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# Socio-cultural factors as correlates of maternal mortality in Edo South Senatorial District, Nigeria

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ABSTRACT

**Objective:** To investigate the socio-cultural factors that contribute to Maternal Mortality in Edo South Senatorial District. **Methods:** The population of the study was made up of 2 157 females of reproductive age and multi-stage random sampling technique was used. The instrument for data collection was a self developed structured and validated questionnaire with a reliability of 0.82. Focus group discussion (FGD) and in-depth interview guide were employed to complement the instrument. Inferential statistics of multiple regressions were also employed to test the hypotheses at 0.05 level of significance. **Results:** The results showed that the socio-cultural variables when taken together contributed positively to maternal mortality [$R^2$ = 0.32; CV = 16.5; *df* = 7). The finding further revealed that six, out of seven of the independent variables in the study significantly contributed to maternal mortality in Edo South Senatorial District. The implications of these findings in maternal and child health care were highlighted. **Conclusions:** The study had shown that in addition to medical causes of maternal mortality, there are socio-cultural factors that contribute to women dying during pregnancy, labour and pueperium.

## 1. Introduction

Maternal mortality is one of the greatly neglected problems of health care in developing countries. It is a major health problem in Sub-Saharan Africa. Estimates by the World Health Organization (WHO) and United Nations Children Fund (UNICEF) show that each year, all over the world an estimated 585 000 women die from causes related to pregnancy and childbirth[1]. Every day, 1 500 women die from pregnancy or child birth related complications and most of these deaths occurred in developing countries[2]. The same study showed that maternal mortality rates in developing countries are estimated to be 100 times higher than those seen in industrialized countries. No wonder, improving maternal health is one of the eight Millennium Development Goals adopted by the International Community at the United Nations Millennium summit in 2000. In order to achieve the objectives of the Millennium Development Goals, Countries have indicated commitment of reducing the maternal mortality ratio by three quarters between 2000 and 2015[3].

Report showed that 1 in every 18 women die giving birth compared to 1 in 4 800 in the United State of America[4]. The high incidence of maternal death is one of the signs of major inequality spread throughout the world, reflecting the gap between the rich and poor. About 99% of all maternal deaths occur in developing countries where 85% of the population live[5]. Women in developing countries have many pregnancies on the average and their life time risk reflects the overall burden of these women.

Women die from a wide range of complications in pregnancy, child birth, or the post partum period. There are four major causes of maternal mortality including severe bleeding (mostly post partum), infection (mostly soon after delivery), hypertensive disorders in pregnancy (eclampsia), obstructed labour and unsafe abortion.

There are however, socio-cultural factors that contribute to women dyeing in pregnancy, labour and pueperium which most of the time are neglected[6]. Some of these problems include harmful traditional practices like female genital mutilation that could lead to prolonged and obstructed labour as a result of adhesions. Four percent of maternal deaths have been attributed to such practices[5]. Other problems include food restrictions and taboos associated with the pre and post partum periods of a woman's life, like preventing a pregnant woman from eating snail so that the child will not salivate. In the same vain, not allowing pregnant woman to eat egg to prevent the child from stealing.

The study therefore aims at examining the extent to which socio-cultural factors affect among others the maternal mortality in the Southern part of Edo State, Nigeria.

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## 2. Materials and methods

### 2.1. Participants

The descriptive survey method was used for the study. The population was made up of all females of reproductive age who were married, all health workers and all relatives of women who died in pregnancy, labour and pueperium. There are seveen Local Government Areas in Edo South Senatorial District, three are identified by the Independent National Electoral Commission (INEC) to be predominantly urban and four predominantly rural[6]. Using the simple random sampling technique, two Local Government Areas that formed the first cluster were chosen from the urban areas and two from the rural areas that formed the second cluster. The participants for the study were drawn from 44 wards in the four Local Government Areas selected thus; Oredo (7 wards), Ikpoba Okha (6 wards) and Ovia-North (6 wards). Sixty percent of the wards were selected using proportional random sampling technique. In each participating ward, married women of reproductive age (15-49 years) were drawn as respondents using convenience sampling technique. A total number of 2 157 urban and rural married women of reproductive age selected from the four local Government Areas formed the sample for the study.

There were two interviews: health workers interview and interview for relatives of those who died in pregnancy, labour and pueperium. In all, 59 respondents participated in the study. Health workers interviews were conducted in the hospital/health centers/traditional birth attendant's clinic in the wards already selected for the study and convenience sampling technique was also employed.

Focus Group Discussion (FGD) was also conducted in the four Local Government Areas used for the study, namely; Oredo, Ikpoba-okha, Orhiomwon and Ovia-North. Community leaders were visited and briefed on the study and permission was sought to involve some community members in group discussions. Volunteers were invited to participate in the discussion. Forty eight participants were involved in the four FGD-two from urban and two from rural areas. The time, date and venue for discussions were specified to those who volunteered. Discussion group sessions were conducted with the investigator playing the role of the moderator. There was also a note taker and guard to prevent distraction during the course of the discussions and four sessions were held.

In this study, questionnaire was utilized which was the main instrument. FGD and in-depth interview of health workers and relatives of the subjects. To ascertain reliability, the corrected version of the questionnaire was pre-tested by administering it to 200 adults of reproductive age from urban and rural areas of one Local Government Area outside the sampled ones. The data collected were correlated to estimate the reliability of the instrument using Gonbach's coefficient (R), which produced as estimate of 0.82.

### 2.2. Data collection

The researcher and ten research assistants administered the questionnaire on the respondents. The questions were also discussed and read out to the illiterate women in pidgin English/native language and their responses recorded on their behalf. The questionnaires were collected immediately after administration.

### 2.3. Data analysis

Focus Group Discussion was transcribed and analyzed qualitatively, in-depth interviews were sorted and coded for computer analysis. The data collected were analyzed using Statistical Analytical System (SAS) mode. Descriptive statistics of frequencies were used to describe the demographic data. The inferential statistics of multiple regression was used to test the hypothesis at 0.05 level of significance.

## 3. Results

Analysis were done to identity frequencies and percentages of selected demographic and background variables of the participants. Majority of the subjects are between the ages of 26-35 years [Rural: 24.8%, 535/2175; Urban: 19.24%, 415/2175], followed by those who are between the ages of 36-45 years [Rural: 14.84%, 320/2175; Urban: 12.10%, 261/2175]. Insignificant number however was between the ages of 15-25 years [Rural: 9.13%, 197/2175; Urban: 10.29%, 222/2175] and above 45 years [Rural: 4.96%, 107/2175; Urban: 4.31%, 93/2175].

These hypotheses were specifically tested: The socio-cultural factors/economic status, educational attainment, access to health care services, female genital mutilation, women decision making power, early marriage/early child bearing, traditional obstetric care services do not significantly contribute to maternal mortality in urban and rural areas of the Southern part of Edo State, Nigeria

Table 1 presents the parameter estimates, standard error, T-statistic and probability level of the difference of the

**Table 1**

Test of significance of regression weights on the dependent and independent variables.

| Variable number | Independent variable | *Df* | Standard Reg. Weight | SEB | T | *P* (value) |
|---|---|---|---|---|---|---|
| 1. | Educational attainment | 1 | 0.2420 | 0.030 | 8.20 | 0.000 |
| 2. | Economic status | 1 | 0.0958 | 0.031 | 3.10 | 0.002 |
| 3. | Access to health care services | 1 | 0.0760 | 0.032 | 2.39 | 0.170 |
| 4. | Early marriage/ early child bearing | 1 | 0.3100 | 0.028 | 10.98 | 0.001 |
| 5. | Female genital mutilation | 1 | 0.1130 | 0.023 | 4.84 | 0.001 |
| 6. | Women decision making power | 1 | 0.1310 | 0.027 | 4.89 | 0.001 |
| 7. | Traditional obstetric care services | 1 | 0.1710 | 0.030 | 5.74 | 0.001 |

Model: $Df$=6, $R^2$=0.32, $CV$=16.54

independent variables (socio-cultural factors) and the dependent variable (maternal mortality). From the table, all the independent variables ($P<0.05$); however, access to healthcare services was the only variable found not to be significant ($P>0.05$).

## 4. Discussion

A careful analysis of the effect of the contribution of each of the six independent variables showed a positive contribution to maternal mortality in all cases except for access to health care services, therefore the hypothesis which states that the socio-cultural factors under study will not contribute to maternal mortality is rejected. The findings on access to healthcare were corroborated by the results of the in-depth interview conducted in both rural and urban areas among relatives on women who died in pregnancy, labour and puerperium. Majority of the respondents confirmed that there was always one form of transportation or another whenever there was need for maternal care in the health centers. Also the roads in both rural and urban areas were said to be accessible by land through motorized vehicles. Therefore, to a large extent, access to healthcare services did not have any significant contribution to maternal mortality. The hypothesis which states that the socio-cultural variable, access to health care services will not contribute to maternal mortality was not rejected.

This disagrees with earlier research carried out by Pramparo in South Asia and Nwakoby et al in Njikoka Local Government Area of Anambra State in which they found that lack of transport was a factor that contributed to maternal mortality. Prampalo also affirmed that lack of transport was a factor strongly related to economic resources. It should be noted however, that those areas have different socio-cultural background. It may then be concluded that the Southern part of Edo State possess instrument for convenient conveyance in terms of transportation and usable roads for quick to hospital/clinics for treatment and delivery as may be necessary.

Lack of education was found to be a major socio-cultural factors that contribute to maternal mortality. Girl- child education will be an appropriate response to the high level of illiteracy in Nigeria, especially Edo State where this study was conducted. The Universal Basic Education (UBE) programme of the Federal Government of Nigeria is a long term strategy for reducing maternal mortality which is a symptom of poor education. This is because an educated women can take decision on where to go for treatment. Formal education affects the health behavior of women and that in turns affects their health status. Studies have shown that the higher the level of education of a woman, the more the chances of survival of the child and the mother during delivery. Education is the key to mothers' survival and enables a woman to know what to do in determining illness and health conditions

Educated women tend to marry and bear children later than their less educated peers and not likely to have large families, therefore, education of a woman make child bearing safer.

The first step would be to ensure that women have adequate information about possible causes of maternal mortality and ways it could be reduced.

Women should also be educated on the following health issues:

Breast feeding: importance of breastfeeding should be emphasized to women during antenatal, postnatal clinic and during workshops in the communities and market places.

Good nutrition by pregnant women to prevent anemia. Anemic women are not able to resist infection and less able to survive hemorrhage or other complications of labour and delivery, therefore women must be educated on the importance of good nutrition in pregnancy.

Training of the midwives and deployment to rural areas to work for at least one year after graduation, as currently practiced in Nigeria.

The midwives render services that help to revive the Health Centers and through community mobilization, rural women are attracted to the health centers for delivery.

The study has shown that in addition to medical causes of maternal mortality, there are socio-cultural factors that accentuate the phenomena of women dying during pregnancy, labour and pueperium. Based on the foregoing data evaluation and appraisal, the following are recommended for adoption; Cultural and traditional factors that have the tendencies to increase the risks of maternal deaths should be discussed with community leaders and a village audit instituted for every maternal death to generate useful data base. Harmful traditional practices like female genital mutilation should be stopped, having disseminated their deleterious effects. Further studies need to be done on this using wider geographical area.

## Conflict of interest statement

We declare that we have no conflict of interest.

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