling procedure of simple random sampling and accidental sampling technique. A questionnaire designed by the researcher was utilized to collect data (close-ended). The face and content validity of the instrument was ascertained by Five (5) jurors from the Department of Health Education. The Cronbach alpha reliability coefficient was used to determine the instrument's reliability, yielding a value of 0.78, which is greater than 0.70. As a result, the device was found to be appropriate for the research. The questionnaire was administered by the researcher and five (5) trained research assistants. Three hundred and eighty-four (384) copies of the questionnaire were administered to the respondents accidentally at their wards until the samples for the study were covered. To avoid any loss or missing copy, the questionnaire was recovered as soon as possible. Data were coded, collated, and analyzed using descriptive statistics of frequency counts and percentages for demographic data, mean to answer the research questions posed for the study, and inferential statistics of one sample T-test to test the stated hypotheses at a 0.05 level of significance.

**Results**

**Research Question 1:** What are the impacts of maternal health care services on maternal health in Zaria LGA of Kaduna State?

**Table 1: Distribution Showing impact of maternal health care services on maternal health in Zaria LGA of Kaduna State**

| S/N | Item | Strongly Disagree | Disagree | Agree | Strongly Agree | Mean |
|---|---|---|---|---|---|---|
| 1. | Maternal health care services will reduce maternal morbidity and motality. | 22 (5.7%) | 49 (12.8%) | 97 (25.3%) | 216 (56.3%) | 3.32 |
| 2. | Maternal health care services guarantee that pregnant women have safe deliveries. | 51 (13.3%) | 34 (8.9%) | 107 (27.9%) | 192 (50.0%) | 3.15 |
| 3. | Access to maternal health care services can help to reduce complications before, during, and after childbirth. | 65 (16.9%) | 27 (7.0%) | 119 (31.0%) | 173 (45.1%) | 3.04 |
| 4. | Maternal mortality will be reduced if maternal health equipment and facilities are easily accessible. | 12 (3.1%) | 33 (8.6%) | 256 (66.7%) | 83 (21.6%) | 3.07 |
| 5. | Family planning services will reduce the likelihood of unsafe abortions and delay young women's first pregnancies. | 52 (13.5%) | 111 (28.9%) | 146 (38.0%) | 75 (19.5%) | 2.64 |
| | **Average Mean** | | | | | **3.04** |

Table 1 shows the impact of maternal health care services on maternal health in Zaria LGA of Kaduna State. On 'Maternal health care services will reduce maternal morbidity and mortality, 22 (5.7%) of the respondents strongly disagreed, 49 (12.8%) of the respondents disagreed, 97 (25.3%) of the respondents agreed and 216 (56.3%) of the respondents strongly agreed with a mean score of 3.32. On 'Maternal health

care services guarantee that pregnant women have safe deliveries', 51 (13.3%) of the respondents strongly disagreed, 34 (8.9%) of the respondents disagreed, 107 (27.9%) of the respondents agreed and 192 (50.0%) of the respondents strongly agreed with a mean score of 3.15. On 'Access to maternal health care services can help to reduce complications before, during, and after childbirth,' 65 (16.9%) of the respondents strongly disagreed, 27 (7.0%) of the respondents disagreed, 119 (31.0%) of the respondents agreed and 173 (45.1%) of the respondents strongly agreed with the mean score of 3.04. On 'Maternal mortality will be reduced if maternal health equipment and facilities are easily accessible, 12 (3.1%) of the respondents strongly disagreed, 33 (8.6%) of the respondents disagreed, 256 (66.7%) of the respondents agreed and 83 (21.6%) of the respondents strongly agreed with the mean score of 3.07. On 'Family planning services will reduce the likelihood of unsafe abortions and delay young women's first pregnancies', 52 (13.5%) of the respondents strongly disagreed, 111 (28.9%) of the respondents disagreed, 146 (38.0%) of the respondents agreed and 75 (19.5%) of the respondents strongly agreed with a mean score of 2.64. The prior mentioned is the impact of maternal health care services on maternal health in Zaria LGA of Kaduna State since the average mean score is 3.04 which is above the midpoint score of 2.5.

**Research Question 2:** What are the prospects of maternal health care services on maternal health in Zaria LGA of Kaduna State?

**Table 2: Distribution Showing prospects of maternal health care services on maternal health in Zaria LGA of Kaduna State**

| S/N | Item | Strongly Disagree | Disagree | Agree | Strongly Agree | Mean Score |
|-----|------|-------------------|----------|-------|----------------|------------|
| 1 | Cost reductions for prenatal, perinatal, and postnatal services will promote use and hence enhance maternal health. | 29 (7.6%) | 41 (10.7%) | 254 (66.1%) | 60 (15.6%) | 2.90 |
| 2 | The government's prioritization of women's education and empowerment in maternal health care services would improve maternal health. | 25 (6.5%) | 46 (12.0%) | 194 (50.5%) | 119 (31.0%) | 3.06 |
| 3 | The redevelopment of health facilities will increase the utilization of maternal health care services. | 47 (12.2%) | 83 (21.6%) | 153 (39.8%) | 101 (26.3%) | 2.80 |
| 4 | the creation of mid-way service delivery centres will alleviate the problem of distance to hospitals. | 13 (14.3%) | 53 (13.8%) | 239 (62.2%) | 79 (20.6%) | 3.00 |
| 5 | Family planning services will help to reduce the number of maternal mortality and morbidity. | 55 (14.3%) | 107 (27.9%) | 134 (34.9%) | 88 (22.9%) | 2.66 |
| | **Average Mean** | | | | | **2.88** |

Table 2 shows the prospects of maternal health care services on maternal health in Zaria LGA of Kaduna State. On 'Cost reductions for prenatal, perinatal, and postnatal services will promote the use and hence enhance maternal health', 29 (7.6%) of the respondents strongly disagreed, 41 (10.7%) of the respondents disagreed, 254 (66.1%) of the respondents agreed and 60 (15.6%) of the respondents strongly agreed with a mean score of 2.90. On 'The government's prioritization of women's education and empowerment in maternal health care services would improve maternal health', 25 (6.5%) of the respondents strongly disagreed, 46 (12.0%) of the respondents disagreed, 194 (50.5%) of the respondents agreed and 119 (31.0%) of the respondents strongly agreed with a mean score of 3.06. On 'The redevelopment of health facilities will increase the utilization of maternal health care services,' 47 (12.2%) of the respondents strongly disagreed, 83 (21.6%) of the respondents disagreed, 153 (39.8%) of the respondents agreed and 101 (26.3%) of the respondents strongly agreed with the mean score of 2.80. On 'the creation of mid-way service delivery centres will alleviate the problem of distance to hospitals', 13 (14.3%) of the respondents strongly disagreed, 53 (13.8%) of the respondents disagreed, 239 (62.2%) of the respondents agreed and 79 (20.6%) of the respondents strongly agreed with the mean score of 3.00. On 'Family planning services will help to reduce the number of maternal mortality and morbidity, 55 (14.3%) of the respondents strongly disagreed, 107 (27.9%) of the respondents disagreed, 134 (34.9%) of the respondents agreed and 88 (22.9%) of the respondents strongly agreed with a mean score of 2.66. The earlier mentioned are the prospects of maternal health care services on maternal health in Zaria LGA of Kaduna State since the average mean score is 2.88 which is higher than the midpoint score of 2.5.

**Hypotheses**

**Hypothesis 1: There are no significant impacts of maternal health care on maternal health in Zaria LGA of Kaduna State.**

**Table 3: One-Sample T-Test Analysis on the impact of maternal health care services on maternal health in Zaria LGA of Kaduna State**

| Variable | N | Mean | Std. Deviation | df | t-value | P-value |
|---|---|---|---|---|---|---|
| Impact | 384 | 3.04 | 0.876 | 383 | 68.02 | .000 |
| Test Mean | 384 | 2.50 | 0.000 | | | |

*Calculated p < 0.05, calculated t-value > 1.972 at df 383*

The result of the one-sample t-test statistics in table 4 shows that the impact of maternal health care services on maternal health in Kaduna State Nigeria is significant because the calculated p-value of 0.000 is less than the 0.05 alpha level of significance and the calculated t-value of 68.02 is greater than the 1.972 critical t-value at 383 degrees of freedom (df). As a result, the null hypothesis, which stated that there is no significant impact of maternal health care services on maternal health in Zaria LGA of Kaduna State, Nigeria is hereby rejected.

**Hypothesis 2: There are no significant prospects in maternal health care as perceived by mothers in Zaria LGA of Kaduna State.**

**Table 5: One-Sample T-Test Analysis on prospects of Maternal Health Care Services on maternal health in Zaria LGA of Kaduna State, Nigeria**

| Variable | N | Mean | Std. Deviation | df | t-value | P-value |
|---|---|---|---|---|---|---|
| Prospects | 384 | 2.88 | 0.80 | 383 | 70.59 | .000 |
| Test Mean | 384 | 2.50 | 0.000 | | | |

*Calculated p < 0.05, calculated t-value > 1.972 at df 383*

The result of the one-sample t-test statistics in **table 5** clearly shows that the prospects of maternal health care services on maternal health as perceived by mothers in Zaria LGA of Kaduna State, Nigeria is significant because the calculated p-value of 0.000 is lesser than the 0.05 alpha level of significance and the calculated t-value of 70.59 is higher than the 1.972 critical t-value at 383 degrees of freedom (df). Therefore, the null hypothesis which stated that there are no significant prospects in maternal health care services as perceived by mothers in Zaria LGA of Kaduna State, Nigeria is rejected.

**Discussion**

Two hypotheses were formulated and tested for this study. Hypothesis 1 tested shows that the impact of maternal health care services on maternal health in Zaria LGA of Kaduna State is significant. This result of this study is in line with Ahmed et al. (2012), who found that 44% of maternal mortality in the world could be averted through the prevalence of contraceptive use. Ekpenyong et al. (2019) on the other hand revealed in a study that cost of treatment, distance, time and women's education towards maternal health care are critical to improving maternal health. However, the findings of Ononokpono and Odimegwu (2014) lie in between. Their findings revealed that living in areas with a high proportion of educated women improves maternal health and mortality considerably.

The result of hypothesis II revealed that the prospects of maternal health care services on maternal health as perceived by mothers in Zaria LGA of Kaduna State is Significant. The result of this study sync with Olopade and Lawoyin (2008) which showed that living in a community with a high percentage of educated women improves maternal health and mortality. The study discovered that the quality of maternal health care must be improved, as well as the education of women of reproductive age on maternal health. Olonade et al. (2019) affirmed the importance to focus on an overall health reform program that will involve maternal education, access to health care services and women empowerment which will enable them to make informed decisions on issues relating to their reproductive life. In addition, Kazaure (2018) identified the need to reevaluate and restructure maternal health care policy to influence a positive impact on maternal morbidity and mortality in Nigeria.

**Conclusion**

Based on the findings of the study, it was concluded that there is a significant impact of maternal health care on maternal health in Zaria LGA of Kaduna State. Secondly, there are significant prospects in maternal health care as perceived by mothers in Zaria LGA of Kaduna State.

**Recommendations**

Based on the conclusions of the study, the study hereby recommends that:

1. The Government should revitalise maternal health care facilities and prioritise women's education on maternal health care services.
2. the policy should be made on family planning services and reduce the cost of prenatal, antenatal and postnatal services to enhance the usage of maternal health services which will hereby improve maternal health.

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