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Prevalence Of Maternal Moterlity And Its Associated Risk Factors In Nigeria: A Systematic Review

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Abstract:

Background: The maternal mortality ratio (MMR) in many low- and middle-income countries is alarming, with Nigeria and India accounting for over two third of all maternal fatalities worldwide. Nigeria has one of the world highest maternal mortality rate, accounting for about 20% of all maternal deaths worldwide. The rate of maternal mortality is 814 deaths per 100,000 births in Nigeria. The purpose of this study was to assess the prevalence of maternal mortality ratios (MMRs) in Nigeria and to identify the risk variables linked with maternal fatalities.

Methodology: The searches were done in the databases of GLOBAL HEALTH, MEDLINE, PUBMED, WEB OF SCIENCE, PRO-QUEST, CINAHL, and EMBASE. References from the studies that were identified were checked. Eligible studies were those that involved identifying causes and associated risk factors of maternal mortality and interventions on reducing the rate of (MMRs) in Nigerian, as well as those that reported on health outcomes and used a controlled study design. In order to eliminate studies, the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) checklist was employed, and the available evidence was critically appraised in accordance with the study's aim.10 full-text publications were chosen from the 45 articles, and 5 articles were eventually included in the study.

Results: According to the findings of this study, medical and non-medical factors, education, poverty, patient related and institutional variables, unsafe abortion, eclampsia and hemorrhage are all linked to increased maternal mortality. The majorities of maternal deaths are caused by women who choose to give birth with unskilled birth attendants rather than trained medical professionals. The more educated women are, the more they seek Skill Birth Attendant (SBA) support, according to statistics.

Conclusion: Maternal mortality rate prevalence in Nigeria is relatively high, due to insufficient basic healthcare, the frequency of antenatal care (ANC) visits, prenatal care, the location of delivery, eclampsia, hemorrhage, illiteracy, medical and non-medical factors are all linked to increased maternal mortality in Nigeria. Improvements in institutional management and adoption of measures to improve women's socioeconomic status, health education, as well as the development of the health-care system will allow women to seek adequate and prompt evidence-based pregnancy care should all be part of the effort to reduce MMR in Nigeria.

Keywords: Prevalence of Maternal Mortality, Antenatal Care, Maternal Mortality ratio, Causes of Maternal Mortality and systematic review.

I. INTRODUCTION

The 17 worldwide objectives to combat environmental degradation, inequality and poverty including more concerns by 2030 were initiated by the United Nations (Bongaarts, 2016). The 193 countries that have formally endorsed the Sustainable Development Goals (SDGs) structure demonstrated unprecedented global cooperation in the history of humanity. Sustainable Development Goals (SDGs) represent a structure and roadmap for the accomplishment of

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lifelong worldwide prosperity by obliging member countries to take both individual and collective action. The MDGs, which were in effect between 2000 and 2015, have been replaced with the Sustainable Development Goals (SDGs). A country is considered to be low-income if its 2020 Gross National Income (GNI) per capita, as determined by the World Bank Atlas method, is less than $1,045.

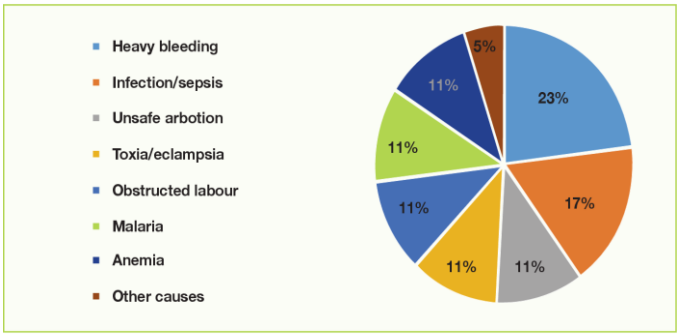
Nigeria is a low income country and the world's most populous black country with a GNI of $2400 in 2022 and $2500 in 2023. The low-income nation in question is Nigeria, where maternal deaths related topic is a public health concern. It was discovered that SDG 3 exists. SDG 3 targets to reduce the global maternal mortality rate to fewer than 70 per 100,000 live births by 2030 in this context. Nigeria has one of the highest maternal mortality rates in the world with an estimated maternal death rate of 814 deaths per100, 000 live births. Not only did Nigeria fail to fulfill the 5th objective of the Millennium Development Goals, which called for a 75 percent reduction in maternal mortality in 2015, but it also suffered some considerable rise in maternal mortality, according to new World Health Organization forecasts (Olonade et al., 2019). This is due to the fact that the country's average indicator for attaining safe motherhood has remained the same over the past decade. Birth control frequency rate has remained low at 10%; pregnant women's antenatal attendances have remained at 64%; and skilled birth attendance has remained among the lowest in Sub-Saharan Africa at 33%. It's no surprise that Nigeria has made no significant progress in reducing maternal death over the last decade, given its dismal maternal and reproductive health indicators.

The total number of maternal mortality worldwide has reduced by 45% since 1990, from 523,000 to 289,000 in 2013. Similarly, global MMR has decreased by 45% from 380 maternal fatalities per 100,000 live babies in 1990 to 2010 in 2013, a 2.6% yearly fall. Between 2005 and 2013, global MMR fell by 3.3% each year, faster than the 2.2% yearly reduction seen between 1990 and 2005 (WHO, 2006). There is need for substantial work to be done, particularly in low-income countries, to reduce unnecessary maternal fatalities (Ntoimo et al., 2018). Relevant stakeholders have backed this position, resulting in the present Sustainable Development Goals (SDG) target of less than 70 maternal deaths per 100,000 live births by 2030, as a consolidation of MDG strategic successes.

Improved socioeconomic level has a direct impact on maternal mortality, but it is mediated by a complex interaction of factors including; improved greater health status, improved access to healthcare, health and reproductive attitude as well as various other undiscovered apparatus. For instance, in Nigeria, the most important intermediate risk factor in maternal death has frequently been highlighted by the examination of hospital based as a delay in obtaining medical care, which is primarily experienced by women from lower socioeconomic classes.

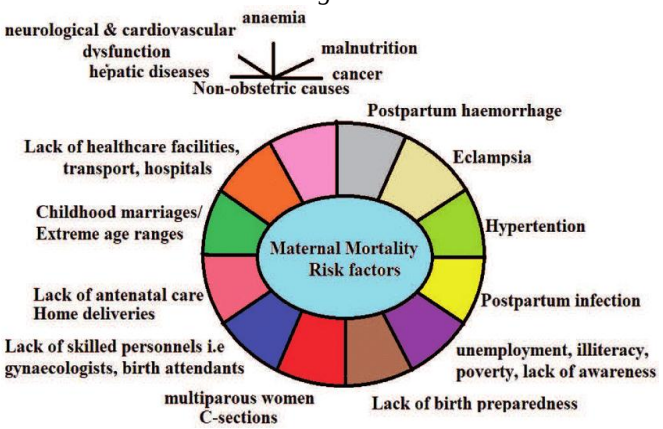
When indices like type of housing, educational level and income measure are employed in Nigeria, multiple research have revealed that maternal mortality is more common among women in the lower socioeconomic class (Kullima et al., 2009). In fact, (Harrison, 1985) found that education was a key driver of maternal mortality in Nigeria in his study of 23,874 successive delivery in Zaria. Maternal mortality was as low as it was in other high income

Nation's amidst a sample of expectant women with at least a secondary education.



Source: FGN & UNDP

Figure 1: Fact about Maternal Motility Rates in Nigeria Diagram



Source: I Download Scientific Diagram

Figure 2: Risk factors associated with maternal death

The majority of deliveries in Nigeria take place in the homes of traditional birth attendants (TBAs) or in poorly managed private hospitals due to poor health care system. Women in labor who are experiencing life-threatening difficulties are frequently referred to secondary and tertiary hospitals (referral hospitals), where they are treated as obstetric emergencies.

SCOPE OF THIS SYSTEMATIC LITERATURE REVIEW

The systematic review scope will include determining the frequency and associated risk factors for maternal health in Nigeria, such as medical and non-medical factors, illiteracy, gender equality, lack of access to health care, poverty, inadequate primary healthcare and others, utilizing relevant authors, recognizing prior studies, pointing out inconsistencies (conflicts in earlier studies, research gaps, open questions left over from other research), and pointing out the relationships connecting the factors.

RESEARCH QUESTION

Population Effect and Outcome (PEO) was used in developing the research questions

- ✓ What is the rate of maternal mortality prevalence in Nigeria?

- ✓ What are the associated risk factors to maternal mortality rate in Nigeria?
- ✓ What is the significant relationship between maternal death and maternal education in Nigeria?

In 2017, over 810 women died daily from needless causes related to pregnancy and childbirth, with 94% of all maternal mortality occurring in low-income nations including 16 other nations in Sub-Saharan Africa reported very high MMR in 2017 (WHO, 2019). The fact remains that countries with high MMR are largely in Africa that was what inspired this research topic. The figure of maternal deaths among this group must be established so that it will help in achieving the SDG 3.1 target. If it is novel, it will be determined by the literature study that follows. The findings of the evaluation are appropriate for any conventional review approved board for research. The research findings are keys for systematic comprehension because they have the potential to reduce the figure of Nigerian women die through maternal child bearing. The results could be used to establish health policy, and the research could be bettered.

AIMS OF THE STUDY

The goal was to determine how SDG 3 execution will influence MMR in Nigeria, as well as the prevalence and risk factors for maternal fatalities, by compiling data from recent articles and using it to evaluate SDG 3.1's success in Nigeria and make potential recommendations for areas to upgrade and strategic plans that stakeholders could carry out in other to reduce MMR in Nigeria.

II. METHODOLOGY/METHODS

Prevalence of maternal mortality, maternal mortality ratio, causes of maternal mortality, Nigeria, systematic reviews was all utilized as keywords. And and Not are two of the Boolean instructions that were employed. Lacks of access to health care, education are all phrases that have been utilized. Articles and reports on maternal health in Nigeria, articles discussing the associated risk factors of MMR in Nigeria, articles discussing maternal health prevalence, articles published within 2000 to 2021, research study written in English and both quantitative and qualitative studies were used as inclusion criteria. Articles with emphases other than Nigeria, studies and reports without a emphases on maternal mortality in Nigeria, articles without emphases on associated MMR risk factors in Nigeria, articles with emphases on refugees, studies published before 2000 or after 2021 and articles not written in English were all excluded. The articles were critically appraised using the CASP checklis

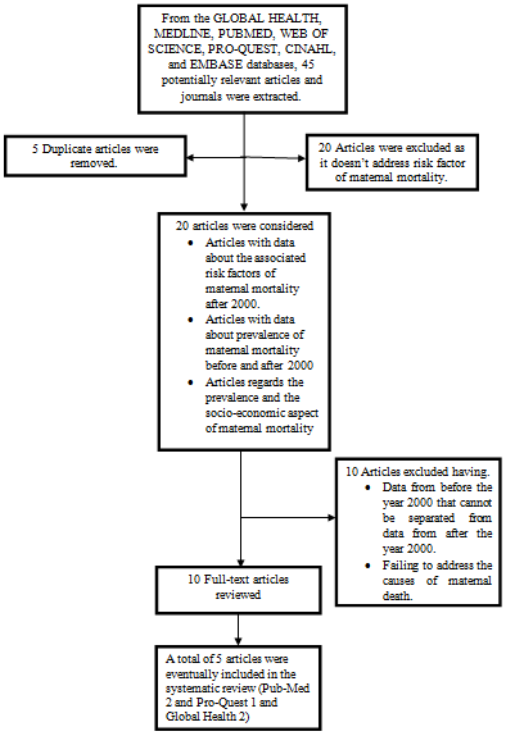


Figure 3: Flow chart of the review

III. FINDINGS/RESULTS

HEALTHCARE

Healthcare services are the main variables that appear in all of the studies. Women in Nigeria are faced with several problems such as access to health facilities, insufficient basic healthcare, lack of qualified birth attendants, the frequency of antenatal care (ANC) visits, prenatal care, and the site of delivery have all been associated to higher maternal mortality in Nigeria. Seventy-five percent of women gave birth at a place other than a hospital (Fawole et al., 2011). According to (Kullima et al., 2009), experts concur that births in a health facility by skilled birth attendants decrease the risk of maternal fatality significantly. Enhancing family planning, postnatal care and prenatal care (ANC) may also help to reduce maternal mortality. Medical and non-medical variables are two major reasons or factors that contribute to increased maternal mortality in Nigeria.

Manpower shortages like, delays in referrals, trained birth attendants, cultural beliefs/practices, setback in seeking care, setback in reaching locations of care, poverty; negligence in detecting danger indicators, lack of equipment/medications/blood and insufficient power supply are all non-medical variables. Ruptured uterus, during or after delivery hemorrhage blood loss, miscarriage, abortion problems, infection, pregnancy-induced hypertension, and protracted obstructed labor are some of the medical causes. One of the most important strategies for reducing maternal and neonatal deaths is the healthcare center's intrapartum care which entails trained skilled workers managing labor, successfully managing difficulties and being supported by effective referral systems for specialized care when needed, as

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well as an effective postnatal care package. Increasing the frequency of births attended by competent birth attendants such as nurses, midwives and doctors who are well-versed in safe delivery care is a critical strategy to enhance mother and child health in Nigeria.

EDUCATION

Education was found to have a significant impact on boosting health-care utilization, empowering women and increasing birth spacing according to the study. 83% of women who died as a result of complications during pregnancy were illiterate (Bauserman et al., 2015). Higher levels of education and income quintiles among women will both contribute to the usage of SBAs during delivery (Piane, 2009)

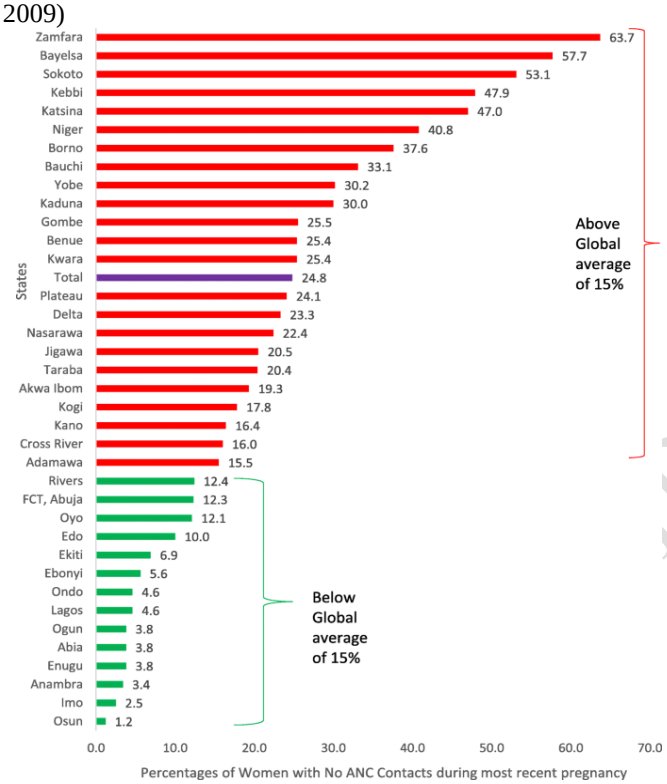
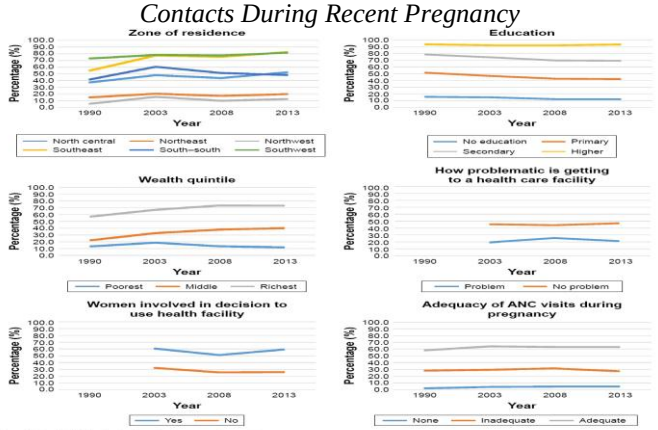


Figure 4: Diagram on Percentage of Women with no ANC Contacts During Recent Pregnancy



Source: Dove medical Press

Figure 5: Trends in SBA utilization by selected women characteristics. Abbreviation: ANC. Antenatal Care: SBA, Skilled Birth Attendant

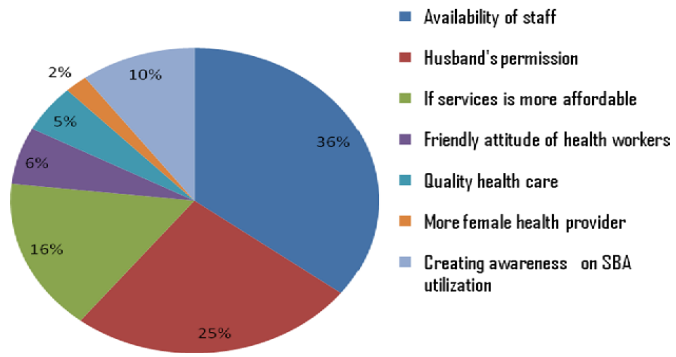


Fig. 1. Enablers to SBA utilisation.

Source: NFG & UNDP

Figure 6: Enablers to Skilled Births Attended Utilization

According to the study, more than 39.7% of women with a high school diploma or higher utilized ANC, compared to 60.3% of women with no education (Kawuwa, Mairiga, and Usman, 2007). Women who were aware of pregnancy warning signs were 31.3 percent more likely to explore ANC services than those who were not 69.2%. Women with small media knowledge were in the minority, while having the lowest percentage of ANC use 50.4%. Education has a positive impact on ANC visits, as seen in Fig 5.above. According to (Mairiga and Saleh, 2009), their study of factors impacting SBA utilization and facility births highlights the importance of education, infrastructure such as communication and transportation networks including strengthening of the health system. In cities, the percentage of people that utilize SBA and ANC is higher than in rural areas (Rabiu et al., 2018). Underutilization of ANC was found to be 47.4% in Nigeria, 61.1% in rural areas, and 22.4% in urban areas (Adewuyi et al., 2018).

Maternal and other mortality in Nigeria is increasing dramatically, and the disparity within rural and urban areas is troubling, with all maternal death indicators being higher in the north than in the west. According to (Okonofua, Abejide, and Makanjuola, 1992), states that a considerable disparity exists between rural and urban areas, as seen by statistically higher maternal death metrics in Nigeria, such as the maternal mortality ratio and rate. In a separate community survey, it was determined that skilled ANC usage is at 68%, with 73% of users having four visits, which is like the national average of 61% skilled ANC usage and 81% of users having four visits (Onyeajam et al., 2018).

POVERTY

According to some sources, women in lower-income countries receive weaker prenatal care and competent birth attendance, as well as reduced service provision in Nigeria's northern area (Azuh et al., 2017). There is a link between the husbands's on the utilization of prenatal care, family planning and the woman's birth in a Nigerian healthcare facility.

A relationship amidst family income/wealth and women's healthcare use has been established in several studies (Folorunso, 2019). There are link between the figure of ANC attendance, family wealth, and the location of the baby's birth (Kawuwa, Mairiga, and Usman, 2007). In contrast to individuals that had four or more ANC attendance or were in the wealthiest quintile, those that had no prenatal visits or

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were in the lowest quartile had a twelvefold increased chances of having a non-institutional delivery. After searching notable variables, women that had no ANC attendance were eight times more probable to have a non-institutional delivery than those who had five or more and women in the poorest households were four times more probable to have non-institutional delivery than those in the richest households, making antenatal visits the most notable determinants of institutional delivery (Onyeajam et al., 2018).

REMOTENESS

Cities have a higher proportion of people using SBA and ANC than in rural areas. According to (Okonofua, Abejide, and Makanjuola, 1992), the disparity between urban and rural areas is startling, with all maternal mortality indicators substantially greater in rural areas than in urban areas. As evidenced by statistics on maternal mortality indicators, such as the maternal mortality ratio and rate in rural areas, a significant imbalance between rural and urban areas exists (Okonofua, Abejide, and Makanjuola, 1992).

CONFLICT

According to (Azuh et al., 2017), state that the conflict in Nigeria has severely hampered reproductive, maternal, neonatal, child, and adolescent health and nutrition (RMNCAH&N) services delivery in recent years in Nigeria, maternal mortality has not declined significantly beginning with 1,200 mortality per 100,000 live delivery in 2000 to 814 mortality per 100,000 live delivery in 2020 (Igwegbe et al., 2011). Due to a lack of development and adequate management in the healthcare system, the MMR has increased, resulting in a decline in skilled birth attendance from 45% in 2000 to 35.8% in 2019. Nigeria, on the other hand, has seen a steady hike in violence and insecurity since 2011. This had a substantial effect on all elements of the healthcare system, resulting in the closure of several healthcare facilities and increased restrictions on service access, particularly for women and children.

Authors Name & Date	Title of Study	Aim	Study Design	Method	Main Findings	Strengths	Limitations	Critical Appraisal Tools Used
Okonofua, F.E., Ogu, R.N., Ntoimo, L.F., Galadanci, H.S., Gana, M., Okike, O.N., Agholor, K.N., Abdus-Salam, R.A., Durodola, A., Abe, E. and Randawa, A.J. (2018).	Prevalence and Risk Factors for Maternal Mortality In Referral Hospitals In Nigeria	The goal of the multisite study was to evaluate maternal mortality ratios (MMRs) and risk variables for maternal fatalities in Nigerian referral health facilities.	A National Multi Center Study	A pretested study protocol was used to collate data and analyzed it centrally using univariate, bivariate and multivariate statistics. Ethical approval was received from the World Health Organization and the National Health Research Ethics Committee (NHREC) of Nigeria	MMR in hospitals was 2,085 per 100,000 live births (range: 877–4,210 per 100,000 births), according to the findings. Several covariates were discovered to increase the risk of maternal death; however, after controlling for confounding, only five factors remained	The research design was appropriate for the study's goal, the data collection and analysis including the methodology was adequate because it also answered the specific question. Six secondary schools and two tertiary hospitals provided data for this	The study's biggest limitation is its retrospective nature, which means that not all obstetric problems and maternal mortality may have gone unnoticed due to poor hospital record keeping. The use of a limited database, the exclusion of grey literature, and the	Critical Appraisal Skills Programme Tools (CASP)
							significant in the logistic regression model.	study. Stata version 12 (Stata Corp LP, College Station, TX, USA) for windows was used to conduct descriptive, bivariate, and multivariate analyses, which were all part of the study's strength.	exclusion of papers published in languages other than English is also part of the limitation of the study.	
Lawrence, A.W., Ihebuzor, N. and Lawrence, D.O. (2020).	Some Challenges Militating against Developing Countries Achieving SDG 4 on Targets: Nigeria	Fishbone and problem tree analysis, along with qualitative descriptive evaluation of the seven Sustainable Development Goal 4 targets and the three enabling targets, were used to identify critical factors of inadequate funding, low enrollment in schools and the number of children who are not in school, and inadequate school infrastructure.	A Case Study	Fishbone and Problem Tree Analysis Method.	According to the conclusions drawn from the texts examined, there are bottlenecks and challenges in the delivery of basic education services in Nigeria as a result of the interaction of several supply and demand side factors.	The methodology, data collection, and analysis were sufficient since they provided a response to the particular question, and the research design was suitable for achieving the purpose of the study. Root problem identification, prospective solution selection, and problem resolution sequencing are all aspects of the study's strength that all of the methodologies lend themselves to easily interactive deployment by teachers and other stakeholders	The study's main flaw was that it failed to fully explain how these bottlenecks and limitations interacted and affected one another; instead, it essentially listed them. Stopping at underfunding leaves additional issues that fall under that heading's umbrella unaddressed this was part of the limitation.	Critical Appraisal Skills Programme Tools (CASP)
Adewuyi, E.O., Auta, A., Khanal, V., Bamidele, O.D., Akuoko, C.P., Adefemi, K., Tapshak, S.J. and Zhao, Y. (2018).	Prevalence and factors associated with underutilization of antenatal care services in Nigeria	The study aim was to investigates the prevalence and factors associated with underutilization of ANC services with a focus on the differences between rural and urban residences in Nigeria.	A Cross Sectional Study Design	Stratified Sampling Method	Maternal and husband's education levels, region of residence, wealth index, maternal age, frequency of watching television, distance to- and permission to visit health facility	The research design was appropriate for the study's purpose, and the data collection and analysis, as well as the technique, were sufficient in answering the specific questio	Some little missing data and the use of complex samples statistics in data analysis to account for sample weight and cluster design of the dataset employed. The cross-sectiona	AXIS

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					were all found to be substantially linked with ANC underuse in both rural and urban settings.	n. The use of recent nationally representative datasets, a high response rate, and data disaggregation into rural and urban areas. Furthermore, given the survey's huge sample size, data disaggregation does not jeopardize generalizeability.	l structure of the survey made estimating a causal relationship impossible. Second, because the data in this study was self-reported and collected retrospectively, it was susceptible to social desirability and recollection bias.	
Onyeajam, D.J., Xirasagar, S., Khan, M.M., Hardin, J.W. and Odutolu, O. (2018).	Antenatal care satisfaction in a developing Country, Nigeria.	The study aim is to identify self-reported patient satisfaction provider and facility-specific factors that can be improved to increase ANC satisfaction and utilization.	A Cross-Sectional Study	Stratified Sampling Method	Patient satisfaction was positively associated with responsive Service, and ANC satisfaction was negatively impacted by out-of-pocket payment for care (vs. free care, AOR 0.44, 95% CI 0.23–0.82) in Nigeria.	The research design was appropriate for the study's goal, and the data collection and analysis, as well as the methodology, were sufficient because they answered the specific question. The availability of equipment and pharmaceuticals, sufficiency of clinical care, empathic and non-discriminatory environment, and convenience of access to treatment in healthcare facilities and prenatal patients' satisfaction with care were part of the strength of the study.	The low number of patients interviewed in each facility, lack of combine information on the facility's official charges. The absence of data on language concordance between providers and patients. The inability to interact successfully with the patient due to a language barrier could be mislabeled as an interpersonal communication problem are all part of the limitation of the study.	AXIS
Azodoh (2020).	Quality of Antenatal Care Services in Primary Healthcare Centers in the Federal Capital Territory, Abuja, Nigeria	To assess the quality of ANC services in primary healthcare centers (PHCC) in the Federal Capital Territory (FCT), Abuja, Nigeria.	A Cross Sectional Study Design	Stratified Sampling Method	This study found that 76.9% of PHCC ANC users in FCT received desirable quality ANC services with a	The research design was appropriate for the study's purpose, and the data collection and analysis, as well as the methodology, were sufficient. Part of the strength of	Low attendance of participants was the major limitation of the study	AXIS
							NPS of 53.8% on the satisfaction of users. In addition, 16% of the attendees did not receive any of the ten ANC components considered in this study.	the study was the analyzing of data using Microsoft Excel and Statistical Package for the Social Sciences (SPSS) software and there was no bias in the study

IV. DISCUSSION

Following the critical appraisal of the aim of these study findings on the prevalence of maternal mortality and its associated risk factors in Nigeria, it was discovered that study design was found to be relevant to the goals and the approach utilized was suitable in addressing the study research objectives, while the findings were recommendations to resolve the implications and concerns of MMR in Nigeria. The research shows that there are two primary significant factors that are influencing maternal mortality in Nigeria which includes; Medical and Non-medical factors ("healthcare, education, poverty, conflict and remoteness").

Hemorrhage which is the loss of blood during or after delivery), ruptured uterus, infection, abortion problems, pregnancy-induced hypertension, and prolonged obstructed labor are only a few of the medical explanations. Non-medical problems include cultural beliefs/practices, labor shortages, competent birth attendants, poverty, delays in seeking treatment, delays in reaching care locations, delays in referrals, failure to notice danger indicators, a lack of equipment/medications/blood, and a lack of power.

The study's five papers also demonstrate how these factors are interconnected; for example, in Nigeria, women's education and information influence the figure of ANC attendance. The number of women serviced by SBA is similarly influenced by their level of education. As a result, education plays a crucial role in the delivery of healthcare. Seven of the 10 research in this review focused on health-care issues, demonstrating that health-care is the most important factor impacting maternal mortality in Nigeria. Education is as old as humanity itself, and it is the most crucial factor in a person's development (Lawrence, Ihebuzor and Lawrence, 2020). Education has provided the competencies, knowledge and skills that have enabled human race to evolve from the stone era to the industrial age, and then to the computer/internet age, as well as the leapfrogging of technological innovations and changes.

According to the findings, women of lower socioeconomic position have a much higher incidence of delay in maternal fatalities than women of higher socioeconomic grade. It demonstrates that the maternal death cases have lower educational accomplishment, as well as a higher incidence of illiteracy and poverty. According to (Karlsen et al., 2011), states that the higher educated women are more likely to choose the proper healthcare center and to report pregnancy issues in a timely manner

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Both directly and indirectly, maternal mortality may be related to education. It is anticipated that as women's educational attainment rises, so will their capacity to receive, process, and comprehend basic health information about the advantages of good prenatal care and the reproductive health services needed to make optimal health decisions. More educated women, for example, may be less probable to receive traditional clarifications for life and death in favor of receiving comprehensive information about birth length, signs of pregnancy difficulties and the need to better their dietary status to minimize the risk of iron insufficiency anemia, all of which are critical in the effort to reduce maternal deaths. (Karlsen et al., 2011). Women's education alters the dynamic of family connections by potentially lowering maternal mortality rates (Karlsen et al., 2011). The increased risk of maternal mortality amidst married and non-married/copulating women reflects the ways in which women's social and economic leadership limitations, as well as attitudes toward childbearing outside of marriage, influence women's lives. Furthermore, better educated women are more probable to feel comfortable asking questions regards their healthcare requirements and to be heard by healthcare experts. It increases women's confidence and consequently empowerment to make well-being resolutions may be the indirect association between educational levels and maternal deaths. Women's increased access to education reflects their more equal status in society. The significance of progress in regards to MDG 3, which promotes gender equality and female empowerment, notably in education, for achieving MDG5 should not be overlooked. More highly educated women have more control over the number of children they give birth to, their dietary during pregnancy, and their access to healthcare because of the links between education and socioeconomic status.

STRENGTHS / LIMITATIONS

The studies clearly addressed the research questions and the aims. The databases that were used for the data collations and the methodology were appropriate. The use of highly regarded databases to carefully and thoroughly search for the appropriate literatures, as well as replicable and systematic data extraction using the required checklist to reduce errors were among the study's strengths. The comparison of various study designs and adherence to other recommendations, Utilization of Statistical Package for Social Sciences (SPSS) version 24.0 (IBM SPSS Inc.), STATA 12 program and others that were used for data analysis were all part of the strength of the study. The most significant limitations of the study were the lack of randomized control trial studies on the topic, which could be due to the country's security challenges. Due to the key word terms used to locate acceptable research from the database search engine, the study's validity and reliability were limited as some relevant studies may have been omitted. No data collation was conducted in a language other than English. Nigerian Maternal Mortality survey was not recorded in 2017-2018; because there was no data collated from various conflicts affected and unstable rural areas in the country's northern region this were all part of the limitations of the study.

GAPS IN KNOWLEDGE

Most studies ignore the conflict in Nigeria. The conflict in Nigeria has had a negative impact on the MMR in the country, as previously stated. There is no documented data correlating women's formal job with their health, which could explain Nigeria's low female employment rate. Furthermore, none of the studies talked about postnatal care data in Nigeria. Few studies have looked at the influence on health as a function of age, and a variety of age groups have been used. A woman's risk of dying from a maternal cause is influenced by the number and timing of her deliveries. Its common knowledge that teenage first births at older age (42 - up) raises the chance of maternal death. Furthermore, women chances of dying from a maternal cause increase with the number of children she has. Fertility was only mentioned in a few studies.

V. IMPLICATIONS

According to (Onyeajam et al., 2018), states that during their previous pregnancy, half of the women didn't get two doses of tetanus toxoid immunization., and 16% had four or more ANC visits.. Consequently, over 75% of births were made at home without the use of SBAs, and over 70% of women did not get PNC. In terms of maternal health care provision and utilization, rural regions continue to lag behind urban areas. There is also a lot of room for improvement in terms of environmental health. Only one out of every thirty homes has access to improved sanitation, and nearly half of the population does not have access to decent healthcare or clean water. However, ensuring equitable access to health care remains a problem and current delivery procedure have serious transactional costs, putting their long-term viability in jeopardy. World Health Organization outlined some major complications that account for nearly 75% of all maternal mortality is;

- ✓ High blood pressure during pregnancy (pre-eclampsia and eclampsia)
- ✓ Unsafe abortion
- ✓ Severe bleeding (mostly bleeding after childbirth)
- ✓ Complications from delivery
- ✓ Infections (usually after childbirth)

Whether MMR reduces to 393 in 17 years, the chances of reaching SDG 3.1 in the following 8 years are slim, mainly considering worldwide pandemics, conflict and poverty. However, because of the development in worldwide technology, global health organization alliance, and increased funding from governments and other stakeholders, the objective may be achieved in the next 17 years. Some key obstacles that could prevent Nigeria from accomplishing this goal include inadequate education, out-of-school children, and long-term neglect of learning spaces and infrastructure, societal cultural norms, financing, income, a lack of health-care resources, poor education, employment, conflict, sanitation, and food are all key roadblocks to achieving SDG 3.1's objective of reducing maternal mortality to less than 70 per 100,000 live delivery.

VI. RECOMMENDATION

The government should make skilled birth attendants (SBAs) available in hospitals to minimize mortality from complications such as infections, high blood pressure throughout pregnancy, severe bleeding, delivery concerns, and unsafe deliveries. Access to skilled birth attendance (SBA) has to be improved, particularly through improved primary health care (PHC). To lower the risk of maternal death, there should be increased awareness of the need of antenatal visits by providing free health services and maternal welfare.

Efforts to prevent maternal fatalities should focus on empowering women to take charge of all areas of maternity care, particularly, women who have had past pregnancies, especially those with poor birth outcomes, should be considered. Women should receive maternal health education, family planning should be encouraged, and social safety nets should be established alongside with free or subsidizes maternal health care so that women don't miss out on the benefits of prenatal care owing to a lack of financial means.

Women should be encouraged to attend local schools to further their education. Gender preconceptions must be dismantled in order for women to have the freedom to determine when to have ANC checks and other healthcare decisions. Women should be allowed to work in other to be able to assist in some financial need of their families so that they can afford quality health care.

All detrimental cultural attitudes and actions toward women must be abandoned. Access to health care for the general public should be increased. The government should intervene in the health-care industry and make it free or provide some type of health-care subsidy to low-income people.

The Nigerian government and international organizations must invest in education, cultural transformation, in the economy, and social infrastructure on a long-term basis. A specified gender program should be implemented in order to promote maternal health.

Promotion of women's education on the need to give birth to fewer children, discouraging early marriage, family planning and increasing income measure is very important. This study was guided using the Preferred Reporting Items for systematic reviews and Meta-Analyses (PRISMA) guidelines (Liberati., 2009). More study is need in other to help in creating a high quality data via a better study design and processes as it will would assist in monitoring and analyzing Nigeria's existing MMR.

VII. CONCLUSION

Due to institutional and patient-related variables such as early marriage, lack of qualified birth attendants, insufficient primary healthcare, access to health facilities, unsafe abortion, insufficient basic healthcare, the frequency of antenatal care (ANC) visits, prenatal care, the location of delivery, eclampsia, hemorrhage, illiteracy, medical and non-medical factors are all linked to increased maternal mortality in Nigeria. According to this study conflict, leadership, economic, and social difficulties have impeded efforts to lower MMR in Nigeria.

Furthermore, ANC visits, SBA, and family planning are examples of socio-cultural habits that negatively impact health care services, and the government should endeavor to promote women's education and gender equality. This study finds out that there's need for improvements in institutional management, and adoption of measures to improve women's socioeconomic status, health education will help women to get a better understanding so that they can look for the right and timely evidence based pregnancy care, healthcare system strengthening should also be part of the effort to reduce MMR. In order for women to be aware of healthcare services, they must be given information. Health-care services must be available in rural areas just like the urban areas. More research is required to identify and discover a solution to Nigeria's high MMR estimates.

REFERENCES

[1] Ntoimo, L.F., Okonofua, F.E., Ogu, R.N., Galadanci, H.S., Gana, M., Okike, O.N., Agholor, K.N., Abdus-Salam, R.A., Durodola, A., Abe, E. and Randawa, A.J. (2018). Prevalence and risk factors for maternal mortality in referral hospitals in Nigeria: a multicenter study. International Journal of Women's Health, Volume 10, pp.69–76. https://doi.org/10.2147/ijwh.s151784.

[2] Fawole, A.O., Shah, A., Tongo, O., Dara, K., El-Ladan, A.M., Umezulike, A.C., Alu, F.E., Eniayewun, A.B., Fabanwo, A.O., Adewunmi, A.A., Adegbola, O., Adebayo, A.A., Obaitan, F.O., Onala, O.E., Usman, Y., Sullayman, A.O., Kailani, S. and Sa'id, M. (2011). Determinants of perinatal mortality in Nigeria. International Journal of Gynecology & Obstetrics, 114(1), pp.37–42. https://doi.org/10.1016/j.ijgo.2011.01.013.

[3] Ope, B.W. (2020). Reducing maternal mortality in Nigeria: addressing perception and experience of maternal health services. Journal of Global Health Reports, 4. https://doi.org/10.29392/001c.12733.

[4] Kullima, A., Kawuwa, M., Audu, B., Geidam, A. and Mairiga, A. (2009). Trends in maternal mortality in a tertiary institution in Northern Nigeria. Annals of African Medicine, 8(4), p.221. https://doi.org/10.4103/1596-3519.59575.

[5] Azuh, D., Azuh, A., Iweala, E., Adeloye, D., Akanbi, M. and Mordi, R. (2017). Factors influencing maternal mortality among rural communities in southwestern Nigeria. International Journal of Women's Health, [online] Volume 9, pp.179–188. https://doi.org/10.2147/ijwh.s120184.

[6] Onyeajam, D.J., Xirasagar, S., Khan, M.M., Hardin, J.W. and Odutolu, O. (2018). Antenatal care satisfaction in a developing country: a cross-sectional study from Nigeria. BMC Public Health, 18(1). https://doi.org/10.1186/s12889-018-5285-0.

[7] Lawrence, A.W., Ihebuzor, N. and Lawrence, D.O. (2020). Some Challenges Militating against Developing Countries Achieving SDG 4 on Targets: Nigeria as Case

Study. Modern Economy, 11(07), pp.1307–1328. https://doi.org/10.4236/me.2020.117093.

[8] Bauserman, M., Lokangaka, A., Thorsten, V., Tshefu, A., Goudar, S.S., Esamai, F., Garces, A., Saleem, S., Pasha, O., Patel, A., Manasyan, A., Berrueta, M., Kodkany, B., Chomba, E., Liechty, E.A., Hambidge, K.M., Krebs, N.F., Derman, R.J., Hibberd, P.L. and Althabe, F. (2015). Risk factors for maternal death and trends in maternal mortality in low- and middle-income countries: a prospective longitudinal cohort analysis. Reproductive Health, 12(S2). https://doi.org/10.1186/1742-4755-12-s2-s5.

[9] Karlsen, S., Say, L., Souza, J.-P., Hogue, C.J., Calles, D.L., Gülmezoglu, A.M. and Raine, R. (2011). The relationship between maternal education and mortality among women giving birth in health care institutions: Analysis of the cross sectional WHO Global Survey on Maternal and Perinatal Health. BMC Public Health, 11(1). https://doi.org/10.1186/1471-2458-11-606.

[10] Adewuyi, E.O., Auta, A., Khanal, V., Bamidele, O.D., Akuoko, C.P., Adefemi, K., Tapshak, S.J. and Zhao, Y. (2018). Prevalence and factors associated with underutilization of antenatal care services in Nigeria: A comparative study of rural and urban residences based on the 2013 Nigeria demographic and health survey. PLOS ONE, 13(5), p.e0197324. https://doi.org/10.1371/journal.pone.0197324.

[11] Bongaarts, J. (2016). WHO, UNICEF, UNFPA, World Bank Group, and United Nations Population Division Trends in Maternal Mortality: 1990 to 2015 Geneva: World Health Organization, 2015. Population and Development Review, 42(4), pp.726–726. https://doi.org/10.1111/padr.12033.

[12] Piane, G.M. (2009). Evidence-based practices to reduce maternal mortality: a systematic review. Journal of Public Health, [online] 31(1), pp.26–31. https://doi.org/10.1093/pubmed/fdn074.

[13] Mairiga, A. and Saleh, W. (2009). Maternal Mortality At The State Specialist Hospital Bauchi, Northern Nigeria. East African Medical Journal, 86(1). https://doi.org/10.4314/eamj.v86i1.46924.

[14] Olonade, O., Olawande, T.I., Alabi, O.J. and Imhonopi, D. (2019). Maternal Mortality and Maternal Health Care in Nigeria: Implications for Socio-Economic Development. Open Access Macedonian Journal of Medical Sciences, [online] 7(5), pp.849–855. https://doi.org/10.3889/oamjms.2019.041.

[15] Chukudebelu, W.O. and Ozumba, B.C. (1988). Maternal mortality in Anambra State of Nigeria. International Journal of Gynecology & Obstetrics, 27(3), pp.365–370. https://doi.org/10.1016/0020-7292(88)90114-2.

[16] Wright, K., Banke-Thomas, A., Sonoiki, O., Ajayi, B., Ilozumba, O. and Akinola, O. (2016). Opinion of women on emergency obstetric care provided in public facilities in Lagos, Nigeria: A qualitative study. Health Care for Women International, 38(6), pp.527–543. https://doi.org/10.1080/07399332.2016.1234482.

[17] Piane, G.M. (2019). Maternal Mortality in Nigeria: A Literature Review. World Medical & Health Policy, [online] 11(1), pp.83–94. https://doi.org/10.1002/wmh3.291.

[18] Kawuwa, M., Mairiga, A. and Usman, H. (2007). Community perspective of maternal mortality: Experience from Konduga local government area, Borno state, Nigeria. Annals of African Medicine, 6(3), p.109. https://doi.org/10.4103/1596-3519.55724.

[19] Folorunso, A.P. (2019). Improving Maternal Health: Maternal Morbidity and Mortality in Developing Countries. TEXILA INTERNATIONAL JOURNAL OF MEDICINE, 7(1), pp.1–11. https://doi.org/10.21522/tijmd.2013.07.01.art001.

[20] Igwegbe, A.O., Eleje, G.U., Ugboaja, J.O. and Ofiaeli, R.O. (2011). Improving maternal mortality at a university teaching hospital in Nnewi, Nigeria. International Journal of Gynecology & Obstetrics, 116(3), pp.197–200. https://doi.org/10.1016/j.ijgo.2011.10.023.

[21] Tasneem, S., Nnaji, A. and Artac, M. (2019). CAUSES OF MATERNAL MORTALITY IN NIGERIA; A SYSTEMATIC REVIEW. International Journal of Health Management and Tourism, pp.200–210. https://doi.org/10.31201/ijhmt.633942.

[22] Rabiu, K.A., Adewunmi, A.A., Ottun, T.A., Akinlusi, F.M., Adebanjo, A.A. and Alausa, T.G. (2018). Risk factors for maternal mortality associated with eclampsia presenting at a Nigerian tertiary hospital. International Journal of Women's Health, Volume 10, pp.715–721. https://doi.org/10.2147/ijwh.s178729.

[23] Okonofua, F.E., Abejide, A. and Makanjuola, R.A. (1992). Maternal Mortality in Ile-Ife, Nigeria: A Study of Risk Factors. Studies in Family Planning, 23(5), p.319. https://doi.org/10.2307/1966529.

[24] Adinma, E.D. (2012). Maternal and perinatal outcome of eclampsia in tertiary health institution in Southeast Nigeria. The Journal of Maternal-Fetal & Neonatal Medicine, 26(2), pp.211–214. https://doi.org/10.3109/14767058.2012.722708.

[25] Hussein, J., Hirose, A., Owolabi, O., Imamura, M., Kanguru, L. and Okonofua, F. (2016). Maternal death and obstetric care audits in Nigeria: a systematic review of barriers and enabling factors in the provision of emergency care. Reproductive Health, [online] 13(1). https://doi.org/10.1186/s12978-016-0158-4.

[26] Oladapo, O., Adetoro, O., Ekele, B., Chama, C., Etuk, S., Aboyeji, A., Onah, H., Abasiattai, A., Adamu, A., Adegbola, O., Adeniran, A., Aimakhu, C., Akinsanya, O., Aliyu, L., Ande, A., Ashimi, A., Bwala, M., Fabamwo, A., Geidam, A. and Ikechebelu, J. (2016). When getting there is not enough: a nationwide cross-sectional study of 998 maternal deaths and 1451 near-misses in public tertiary hospitals in a low-income country. Bjog, [online] 123(6), pp.928–938. https://doi.org/10.1111/1471-0528.13450.

[27] Ijadunola, K.T., Ijadunola, M.Y., Esimai, O.A. and Abiona, T.C. (2010). New paradigm old thinking: the case for emergency obstetric care in the prevention of maternal mortality in Nigeria. BMC Women's Health, 10(1). https://doi.org/10.1186/1472-6874-10-6.

[28] Piane, G.M. and Clinton, E.A. (2014). Maternal Mortality Interventions: A Systematic Review. Open Journal of Preventive Medicine, 04(09), pp.699–707. https://doi.org/10.4236/ojpm.2014.49079.

ISSN: 2394-4404

[29] Azodoh (2020). Quality of antenatal care services in selected primary health care centers in the Federal Capital Territory (FCT), Nigeria. The Anatolian Journal of Family Medicine. https://doi.org/10.5505/anatoljfm.2020.52724.