Maternal Mortality among Women of Childbearing Age in South-East Senatorial Zone, Rivers State from 2013-2016

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ABSTRACT

The study investigated maternal mortality among women of childbearing age in South-East senatorial zone of Rivers State. The study adopted descriptive survey design. A sample size of 146 respondents, consisting of 21 medical doctors, 110 public health nurses/midwives, and 15 medical record officers was selected, using multi-stage sampling procedures. A self-structured questionnaire was used for data collection, with a reliability value of r=80, using Pearson Product Moment Correlation Coefficient (r). Five research questions guided the study and four hypotheses were postulated and tested at .05 alpha level. Frequency and simple percentage were used to answer the research questions, while chi-square was employed to test the hypotheses. The findings of the study were that there was high prevalence of maternal mortality among the women of childbearing age in South East Senatorial zone from 2013-2016, occurring majorly twice a month; and that there was significant difference in maternal mortality among the women based on age, parity, level of education except occupation. The study recommended among others, that Ministry of Education in conjunction with Ministry of Health and Ministry of Women Affairs should organize seminars and workshops in health facilities, churches/mosques, and town halls to enlighten women, and even men on causes and prevention of maternal deaths; and there should be aggressive public enlightenment, sensitization and awareness campaign on child and maternal health and how to prevent maternal mortality by Ministry of Information and other relevant stakeholders, using different traditional or conventional and social and mass media platforms.

Key words: Maternal Mortality, women of childbearing age

INTRODUCTION

Maternal mortality is a serious global public health problem of great concern recently, especially in developing countries, including Nigeria. Partnership for Transforming Health Systems [PATHS] stated that everyday, at least 1,450 women worldwide die from complications of pregnancy and childbirth, that is, a minimum of 600,000 women dying every year. In 2015 alone, 303, 000, women died during and following pregnancy and childbirth, 4.2 million infants died within the first year of life and 2.6 million babies were stillborn (WHO, 2018), and nearly all maternal deaths occur in low-and middle-income; women living in poor countries are nearly 23 times more likely to die from pregnancy and childbirth-related complications than their counterparts living in developed countries (WHO, 2015a). Globally, there has been an increase in maternal mortality since 2000-2005 (62%); 2006-2012 (69%); 2013-2018 (81%) (UNICEF, 2019) In similar observation, Adedokun and Uthman (2019) reported that sixty-six percent global maternal mortality

rate during childbirth occurs in sub-Sahara Africa, and only fifty-six percent of all the births takes place in health facility. Nigeria Demographic and Health Survey Report [2013] revealed that 61.7% of urban women deliver by a skill-birth attendant compared to 21% of rural women, a factor responsible for high rates of maternal mortality especially in rural areas.

Currently, Nigeria is reported to have the highest number of maternal deaths in Africa. According to Osotimehin (2016), Nigeria constitutes two per cent of the world's population, but contributes ten per cent to the world's maternal mortality. United Nations Fund of Population Activities [UNFPA] (2012) did raise alarm that Nigeria maternal mortality rate has risen to high percentage, where about one hundred and eleven women die on daily basis due to pregnancy and childbirth-related complications. Global records indicate that one-third of the global maternal deaths occurred in Nigeria, with an approximate 58,000 maternal deaths per annual, and a Nigerian woman has 1 in 22 lifetime risk of dying during pregnancy, childbirth or postpartum/post-abortion, whereas, in the most developed countries, the lifetime risk is 1 in 4900 (WHO, 2020). The United Nations Population Fund [UNPF] in 2012 also noted that maternal mortality rate increased from 545 to 575 deaths per 100,000 live births between 2008 and 2013, reflecting a worsening situation and failure in achieving the 5th target of the Millennium Development Goals [MDGs] (Umoke, Nwimo & Nwalieji, 2020).

WHO (2015b) defined maternal death as death of either a pregnant woman within forty-two days of delivery, miscarriage or termination of pregnancy from any cause related to or aggravated by pregnancy or its management, but not from accidental causes. However, material death can still occur after one year of childbirth or termination of pregnancy. The complications of pregnancy may be experienced during pregnancy or delivery itself or may occur up to forty-two days,

following childbirth. Maternal mortality is, therefore, defined in the context of this study as death during pregnancy, in labour or first six weeks after delivery, or termination of pregnancy. Lucas and Gilles (2009) identified two measures of maternal mortality as maternal mortality ratio, and maternal mortality rate. Maternal mortality rate is the number of maternal deaths in a period of time, usually a calendar year per 100,000 women of reproductive age during the same period. According to World Health Organization, the age range of women of childbearing age is from 15-49 years.

Maternal deaths are subdivided into direct and indirect obstetric deaths (Lucas & Gilles, 2009). Direct obstetric death results from obstetric complications of pregnancy, labour or postpartum period, from interventions, omissions, incorrect treatment or from chain of events, resulting from any of the above. They are usually due to one of the major causes: haemorrhage, sepsis, eclampsia, obstructed labour, and complications of unsafe abortion. Indirect obstetric deaths are deaths usually from previously existing diseases, or from disease arising during pregnancy (but without direct obstetric causes) which were aggravated by the physiological effects of pregnancy. Examples of such diseases include malaria, anaemia, HIV/AIDS, and cardiovascular disease.

Some factors have been positively associated with maternal mortality. Gray (2005) stated that causes of maternal mortality can be broadly classified into obstetric factors, socio-cultural factors, and health service factors. Umoke, Nwimo and Nwalieji (2020) explained that high level of maternal mortality in developing countries stems from a complex array of factors in addition to the inadequacy of healthy services such as obstetric care, and other factors which include social cultural, economic and logistic problems, coupled with high fertility. In a similar contribution, Obionu (2001) in Onita (2018) classified these factors under health service,

reproductive, socio-economic, transport, and cultural factors.

On the obstetric factors, Onita (2018) stated that most causes of maternal death include haemorrhage, sepsis, unsafe abortion, hypertension disorders and obstructed labour. However, according to her, these causes are preventable and treatable if every intervention is taken. Six main causes of direct maternal deaths in developing countries include thrombosis and thromboembolism, early pregnancy death (ectopic pregnancy induced hypertension sepsis, amniotic fluid embolism and haemorrhage. Nigerian Partnership for Safe Motherhood [NPSM] (2010) added that, globally, about eighty per cent of maternal deaths is the direct result of complications arising during pregnancy, delivery or the puerperium. According to the NPSM, the most common direct causes of obstetric deaths in Nigeria include haemorrhages, sepsis, pre-eclampsia, anaemia, cephalopelvic disproportion, abortion and malaria. On the part of socio-cultural factors, UNFPA (2012) stated that the chances of dying or being disabled is in association to the woman's social and economic background, the norm and value of culture she upholds, and the geographical remoteness of her residence and meager income. Onita (2018) added other factors that attributed to the cause of high rates of maternal mortality in developing countries, to include high patronage of traditional birth attendants, illiteracy, poverty, poor distribution of health facilities, poor adherence to family planning methods. Onuzuike (2010) concurred that poverty is a major economic factor associated with maternal death.

Loss of women in the process of childbirth is a tragedy and has some consequences. It has enormous and devastating effects on the families, and nations. It affects both the infants, children, teenagers as well as adults and aged members of the society. Maternal deaths result to deficient infant care, infant nutrition and increase in rate of infant mortality. Omoruiyi (2010) posited that women deaths due to obstetric complications or after delivery, leave behind orphans whose growth and development are affected, and have sixth-six per cent risk of dying. The husbands are left as widowers, often, faced with the problems of taking care of the children and other family responsibilities. Generally, loss of women to death has serious negative social, economic and reproductive implications on the family, society and nations.

Prevention and reduction of maternal deaths involve multi-dimensional approaches, involving a lot of stakeholders in various disciplines. Following WHO reports, Onita (2018) opined that reducing maternal mortality will depend on identifying and improving services that are critical to the health of women which should include: ante-natal care, emergency obstetric care, adequate postpartum and family planning. UNICEF (2002) recommended that interventions for improving maternal health should focus on quality and affordable ante-natal care, skilled birth attendants, access emergency obstetric care and postnatal care.

Prevention of these regrettable deaths of women due to pregnancy and childbirth-related complications could be influenced by knowledge. Knowledge is critical to man's quality of life because whatever we do everyday depends on knowledge. WHO (2014) maintained that many of the ailments people suffer are to a large extent, self-influenced by anti-health practices due to lack of knowledge. Certainly, educational level of women influences their utilization of healthcare services (Umoke, et al, 2020). It is observed that educated women are more knowledgeable about maternal mortality and also exhibit more positive attitude than their uneducated counterparts (Preventing Maternal Mortality Network, [PMMN], 2008). PMMN further indicated that educated women have more understanding of the physiology of reproduction and so, are more disposed to understand the complications and risks of

pregnancy than illiterate mothers. Educated women tend to seek for maternal health care services in standard health facilities with skilled birth attendants while the illiterate ones preferred maternity homes, often, with quacks. Beside education, factors that seem to influence knowledge and attitude to maternal mortality are location and occupation. Low level of knowledge and negative attitude to maternal mortality among rural dwellers may be attributed to few health facilities and health personnel in the rural areas. More so, the quality of health services provided in rural areas are lower than the services provided in urban health facilities. It is also noted that when women of childbearing age are not gainfully employed, it reduces their will power to access maternal health services and to maintain good health.

Women of childbearing age in South-East Senatorial zone of Rivers State are mostly peasant farmers, petty traders and hawkers with limited education and not gainfully employed. Most of the communities where these women live do not have quality health personnel. With all these deficiencies, it is most expected that the women of childbearing age in this zone may have issues of maternal mortality, hence the need for the study.

Research Questions
The study was guided by the following research questions:
1. What is the prevalence of maternal mortality among women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016?
2. What is the prevalence of maternal mortality among the women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016 based on age?
3. What is the prevalence of maternal mortality among women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016 based on parity (number of children)?

4. What is the prevalence of maternal mortality among women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016 based on level of education?
5. What is the prevalence of maternal mortality among women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016 based on occupation?

Hypotheses
The following hypotheses were postulated and tested at .05 alpha level:
1. There is no significant difference in maternal mortality rate among women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016 based on age
2. There is no significant difference in prevalence of maternal mortality among women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016 based on parity (number of children)
3. There is no significant difference in prevalence of maternal mortality among women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016 based on level of education
4. There is no significant difference in prevalence of maternal mortality among women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016 based on occupation

METHODOLOGY
The study employed descriptive survey. The sample size was 146 respondents comprising medical doctors, public health nurses/ midwives, and medical record officers, selected using multi stage sampling procedures. Validated self-structured questionnaire was used for data collection with reliability coefficient r = .80 obtained, using Pearson Product Movement Correlation Coefficient. The copies of the instrument were distributed by the researchers, with 100 % return rate. The data were analyzed using frequency and

simple percentage for the research questions, and chi-square for testing hypotheses at .05 alpha level using SSP version 20.

RESULTS

Table 1: Distribution of Respondents for the Study

Personnel	Number	Percent
Medical doctors	21	14.38
Public health nurses/midwives	110	75.34
Medical record officers	15	10.28
Total	**146**	**100.00**

Table 1 showed that medical doctors were 21 in number constituting 14.38 per cent of the respondents. Public health workers/midwives were 110 and medical record officers, 15, constituting 75.34 per cent and 10.28 per cent of the respondents, respectively.

Research Question 1: What is the prevalence of maternal mortality among women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016?

Table 2: Maternal mortality among women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016.

Maternal mortality	Frequency	Per cent
Weekly	42	28.8
Twice a month	56	38.4
Yearly	31	21.2
Once in every other year	17	11.6
Total	**146**	**100**

Table 2 showed that out of 146 health workers respondents, 42 (28.4%) agreed that maternal morality occurred weekly; 56 (38.4%) agreed that it occurred twice a month; 31 (21.2%) agreed that maternal morality occurred once in every other year. The data on the table revealed that maternal mortality among the women of childbearing age in South-East Senatorial zone of Rivers State from 2013 – 2016 was high and occurred majorly twice a month.

Research Question 2: What is the prevalence of maternal mortality among women of childbearing age in South-East senatorial zone of Rivers State from 2013-2016 based on age?

Table 3: Maternal mortality among women of childbearing age in South-East Senatorial zone of Rivers State from 2013-2016 based on age (N = 146)

Age	Frequency	Per cent
15-23 years	64	43.8
24-32 years	41	28.1
33-41 years	9	6.2
42 – 49 years	32	21.9
Total	**146**	**100**

Table 3 revealed that the women with the age bracket of 15-23 years had the highest number of maternal deaths 64 (43.8%), followed by those between the age 24-32 with 41 (28.1%), and those within age bracket of 42-49 years with 32 (21.9%). The least was those within 33- 41 years, 9 (6.2%). The results indicated that younger women had the highest cases of maternal mortality implying that young women were at greater risk for maternal mortality than others.

Research Question 3: What is the prevalence of maternal mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on parity (number of children)?

Table 4: Maternal Mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on parity

Parity, (number of children)	Frequency	Per cent
1	24	16.4
2	30	20.5
3	36	24.7
4 and above	56	35.4
Total	**146**	**100**

Table 4 showed that women with four children and above had the highest cases of maternal mortality 56 (38.4%), followed by those women with three children 36 (24.7%), and those with two children 30 (24.5%). The women with the least cases of maternal mortality were those with one child, with 24 (16.4%). The results revealed that maternal mortality among the women occurred more with women with more children than others.

Research Question 4: What is the prevalence of maternal mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on level of education?

Table 5: Maternal Mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on level of education

Level of education	Frequency	Per cent
Non-formal education	33	22.6
Primary education	25	17.1
Secondary education	59	40.4
Tertiary education	29	19.9
Total	**146**	**100**

Table 5 showed that 59 (40.4%) respondents agreed that women with secondary education had the highest cases of maternal mortality, followed by those women with no formal education 33 (22.6%), and those women with higher education 29 (19.9%). The group with least maternal mortality was the women with the primary education with 25 (17.1%). The results on the table indicated that there was difference in maternal mortality according to level of education, however, with no defined pattern.

Research Question 5: What is the prevalence of maternal mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on occupation?

Table 6: Maternal Mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on occupation (N=146)

Occupation	Frequency	Per cent
Farming	38	26.0
Trader	33	22.6
Civil servant	31	21.2
House wife (unemployed)	44	30.1
Total	**146**	**100**

Table 6 showed that 44 respondents representing 30.1% responded that house wives had the highest cases of maternal mortality, followed by farmers with 38 (26.0%) and traders with 33 (22.6%). Civil servants recorded the least cases of maternal mortality with 31 (21.2%). The results imply that the unemployed (house wives) were more at risk for maternal mortality than the engaged or employed women.

Test of Hypotheses

Hypothesis 1: There is no significant difference in maternal mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on age

Table 7: Chi-square Analysis of Maternal Mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on age

Variable	N	Df	x^2 cal	Sig. (2-tailed)	Level of Sig	x^2 crit.	Decision
maternal mortality based on age	146	3	42.548	.001	.05	7.89	Rejected

Table 7 revealed that x^2 cal was 42.548 with df=3, and P<0.05. The obtained x^2 cal value of 42.548 was greater than x^2 crit. =7.89. Therefore, the null hypothesis that there is no significant difference in maternal mortality among the women of childbearing age from 2013-2016 based on age was rejected. This indicates that there was significant difference in maternal mortality among the women from 2013-2016 based on age.

Hypothesis 2: There is no significant difference in maternal mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on parity.

Table 8: Chi-square Analysis of Maternal Mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on parity (N = 146)

Variable	N	Df	x^2 cal	Sig. (2-tailed)	Level of Sig	x^2 crit.	Decision
maternal mortality based on parity	146	3	15.863	0.001	.05	7.89	Rejected

Table 8 revealed that the x^2 cal was 15.862 with df = 3 and P < 0.05. The obtained X^2 cal value of 15.863 was greater than X^2 crit. = 7.89. Therefore, the null hypothesis that there is no significant difference in maternal mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on parity was rejected. This indicates that there was significant difference in maternal mortality among the women based on parity.

Hypothesis 3: There is no significant difference in maternal mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on level of education

Table 9: Chi-square Analysis of Maternal Mortality among women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on level of education

Variable	N	Df	X^2 cal	Sig. (2-tailed	Level of Sig	X^2 crit.	Decision
maternal mortality based on level of education	146	3	19.370	0.001	0.05	7.89	Rejected

Table 9 showed that the X^2 cal was 19.370 with df = 3, and P < 0.5. The obtained X^2 cal. Value of 19.370 was greater than X^2 crit. 7.89. Therefore, the null hypothesis that there is no significant difference in maternal mortality among the women from 2013- 2016 was rejected. This indicates that there was a significant difference in maternal mortality among the women of childbearing age in South East senatorial zone of Rivers State from 2013- 2016 based on level of education.

Hypothesis 4: There is no significant difference in maternal mortality among the women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on occupation.

Table 10: Chi-square Analysis of Maternal mortality among the women of childbearing age in South East senatorial zone of Rivers State from 2013-2016 based on occupation (N = 146)

Variable	N	Df	X^2 cal	Sig. (2-tailed	Level of Sig	X^2 crit.	Decision
maternal mortality based on occupation	146	3	2.767	0.429	0.05	7.89	Accepted

Table 10 revealed that X^2 cal was 2.767 with df = 3 and P < 0.05. The obtained X^2 cal value of 2.767 was less than X^2 crit. value of 7.89. Therefore, the null hypothesis that there is no significant difference in maternal mortality among based on occupation was accepted. This indicates that there was no significant difference in maternal mortality among the women based-on occupation

DISCUSSION OF FINDINGS

The findings of the study were discussed under the following sub-headings:

Maternal mortality among women of childbearing age

This study showed in Table 2 that there was a prevalence of maternal mortality among women of childbearing age in south-east zone of Rivers State from 2013-2016 and it occurred majorly twice a month. The finding is in agreement with recent research reports that maternal mortality is a serious global health problem (WHO, 2014), and that Nigeria contributes ten percent to the world's maternal mortality rate, and the rate risen to about ten percent, where about one hundred and eleven women die on daily basis in Nigeria due to pregnancy and childbirth-related complications (Osotimehin, 2016). This finding was expected due to the characteristics of the women of childbearing age and dearth care in south -east zone of Rivers State. The women were predominantly farmers, petty traders and of low educational and socio-economic status. More so, it is a common knowledge that there is generally low utilization of maternal health care services, especially in developing countries Nigeria inclusive, due to some factors, such as poverty, ignorance, cultures, low status of women and poor attitude of the health risks (PMMN, 2008). These factors have been associated with high maternal mortality rate. PMMN further stated that when women cannot afford good ante-natal care services and patronize health quacks, traditional birth attendants without professional skills or decide to deliver at home, there are most highly likely to have pregnancy and childbirth related complications, that could lead to maternal deaths (UNICEF, 2019). This finding of the study also agrees with Egozuzu's findings in 2011 which revealed high rates and differences in maternal mortality in different geo-political zones of

Nigeria as: 2,420 per 100,000 have births in Kano State (North West); 1,549 per 100,000 live-birth in Borno State (North-East); 1700 per 100,000 live births in Bauchi State (North east); 1400 per 100,000 live births in Enugu State (South-East), making Nigeria one of the countries with unacceptable world's high maternal mortality rate, next to India (Onita, 2018).

Maternal mortality among women according to age

Finding in Table 3 revealed that younger women had higher cases of maternal mortality, and more at risk than older counterparts from 2013-2016. This finding corroborates the reports of Lule (2013) that girls aged 15-19 are twice as likely to die from childbirth as women in their twenties. He explained that pregnancy-related complications are the main causes of deaths for women aged 15-19 years world-wide. He further outlined pregnancy-related complications experienced at this age groups as obstructed labour, Vesicovaginal fistula (VVF), ruptured interous, depression, psychosis, high blood pressure.

Teenage pregnancy programmes with birth interval of two years have been studied and found to pose problems that contribute to high maternal mortality and morbidity. Suspected reasons for high maternal mortality among younger women of childbearing age may include lower attendance to ante-natal care, adolescent females than in adult women/s lack of knowledge about prenatal cares; lack of knowledge about the consequences of not attending ante-natal care; desire to hide pregnancy; contemplation of abortion; judgmental attitude from parents and society, and even healthcare personnel; lack of healthcare-seeking behaviours; and financial barriers (Onita, 2018).

Maternal mortality among women of childbearing age according to parity (number of children)

The result presented in table 4 showed that maternal mortality that occurred more among the women of childbearing age with more children. There was a significant difference in maternal mortality frequency among the women based on parity. The finding of this study is supported by WHO (2010) reports which observed that attending ante-natal care for subsequent programmes has been neglected by many women who assume that the pregnancies would be safe since their first previous pregnancies were not associated with any difficulties and tend to deliver their babies at home or with traditional birth attendants.

It is observed that women in with three children and above do not actively initiate ante-natal care where there is no compliant or complications. The study's result is also in agreement with Abdulkarim, Mohammend and Abubakar (2008), who stated that multi-parous mothers have high maternal mortality risks due to multiple and poorly special births. Such women also have higher rates of induced abortion and a lower uptake of maternal health care services, compared to primi-parous women (i.se those giving birth for the first time). According to National Population Commission of Nigeria, between 2008 and 2018, one in four of all births in Nigeria were among multi-parous women Onita, 2018; NPC, 2004).

Maternal Mortality according to Educational level

The result of this study in table 5 showed that there was difference in maternal mortality of the women of South-East Senatorial zone of Rivers State based on level of education. However, the difference in the maternal mortality frequency did not follow any defined pattern. The finding was unexpected as many studies had established positive significant influence of increasing level of education on reduction in maternal mortality rate. Opirite-Boma and Amaigbom (2020) reported that women with high level of education tend to receive ante-natal care from quality health facilities and skilled healthcare providers during delivery, and are more compliant with regimen drugs. It is

generally observed that educational knowledge helps to create a positive change in behaviour towards maternal health.

Maternal Mortality according to Occupation

This study showed in Table 6 that unemployed women of childbearing age had higher cases of maternal mortality than the self-employed and those in public/civil service. This finding aligns with the position of Onuzuike (2010), who stated that poverty is a major economic factor associated with maternal death. He pointed out that poor women are less likely to be in good health and seek medical care when pregnant. A job which goes with high remuneration invariably leads to better ways of living, which has direct relationship with good health. This implies that pregnant women who earn high earnings will have enough money to afford good things and quality healthcare services for health maintenance and promotion, and in health challenges. Similarly, Lanre (2008) stated that poverty hinders women of child-bearing age from accessing quality reproductive healthcare services thereby increasing rates of cases of maternal mortality among population of women from low income families. However, in this study there was no significant difference in prevalence of maternal mortality among the women as revealed in Table 10. This finding could be due to the fact that majority of women in the study area were petty traders and peasant farmers.

CONCLUSION

There was high prevalence of maternal mortality among the women of childbearing age in south-east senatorial zone of Rivers State. Age, parity, educational level and occupation of the women had influence on the maternal mortality rate among the women within the period of 2013-2016.

Recommendations

Based on the findings of this study, the following recommendations were proffered:

1. The Ministry of Education in conjunction with the Ministry of Health and Ministry of women Affairs should organize seminars and workshops in health facilities, churches or mosques and town halls to enlighten women, and even men on causes and prevention of maternal deaths.

2. Health education should be made compulsory in all post primary schools and also included in general studies in tertiary institutions to help students gain knowledge on reproductive health and maternal health, and how to prevent maternal deaths and other reproductive health challenges. The effort could create a future generation that will be free from maternal complications and mortality.

3. Government and voluntary agencies and other health stakeholders should endeavour to strengthen primary health care to ensure effective healthcare service delivery and optimal utilization of available healthcare facilities and services at all levels

4. There should be public enlightenment, sensitization, and awareness campaign on reproductive health, pregnancy and childbirth-related problems, and the effective prevention and intervention means or strategies using deferent traditional or conventional and social media platforms.

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