Predictors of Maternal Health As Perceived By Pregnant Women
In Eti-Osa, Lagos State, Nigeria

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Abstract
This study was an attempt to examine predictors of maternal health as perceived by pregnant women in Eti-Osa LGA of Lagos State. The study adopted the survey design. The Maternal Health Scale (MHS), a self designed scale consisting of 25 items was administered to 100 pregnant women in three selected hospitals. Three hypotheses were formulated for the study and they were all sustained. Cultural practices was the most potent predictor of maternal health ($\beta = 0.09; \ t = 5.220; \ p<0.05$). Consequent upon these findings, there is need for education and enlightenment campaigns focused on maternal health in primary health care centres (PHC) by government and other non-governmental groups. There is also the urgent necessity to provide women with the appropriate health education to enable them make informed decisions concerning their health and that of their children.

Keywords: Predictors, Maternal health, Cultural practices, Education, Pregnant Women

Introduction
To achieve the fifth millennium development goal (MDG) for improved maternal health in Nigeria, government at all levels (local, state and federal) had the cardinal objective of reducing maternal mortality to the barest minimum, and to increase the utilization of maternity service and improved maternal health especially for women and children. Complications of pregnancy and childbirth are a leading cause of maternal morbidities and mortalities for women of reproductive age (15 – 49 years) in developing countries (WHO, 2006). In a Centre for Reproductive Right (CRR, 2008) report, it was noted that maternal death in Nigeria is one of the worst in the world. The report further noted that the Nigerian government has ratified most relevant international and regional treaties and has developed policies aimed at improving reproductive health, including maternal health; these actions have not translated into effective implementation and resource allocation. The number of maternal deaths in Nigeria which is 545 maternal deaths per 100,000 live births is second only to that of India.

The scale of worldwide maternal death is shocking. The United Nations Population Fund (UNFPA) in 2000 reports that one woman dies in childbearing every minute, with over half a million women dying per year and most of these deaths are preventable. Going by the results from some agencies, Nigeria’s progress towards improving maternal health is grossly inadequate (WHO, UNICEF, UNFPA and The World Bank estimates, 2010), and as equally noted by Igberase, Isah and Igbekoyi (2009), maternal mortality rates are very high in Nigeria. The achievement made so far is low given that the annual percentage decline in maternal mortality ratio from 1990 to 2008 was 1.5% compared to the targeted 5.5% (WHO, 2010). In addition, maternal deaths and lifetime risk is high as a woman’s chance of dying from pregnancy and childbirth in Nigeria is 1 in 13, relative to 1 in 5000 in developed nations (WHO et al., 2010, FMOH/National Primary Health Care Development Agency/Midwives Service Scheme, 2009). Nigeria Demographic and Health Survey (NDHS, 2008) estimated the national maternal mortality rate at 545 per 100,000 live births. Despite the apparent decrease, compared to the previous rate of 800 per 100,000 live births in 2005, it is still high, and presents a picture of poor maternal health status of Nigeria. Extant literature show that the Nigerian government identified maternal mortality and morbidity as a pressing problem and developed laws and policies in response (Shiffman & Okonofua, 2006, UN, 2007), these actions have not translated into a significant improvement in maternal health throughout the country.

According to the World Health Organization (WHO), healthy development of the child is of basic importance and this is achievable through maternal health. Delivery of healthy children or individuals brings about continuity in human existence but there are issues pregnant women encounter that hinders either successful delivery of children or healthy state of mother before, during and after delivery. Pregnancy is a joyful and honorable period especially for the married ones as this makes them feel more socially accepted and certified as a real woman by
societal standards. In 2008, the World Health Organization (WHO) revealed that 358,000 women died of complications during pregnancy or childbirth, most of which could be avoided as the necessary medical interventions exist and are well known. A major challenge is pregnant women's lack of access to quality care before, during, and after childbirth.

To improve maternal health, the Millennium Development Goal 4 and 5 (MDG 4 and 5) set out the target of reducing maternal mortality by 75% and achieving universal access to reproductive health by 2015. However, progress in reducing mortality in developing countries and providing pertinent services has been too slow to meet the target. WHO is supporting countries by delivering integrated, evidence-based and cost-effective care for mothers during pregnancy, childbirth and the postpartum period (WHO, 2008).

Statistics by the WHO (2010) on maternal mortality revealed that in 20 years the number of maternal deaths has decreased from more than 540,000 deaths in 1990 to less than 290,000 in 2010. This is a decline of 47% and one third of these maternal deaths occur in just two countries: India with 20% of the global total and Nigeria with 14%. WHO (2010) invested in the health system especially in the training of midwives and in making emergency obstetric care available round-the-clock. This is fundamental to reducing maternal mortality, and it was reported by WHO that one million children worldwide are left motherless every year, primarily because their mothers had no access to or could not afford quality health care. These children are also more likely to die within two years of their mothers’ death.

In Nigeria, culture plays a leading role in our everyday dealings including beliefs concerning pregnancy and childbearing. For example, in the Western part of Nigeria which is dominated by the Yoruba, a pregnant woman is not expected to eat certain foods (snail, okro, and so on) or announce her state to members of her family to prevent spiritual attacks. This is corroborated by Geubbels’ (2006), that this may attract the attention of evil spirits who may bring harm to the mother and child. In circumstances where things go wrong during or after pregnancy, the woman is usually blamed for the consequences, hence her actions during birth is judged based on her adherence to certain cultural, traditional or religious beliefs as upheld by her and family members. A pregnant woman is compelled to adhere to the dictates of the elders in the family or society as backed by traditions and or religion. Mama (1996) revealed that in Nigeria, many women are denied their rights and are subjected to some cultural practices that greatly endanger their health. For instance, in the Northern part of the country, many still practice betrothing their children from the tender ages of twelve to older men for marriage, these children start to engage in sexual intercourse at an early age to their “husbands” and this is detrimental to their development as they are too young to become mothers; this action endangers their health and that of their offspring.

In the Eastern part of Nigerian which is dominated by the Igbo, it is usually a thing of pride to have a non-eventful pregnancy, which is crowned by a vaginal delivery of the baby. Hence many women try everything they can to have vaginal delivery to maintain their ego, as people who have not gone through normal delivery and gone through the pains of childbirth are not referred to as ‘real women’. Some end up losing their babies or their lives in the process of trying to be ‘real women’ (Mama, 1996). Western culture today often sees labour pain as something that should be fixed or stopped, in many cases embracing medical pain relief. There is though, a growing trend to try using natural therapies to minimise or negate the woman’s need for pain relief (with their possible side effects) and incorporate this with ‘hands on’ physical and emotional support from the partner or chosen support people (Birth, 2010).

Apart from cultural believes, religion also affect maternal health or maternal mortality. Some Christians believed that the labour pain can be viewed as part of God’s plan for mankind having disobeyed God’s instructions after creation; hence, they refuse pain relief medications during pregnancy. Lack of interest or believe in drugs and medications could hinder effective service and care delivery, and this are what non-Christians would refer to as a mere ‘coincidence’ or ‘karma’, they would attribute this as the way God wants it to be. According to Birth (2010), what we believe is what we base our thoughts and emotions on and this in turn affects how we are biologically and how we relate with others in our social life.

Primary health care centres are provided by the government for the rendering of primary care services to pregnant women but Rahman (2000) revealed that a woman’s decision to attend a particular health care facility is as a result of personal need, social factors and the location of services. Apart from cultural or traditional and religious beliefs, other cogent psychosocial factors limiting the quality of health among pregnant women are poverty, insufficient food, limited access to hospitals and lack of professional care.

Cultural and religious elements could be identified as superstitious beliefs, level of spirituality and so on. The elements of culture and religion entrenched in social and mental factors that determine the extent to which people engage in health behaviours that could be either harmful or beneficial for them to attain their state of being (health). For pregnant women, it means that the elements of culture and religion are implicated in the factors that determine the extent to which they will engage in certain health behaviours. These cultural and religious elements serves as hindrance to solving the MDG goal 5 as many of the women whom the professional care is meant for have beliefs and social norms contrary to the methods performed by the professionals in the care centres. To
facilitate progress in the pursuit of the goal, it is highly imperative that the culture and religions practiced in the designated societies where these centres are situated be inculcated in the care and adequate awareness programmes for the enlightenment of these women so they can be more inclined to adhering to the fundamental health improving behaviours that will be introduced to them at the care centres.

To achieve this, it is essential that counsellors and psychologists be incorporated into these programmes to employ psychological methods like cognitive restructuring, behaviour modification and psycho-education among others to make these women more responsive to change and engage more in health improving behaviours than health impairing behaviours for the sake of themselves and their offspring. Understanding community level factors in the study of maternal health care is important because individuals are nested within households and households are embedded in communities hence individual decisions can also be influenced by the characteristics of the communities in which they live (Mackian, 2003).

Maternal nutritional plane (Barker, 2004; Wu, Bazer, Wallace and Spencer, 2006) has been implicated in developmental programming and resulting pre and postnatal changes that affect long-term offspring health and performance. A small amount of alcohol can cause permanent damage to the child. The use of alcohol during pregnancy can cause serious problems in children and adolescents including slow growth and developmental delay, unusual facial features, irritability, brain and neurological disorders, mental retardation, school-age children may have problems with learning, low tolerance for frustration, inadequate social boundaries and difficulty reading, teenagers can have continuous learning problems, depression, anxiety and inappropriate sexual behaviour. Fetal alcohol symptoms are a more specific group of symptoms caused by alcohol intake. However, many pregnant women neglect these as their culture and religious practices may permit alcohol intake and when they give birth and the child begins to manifest the effect of the alcohol, they attribute the cause to other superstitious beliefs that the mother may have violated. This is to emphasize the importance of the need to develop maternal health as its impact on the health of their offspring, the leaders of tomorrow of Nigeria is also at stake.

Objectives of Study
The general objective of this study is to explore the predictors of maternal health as perceived by pregnant women. Specifically, the study is set to achieve the following objectives;
1. To examine if pregnant women who subscribe to irrational religious beliefs will be more prone to maternal ill – health and mortality in Eti-Osa Local Government Area.
2. To observe the influence of social-emotional support (from husband, family and economy) on maternal health in Eti-Osa Local Government Area
3. To examine the relative effect of education and cultural practices on maternal health in Eti-Osa Local Government Area.

Hypotheses
Hypothesis One: Pregnant women who subscribe to irrational religious beliefs will be more prone to maternal ill – health and mortality in Eti - Osa Local Government Area.
Hypothesis Two: There is a significant relationship between social-emotional support (from husband, family and economy) and maternal health in Eti - Osa Local Government Area.
Hypothesis Three: There is a significant relative contribution of education and cultural practices on maternal health in Eti - Osa Local Government Area.

Methods
Design
This is a cross-sectional field survey. The population for this research consists of all mothers and pregnant women in Eti–Osa West of Eti-Osa local government area in Lagos State.

Participants
A sample of 100 respondents was selected from the population using stratified and simple random sampling techniques. The respondents were chosen from three hospitals: the Ife - Oluwa maternity clinic, St. Kizito maternity clinic and Ilasan community hospital.

Instruments
The instrument used for data collection was a 25 item self designed scale titled “Maternal Health Scale (MHS). The items were generated by literature review. Section A was based on demographic data with includes age, number of children, educational qualifications, religion and marital status among others. Section B was based on
items measuring Maternal Health, belief systems, social-emotional support and cultural practices. This section was structured as a 4-point Likert-type rating scale ranging from 4= strongly agree to 1= strongly disagree.

**Psychometric Properties**

The MHS possesses content validity and for the reliability test, it was subjected to a test-retest reliability coefficient measure (3 week interval), the Pearson’s r yielded 0.87 while the internal consistency reliability using the average inter-item correlation yielded a reliability estimate of 0.81.

**Data Analysis**

The data were expressed as both descriptive and inferential statistical methods. Regression analysis was employed to test the predictive power of the predictor variables while the Pearson’s Product Moment Correlation Coefficient was used to test for significant relationships. A p-value of ≤ 0.05 was considered as significant. The data were analyzed using SPSS (SPSS version 17 for Windows, SPSS Inc., Chicago, IL).

**Ethical Considerations**

Prior to administering the questionnaire, the purpose of the study was explained to the participants. Participation was voluntary and there was no incentive given for participation. Those who agreed to participate were made to sign a consent form. Anonymity was assured by asking participants not to write their names on the questionnaire forms.

**Hypotheses Testing**

1. $H_1$: Pregnant women who subscribe to irrational religious beliefs will be more prone to maternal ill-health and mortality in Eti - Osa Local Government Area.

   **Table 1: Correlation Coefficient of Religion and Maternal Health**

<table>
<thead>
<tr>
<th>Variation</th>
<th>N</th>
<th>df</th>
<th>r-observed</th>
<th>Sig. Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion</td>
<td>100</td>
<td>98</td>
<td>0.74</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Maternal Health</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   Table 1 indicates a significant positive relationship between the two variables at $r = 0.736$ for religion and maternal health in Eti – Osa Local Government Area, at $p = 0.00 < 0.05$ significant level and 98 degree of freedom. The hypothesis is sustained.

2. $H_2$: There is a significant relationship between social-emotional support (from husband, family and economy) and maternal health in Eti - Osa Local Government Area.

   **Table 2: Correlation Coefficient of Social Support and Maternal Health**

<table>
<thead>
<tr>
<th>Variation</th>
<th>N</th>
<th>df</th>
<th>r-observed</th>
<th>Sig. Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Support</td>
<td>100</td>
<td>98</td>
<td>0.606</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Maternal Health</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   The results displayed in Table 2 show a significant positive relationship between the two variables at $r = 0.606$ for social-emotional support and maternal health in Eti – Osa Local Government Area, at $p = 0.00 < 0.05$ significant level and 98 degree of freedom. This implies that there is a positive relationship between social-emotional support and maternal health in Eti – Osa Local Government Area. The hypothesis is therefore accepted.

3. $H_3$: There is a significant relative contribution of education and cultural practices on maternal health in Eti - Osa Local Government Area.
Table 3: Summary of Regression Analysis on Correlates of Educational Level, Cultural Practices and Maternal Health

<table>
<thead>
<tr>
<th>Sources</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>R</td>
<td>.64a</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>R²</td>
<td>.404</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Adj R²</td>
<td>.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.E</td>
<td>5.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Predictors: (Constant), Educational level, cultural practices
Dependent variable: Maternal Health

Table 3 indicated the model summary of the multiple regression equation that predicted maternal health. In this study, 40.4% of the variation in maternal health appears to be accounted for by the combination of education and cultural practices. The hypothesis which stated ‘there is a significant relative contribution of education and cultural practices on maternal health in Eti-Osa Local Government Area’ was accepted at R = .64, R² = .404, F (2, 97) = 32.92; p<.05.

Table 4: Coefficient Table of Education and Cultural Practices to the Prediction of Maternal Health

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>B</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>50.78</td>
<td>2.20</td>
<td>-.</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>0.24</td>
<td>.72</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>CulturalPractices</td>
<td>0.09</td>
<td>.21</td>
<td>.61</td>
</tr>
</tbody>
</table>

Dependent Variable: Maternal Health

The most potent predictor as shown is cultural practices (β= 0.09; t = 5.22; p<0.05). The reason for this finding could be that these women engage in cultural practices that are superstitious and mainly folk belief which hold no truth and are detrimental to their health. Education has a silver bullet quality that can lift women out of poverty, ignorance and other vices that render them vulnerable and as Nigerian women lacked appropriate education, it is obvious that they cannot participate fully in the development process. This corroborates Bankole and Eboiyehi (2003) who argued that if education stands as the most powerful force to improve the capacity of any individual, it means that the Nigerian women cannot benefit from development and globalization.

Discussion of Findings

The study examined a number of psychosocial factors affecting maternal health in Eti-Osa Local Government of Lagos State. These predictors have implications on the maternal health of the sampled pregnant women. The first hypothesis reveals there was a positive and significant relationship between religious belief and maternal health, therefore women who subscribe to irrational religious beliefs will be more prone to maternal ill-health and mortality in Eti-Osa Local Government Area. This revealed that the religious beliefs of the women correlate significantly with their maternal health that is religion has an effect on maternal health. As noted by Levin (2010), for many clinicians and scientists of the day, religion was highly relevant – for better or worse – as an etiologic, therapeutic, or palliative agent in psychotherapy. Whether thought to be a malign or salutary influence on mental and emotional well-being, the sphere of religiousness, faith, and sacred beliefs and experiences had been a source of exploration for decades. Whatever one’s beliefs or preferences about faith or God, it at least was agreed that these things mattered.

Hypothesis two shows a positive and significant relationship between social-emotional support and maternal health. Reasons for this finding could be that people in the immediate environment of the pregnant woman such as her husband, extended family and friends were supportive and this resulted in a better quality of care for the pregnant woman. There are equally situations when some mother-in-law exerts too much pressure on the pregnant woman to seek the assistance of traditional caregivers instead of modern medical attention despite being well educated. Traditionally, wives would rather please their in-laws by agreeing and acceding to her request despite their covert objections and reservations concerning the services of the traditional caregivers. As noted in this study, 68% of the respondents agreed that pregnant women must take permission from their husbands before seeking...
Conclusion and Recommendations

The main purpose of the research was to examine the effect of psychosocial factors on maternal health and to what extent they predict maternal health in Eti – Osa Local Government Area of Lagos State. The factors considered were religion, social support, cultural practices and education. The research has added to existing knowledge to further emphasize psychosocial factors especially ones as used in this research as significant predictors of maternal health which if monitored can reduce the alarming rate of maternal morbidity and mortality rates contributing to solving the Millennium Development Goals (MDG). The high rate at which cultural practices affect maternal health can be curtailed if the education of these women be given paramount attention. It is therefore highly recommended that a larger quantity of respondents should be sampled in subsequent research to get more data which will be more significant if gotten from a larger sample size than only the 100 that were used in this study, to make findings and results more generalizable.

Other factors (independent variables) that could affect maternal health and could not be covered by this study should be expanded upon by subsequent researches on maternal health to discover what other factors have a significant impact on maternal health and to what extent they do. Other Local Government Areas in Lagos State should be studied and in cases where the researcher has more available resources as time and money, it is suggested that they study more representative sample of Lagos State or Nigeria as a country. More Nigerian culture specific instruments should be developed to make studying the health of Nigerian women more true to Nigeria than the mostly westernized ones available to us. Statistics of the rate of death and sicknesses should be made available and not be kept private by both private and public hospitals who think they will be tarnishing their image by revealing such information to allow for constructive changes that are needed to be made possible. The government and capable NGO’s should support our educational system to be able to deliver concise and well rounded school systems than what we have now. Many women cannot afford to attend schools with a higher standard and most close to nothing fee schools do not give the necessary training that will empower these women to make appropriate basic life choices as some of the teachers in our secondary schools of today who claim to have a B.Sc do not have a reasonable command of the English language nor basic poise.

References


Igberase, G. O., Isah, E. C., & Igbekoyi, O. F. (2009). Awareness and perception of maternal mortality among health services. Apart from the pressure from in-laws, some of the pregnant women have low economic power due to the distressed economy which makes it becomes difficult for these women to visit medical centres with its attendant bills. From the findings about 97% of the respondents strongly agreed that poverty which is lack of economic power and government support affect maternal health. This finding supports those of Okonufua, Mitchel, Popoola, Okorouwa, & Elujoba (1994) and Onwudiegwu (2001).

For hypothesis three which stated that there is a significant relative contribution of education and cultural practices on maternal health was accepted with cultural practices being the most potnet predictor ($\beta_0 = 0.09; t = 5.22; p<0.05$). Meanwhile, the globalization process that is sweeping through the world has added to many women’s problems especially poor uneducated women. Few women that work in formal setting are mainly found among the unskilled workers. These women due to their lack of education felt the impact of globalization and rationalization that came negatively. From the findings of the study, it is very clear that psychosocial determinants to a great extent determine maternal health and hence maternal mortality in Nigeria. Efforts should be directed towards educating women about the risk of delivering in homes of traditional birth attendants, maternity homes and health centres, and the concept of early referral of women to the hospital should be reinforced. Providing information to women on prevention of maternal mortality and community participation and mobilization will help prevent maternal mortality to some extent in Nigeria (Igberase, Isah & Igbekoyi, 2009).


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