

Review Article

## Maternal Mortality Burden: The Influence of Socio-Cultural Factors

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### ABSTRACT

**Background:** Maternal mortality is one of the major health problems confronting Nigeria and other resource-poor countries

**Objective:** This study aimed to examine principally whether and how socio-cultural factors affect maternal mortality in Nigeria.

**Methods:** A comprehensive literature search was conducted on two electronic databases: Scopus and Pro Quest Health and Medical Complete.

**Results:** Available evidence indicated that there were many non-biomedical factors that predispose pregnant women to a higher risk of maternal mortality. Socio-culturally, harmful traditional beliefs and practices; early marriage, high parity and female illiteracy contribute to the high burden of maternal deaths in Nigeria.

**Conclusion:** Maternal mortality reduction needs action beyond prevention and treatment of biomedical causes; it needs the modification of the socio-cultural contexts that contribute to high maternal mortality in Nigeria. They are difficult to change but indispensable to maternal health. Hence, high maternal death must be addressed within the socio-cultural context of different Nigerian regions.

**Keywords:** maternal mortality, Nigeria, socio-cultural factors, Africa, maternal death, socio-cultural practices/beliefs.

### INTRODUCTION

Maternal mortality is one of the major health problems confronting Nigeria and other resource-poor countries. <sup>[1]</sup>

According to the World Health Organization (WHO), "maternal mortality is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes". <sup>[2]</sup> It is one of the most common causes of death for women of reproductive age in developing countries. <sup>[3]</sup>

It results from several factors that act in an interrelated manner, ranging from biomedical causes (such as, infection,

hemorrhage, obstructed labour and eclampsia) to more distant non-biomedical causes (socio-cultural and economic factors). <sup>[3]</sup> This study aimed to examine principally whether and how these socio-cultural factors affect maternal mortality in Nigeria.

According to the recent estimates developed by the WHO, the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNPFA) and the World Bank (WB), maternal deaths worldwide were estimated to be 358,000 in 2008, a decrease from the 1990 estimate of 546,000 deaths. This indicates a decline in maternal deaths of thirty-four percent from the levels in 1990. <sup>[4]</sup> In spite of this decline, the low-income countries continue to

account for ninety-nine percent (355,000) of maternal deaths, and more than half of these (204,000) occurred in the sub-Saharan Africa region alone. [4,5] Despite the decrease in maternal deaths over the years, the number is still unacceptably high. [6] This calls for both more effective interventions to reduce maternal deaths in the affected regions, and better efforts to generate robust data for future use. This also calls for more investigation of the root causes of maternal mortality, so that they can be addressed.

Nigeria is the most populous African nation with a population of about 160 million [7] and there were an estimated 50,000 maternal deaths; it has one of the highest maternal mortality ratios (MMR) in the world, at 840 maternal deaths for every 100,000 live births. [4] Several studies report high MMR in Nigeria, [8-11] and most deaths occur in the northern part of the country. [6, 12,13] Despite the global Safe Motherhood Initiative (SMI), MMR has remained high. [14] The Millennium Development Goal (MDG 5) has lent a new urgency to global initiatives to reduce maternal mortality, but the possibility of Nigeria attaining this goal is uncertain given current trends in maternal mortality. [1]

The present MMR is said to be a far cry from the 'actual figure' because the figures most often presented are health facility-based in a country where more than fifty percent of deliveries occur at home, or in traditional birth attendants (TBAs) clinics and church missions. [15-17]

There has been much study on the issues related to maternal death, but it continues to occur at a high rate and solutions to the problem are still not clear. [18] Scientific studies on maternal deaths pay a great deal of attention to biomedical phenomena. In addition, the current global focus in term of public health policy concerning maternal mortality that all women should have access to skilled attendants at birth and immediately after, and to timely referral for emergency care because of the clustering of mortality

around delivery, and the dominance of medical factors as causes of death. [19]

However, the approach of focusing on biomedical phenomena may not be the most useful if the problem of maternal death is to be understood as a whole and the significance of socio-cultural factors in maternal mortality is to be appreciated. [18] A detailed understanding of existing maternal health beliefs and practices is important in designing effective programs to reduce maternal mortality in Nigeria. [20] Hence the purpose of this study is to examine how these socio-cultural characteristics influence maternal mortality in Nigeria.

## **METHODS AND MATERIALS**

A comprehensive literature search was conducted on two electronic databases: Scopus and ProQuest Health and Medical Complete. Google scholar search engine was also utilized as well as organizations' websites such as those of WB and WHO. In order to facilitate the search the following keywords: maternal mortality, Nigeria, social-cultural factors, Africa, cultural practices/beliefs and maternal death were adopted. Publications of interest were those published in English and with information on socio-cultural factors.

Nine hundred and thirty-six papers were retrieved. Duplicate papers in the databases were deleted. After screening of abstracts and application of the inclusion and exclusion criteria, sixty-two papers were included in the final review. The sixty-two studies included were of three different study designs. Forty-four were quantitative studies, fourteen papers were qualitative studies and four were of mixed design.

Inclusion and exclusion criteria were based on matching types of evidence to research purposes on the basis of their relevance and quality of individual studies.

In assessing the quality of the included studies, the criteria from Dixon-Woods et al. were adopted, so as to exclude the papers that are fatally flawed. [21] The

appraisal prompts for informing judgments about quality of papers are as follows:

**Are the aims and objectives of the research clearly stated?**

Is the research design clearly specified and appropriate for the aims and objectives of the research? [21,22]

## RESULTS

The main issues that emerged from the reviewed articles are grouped under seven themes which include beliefs concerning causes of pregnancy complications, beliefs associated with traditional birth practices, beliefs concerning biomedical practices, religion, early marriage, high parity and education.

### **Beliefs concerning causes of pregnancy complications**

Several studies have shown that high maternal mortality rates in Nigeria can be linked to beliefs which inform local practices. [23-25] Findings from interviews showed that some women, men and traditional birth attendants (TBAs) in Nigeria hold many beliefs about pregnancy and childbirth, and some of these beliefs lead to delay in the referral of pregnant patient with complications to hospitals, which often leads to maternal deaths. [20] Omorodion's ethnography of the Esan people in Edo State, gave an insight into the depths and dimensions of these practices in the position of the woman in the community. In his study, he noted the ease with which the community attributed any problems of the woman or her family to her misdeeds and there was always a need to make confessions before respite could be sought especially if is related to pregnancy complications. [26] In one of the qualitative studies carried out in seven states of eastern Nigeria, Okafor mentioned that both the pregnant women and the TBAs shared a common belief that obstructed labour (one of the commonest causes of maternal mortality in Nigeria) was a consequence of sexual infidelity by the woman. [20] He maintained that both the TBAs and the husband were of the opinion that, unless a

woman confesses her infidelity, she would not be able to deliver her baby. In this light, some men and women see caesarean section as an easy way out for an unfaithful woman who does not what to confess her infidelity. This kind of belief was also held for any woman suffering from bleeding either during pregnancy or labour. [27] However, they also identified beliefs concerning issues which may contribute to obstructed labour including violation of traditional practices such as husband's failure to perform customary ceremonies on behalf of a wife who has successfully had ten or more deliveries. Therefore, as a result of these beliefs about prolonged obstructed labour any woman with this complication may not be offered immediate referral by TBAs, which often lead to deaths. [20]

There was also a belief that evil forces such as witchcraft and other supernatural forces caused some cases of maternal bleeding and prevented effective modern treatment, and women suffering from such bleeding continued to seek traditional modes of care which may lead to maternal deaths. [1,8,24,27-29]

Furthermore, a study conducted among the four major ethnic groups of Borno state revealed that evil spirits witches and wizards, heredity, and destiny from God were the perceived causes of eclampsia (a life threatening condition) in the area. These perceptions result in the use of the following treatment: drinking various concoctions, including inhalation of smoked herbs, and wearing a talisman. These traditional beliefs and practices often caused delay in seeking effective modern treatment and care. [30] However, Okolocha and colleagues mentioned that though traditional medicine is more commonly used than modern medicine, the trend is toward utilization of both systems for treatment of most conditions. [27]

### **Beliefs associated with traditional birth practices**

A lot of literature has reported that beliefs associated with traditional birth practices act as disincentives to seeking

modern health care both during pregnancy and labour. For instance, Asowa-Omorodion and Okolocha reported that most respondents believe strongly in the traditional mode of care that is the most accessible, prevalent, easiest, and cheapest. [27,28]

It is estimated that four percent of reported maternal mortality in Nigeria is attributable to traditional prescriptions and management of pregnancy, labour, and delivery. [20] Many researchers have reported a higher incidence of maternal deaths in women who deliver in TBAs' center. [31-40] Characteristics, attitudes and skill of traditional practitioners have played a major role on the outcome of maternal mortality. [17,27,41] For example, Okolocha and others identified an age long traditional practice by some TBAs of inducing bleeding after delivery 'to cleanse the women of bad blood' and consequently put mothers at greater risk of maternal deaths. [27]

#### **Beliefs concerning biomedical practices**

There are also certain beliefs or ideas about biomedical procedures. For instance, the beliefs that presenting early to a modern health facility when a woman is in labour often resulted in early surgical operation, created fear in pregnant women so that many of them seek care from the TBAs in an attempt to avoid caesarian delivery. [1] Researchers mentioned that one of the main reasons for mission house delivery by pregnant mothers or late presentation in health facility was the fear of possible caesarean section. [41-44] Caesarean deliveries are associated with stigma and are seen as a sign that the mother is not a 'complete women', a factor that may prevent the women's younger sisters and her own daughters from getting a husband. [20] Therefore, in an attempt to gain esteem some women with obstetric complications that need caesarian delivery may present late in the hospital in a very bad clinical state, which often leads to deaths.

Additionally, dietary restrictions of certain food items such as egg, and milk during pregnancy were mentioned as a

common traditional practice because of fear of having a big baby that might result in a caesarian delivery and this has negative effects on the health of pregnant women. [20, 45,46] "It is paradoxical that these women who need all the nutrients they could muster to fight disease and possibly replenish any blood they might lose are barred from eating 'sweet foods' like milk". [20]

#### **Religion**

Religion also plays an important role in forming community norms and individual attitudes and behaviors in Nigeria. [26] Williams described "the 'spiritual churches', 'prophet' as potent factors contributing to high maternal mortality in Nigeria". [8] She maintained that while the medical profession may provide effective antenatal care (ANC) to mothers, and educate them on the hazards of pregnancy, some Nigerian women are wrongly advised and frightened by some prophets into delivering in church mission, which may result in loss of life because of ineffective delivery services. [8] Religion has contributed to low utilization of ANC. [47,48]

However, Omorodion seem to have a slightly different opinion of the influence of religion on the utilization of modern health care facilities. He argued that the advent of Christianity, and to lesser extent Islam, seem to have diminished the traditional belief system in witchcrafts and ancestral spirits. He maintained that this has paved the way for more utilization of orthodox healthcare services in these communities. [26]

Olusanya and colleagues reported that there was an eleven percent increase in the odds of delivering outside hospitals among Muslim mothers compared with Christian mothers. [49] Consistent with findings by other researchers, religion was predictive of health choices among mothers. [16, 41,19]

#### **Early marriage**

In some regions of Nigeria, girls marry relatively young, often much younger than men. In Northern Nigeria, approximately half of girls (45%) are

married by the age of fifteen and seventy-three percent are married by the time they are eighteen years old. [50] The cultural practices of early marriage have been reported by many researchers to be a major contributor to maternal mortality. [32,51-57] For instance, reports from a study conducted in a teaching hospital in Sokoto, painted a gloomy picture for adolescent pregnant mothers where the MMR was 4863/100,000 live births compared to 2151/100,000 live births in the general population. [58]

Similarly, Ujah et al. noted a high MMR of 2,700/100,000 among adolescents in Zaria compared to 400/100,000 for 20-24 year old women. They stated that 86% of the women aged 15 years and below were of the Hausa-Fulani ethnic group and over 98% were illiterate and 90% were of Islamic faith. [59] Marchie and Anyanwu also reported that the most relevant variable in terms of predictor of maternal mortality was early marriage/ early child bearing followed by educational level. [46]

The influence of culture and religion on early marriage and childbearing, as well as maternal deaths, was well documented by Harrison, who reported that early marriage is common in Nigeria especially in the northern part. [55] The authors concluded that the non-biomedical risk factors for adolescent maternal mortality were non-utilization of antenatal services. In addition, Wall mentioned that adolescent mother were at higher risk of maternal mortality because they are physically not yet mature, in particular, their height and pelvic size are often in-sufficiently developed to carry a pregnancy, which places them at greater risk of obstructed labour, which may lead to permanent disability or death. [60]

### **High parity**

High parity is another variable that clearly emerged from the literature review as one of the strong contributors to maternal mortality in Nigeria. Many researchers reported high levels of maternal deaths among high parity mothers. [5,8,32,61-65] Researchers found that maternal deaths increased with parity; and the highest

maternal deaths were recorded in the grand multipara. [55] Grandmultiparity is a pregnancy after the fifth delivery- is viewed with anxiety, especially by obstetricians in poor-resource setting working with inadequate facility. [66]

Osubor et al. pointed out that traditionally, having many children is a cherished characteristic in many parts of Nigeria and that the women's status is often related to the number of children she has and some women derive pride and prestige from their roles as mothers. [1] Amaka states that many husbands perceive children as sign of their sexual potency and some wives consider bearing children to be their main function. [67] Hence, child bearing must be allowed to continue without control. High fertility strongly increases a woman's lifetime risk of dying from pregnancy-related causes. The more a woman is pregnant, the more the risk to her health and survival. She is vulnerable to uterine rupture and severe blood loss.

### **Education**

Education is one of the most commonly reported predictive factors in relation to maternal mortality in the literature reviewed. Most of the studies reviewed show that utilization of maternal health services increases with increasing levels of maternal education. A lot of literature states that there is a significant association between maternal mortality and maternal educational levels. [32,37,39,58] Education matters in two ways: formal education and knowledge about risk in pregnancy. Lack of knowledge about risk in pregnancy was cited as one of the factors underlying maternal mortality [8,20,45] and authors pointed out that some women of childbearing age were unaware of the normal changes in pregnancy, the risk indicators and when or where to report during complications. This often contributes to a delay or total failure to use the few available health services on time. Researchers found link between formal education and use of hospital based services. [44,68] In addition, educated women

have better access to information related to health and are more likely to practice family planning; hence they are more likely to have smaller and healthier families.

## DISCUSSION

The development of Nigerian region specific programs that would take into account these socio-cultural factors are vital to combat high maternal deaths in Nigeria. In the ongoing efforts to reduce maternal mortality, it is obvious that for the country to achieve the desired improvements it will be necessary to intensify efforts in the northern states where most of the mortality occurs. Moreover, because of some age-old, long-held traditional beliefs and practices, reduction of maternal deaths in Nigeria will entail extensive community education by social marketing. This involves mass media campaigns that will reach people in their own communities and encourage them to change their beliefs and practices that contribute to maternal mortality.

## CONCLUSION

The causes of maternal mortality in Nigeria are complex, arising from socio-cultural variables. The complexity of these factors makes it difficult to predict exactly the magnitude by which each of them acts independently as a cause of maternal deaths. Maternal death reduction, therefore, needs action beyond prevention and treatment of biomedical causes; it needs the modification of the socio-cultural contexts that contribute to high maternal mortality in Nigeria. Socio-cultural considerations are very important in reducing maternal deaths in Nigeria because they serve as 'roots' to most maternal mortality resulting from biomedical causes. A well-planned maternal health program to reduce maternal deaths in Nigeria should not only focus on biomedical causes because non-biomedical socio-cultural factors are also implicated.

### Authors' contributions

FFO conceived and designed the study, gathered and reviewed the articles and wrote the manuscript.

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