Socioeconomic Status, Utilization of Health Care Facilities and Maternal Morbidity in Abia State, Nigeria.

Ebere Augustine Ugwueje

Department of Sociology, Abia State University, Uturu.
Email:affwin64@gmail.com

ABSTRACT

Women in Nigeria are faced with considerably high chances of death due to life- threatening pregnancy-related disease complications. The growing burden of Severe Maternal Morbidity (SMM) risk is not only for the woman but also for her fetus/neonate who may suffer consequences of morbidity and mortality as well. These unfortunate deleterious maternal outcomes are said to be caused by many factors. Thus the objective of the study was to identify the socioeconomic, demographic and health care-related factors associated to the prevalence of maternal morbidity in Abia State. This paper was guided by the functionalist theory that posits that for a successful pregnancy/maternal outcome, there must be a conscious working together of all the interrelated stages of pregnancy.This study focused on hospital auditing, and cross-sectional population-based study and data collected from representative sample of women attending antenatal clinic in selected public health care facilities using a mixed- method research design. The Researchers found that for indirect morbidity, the most prevalent complication among the pregnant women in the sample was malaria. For direct obstetric morbidities, prolonged labour with 32.8 per cent of patients was the highest of all the complications; followed by complication of hypertension, and bleeding. Though there was no statistical significant relationship between social status of women and morbidity, it was observed that once the complication sets in, the social status of the woman/inequalities affect the health seeking behavior including the decision to seek for care, where to go and when to start antenatal. Considering the existing health inequality observed in the study area, the study recommended redressing such inequalities in education; housing; employment; living wages; access to health care; access to healthy foods especially for women and children.

Keywords: Socioeconomic Status, Severe Maternal Morbidity, Mortality, Health inequality

INTRODUCTION

Though the perinatal and postpartum periods are a time of risk for women everywhere, pregnant and postpartum women in Nigeria are faced with considerably high chances of death thanthose of their counterparts in the developed and many other developing countries. This is due to very poor health care infrastructure and uptake of health care services by women in Nigeria. According to the World Health Organization [1,2], approximately 830 women die every day from preventable causes related to pregnancy and childbirth; and more worrisome is the fact that 99% of all maternal deaths occur in developing countries. For instance, when, for every 1 maternal death in the United States of America, as much as 50–100 women experience Severe Maternal Morbidity (SMM), and many more women experiencing life-threatening complications [3,4,5,6,7]. This holds a serious public health threat.

Research has shown that for rich and poor countries, health and disease are directly associated with socioeconomic status: the worst the status, the worst the quality of the health [1]. The relationship between socioeconomic status and the quality of health is obvious in Sub-Saharan Africa (SSA) where the highest burden of Severe Maternal Morbidity (SMM) estimates are as high as 198 per 1000 live births and hemorrhage and hypertensive disorders are the leading conditions contributing to SMM across all regions [8,9,10]. Nigeria is one of the countries in Sub-Saharan Africa where maternal morbidity and mortality has remained a problem. The country's progress towards cutting down the number of maternal deaths has been largely insufficient [11,12,13]. Maternal mortality persists in Nigeria despite strategies like the promotion of institutional deliveries, and training and deploying of new skilled health workers. In Nigeria maternal mortality has

been a big problem. The nation is among the top six countries in the world that contribute to more than 50% of all global maternal deaths [14,15]. For example, in 2008, Nigeria had the second largest recorded number (50,000) of maternal deaths with an estimated MMR of 840/100,000 live births [16]. The Nigeria Demographic and Health Surveys (NDHS) revealed a national MMR of 576 deaths per 100,000 live births and 545 deaths per 100,000 in 2013 and 2008 respectively [17]. The figures show that the rate is declining though at very slow rate. According to Dr. OsagieEhanire, Nigeria minister of health, Nigeria has the worst maternal mortality rate in the world recording 512 maternal mortality per 100,000 births now [4]. This picture reveals that there is a growing burden of maternal morbidity and consequent mortality among women. Severe maternal morbidity (SMM) risk is not only for the woman but also for her fetus/neonate who may suffer consequences of morbidity and mortality as well. Adverse delivery outcomes occur at a higher frequency among women with SMM [18,19,20,21]. The unfortunate deleterious maternal outcomes like maternal death and severe maternal morbidity calls for research efforts to identify the social and other underlying factors that causes high maternal morbidity and deaths. This study focused on hospital auditing, and cross-sectional population-based study given thathealth information in Nigeria is still scarce. Therefore, the general objective of this study is to identify the socioeconomic, demographic and health care-related factors associated to the prevalence of maternal morbidity in Abia State [22]. Specifically, to assess the nature and extent of maternal morbidity in Abia State; ascertain the socio-economic factors associated with maternal morbidity ; identify the relationship, if any, of the social status of women and the role of the ,significant others in the network of social relations in decision to seek health care; ascertain the socio-economic factors associated with failure to seek care in a situation of maternal morbidity in Abia State; and identify the socio-economic factors that act as barrier to prompt and effective treatment of emergency obstetric patients in Abia State.

Hypotheses tested include:

1. There is no significance relationship between the social status of women and their utilization of modern health care facilities for antenatal care.
2. There is significance relationship between the social status of women and obstetric morbidity.
3. Decision to seek health care is vested on significant others than on the patients.
4. Differences in maternal outcome results mainly from the management of delivery in health facilities.

Conceptual Clarifications/ Theoretical Framework

There are some concepts in this paper that need to be clarified. These include:

Maternal morbidity

This refers to the disease/illness experienced by pregnant women. It is defined as any condition that is attributed to or aggravated by pregnancy and child birth which has a negative impact on the woman's wellbeing and /or function [13]. Many times, this often results in an inability to function properly and in many situations, affects the woman's economic, social and fertility roles. The World Health Organization (1992) has defined reproductive morbidity as consisting of three types of morbidity: obstetric, gynecologic, and contraceptive morbidity. (Obstetric morbidity is the equivalent of maternal morbidity). This paper is more interested in obstetric morbidity which is morbidity in a woman who has been pregnant (regardless of the site or duration of the pregnancy) from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes. It can be direct obstetric morbidity resulting from obstetric complications of the pregnant state (pregnancy, labor, and the puerperium) or from interventions, omissions, incorrect treatment, or from a combination of events resulting from any of the above. This can include temporary conditions, mild or severe, which occur during pregnancy or within 42 days of delivery, or

permanent/chronic conditions resulting from pregnancy, abortion or childbirth. Some chronic conditions (such as anemia or hypertension) may be caused by pregnancy and delivery, but are equally likely to have other causes. There is also indirect obstetric morbidity resulting from a previously existing condition or disease, such as sickle cell disease or tuberculosis, which was aggravated by the physiologic effects of pregnancy. Such morbidity may occur at any time and continue beyond the reproductive years.

Maternal Health Care

Maternal health refers to the health of women during pregnancy, childbirth and the postpartum period. This has to do with the overall wellbeing of women at the stage of pregnancy and children below age 5. Maternal healthcare is comprehensive as it includes educational, social, nutritional services as well as medical care during and posts pregnancy. There will be morbidity and consequently mortality as a result of hemorrhage, infection, high blood pressure, unsafe abortion, and obstructed labour in low and middle income countries.Reducing preventable severe maternal morbidity not only reduces the chance for maternal mortality but also improves the health and well-being of the newborn. Many reasons have been observed why many pregnant and nursing mothers chose not to make use of appropriate antenatal and postnatal cares [6]. Some of the reasons include: cultural, social, economic, political, natural, and environmental. This implies that both the natural environment-biological-and the social environment perform powerful and critical functions in healthcare utilization behaviour of women across most African societies. However, cultural factors are a major determining factor influencing health care. [9] observed that certain cultural practices are responsible for incidences of maternal and infant mortality in Nigeria and other parts of the sub-Saharan African societies. Agreeing with [12] as cited in [15] in a study on pregnancy outcomes conducted among Ibani people in Rivers State has found that incidences of maternal mortality rate are on the increase and outcome of pregnancy (which could either be positive or negative) is affected by socio-cultural factors. This is the case when culture demands so much from women including pregnant women to engage in work including home management and other works without enjoying any special attention or care during pregnancy which makes many of them tired and experiences fatigue during pregnancy which consequently can lead to death. [18] is of the opinion that what are required of maternal mothers at this time are improved nutrition, rest, and focused ante-natal care as well as moral and financial support [19]. Pregnant women in Nigeria are denied these cares and consequently, many of them die due to pregnancy related problems. This is evidenced in the statistical figures showing the maternal mortality rate for Nigeria as high as 3200 per 100,000 live births [21].

Maternal Mortality

Maternal mortality refers to deaths due to complications from pregnancy or childbirth. The ICD-10 introduced the term *pregnancy-related death*, which is defined as "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death" [8]. The World Health Organization's (WHO's) 10th revision of the *International Statistical Classification of Diseases and Related Health Problems* (ICD-10) defines *maternal mortality* as "the death of a woman while pregnant or within 42 days of termination of pregnancy irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes" [11]. *late maternal death,* that is defined as "the death of a woman from direct or indirect obstetric causes more than 42 days but less than one year after termination of pregnancy." The ICD-10 defined *direct obstetric deaths* as "maternal deaths resulting from obstetric complications of the pregnant state (pregnancy, labor, and the puerperium), from interventions, omissions, incorrect treatment, or from a chain of events resulting from any of the above." *Indirect obstetric deaths*, by contrast, are "those resulting from previous existing disease or disease that developed during pregnancy and which was not due to obstetric causes, but was aggravated by physiologic effects of

pregnancy [15]. In sub-Saharan Africa, the danger of death during pregnancy or child birth known as maternal mortality is 175 times higher when compared to other developed nations of the world, and risk for pregnancy-related illnesses and adverse consequences after child delivery is much higher [9]. A total of 500,000 deaths are recorded per year within the sub-Saharan African region [10]. [6] opined that pregnancy-related death is the main most critical health problem that medical practitioners and Nigerians are faced with. Many of the Nigerian populace, especially women who are of the low socioeconomic background are constantly at the risk of maternal death. Their poor condition makes them prone to sickness, infirmity and in most cases result in death due to their inability to access good health services, especially reproductive health services. Again their hindered access to quality reproductive health services and lack of power to make informed decisions on issues of reproductive health compromises women's chances of survival during pregnancy and having healthy children.

Theoretical framework

This paper is guided by the functionalist theory. The theory lends support that for a successful pregnancy/maternal outcome, there must be a conscious working together of all the interrelated stages of pregnancy ranging from family planning, pregnancy, and delivery to the postpartum days; also that there must be in place, a good maternal health care system that will ensure a positive outcome of pregnancy. The general assumptions of the functionalist view hinges on the fact "that society can be explained as a whole unto itself" [14]. Classical theorists like Comte, Spencer, and Durkheim, see human society as likened to a biological organism that has different though interrelated parts with a functional prerequisite for adaptation and survival. To them, for a society to survive, the different social institutions as parts must work and adapt to each other. Talcott Parsons, a notable functionalist, in recasting the functional imperatives of a social system, developed a four-fold classification scheme with the acronym AGIL (Adaptation, Goal attainment, Integration and Latency*).* Adaptation refers to the fact that systems are embedded in physical and socio-political environments to which they must adapt if they are to survive. Goal attainment refers to the need to define the primary goals of any system and the methods by which individuals accept those goals as their own and strive to achieve them. Integration refers to the need to coordinate the component parts of the system so that they contribute to the maintenance of the whole. Latency refers to those structures that serve to maintain and revitalize the motivation of individuals to perform their roles according to social expectations [8]. Government through its rules and regulations and policies directs expenditure to meet up the set social expectations (reduction in maternal morbidity and mortality). Conclusively, functionalists see the society as a system with interconnected and interrelated structures which form a whole indicating that the existence of the society requires that specific aspects of the social world must work in tandem for the smooth running of the society [9].Thus for a society to reduce maternal morbidity and mortality, its government must adopt an integrated approach by building and equipping hospitals, encourage education and employment for women, and general improvement of the socioeconomic status of women through reduction of gender discrimination against women.

METHODS
Data

Data for this study was collected using a mixed- method research design. Here, both quantitative and qualitative methods were used to collect data from hospitals in Abia State in south east Nigeria. The data was drawn from self-reported maternal morbidity as contained in the records of representative sample of women attending antenatal clinic in different selected public health care facilities. To select them, a 2-phase two-stage stratified cluster design was used. In the first stage five health facilities were purposively selected from the list of health facilities across the three senatorial zones in the State. At the second stage of the sampling, pregnant women were randomly

selected from the selected facilities with probability proportional to the size of the facility. The inclusion criterion was being a pregnant woman (between 15 and 49 years old). A close-ended structured questionnaire was used to collect the quantitative data and structured Interview Schedule was used to collect the qualitative data. These research instruments were applied to the subjects by trained Research Assistants. These questions were related to the identification of maternal morbidity during pregnancies in the last five years, socioeconomic status, demographic characteristics and utilization and non-utilization of health care facilities for assistance during the prenatal and postpartum period. A validated questionnaire was applied to 750 women aged between 15 and 49 years identified in the clinics. Finally, to avoid sample loss, a 10% non-response rate was applied, resulting in a final sample of 825 pregnant women. Although 825 women had been effectively identified, only a sample of 660 were interviewed due to losses related to refusals to participate and absence from clinic after 2 consecutive visits to the clinic by the researchers.   As the calculated minimal sample size was 750 women, the response-rate was 88.0%, corresponding to a loss of about 12.0%, which did not interfere on the precision of the estimates.

Outcome Variables

Outcome variables include morbidity which was assessed from women's recall at each visit by the researchers and from obstetric complications diagnosed by the birth attendant within health facilities as is seen in the patients' folder. The prevalence of maternal morbidity was calculated by dividing the number of women that reported at least one maternal complication by the number of pregnancies in the previous five years. To identify the associated factors, we considered the number of maternal complications (numeric variable), since the same woman could have reported the occurrence of more than one complication.

Independent Variables

The explanatory variables were socio-demographic data, medical data, obstetric data, and data on prenatal care. Socio-demographic data include age, marital status, level of formal education, household income, and occupation. Income, education, and occupation represent the socioeconomic status. Medical data include history of a chronic medical condition such as hypertension, diabetes, asthma, cardiac disease, sickle cell disease and cerebrovascular disease. Next is the obstetric data relating to maternal assistance during pregnancy, delivery and postpartum. Other data include parity, estimated gestational age, and number of prior cesarean deliveries and level of prenatal care. We looked at such other variables like: who performed the prenatal care; type of health facility where prenatal care was performed (public or private). Statistically, bivariate analysis was first done and followed by a test of relationship using t-test statistic.

FINDINGS AND DISCUSSION
Distribution of Respondents

The total number of patients who registered at the three antenatal clinics during the three to six month research period was 224 patients for ABSUTH, 66 for General Hospital Aba, and 275 for FMC Umuahia, 55 for General Hospital Amachara, and 40 for General Hospital Isuikwuato making a total of 660 patients. The number of questionnaires properly filled and used for the analysis was 660. Table 1 shows the distribution of the respondents in the antenatalclinics.

Table 1: Percent Distribution of Respondents by Facility

Facility (%)	Frequency	Percent
ABSUTH Aba	224	33.9
General Hospital Aba	66	10.0
General Hospital Amachara	55	8.3
Federal Medical Centre Umuahia	275	41.7
General Hospital Isuikwuato	40	6.1
Total	660	100

From Table1, it can be observed that Federal Medical Centre Umuahia and ABSUTH Aba antenatal clinics had large chunk of the respondent 41.7% and 33.9% respectively. General Hospital Aba antenatal clinic recorded 10.0 %. General Hospital Isuikwuato clinic recorded 6.1% of the respondents. The distribution of the respondents is according to the size of facility and location.

Socio-demographic Characteristics

Table 2: Percent Distribution of Respondents by Demographic and Socioeconomic Status

Age range	Frequency	Percent (%)
15-19	26	3.9
20-24	71	10.8
25-29	163	24.7
30-34	251	38.0
35-39	115	17.4
40-44	26	3.9
45-49	7	1.1
Not indicated	1	0.1
Total	660	100

Marital status of respondents	Frequency	Percent (%)
Married/Stable relationship	560	84.8
Single	18	2.7
Separated/divorced	82	12.4
Total	660	100

Education attainment of respondents	Frequency	Percent
No formal education	14	2.1
Primary education	140	21.2
Secondary education	238	36.1
Tertiary education	268	40.6
Total	660	100

Educational attainment of husband	Frequency	Percent
No formal education	13	1.0
Primary education	95	13.5
Secondary education	298	44.3
Tertiary education	246	36.7
Total	660	100

Monthly income	Respondents		Spouse	
	Frequency	Percentage	Frequency	Percentage
No income	230	32.8	7	1.0
Below 20,000	59	8.4	75	11.4
20,000 – 50, 000	106	15.0	116	17.6
51, 000 – 80, 000	172	24.4	144	21.8
81,000 – 100,000	70	9.9	165	25.0
101,000 – 150,000	20	3.8	89	13.5
151,000- 200, 000	2	1.7	43	6.5
201,000 and above	1	1.4	21	3.2
Total	660	100	660	100

Monthly income	Respondents		Spouse	
	Frequency	Percentage	Frequency	Percentage

Homemaker/housewife	92	13.9	2	0.3
Student	99	15.0	16	2.5
Applicant/employed	36	5.4	16	2.4
Farmer	14	2.1	276	41.8
Hair dresser/sewing	61	9.2	60	9.1
Trading	145	22.0	162	24.5
Teacher	66	101.1	34	5.1
Civil servant/public servant	94	14.3	40	6.1
Professional	41	6.2	54	8.2
Other trades not indicated	12	1.8		
Total	660	100	660	100

Table 2 reveals 38.0 per cent of the respondents are aged 30 to 34 years followed by 24.65 per cent for the 25 to 29 years age range. Age range 45 – 49 is least, showing that only a small proportion of the women of this age category are still conceiving. Looking at the marital status of the respondents, 84.8 percent of the respondents are married and in stable relationship. Only 2.7 percent of the respondents are single showing that single motherhood is not a common practice in the culture area. Regarding the respondents' educational attainment, 40.6 percent had tertiary education, secondary education (36.1 per cent), primary education (21.2 per cent), and no formal education (2.1 per cent). Looking at distribution of occupation of respondents, 22.0% of women and 41.8% of their husbands were involved in trading and 15.0 % of the women respondents were students. This is followed by civil servants/public servants (14.3%) for women and 24.5% for men. The differences in the mean value of the men and women's occupational engagements came as a result of the number of each group that engaged in the lesser jobs that preceded trading. For the women, a cumulative of 45.6 per cent was students, full time housewives, applicants, farmers and hairdressers. For the men, only 6.93 per cent cumulative fell into the same category. The greater proportion of the men fell into such occupational engagements as trading/business, civil service/public service, teaching and other unclassified professional jobs in that order. Again, Even though it was noticed that there is only very little educational difference between the men and their wives, there is however much job differences between the two groups. Table 2 further revealed that 230 (32.8 per cent) respondents have No income. This tallied with the cumulative percent of the respondents who are students, homemakers, or applicants/unemployed. 8.21 per cent of the respondents said that their income is between the ranges of N20, 000 every month. For their spouses, 17.8 per cent earn below N20, 000 every month. On the average more respondents (24.4 per cent) earn between N51, 000-N80,000 a month. While a large proportion of the respondents (41.2 percent) earn No income or less than N20, 000 a month, a disproportionate low percent of the respondents (3.1 percent) earn between N151, 000 -N200, 000 and 201,000 and above a month. However, as is expected, their spouses earn more with 48.2 per cent of them earning a range of between N81, 000-N200,000 every month. On the educational attainment of the spouse, it was recorded that 35.7% had tertiary education, 3.7% less than the number of women with tertiary education. This is so probably because the women are hesitant to disclose their husband's level of education. Though there seem to be a difference between the education of women and that of men, it is only a small measure of difference. No test of significance was made. However, to find out if the respondent's level of education affected the facility she attended, a bivariate analysis was done looking at the relationship between type of facility and respondent's level of education as shown in Table6.

The Nature and Extent of Maternal Morbidity

A number of variables were used to capture the incidence of maternal morbidity. These include malaria, anemia, and malnutrition for indirect morbidities. To collect data on the listed variables the questions were framed in a way that reflected the peculiar

experiences of the women during the periods of current pregnancy excluding cases of sicknesses outside the present pregnancy. Infection, bleeding and prolonged/obstructed labour for direct morbidities which are specifically for ward patients were recorded for the patients at the wards. Again cases recorded are only sicknesses associated with the current pregnancy. The nature of morbidity is seen as either indirect morbidity or direct morbidity. Data for direct morbidity was collected from a sample of patients in the wards. The extent of indirect morbidity is as seen in Table 3.

Table 3 Percentage Distribution of Indirect Obstetric Morbidities by Respondents

Morbidities	Frequency	Percentage (%)
Anaemia	45	6.8
Malaria	249	37.7
Malnutrition	5	0.8
Others	36	5.4
No illness	325	49.3
Total	660	100

Records in Table 3 reveal that of the 660 women sampled, 249 or 37.7 percent had complications of malaria during pregnancy, 6.8 per cent were diagnosed with anemia,0.8 per cent had problem of malnutrition while 'others' (cases of unclassified indirect morbidities) is 5.4 per cent, 49.3 per cent recorded no complications. It can be observed the most prevalent complication among the pregnant women in the sample was malaria. Malaria is most prevalent and endemic considering that the samples were drawn from population in sub-Saharan Africa where malaria burden is as high as 90% of the world cases and Nigeria taking off 23% of the African burden of malaria cases [9]. Children under five years of age and pregnant women are mostly at risk. However, the distribution of illnesses will be best appreciated when cross-tabulated with socio-economic factors which show some potentially interesting results. A bivariate analysis of indirect obstetric

Direct Obstetric Morbidities

Table 4 Percentage Distribution of Morbidities by Respondents Wards

Morbidities	Frequency	Percentage
Infection	8	6.6
Bleeding	15	12.3
Prolonged/Obstructed labour	40	32.8
Hypertension	24	19.7
Pre-eclampsia/eclampsia	6	4.9
Others	29	23.8
Total	122	100

Table 4 show cases of direct obstetric morbidities, 40(32.8 per cent) of patients had problems of prolonged labour which is seen to be the highest, 8 persons had complication of infection representing 6, 6 per cent of the patients, 15 (12.3 per cent) patients had problems of bleeding, another 24 (19.7 per cent) had complication of hypertension, pre-eclampsia/ eclampsia recorded 6 cases or 4.9 percent of the total cases. Generally, 29 (23.8 percent) of patients had some other unclassified complications. Generally speaking, a test of significance showed no significant effect (t=-2.173; df= 4; p>0.05) of socio- economic status on the likelihood of women having pregnancy related complication.

Socioeconomic factors and Maternal Morbidity

It is a known fact that morbidity cuts across all social classes. No social class is exempted from maternal morbidity. However, some social economic status predisposed

pregnant women to high incidence of morbidity. As stated in the earlier section of this paper, the basic aim of the paper is to examine the class distribution of morbidity among pregnant women in the sample. To do this, experiences during pregnancy were differentiated into the different classes of women represented in the sample. In the study, for proxies of class, such indicators as age, marital status, educational attainment, occupation, income, and

housing standard residence were used. In this study age, educational attainment and income as proxies for social status were analyzed. For indicators of morbidity, some of the ones identified by the study include malaria, anaemia, malnutrition, infection, bleeding and prolonged/obstructed labour. These identified disease conditions and complications are analyzed, interpreted and discussed as seen below.

Age and Maternal Morbidity

As can be seen from Table 3, no age range is immune to indirect obstetric morbidity like anaemia and malaria; and direct obstetric morbidity including obstetric complications of patients in the ward, like bleeding, prolonged/obstructed labour, Pre-eclampsia/eclampsia and hypertension. It could be seen from Table 5 that the prevalence of prolonged/obstructed labour is higher among very young women. For example, 31(77.5 per cent) of the 40 cases are recorded among women age 15-24 years; and the remaining 9 (22.5 per cent) of cases spread among age 25- 44 years. Major reason for this high rate of the cases among the young women is the poor socio-economic status that leads to malnutrition, which consequently affects adequate development of the pelvis leading to obstructed labour. Bleeding as a direct obstetrics illness affects the young pregnant women than the older ages. From this study 5(33 per cent) of the 15 cases of bleeding occurred among pregnant women age 15- 24 years Another 5 (33 per cent) occurred among women above 35 years with significantly lower live- birth rates and higher miscarriage rate compared to the

younger women. Hypertension is also age-specific. Both chronic and pregnancy-induced hypertension is associated with advanced maternal age. For this study, the risk of gestational hypertension was found to be 1.67 times higher for mothers who were 35-44years and above than in mothers who were 25-29 years old. This compares with the study by [14] which found that gestational hypertension is 1.63 times high in risk in mothers who were 40.0-44.9 years than in mothers who were 25.0- 29.9 years old. Pre-eclampsia/eclampsia increases with increasing maternal age. For example, it increased from 2 (33.3 per cent) to 4 (66.7 per cent). This compares with result of other analyses which suggests that the risk of pre-eclampsia increase by 4 per cent for every year more than 32 years of age [8]. However, that only 14 cases or complications were reported for age 40-44 years is explained by the fact that only a very small proportion of that age group are having babies at their age. The T-test (Table 6) shows no significant effect (t=-2.173;p>0.05) of socio economic status on the likelihood of women having pregnancy relatedcomplication.

Table 5 Direct Obstetrics Complication and Respondents' Age Range

Respondents Age Range (Years)	Direct obstetrics Illness						
	Infection	Bleeding	Prolonged /Obstructed labour	Hypertension	Pre-eclampsia	Others	Total
15-19		4	13	-	-		17
20 – 24	4	1	18	-	-	2	25
25 – 29	1	5	5	4		5	20
30 – 34	2	2	1	4	-	14	23
35 – 39	1	3	1	8	2	8	23
40 – 44			2	8	4	-	14
Total	8	15	40	24	6	29	122

Table 6 T-Test Scale on Social Status and Pregnancy– Related Complication Independent Samples Test

Data	T	Df	Sig(2-tailed)	Mean Difference	Std. Error Difference	95% Confidence interval of the Difference	
						Lower	Upper
Equal variance assumed	-2.173	4	.095	-75.3333	34.6683	171.5879	20.9212
Equal variance not assumed	-2.173	2.000	.162	-75.3333	34.6683	224.4724	78.8058

Educational Attainment and Maternal Morbidity

This sub-section attempts to examine the incidence of the different types of morbidity among the different educational classes of pregnant women as seen in Table 7

Table 7: Indirect Obstetric Illness by Respondents' Educational Attainment

Respondents Educational attainment	Indirect obstetrics illness					
	Anaemia	Malaria	Malnutrition	Others	No illness	Total
No formal education	3	4	1	1	5	14
Primary education	28	38	4	13	57	140
Secondary education	13	89	-	9	127	238
Tertiary education	1	122	-	13	132	268
Total	45	249	5	36	325	660

Table 7 presented the summary of the educational distribution of the incidence of cases for indirect obstetric complications. Out of the 14 patients with No formal education 4 or 29 per cent reported to have had malaria. Proportionately, all the categories of educational attainments have high percent of respondents reporting to have had malaria during pregnancy. For example, 27 percent cases for primary, 37 per cent for secondary, and 46 percent for tertiary. This distribution of cases of malaria incidence across the different classes of education is proportional to the number of respondents involved in each class. In the case of anaemia, incidence varied with level of education attended. For example, 3 or 21 per cent of respondents with no education were diagnosed to be anemic, 20 per cent of those with primary, 5 per cent of those with secondary education, and a disproportionate 0.5 per cent of those with tertiary education were diagnosed with anaemia. This report followed this trend because education is a proxy for income, place of residence (urban residence), and even, dietary behaviour. The sample reflected this trend and so most of the findings showed a higher turnout of women with some measure of education. The number without any form of formal education was negligible. As such, the relative indication of women with illnesses who had absolutely no education is small. To be taken into consideration is also the structure of the sample regions. The two main towns under consideration are fairly urbanized, with universities and many secondary and primary schools.

Income and Maternal Morbidity

Income is largely affected by type of occupation and educational status. In turn, it affects a range of other variables like susceptibility to morbidity, psychological and social stability, and self – esteem. As such it is often regarded as a very central variable in most Sociological studies. These in part also inform the choice in the analysis. Tables 8 show indirect maternal morbidity and income of the respondents. For example, respondent with No income suffer more of the illnesses; out of the total 230 patients 51 or 22 per cent are diagnosed with anaemea, 135 or 59 per cent with malaria, and 19 or 8 percent with malnutrition. For the 106 respondents whose income ranges between N20, 000 and N50, 000, 7 or 6 percent suffer from anaemea, 81 or 76 per cent reported to have had malaria during pregnancy. For N81, 000-N100, 000 income group, 2 or 3 per cent are diagnosed to be anaemic and 60 or 86 per cent for malaria. Across all the strata, malaria has the highest incidence; thus showing that malaria is endemic in the study area. Though, the trend show that as income

increases, the less vulnerable to illnesses especially anaemea and malnutrition, certainly, income is not a very important variable in determining the incidence of morbidity among pregnant women. It was noted too that the prevalence of most of the morbidities among the first antenatal patients was more than the prevalence in

subsequent antenatal patients. That may be associated with the impact of antenatal care on the pregnant women and therefore naturally raises questions as to the women's compliance with the antenatal care and their eagerness to seek attention in the event of the incidence of an illness.

Table 8: Indirect Obstetrics and Respondents' Income

Respondents	Indirect obstetrics illness				
Educational attainment	Anaemia	Malaria	Malnutrition	Others	Total
No income	51	135	19	21	230
Below 20,000	6	43	4	6	59
20,000 – 50, 000	7	81	9	6	106
51, 000 – 80, 000	7	140	8	17	172
81,000 – 100,000	2	60	7	1	70
101,000 – 150,000	1	16	-	3	20
151,000- 200, 000	-	2			2
201,000 and above	-	1			1
Total					660

To examine the relationship between social status of women and utilization of health facility, educational attainment and income as proxies for social status were analyzed as can be seen in Table 9. The use of facilities was cross-tabulated with the level of education as shown in Table 8. It revealed that ABSUTH had 139 patients who had tertiary education, making it the highest for the five facilities, with no record for "no

formal education". FMC Umuahia had the highest number of respondents with secondary education (54.2 per cent), and, General Hospital Isuikwuato had the highest number of respondents with no education (54.6%) and primary school attainment (12.5%). This distribution is best appreciated when one considers the location of the facilities.

Table 9: Type of Facility by Education Attainment of Respondents

	Name of facility					
Education	ABSUTH Aba	Genaral Hospital Aba	FMC Umuahia	General hospital Amachara	General hospital Isuikwuato	Total
No formal education	-	2	-	3	6	11
Primary education	15	29	45	30	17	136
Secondary education	66	20	128	10	12	236
Tertiary education	139	12	101	11	3	266
Others	4	3	1	1	2	11
Total	224	66	275	55	40	600

t- test =-2.307;df= 4;p>0.05

The t-test analysis shows no significant difference (t=-2.307; df=4; p>0.05) between education of the women as a proxy for the social status of women and the utilization of modern health care facilities for antenatal care. This is the test of the null hypothesis which proves positive. The test of the null hypothesis which says that there is no significance relationship between the social status of women and their utilization of

modern health care facilities for antenatal care proved positive (t=-2.307;p<0.05) as only ABSUTH show appreciably high educational attainment against low attendance in General Hospital Isuikwuato. Income was also cross-tabulated with the attendance at the various facilities (Table 10), it is observed that General Hospital Isuikwuato recorded the highest number of respondents(31) or 36 per cent with no

income, and ABSUTH Aba recorded the highest number of respondents (38) or 42 per cent with high income range (N81.000-N150,000). This is followed by FMC Umuahia with 21 respondents having high income range (N81, 000-N150, 000). Seen in another way, only 29 per cent of the total 660 respondents have high income and can afford the cost of seeking care from good health facilities like ABSUTH, FMC and General Hospital Aba. An all-high 69 per cent of the respondents have low income that can only afford care from health facilities like

General hospital Isuikwuato, and Gnneral Hospital Amachara. This distribution is moderated by location of the clinics. For instance, General hospital Isuikwuato is in the rural area with low income. The 2 per cent of respondents with very high income all attended clinic at ABSUTH. However, it should be appreciated that those who attended the various facilities attended according to both physical access and financial access. Thus, financial strength affects the regularity of attendance to the clinic and the type of health facility visited.

Table 10: Cross-tabulation of use of Facility and Respondents' income

	Name of facility					
Education	ABSUTH Aba	Genaral Hospital Aba	FMC Umuahia	General hospital Amachara	General hospital Isuikwuato	Total
No income	11	8	9	27	31	86
Below 20,000	49	12	63	9	6	138
20,000 – 50, 000	67	10	148	4	2	231
51, 000 – 80, 000	43	13	34	8	1	99
81,000 – 100,000	19	10	14	7	-	50
101,000 – 150,000	19	13	7	-	-	40
151,000- 200, 000	13	-	-	-	-	13
201,000 and above	3	-	-		-	3
Total	224	66	275	55	40	660

Summary of Findings

Analyzing, discussing and interpreting the data alongside the objectives and hypothesis specified, the study revealed that there is some link between social status and maternal morbidity, particularly the outcome of the morbidity. To identify the socioeconomic, demographic and health care-related factors associated with the prevalence of maternal morbidity in Abia State, the study looked beyond statistical indices, percentages, rates and ratios to reveal the underlying social, economic, cultural and behavioural factors relating to the behaviour of women seeking antenatal and delivery care. On the nature of maternal morbidity, it was observed that for indirect morbidity, the most prevalent complication among the pregnant women in the sample was malaria. The reason is that the area is in the tropical rainforest with very high Malaria burden. For direct obstetric morbidities, prolonged labour with 40(32.8 per cent) of patients was the highest of all the complications; followed by complication of hypertension, and bleeding. These complications are age specific. While pro-long labour/ obstructed labour and bleeding

affects women of very young ages 15- 24 years, hypertension and pre-eclampsia/ Eclampsia affects older women 35- 44 years. A statistical test of significance showed no significant effect ($t=-2.173$; $df= 4$; $p>0.05$) of socio- economic status on the likelihood of women having pregnancy related complications. Though data on social status and maternal morbidity show no significant relationship in terms of the distribution of complications, it was observed that once the complication sets in, the social status of the woman affects the health seeking behavior including the decision to seek for care, where to go and when to start antenatal. The test of the null hypothesis which says that "there is no significance relationship between the social status of women and their utilization of modern health care facilities for antenatal care" proved positive ($t=-2.307$; $p<0.05$) as only ABSUTH show appreciably high educational attainment against low attendance in General Hospital Isuikwuato. Though education was not significant in the data in the decision to register for antenatal in a modern facility, it is in the decision to seek care when in need,

thus information should be regarded as crucial. It should however be appreciated that all those who cared for++ quality services and registered in ABSUTH and FMC had some level of education , thus education is seen to be an important factor as no one with non-formal education registered. A test of hypothesis – "Decision to seek health care is vested on significant others than on the patients" showed show quite a wide gap (t=794.15;p<0.05) and very significant as most of the patients had to consult and actually seek permission before seeking health care. This gap in the number of those who sought for permission to seek care and those who did not before seeking medical care should be appreciated to be very central to social status (age, education, and income). Beyond statistical indices, FGD and IDIs portray some real life experience of women. FGD reported the relationship between spouses as very important for women taking advantage of adequate facilities and for women's good health in pregnancy. A women's status relative to that of her partner affects behaviours, and thus the outcomes of complications, as there may be a bargaining power within them on the use or non-use of antenatal and delivery care. A woman with good education and good income level will always have a voice in the decision of when to register and start antenatal clinic, where to register and where to go for her child delivery. However, these decisions are mediated by good spousal relationship. This is in agreement with [7], that "the distribution of economic power within a household statistically significantly influence decision"; It could then be summed up that many women are not free in their choice and use of health care services due to a number of factors including poverty, illiteracy ,and . Socio-cultural norms. This finding agrees with [4], who informed that the decision to seek care lies in the authority of the spouse or senior members of the family. This is substantiated by [14] study in Zaria on Moslem patients with obstructed labour "no matter how obvious the need for hospital management becomes for the girl who develops obstructed labour, permission to leave home for hospital can usually be given only by the husband"; but in my study area, Southeast Nigeria, such rigid permission to seek care are not always the case particularly if the women have the means to pay for services. In the case of emergencies, some socio-economic factors were found to act as barrier to prompt and effective treatment of emergency obstetric patients. These include: socio – economic status (low financial/economic power, poor education, women's low self -esteem,), poor access to information leading to ignorance, and cultural belief.

CONCLUSION

Seeing that the high number of maternal morbidity and deaths in the study area was the consequences of inequality in access to quality health care services, poor health care infrastructure and effects of socio-cultural barriers,the researchers concluded that addressing inequalities that affects health outcomes, especially sexual and reproductive health and rights and gender, is fundamental to ensuring all women have access to respectful and high-quality maternity care. Again, they further concluded that since many Women die as a result of complications during and following pregnancy and childbirth; and that most of these complications that develop during pregnancy are preventable or treatable for example malaria, Anaemia/malnutrition, and infection, therefore the provision of good health care infrastructure, and skilled care before, during and after childbirth can save the lives of women and newborns.

RECOMMENDATIONS

Given that health care services play an important role in the reduction of maternal morbidity and mortality, and has great potential to reduce inequalities as well, this study recommends among others, the improvement in the social status of women and enhancement of the health system of Abia State. This will reduce effects of the potentially life-threatening conditions which arestrategic in reducing maternal mortality. Considering that the existing health inequality observed in the study area is caused by the social and structural conditions prevalent in the area,the study recommends the incorporation of social determinants of health approach to the policy to address the health inequalities. Here forces like economics, social policies, and politics will be addressed to redress such inequalities in education; housing;

employment; living wages; access to health care; access to healthy foods for the good all especially women and children.

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