Analyzing Maternal Mortality in Nigeria: Emphasis on Socio-Cultural Factors Influencing Healthcare Delivery

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Abstract: This study is based on the impact of negative economy on the state of health care system in Nigeria, particularly focusing on the alarmingly high rate of maternal mortality. Although the negative impact of economy on health system throughout the world is evident, effective functioning of health systems require a unified and concerted effort of a number of units as parts of a health system. In this study, we employed a meta-analytic approach in order to analyze and assess the perceived efficiency of the health care system in Nigeria, specifically with respect to maternal health. Our results have indicated some of the main factors which lead to inefficient health service delivery in Nigeria, particularly with respect to maternal health, to be: negligent attitude of the authorities (governance), lack of or scarcity of trained health professionals (human resources) and an inefficient funding system (health inequalities). In addition, it is apparent that socio-cultural influences also shape perception and evaluation of health-care delivery in Nigeria. Our analysis implicates that improvement in the efficiency of healthcare system in Nigeria, especially with respect to governance, human resources; eradication of health inequalities (funding and budgeting specifically), and enhancing public awareness would result in improvement of health service delivery; thus reducing the rate of maternal mortality.

1. Introduction

According to United Nations Human Development Report (2015) Nigeria is classified as a developing country, which can be, based on three dimensions of the human development, which are long & healthy life, access to knowledge, a decent standard of living, and with an HDI value of 0.514 as of 2014 Nigeria is placed in a category of low human development [1]. The three dimensions mentioned above shows that the health status in Nigeria on an average is 52.8 years while the expected years of schooling on average is 9.0 years and the decent standard of living which is based on average income per person and is 1091 USD. This GDP per capita places Nigeria as the 152th country out of 188 countries and with a rank like this it can be deduced that the country probably has a bad system in general which also includes the health system. As the largest country in Africa the health system is challenged by its geography, demography and the main factors are population growth, cultural diversity and urbanization. The historical traces of Maternal Mortality (MM) might as well have begun in the late 1940s when Britain decided to improve the standard of the midwife profession in Nigeria. Maternity homes were combined with community health with the view to making their services effective and affordable. After almost a decade only 46 MM cases were recorded per 100000 births which were normal according to the British standard at the time [2]. The technicality of the maternal mortality definition lies in the fact that the reasonable period in which death must occur is within 42 days after giving birth or during the period of pregnancy. The death is caused by biological transformation during the pregnancy period rather than external incidents. As of 2005, the World Health Organization confirmed that Nigeria and Burundi had the highest maternal death cases after Angola with 1100 deaths in every 100000 cases as compared to the 1400 cases in Angola. As of June 2014, the United States Agency for International Development (USAID) actually reinforced its commitment to reducing maternal deaths by publishing a document which detailed the objective of no single death of any woman, at least not through maternal issues that could be prevented. Over the past, twenty years maternal mortality has reduced drastically but there are still severe cases reaching a round figure of over 250 000 annually worldwide and most of these cases occur in severely poor countries. Among all these high rates of maternal cases the fact still remains that most of the cases are preventable.
Before the 2005 movement by WHO, a Millennium Summit was held in 2000 with the same agenda concerning the alarming rates of the maternal deaths [3]. The Summit announced various programs aimed at reducing the rate by 2015. However, the various programs and commitments exhibited by various countries especially USA has only produced disappointing results. Maternal health issues fall into the social variables of human development and human rights and the causes of maternal deaths have been confirmed to be more severe than any cause of death among men of 15 years and over [4].

The risk is not only high among women in poor countries but also among women in minority groups such as disabled or different ethnic lineages [5]. Global cases of maternal deaths were observed to decrease by 48.97% between 2005 and 2011. The mothers who survive these deaths often live with many different complications, injuries and disabilities [6]. The greater percentage of cases reported worldwide were from the African continent especially the sub Saharan region. Despite worldwide initiatives Africa and Nigeria still has four major factors that are causing maternal mortality. These are: Hemorrhage, sepsis, eclampsia and unsafe abortions [7].

There are other factors such as obstructed labor and ectopic pregnancy but these cases are very rare in Nigeria and the African continent at large. Studies conducted in Northern Nigeria in 2005 also revealed some indirect causes of maternal mortality including sickle cell anemia which recorded the highest percentage of 19.3% during the study followed closely by hepatitis which recorded 18.6% during the investigations of that particular study. The concluded maternal mortality ratio (MMR) observed in the same study in Northern Nigeria confirmed 740 cases in 2001[8]. Previously the figure was more than three times higher in other studies. For example a study in Kano state showed a ratio of 2420 cases out of every 100 000 deliveries [9]. Between 1994 and 1995 the maternal mortality cases were attributed to the political instability that was going on in Nigeria at the time when the Interim National Government was overthrown coupled with the cancellation of the 1993 elections. Health workers and patients were frightened to visit the hospitals for the fear of being killed. The effect of this political unrest on pregnant women was confirmed when a very low number of deliveries were recorded that year. A very rare section of maternal mortality cases are caused by late arrival to the hospital due to transportation problems and also the inability of the health practitioners to detect obstetric symptoms early. Another minor factor includes the inability of the woman’s family to pay for hospital costs [10]. All these factors are external and they are not directly associated with maternal mortality cases as far as Nigeria is concerned. Another factor that cannot be classified as direct or indirect is illiteracy. Most of the women in Nigeria especially the North cannot read or write due to lack of any formal education.

In this study, together with more generalized reasons (relating to the efficiency of health system and healthcare delivery underlying maternal mortality, we sought to address socio-economic factors that appear to be ignored so far. Such factors include gender discrimination, poverty, poor standard of living, relegation and restriction of women. Based on this approach, we aimed to identify the various challenges that underlie maternal deaths in Nigeria; examine the effect of maternal deaths on socio-economic development; explore the personal factors that prevent women from utilizing maternal care to the fullest; and examine the socio cultural factors which enhance maternal mortality rates in Nigerian communities.

2. Research Methodology and Data Analysis

With the help of purposive sampling 50 women were randomly selected which included those who had been to the hospital due to some problem related to maternal care. This sample size is from a population of 500 women. All our respondents were women in Nigeria who were either with or without children or pregnant. The criterion of ‘the study participant to have visited the hospital concerning maternal issue(s) at least twice’ was implemented. The study entailed the use of both primary and secondary data. 70% of the data was collected first hand through structured questionnaires which would be issued out to mothers and health workers in some selected health centres and hospitals in Nigeria. The survey instrument instrument used for the research was developed by the researchers. 30% of the data was obtained as a result of the analysis of published journals on marketing, business time newspapers, paysheets, directories, annual reports of the various companies and other published materials which were relevant for this study.

The questionnaire comprised of two parts. The first section consisted of personal or demographic data, while the second section consisted of the questions for gathering information concerning maternal mortality or maternal deaths. In total, there were twenty items in the
questionnaire, which was constructed as a 5 Likert scale. Other instruments included interviews with some health workers, private health practitioners as well as dignitaries in the Health Ministry of Nigeria but these interviews were not permitted to be recorded so certain notes were taken for further research. Out of 52 questionnaires distributed, 50 were returned fully completed, therefore our analysis was based on the results of these 50 questionnaires. The data collected from the questionnaires were analyzed using frequency distributions, regression analysis, variance analysis as well as correlation and factor analysis methodology.

3. Results and Discussion

Highest percentage of participants were married (54%), aged between 21 and 30 (48%), has income range of 1001-5000 Naira, are unskilled workers (62%), have three children (58%) and reside ‘in-state’ (66%).

The results of the second part of the survey indicate that the highest percentage of participants visit the hospital twice a month (38%). Highest percentage of friends of the participant’s rate Nigerian hospital services as ‘very poor’ (34%); similar profile being observed when the participants were asked to rate Nigerian hospital services (30%). Based on previous diagnosis of the cause of maternal deaths, eclampsia shows highest frequency (34%), followed by hemorrhage (28%) and sepsis (26%). A high percentage of participants reported of having a medical condition due to heredity (44%). 50% of participants report of having problems with the medical staff most often. Highest percentage (28%) of participants considers income before maternal treatment. Similarly, 48% of participants consider social class as a factor more important than maternal treatment. Majority of participants have knowledge of maternal complication cases (38%, two cases). 28% of participants report of having a close friend who died during childbirth. 74% of participants have not attended antenatal services at all. 42% of participants reported preference towards using traditional treatment during maternal complication experience. Respondents’ advice to their fellow women on exercise during pregnancy was predominantly (30%) ‘not at all’. Based on the factor analysis of the results (Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization), and Rotated Component Matrix with Factor Loadings, the variables could be grouped into various categories as indicated in Table I.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variables</th>
<th>Component</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal care during pregnancy</td>
<td>B15 – Respondent’s advice to fellow women on exercise during pregnancy</td>
<td>1</td>
<td>0.877</td>
</tr>
<tr>
<td></td>
<td>B14 – Preferred action during any maternal complications experience</td>
<td>1</td>
<td>0.802</td>
</tr>
<tr>
<td></td>
<td>B11 – Knowledge of any pregnancy complication cases</td>
<td>1</td>
<td>0.728</td>
</tr>
<tr>
<td>Condition of maternal service</td>
<td>B3 – Diagnosis</td>
<td>2</td>
<td>0.789</td>
</tr>
<tr>
<td></td>
<td>B4 – Hereditary Condition from Family</td>
<td>2</td>
<td>0.745</td>
</tr>
<tr>
<td>Health Services in Nigeria</td>
<td>B2 – How friends rate Nigerian hospital services</td>
<td>3</td>
<td>0.795</td>
</tr>
<tr>
<td></td>
<td>B9 – Respondent’s personal ratings of services in Nigerian hospitals</td>
<td>3</td>
<td>0.660</td>
</tr>
<tr>
<td></td>
<td>B6 – Effectiveness of maternal treatment in your hospital</td>
<td>3</td>
<td>0.466</td>
</tr>
<tr>
<td>Death</td>
<td>B12 – Loss of a close friend during birth</td>
<td>4</td>
<td>0.644</td>
</tr>
<tr>
<td>Social class</td>
<td>B8 – Social class considered as a factor before maternal treatment</td>
<td>5</td>
<td>0.552</td>
</tr>
<tr>
<td>Antenatal</td>
<td>B13 – Frequency of anti-natal services attendance</td>
<td>6</td>
<td>0.868</td>
</tr>
<tr>
<td>Medical Staff’s Attitude</td>
<td>B5 – Problems with medical staff</td>
<td>7</td>
<td>0.865</td>
</tr>
</tbody>
</table>

Regression analysis of the participants’ responses indicate that for every 1 year increase in the age of respondent, there is double the increase in the frequency at which the hospital for antenatal services is visited. This analysis also shows that for every one thousand Naira increase in income of the respondent, there is a doubling of the number of times the participant visited the antenatal services in the hospital.

One-way ANOVA applications to the results revealed no significant differences (between and within group) between the mean responses of different groups of participants with respect to maternal care during pregnancy. Similarly, no significant differences (between and within group) were observed between the mean responses of different groups of participants with respect to antenatal treatment visits by women in Nigeria. In addition, no significant differences (between and within group) were observed between the mean...
responses of different groups of participants with respect to the respondents’ as well as their friends’ opinion on the hospital services in Nigeria. Similar results were obtained when this analysis was carried out with respect to consideration of social status before maternal treatment; with respect to death of a friend while giving birth; as well as opinions on the attitude of medical staff in Nigerian hospitals.

In contrast, significant differences (between and within group) were observed between the mean responses of different groups of participants with respect to complications of maternal death.

4. Conclusion

In conclusion, problems associated with maternal deaths in Nigeria, as discussed above, indicate the community awareness, education and reform in the health system are essential prerequisites to reducing the incidence and frequency of maternal deaths.

In this study, we have confirmed the persistence of the related issues in an attempt to indicate the urgent need for public education and awareness; and enhanced responsibility by both governance and healthcare professionals.

5. References


