Poverty and Maternal Health in the Nigerian Rural Economy: Challenges and Implications for Public Policy

¹Bassey E. Anam, ²Edem Ebong, ³Grace Ekong Jonathan & ⁴Iohn Nma Aliu ¹⁸²Institute of Public Policy &

Administration,

of Calabar

⁴Department of Banking and Finance, College of Business and Management Studies (CBMS) Kaduna Polytechnic, Kaduna

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Abstract

aternal death is associated with several factors. One such factor is poverty; the inability of individuals and households to have access to basic needs, especially health care services. Poverty directly ³Sociology Department, University affects child survival as it increases the chances of newborn death by 2-4 times. The loss of a woman in the prime and productive part of her life also adversely affects family income and increases the social-economic burden on the man and children. The study seeks to assess the implications of poverty on the maternal health of the Nigerian rural populace. Data are obtained primarily from secondary sources and evaluated using the content analytical technique. The analysis of secondary literature provides the direction for developing policy options significance in addressing poverty and improving maternal health among the vulnerable segment of the rural economy. The study concluded that poverty is the key determiner of maternal health and mortality among rural women. As a way forward, the government must design and implement policies to improve economic opportunities for a household in rural communities. These policies must be focused on the poorest segment of the rural communities.

Corresponding Author: Bassey E. Anam

Background to the Study

The cause of maternal mortality is an outcome of nexus interaction of a variety of factors namely-the distant factors (socio-economic, cultural) which act through the proximate or intermediate factors (health and reproductive behavior, access to health services) and in turn influence outcome (pregnancy complication mortality) (Campbell and Graham, 1990). This follows other models which have their basis on the premise that social and economic determinants of mortality operate through a common set of biological mechanisms and proximate, determinants to exert an impact on mortality (Campbell and Graham, 1991). Health behaviour is the action that people do or do not take for their health, e.g attending antenatal care or seeking help when complications arise. Reproductive behavior includes issues like age, birth spacing, wontedness of pregnancy, etc. access to health services is a concept raging from whether adequate facilities exist (adequate supplies, personnel, good quality of care) and if people can reach the service provided (cost, distance information).

Some of the direct, medical causes of maternal mortality include haemorrhage or bleeding, (23%) sepsi (17%) unsafe abortion (11%) hypertensive disorder, and obstructed labour (11%) other causes include ectopic pregnancy, embolism, and anaesthesia-related risks (WHO, 2001, Ogunkelu, 2002). A condition such as anaemia (11%), diabetes, malaria (11%), sexually transmitted infections (STTS) including HIV/AIDS, and others can also increase a woman risk for complication during pregnancy and childbirth, and thus, are indirect causes of maternal mortality and morbidity.

Lack of access to essential obstetric care, lack of access to family planning (FP) counseling and service, lack of drugs, equipment, essential materials, instruments, consumables etc. in hospital, non-availability of health workers on essential duties, deficient transportation, communication and utility (power, water etc) facilities all contribute to increased maternal mortality in Nigeria. Most maternal deaths occur during delivery and the postpartum period.

Reproductive health causes, several studies have shown that certain groups of women are at increased risk of maternal mortality. They include too young (<18years), 700 old (>35years), Too many (having 5 or more delivery) Too frequent (having a spacing of their deliveries less than 2 years apart), and Too sick (pregnancies contraindicated or at very high risk of life). Other contributory factors include; unsafe abortion-610,000 per year High prevalence of malaria, high rate of malnutrition 16%, HIV/AIDS pandemic 5.4%-90%.

Poverty, bad hygienical conditions and limited access to medical treatment, lacking enlightenment often are the primary cause of high mortality rates among babies (8-20 % in their first year of life) and mothers. 8-12 ‰ of child-bearing women between 13 and 49 of age die before, in, or shortly after childbirth. Social-cultural factors that relate to the low status of women (gender disparity in education, access to productive resources e.t.c) also affect their living conditions. Poverty and harmful traditional practices act as a barrier to utilization of available health services have influenced the maternal mortality rate in Nigeria.

Maternal death without doubt is associated with considerable grief and depression. It also directly affects child survival as it increases the chances of newborn death by 2-4 times. The loss of a woman in the prime and productive part of her life also adversely affects family income and increases the social-economic burden on the man and children. Indeed, women's economic contribution is essential to reducing poverty in Nigeria, and projected losses from maternal mortality death on the national economy over 10 years (2001-2010) are estimated at 38 billion naira (Reduce, 2003).

The prevention of maternal mortality network identified social distance as a barrier to access services for many respondents interview in rural communities "social distance" is described by the study as consisting of differences in languages behavior and expectation between the customer of health care and its providers. These concerns define the objective of this study. The study seeks to assess the implications of poverty on the maternal health of the Nigerian rural populace.

Methodology

Data are obtained primarily from secondary sources and evaluated using the content analytical technique. The analysis of secondary literature provides the direction for developing policy options significance in addressing poverty and improving maternal health among the vulnerable segment of the rural economy.

Concept of Maternal Health

Maternal health refers to the health of women during pregnancy, childbirth, and the postpartum period (WHO, 2011). It encompasses the health care dimensions of family planning, preconception, prenatal, and postnatal care in order to reduce maternal morbidity and mortality (WHO, 2011). Preconception care includes education, health promotion, screening, and other interventions among women of reproductive age to reduce risk factors that might affect future pregnancies. The goal of prenatal care is to detect any potential complications of pregnancy early, to prevent them if possible, and to direct the woman to appropriate specialist medical services as appropriate. Postnatal care issues include recovery from childbirth, concerns about newborn care, nutrition, breastfeeding, and family planning (WHO, 2011).

Abia (2004) explained that having babies in developing nations may be life-threatening. Every minute, a woman dies from avoidable complications caused by pregnancy – this adds up to approximately half a million fatalities per year. In Nigeria alone, the maternal mortality rate reaches up to 3,200 women (number of mothers per 100,000 births within 42 days after the childbirth); in Northern Nigeria, particularly in the project target area, this rate is even higher (Bankole, 2006). The maternal mortality rate is even higher in areas where many women have many babies in short periods under malnutrition, bad hygienic conditions, and lacking access to medical treatment.

Therefore, the United Nations (UN) defined "Maternal Health Care" as one of their top eight priorities for this millennium. As reliable members of society, women and mothers play a vital role in the sustainable development of family life in African nations, although

women often lack fundamental human rights such as the right to health and freedom from bodily harm (UNICEF, 2011). In many developing nations, women can neither benefit from the slowly improving economical situation, nor available medical care. Therefore, it is a key objective of many Non-Government Organisations (NGOs) to help improve the living conditions among the poorest members of society.

According to the opinion of experts, maternal health conditions can only be improved by a three-stage program:

- 1. Child spacing by self-determination of periods between the childbirths
- 2. Professional care during pregnancy and childbirth
- 3. Timely access to hospitals where complications can be treated, f.i. by Caesarean cut

A meaningful improvement can only be accomplished by a comprehensive approach that includes the following elements: wide enlightenment and clean drinking water as fundamentals of life and health, and the involvement of all critical stakeholders (Say, Souza, and Pattinson, 2009).

In many developing countries, complications of pregnancy and childbirth are the leading causes of death among women of reproductive age. A woman dies from complications from childbirth approximately every minute (UNICEP, 2011). According to the World Health Organization, in its World Health Report 2005, poor maternal conditions account for the fourth leading cause of death for women worldwide, after HIV/AIDS, malaria, and tuberculosis (WHO, 2005). Most maternal deaths and injuries in Nigeria are caused by biological processes such as undue interface by TBA (traditional birth attendance) and diseases, which can be prevented and have been largely eradicated in the developed world - such as postpartum haemorrhaging, which causes 34% of maternal deaths in the developing world but only 13% of maternal deaths in developed countries (WHO and UNICEF, 2010).

Although high-quality, accessible health care has made maternal death a rare event in developed countries, where only 1% of maternal deaths occur, these complications can often be fatal in the developing world because the single most important intervention for safe motherhood is to make sure that a trained provider with midwifery skills is present at every birth, that transport is available to referral services, and that quality emergency obstetric care is available (Fortney, 2005). In 2008 342,900 women died while pregnant or from childbirth worldwide (WHO and UNICEF, 1990). Although the rate is high, this was a significant drop from 1980, when 526,300 women died from the same causes. This improvement was caused by lower pregnancy rates in some countries; higher income, which improves nutrition and access to health care; more education for women; and the increasing availability of "skilled birth attendants" - people with training in basic and emergency obstetric care - to help women give birth. In Akwa Ibom State, the government is paying for prenatal and delivery care in public health institutions to ensure access of pregnant women to health care delivery.

One specific disease that causes significant maternal health problems is HIV/AIDS. Mother-to-child transmission of HIV in the developing world is a large concern. Approximately 45% of infected mothers transmit the disease to their children (Roberts, 2003) and HIV is a major cause of maternal mortality, causing 60,000 maternal deaths in 2008. HIV rates are especially high in Nigeria maternal mortality rates are also on the rise (WHO, 2005).

Maternal health problems also include complications from childbirth that do not result in death. For every woman that dies during childbirth, approximately 20 suffer from infection, injury, or disability (UNICEF, UNFPA, and WHO, 2004). Almost 50% of the births in developing countries still take place without a medically skilled attendant to aid the mother, and the ratio is even higher in Nigeria (Fatusi and Ijadunola, 2003). Women in Nigeria still rely on traditional birth attendants (TBAs), who have little or no formal health care training. In recognition of their role, Nigeria and non-governmental organizations are making efforts to train TBAs in maternal health topics, to improve the chances for better health outcomes among mothers and babies (DFID, 2005).

Improving maternal health is the 5th of the 8 United Nations' Millennium Development Goals, targeting a reduction in the number of women dying during pregnancy and childbirth by three quarters by 2015, notably by increasing the usage of skilled birth attendants, contraception, and family planning (Starrs, 1997). Decreasing the rates of maternal mortality and morbidity in Nigeria is important because poor maternal health is both an indicator and a cause of extreme poverty.

Poverty and Maternal Mortality

Poverty is one of the major characteristics of the Nigerian rural economy (Anam, 2014). Otu and Anam (2016), added that most communities in Nigeria are poor and that makes them vulnerable to health challenges. Poverty is a condition that is characterized by a lack of necessities of life. The poor in the society are daily confronted with the challenges of lack of skills, lack of economic empowerment, and lack of assistance from the government, relatives, or friends (Eteng and Anam, 2019). Antai and Anam (2014), acknowledged that "to transform the vast rural areas of Nigeria into the mainstream of national development, governments at various levels (federal, state and local) have come up with several policies and programmes".

Maternal mortality refers to the death of women directly due to pregnancy or childbirth (Nour, 2008). The overwhelming majority of such deaths occur in developing countries. They are mostly preventable with current technology; however, treatments in this area are often complex, requiring more doctors, equipment, and medicine, and easier access to facilities both during pregnancy and birth. Maternal morbidity encompasses physical and psychological conditions resulting from or aggravated by pregnancy that harms the woman's health. Maternal morbidity ranges from mild to severe and can include complications and conditions associated with any pregnancy outcome. Extending maternal health surveillance to include identifying and reviewing pregnancy

complications and factors associated with them has the potential to improve maternal health by providing information to influence the delivery of health services and health policy.

Performing maternal health surveillance beyond mortality at the institutional, state, and national level, requires readily available information to identify women with severe morbidity during pregnancy. Recently, CDC researchers used a group of routinely collected ICD-9-CM discharge and procedure codes to identify significant complications of pregnancy. They found that the most severe complications of pregnancy were those that indicated haemorrhage requiring transfusion, hysterectomy, and seizures during delivery hospitalizations. Severe morbidity was more common at the extremes of reproductive age and for black women compared with white women (Callaghan, 2008).

The maternal mortality rate for any year is the number of death attributed to pregnancy and childbearing per 1000 registered total births, (Benneth and Brown, 1999). Maternal death occurring more than 42 days after pregnancy or childbirth are no longer included in the figure, this is in line with the international definition of maternal death, which states that maternal death is the one occurring during pregnancy or labour or as a consequence of pregnancy within 42days after delivery or abortion.

The international classification of diseases, injuries, and causes of death (ICD, 1994) defined a maternal death as the death of a woman within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. This definition is by the definition adopted by the international federation of Gynaecology and obstetrics. Childbearing kills so many women in the developing world of which Nigeria is one. In many developing countries, the complication of pregnancy and childbirth are leading causes of death among women of reproductive age. According to WHO (1996), more than one woman died every minute from such cause, and 585,000 women die every year from the causes, less than one percent of these deaths occur in developed countries demonstrating that they could be avoided in developing countries, Nigeria if resources and services are available.

Davies (2005) stated that maternal mortality is a measure of the risk to the mother connected with childbirth. Maternal deaths are only counted if they are directly related to pregnancy. For example, death from renal failure, which had commenced with severe toxaemia of pregnancy and pyelonephritis, would be counted as a maternal death even if the woman died years later. However, deaths from completely unrelated causes, such as road accidents, medical or surgical emergencies, would not be counted as maternal death even if it took place during pregnancy.

The 2006 census estimated that there are about 65 million females in Nigeria out of which 30 million are of reproductive age (15-49 years). Each year about 6 million women become pregnant, 5 million of these pregnancies result in childbirth (WHO, UNICEF, UNFPA,

2007). Available data indicate that 59,000 women die yearly as a result of complications in childbirth (WHO, 2007). A Nigerian woman is 500 times more likely to die in childbirth than a European counterpart. The mortality ratio is about 800-1,500 per 100,000 live births with marked variation between geo-political zones- 165 in Southwest compares with 1549 in the North-east and between urban and rural area and the second number of absolute maternal deaths, only outranked by India in the world (NPC, 2008). More disturbing is the SOGON study that revealed maternal mortality of 3,380 in Lagos state, 783 in Enugu, 2977 in Cross River state, 846 in Plateau state, 727 in Borno state, and 7523 in Kano state indicating very serious health system failure. One in 20 Nigerian women died of pregnancy delivery-related causes (Advocacy Brief, 2007) compares to 29,800 for Sweden and Finland. Thus for all human development indicators, maternal mortality ratios show the greatest disparity between developed and developing countries. These deaths are largely preventable. Equally of concern is that yearly, about 1,080,000 -1,620,000 Nigerian women and girls suffer disabilities caused by a complication during pregnancy and childbirth (Hill, World Law, 2001).

For everyone pregnant woman that dies 20-30 more suffer long-term and short-term disabilities such as chronic anaemia, maternal exhaustion or physical weakness vesicovaginal or Rector-vaginal fistula, stress incontinence, chronic pelvic pain, PID infertility Ectopic pregnancy, and Emotional Depression. The UNFPA estimates that 2 million women suffer vesico vaginal fistulae globally, 40% of these (800,000) women are in Nigeria, the majority due to prolonged obstructed labour that often terminates in stillbirth or neonatal death (UNFPA, 2003). Child survival is equally affected too as the chances of survival of a child in the absence of his or her mother is greatly reduced. In Nigeria, 340,000 infants die annually during delivery and shortly after delivery especially if the mother dies in childbirth. These deaths are not unconnected with the poor maternal death services in the country and could be avoided through the provision of quality and effective maternal and child health services.

In the year 2000, Nigeria and other members of the United Nation agreed on several Millennium Development Goals (MDG) to improve the welfare of the people in their countries in the 21st century. Two of the health-related goals concern reducing death among children under 5 years old by two-third (MDG 4 i.e. reduction from 230-77 per 100,000 live births) and reducing maternal death by a three-quarter (MDG) by the year 2015 when compared with the 1990 figures (from 1000/100,000 live births to 250). Midway to 2015, Nigeria still records rather appalling maternal and infant mortality rates compared with other developed countries.

Table 1: MDGs Maternal Mortality Rate 2008 Report UNICEF

| Country | Maternal Mortality Ratio | Lifetime risk of |
|---------------|--------------------------|------------------|
| | (2005) | maternal death |
| Nigeria | 1100 | 18 |
| Eritrea | 450 | 44 |
| Ghana | 560 | 45 |
| South America | 400 | 110 |
| Egypt | 130 | 270 |
| Brazil | 110 | 370 |
| Mexico | 60 | 670 |
| Sweden | 40 | 30,000 |

Source: UNICEF (2008)

Studies were conducted by Mohammed and SFCA (2000) under the auspices of the World Health Organization. The objective of the study was the review evidence on the levels of maternal mortality according to different estimation techniques. The WHO "maternal mortality and morbidity review database" was searched for in the article of 1988. Studies were selected according to their methodological quality and included its reported maternal death with a reported sample size of 200 and above. From the results, most of the studies indicated an underestimation in maternal mortality compared with their findings. The methods for data collection were either direct (vital registration system) or by using special surveys (indirect sisterhood methods). The review revealed that there was an increase in maternal mortality in some regions, while there were marked reductions in others. The leading causes of maternal deaths were preeclampsia/eclampsia, sepsis, pulmonary embolism, and abortion-related complications (WHO, UNICEF, and World Bank Statement, 1999).

Women's ill-health and its consequences are poorly defined. Despite women living longer than men, their lives are not necessarily healthy, according to the 2009 Women and Health Report of the World Health Organization (WHO). One condition that impacts only women and may contribute to continued ill-health is pregnancy and childbirth. Whereas the appropriate use of skilled birth attendance with supportive emergency obstetric care can reduce health risks during pregnancy and childbirth, there are negative consequences of maternal ill-health that reach far beyond the health of the mother at the time of pregnancy and childbirth. These consequences can lead to her death, further morbidities, or disability in the extended postpartum period (up to one year) and can negatively impact the health of her baby, the health of her other children, and the social and economic standing of her family. Except for outcomes of the newborns, such consequences are poorly understood both in quality and magnitude and remain, to a large extent, without any programmatic response in low-income countries.

With limited and patchy data, maternal deaths and disabilities are considered a leading contributor to the burden of disease among women. Maternal conditions were second only to HIV/AIDS in terms of women's deaths worldwide and third in terms of disability-adjusted life-years (DALYs) for women aged 15-44 years, based on the 2005 global burden

of disease estimates. More specifically, maternal conditions contributed to 2.7% of deaths among women worldwide and 12% of deaths among women aged 15-44 years. In the South-East Asian region, maternal conditions are the leading cause of women's death and responsible for 14% of deaths among women aged 15-44 years (Ribeiro et al., 2008). As the impact of maternal deaths and disabilities is additive, it is anticipated that, with more complete data, there would be an even greater impact of the burden of maternal ill-health with the concomitant economic impact on the country.

The existing maternal health literature focuses primarily on maternal death: more than 275,000 women are estimated to die each year in pregnancy and childbirth worldwide (Hogan et al., 2008). One known consequence of maternal death is increased mortality of the baby—stillbirth or death of the newborn (Lawn et al, 2009). While the estimates of maternal mortality and its consequences are built on relatively limited data, women who suffer from direct obstetric complications that kill—obstructed or prolonged labour, puerperal sepsis, septic abortion, severe pre-eclampsia and eclampsia, and postpartum haemorrhage—are estimated to be far higher in number yet less well-documented. The global estimates range from 15% of pregnant women suffering from complications—about 20 million women annually (WHO, 2009)—to 1-2% in resource-poor settings when the definition is restricted to the most severe morbidities (Ronsmans, 2009).

Even less is known about the numbers and description of the consequences women may suffer as a result of pregnancy and childbirth and the life-threatening obstetric complications (Koblinsky et al., 2000). These consequences—maternal morbidities or disabilities—are estimated to affect 15-20 million women worldwide each year (Murray, 1998). Assumed to be directly or indirectly related to difficult obstetric events, these morbidities/disabilities include conditions, such as uterine prolapse, stress incontinence, hypertension, haemorrhoids, perineal tears, urinary tract infections, severe anaemia, depression, fistula, and ectopic pregnancy.

Beyond the acute obstetric complications and potential for consequent morbidities and disabilities—either physical or mental or both—it is assumed that the health of women during pregnancy or childbirth further impacts the health and development of the next generation and the well-being of the family—both economically and socially—through impoverishment, violence, stigmatization, isolation, divorce, and remarriage. Reports from Burkina Faso tell of secondary consequences for women and their families up to a year following a severe obstetric complication, including excess mortality and mental health problems of the women plus loss of physical strength, family stability, community status, and impoverishment. Such reports extend the meaning of loss beyond that quantified in measures, such as the maternal mortality ratio or DALYs (Storeng et al., 2010).

As with the health of girls and women across and within countries more generally, the health of women during pregnancy and childbirth is highly affected by social and economic factors, including education, household wealth, and the place of residence.

Typically, those living in wealthier households, having higher education, or living in urban areas, have lower levels of mortality and higher use of healthcare services than their poorer, less-educated, or rural counterparts (Chowdhury et al. 2009). What is less understood is whether these same determinants drive action and better health when a woman faces other consequences of pregnancy or childbirth — the short-term morbidities or chronic disabilities, such as postpartum depression, or social consequences, such as violence.

- 1. *Maternal morbidity* is an overarching term that refers to any physical or mental illness or disability directly related to pregnancy and/or childbirth. These are not necessarily life-threatening but can have a significant impact on the quality of life.
- Acute maternal morbidities include various terms, such as 'obstetric complications',
 'maternal complications', 'absolute maternal indications' (AMIs), 'severe acute
 maternal morbidities' (SAMMs), and 'near-miss' and typically refers to acute
 problems suffered during pregnancy through the standard postpartum period of
 42 days.
- 3. Obstetric or maternal complications are acute conditions that may directly cause maternal deaths. According to the United Nations Children's Fund/WHO/United Nations Population Fund (1997) 'complicated cases' include antepartum or postpartum haemorrhage, prolonged or obstructed labour, postpartum sepsis, complications of abortion, pre-eclampsia/eclampsia, ectopic pregnancy, and ruptured uterus. Anaemia, malaria, tuberculosis, and other pre-existing conditions that may complicate delivery are considered indirect obstetric complications. Rarely are the definitions for these terms for obstetric complications—direct or indirect—more specified.
- 4. Severe obstetric complications have been defined variously based on the criteria of disease, management, and/or organ failure/dysfunction as follows:
- 5. Absolute maternal indications (AMIs) are life-threatening or severe obstetric complications requiring a specific major obstetric intervention which can be verified through records of health services. AMIs reflects conditions that, without intervention, have a high probability of causing maternal death during childbirth or sequelae including the following (Belghiti et al., 1998):
- 6. Severe antepartum haemorrhage
- 7. Placenta praevia and abruptio placentae
- 8. Severe postpartum haemorrhage requiring surgical intervention
- 9. Foetopelvic disproportion (pre-rupture and uterine rupture)
- 10. Shoulder or transverse lie
- 11. Severe acute maternal morbidities (SAMMs) include complications that are 'absolutely' life-threatening using concepts of organ failure and lifesaving surgery—such that women who experience these problems are unlikely to survive if they do not receive care in a hospital (Ronsmans, 2009).
- 12. Near-miss is defined by the WHO as "a woman who nearly died but survived a complication that occurred during pregnancy, childbirth or within 42 days of termination of pregnancy" (Say et al., 2009), or to put more simply, "... women are considered near-miss cases when they survive life-threatening conditions (i.e.

organ dysfunction)" (WHO, 2011). The criteria to determine a near-miss condition are based on organ-system dysfunction or failure versus disease-specific or intervention-specific criteria as the organ-based criteria are found to be more specific in identifying real severe acute maternal morbidity cases (Say et al., 2009). The organ-system-based criteria include cardiovascular, respiratory, renal, coagulation/haematological, hepatic, neurological, and uterine dysfunction (WHO, 2011).

Causes of Maternal Mortality and its Implications for Public Policy

Direct Causes: There are several causes of maternity death, where some causes are direct and some others indirect. Among the direct causes, haemorrhage and hypertension account for about half of the death of expecting mothers. There are some other direct causes such as obstructed red labor, complications of anaesthesia and caesarean, etc. This problem in the maternity stage causes 11 % of the total maternal deaths. In this case, Malaria, HIV/AIDS, and heart diseases are encountered as indirect causes of maternity deaths and consist of 18% of the total deaths. It is a matter of hope that a major portion of these deaths is avoidable. For example, haemorrhage can be prevented by the proper administration of a skilled health care practitioner and with adequate equipment and supplies.

It is also hopeful that the rate of people receiving skilled healthcare assistance during the pregnancy period is increasing day by day. When only 53% of the women were getting practitioner's assistance in 1990, it grew to 63% in 2008. The improvement was all over the world, but amazing in Northern Africa and South-Eastern Asia. The percentage was 74% and 63% respectively. But unfortunately, sub-Saharan Africa didn't progress as par; less than half of the expecting mothers get the attention of skilled practitioners. (Millennium Development Goals Report 2010, Goal: 5)

Indirect Causes: Poverty is the key determiner of maternal health and mortality: In 2000, "Improve Maternal Health" was adopted as the Goal-5 of MDGs, with two distinct targets: to reduce maternal mortality ratio (MMR) three-quarters by 2015, and to achieve universal access to reproductive health by 2015. But a decade afterwards only a 2.5% MMR decline was observed, too little gain to achieve the target. Most maternity deaths occur due to complications at the period of pregnancy, at delivery or post-delivery within 6 weeks. So they can be easily avoided just by the timely availability of health care services. Different initiatives are necessary to ensure the availability of antenatal, delivery and postnatal services. But it is surprising that most of the researches on maternal healthcare services focuses on the first two, whereas the third one is neglected.

A Demographic and Health Survey (DHS) of 55 countries in the mid-1990s found, women in the richest quintile, 5.2 times more interested to give birth with the attendance of a doctor, nurse, or midwife than women in the poorest quintile. Except for Europe and Central Asia, in other poorest regions, less than 50% of women get the opportunity to give birth with support from a medically trained person. On the other hand, 80% or more

women in the highest wealth regions give birth in the attendance of trained personnel. On average, just about 22% of women in South Asia and less than half in sub-Saharan Africa give birth in the presence of trained and skilled practitioners. The above scenario exhibits that, the poorest women in the poorest regions of the world get the least access to maternal health care services (Saurel-Cubizolles, Romito, Lelong and Ancel, 2000).

Conclusion and Policy advocacy

The study examined the implication of poverty on maternal health in Nigeria, with a particular focus on the rural population. As an indirect cause of maternal mortality, the review stressed that poverty is the key determiner of maternal health and mortality among rural women. Based on the findings of this study, the following recommendations were made.

- 1. The government must design and implement policies to improve economic opportunities for the household in rural communities. These policies must be focused on the poorest segment of the community.
- 2. Families should pay particular attention to nutritional-related issues as these are very vital to the health of the family.
- 3. Pregnant women should be mindful of their meals by ensuring that adequate or recommended quantities of the different types of nutrients are met.
- 4. During the postpartum period, nursing mothers should endeavour to always go on a balanced diet as well as feeding well to be able to take care of themselves and the newborn babies.
- 5. Hospitals and other health institutions should step up the level of awareness on nutrition and maternal health in order to equip the less educated women in this direction.
- 6. Agriculture sustains the rural economy. Presently, "a lack of development and the dependence on imported foods all hinder the development of agriculture in Nigeria" (Felix and Anam, 2018). It is important to develop the agricultural sector.

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