BIRTH PREPAREDNESS AND EMERGENCY READINESS PLANS OF ANTENATAL CLINIC ATTENDEES IN AMAKU GENERAL HOSPITAL AWKA, ANAMBRA STATE NIGERIA

BY

DR. IFEOMA ANNE NJELITA

NAU/2005376016F

DEPARTMENT OF COMMUNITY MEDICINE
Faculty of Medicine, College of Health Sciences
NNAMDI AZIKIWE UNIVERSITY, AWKA

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BIRTH PREPAREDNESS AND EMERGENCY READINESS PLANS OF ANTENATAL CLINIC ATTENDEES IN AMAKU GENERAL HOSPITAL AWKA ANAMBRA STATE, NIGERIA.

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DR IFEOMA ANNE NJELITA

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DECLARATION

It is hereby declared that this work is original unless otherwise acknowledged. This work has not been presented to any other Institution for either award of a degree or fellowship or to any journal for publication.

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DR IFEOMA ANNE NJELITA

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DATE

DEDICATION

This research work is dedicated with love to my loving husband, Chukwudi and my precious children; Edward, Karen and Alex. It is also dedicated to all the pregnant women in the developing countries of the world.

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Dr Ifeoma Anne Njelita

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ABSTRACT

Background: Maternal mortality is an enormous public health burden in developing countries of the world. Birth preparedness and emergency readiness is the process of planning for safe delivery and anticipating the actions needed in case of emergencies. When a woman is adequately prepared for normal childbirth and possible complications, she is more likely to access the skilled and prompt care she needs to protect her overall health and possibly save her life and that of her baby. This descriptive study assessed the birth preparedness and emergency readiness of antenatal clinic attendees in a secondary health facility in Awka, South eastern Nigeria.

Methodology: This is a cross-sectional descriptive study carried out among pregnant women attending antenatal clinic at Amaku

General Hospital Awka. The data was collected from the pregnant women using semi-structured interviewer administered questionnaire.

Findings: The mean age of the respondents was 27.9 years with a standard deviation of 4.5 years. The proportion of the respondents who were birth prepared was 56% as against 6% who were emergency ready. Up to 59.8% of the respondents of gestational age >=20weeks were birth prepared compared to 12.5% of the respondents of gestational age <20weeks (p=0.027). As much as 67.9% of the respondents of parity one to three were birth prepared compared to 46.9% of the respondents who were primiparous and 25% of the respondents of parity greater than or equal to four (p=0.011). Whereas 85% of the respondents knew at least one danger sign in pregnancy, labour and post-partum, 12% knew four or more while 3% were completely ignorant of the danger signs. As much as 97% of the respondents were on routine drugs, 84% had received tetanus toxoid but only 26% had received

malaria prophylaxis (intermittent preventive treatment with sulphadoxine and pyrimethamin IPTsp).

Conclusion: Most pregnant women make arrangements in anticipation of normal delivery but the same cannot be said for emergencies.

Key words: Birth prepared, emergency ready, pregnant women, antenatal.

CHAPTER ONE

1.0 INTRODUCTION

Pregnancy is the physical condition of a woman carrying unborn offspring inside her body, from fertilization to birth. Child birth is the process of having a baby emerge from the womb. Pregnancy and child birth, under normal conditions is not a disease but a physiological process.[1] It is a blessing and a thing of joy. There is, therefore, no need for any woman to die as a result of pregnancy or child birth.[1] Unfortunately, many women in developing countries of the world face increased risk of morbidity and mortality from pregnancy and other pregnancy related issues. [1]

Birth preparedness and emergency readiness involves active, definite preparation and decisions made by a pregnant woman for birthing including arrangements made for emergencies that may arise at any time in pregnancy, during delivery or after delivery.[2] This planning has the potential to reduce morbidity and mortality during pregnancy, delivery and post-partum by ensuring faster access to care.[2]

Birth preparedness and emergency readiness is also a comprehensive strategy to improve the use of skilled providers at birth, the key intervention to decrease maternal mortality.[3] The concept of birth preparedness and emergency readiness includes the following elements: (a) knowledge of danger signs; (b) plan for where to give birth; (c) plan for a birth attendant; (d) plan for transportation; (e) plan for saving money; and (f) identifying a blood donor in case of an obstetric emergency. [4]

Birth preparedness and emergency readiness is therefore a key strategy in safe motherhood programmes, a global effort that aims to reduce deaths and illnesses among women especially in developing countries. [5,6] Specifically aimed at reducing maternal mortality, these programmes are being developed in the wider context of health services for women's reproductive health. [6]

According to the World Health Organisation (WHO), maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.[7] As stated by the 2005 WHO report

"Make Every Mother And Child Count" the major causes of maternal death are: severe bleeding/haemorrhage (25%), infections (13%), unsafe abortions (13%), eclampsia (12%), obstructed labour (8%), other direct causes (8%), and indirect causes (20%) [7]. Indirect causes such as malaria, anaemia, HIV/AIDS and cardiovascular disease, complicate pregnancy or are aggravated by it. [7]

1.1 STATEMENT OF THE PROBLEM

Maternal mortality is a substantial public health burden in developing countries. The World Health Organisation estimates that approximately 536,000 women die from pregnancy and childbirth-related complications each year with 95% of these deaths occurring in sub-Saharan Africa and Asia.[8] Africa has the highest burden of maternal mortality in the world and sub-Saharan Africa is largely responsible for the dismal maternal death figure for that region, contributing approximately 98% of the maternal deaths for the region.[8] The lifetime risk of maternal death in sub-Saharan Africa is 1 in 22 mothers compared to 1 in 210 in Northern Africa, 1 in 62 for Oceania, 1 in 120 for Asia, 1 in 290 for Latin America and the Caribbean, and 1 in 29,800 for Sweden.[8]

Nigeria is a leading contributor to the maternal death figure in sub-Saharan Africa, not only because of the hugeness of her population but also because of her high maternal mortality ratio. Nigeria has a maternal mortality ratio of 545 per 100,000.[9] With an estimated 59,000 maternal deaths annually, Nigeria which has approximately 2% of the world's population contributes 10% of the world's maternal deaths.[10] The only country that has a higher absolute number of maternal deaths is India, with 136,000 maternal deaths each year. [11] Maternal mortality ratios in Nigeria vary considerably between various states in the country and between rural and urban areas. It is considerably higher in rural than urban areas and worse in the Northeast and Northwest geopolitical zones than in the Southwest and Southeast zones. [12]

Maternal morbidity, defined as chronic and persistent ill health occurring due to complications of pregnancy, labour, delivery, and postpartum ,[11] is an important indicator of maternal health. Available evidence indicates that for every woman who dies during childbirth in Nigeria, another 30 suffer short and long-term disabilities, [11] such as chronic anaemia, maternal exhaustion or physical weakness; obstetric fistula, stress incontinence; chronic pelvic pain, pelvic inflammatory disease, infertility, ectopic pregnancy; and emotional

depression etc. UNFPA estimates that 2 million women are affected by obstetric fistula in the developing world, out of which 800,000 (40%) occur in Nigeria, particularly in the north. [13]

The tragic issue of maternal deaths has received global attention and different strategies have been designed for its reduction to date.[14] The Safe Motherhood initiative was launched in Nairobi Kenya in 1987. In 1990, Safe Motherhood conference took place in Abuja , Nigeria. Another Safe Motherhood conference took place in Colombo, Sri Lanka in 1997. In 1998 the World Health Day theme was: " Pregnancy is Special: Let us Make it Safe". Still in an attempt to address the issue of maternal deaths, the UN General Assembly, in 1999, recommended increasing the proportion of births assisted by Health Professionals to 80%. The magnitude, developmental and Human Rights nature of the issue gave it prominence at the United Nations summit in 2000 where one of the three health-related Millennium Development Goals (MDGs) was devoted to reducing, by 75%, maternal mortality rate by 2015. [14,15]

1.2 RATIONALE FOR THE STUDY

The strategies for the Safe Motherhood initiative launched in 1987 include: provision of family planning services, provision of post-abortal care, improve antenatal care services, skilled attendant during labour and delivery, Emergency Obstetric care (EmOC) and address adolescent reproductive health issues. [16] Despite over two decades of promotion of the Safe Motherhood Initiative globally, maternal deaths continue to rise in most developing countries. [2]

Data from the Nigerian Demographic and Health surveys indicate that among pregnant Nigerian women, only about 64% receive antenatal care from a qualified health care provider. [17, 24] There are wide regional variations, with only about 28% of women in the Northwest Zone and 54% in the Northeast zone receiving antenatal care from trained health providers. The rest either do not receive antenatal care at all or receive care from untrained traditional birth attendants, herbalists, or religious diviners. Nigerian women are more likely to receive antenatal care from a trained provider if they have secondary or higher levels of education, and if they are economically advantaged. Urban women are more likely to receive antenatal care than rural women.

Only about 37% of deliveries in Nigeria take place in health institutions, while 57% of deliveries take place at home. [18, 24, 29] With such a large number of deliveries taking place at home, when women suffer complications such as haemorrhage, prolonged labour, and eclampsia, there is often delay in bringing them to health facilities where they can be treated. Thus, it is not the complication per se that causes these deaths but the delay in obtaining emergency treatment for the complications that cause death among Nigerian women. [11] Such delays have been eliminated or substantially reduced in many developed countries, hence the lower rates of mortality among pregnant women. By contrast, delays remain the defining feature of maternity care in Nigeria. [11] Since it is not possible to predict which women will experience life-threatening obstetric complications that lead to maternal mortality, receiving care from a skilled provider (doctor, nurse, or midwife) during childbirth has been defined as the single most important intervention in Safe Motherhood .[19] However the use of skilled providers in developing countries remains low.

Three types of delays that influence the provision and use of obstetric services in obstetric complications/emergencies to prevent maternal mortalities have been identified. [20, 21] The first is delay in deciding to seek care if complication occurs. The second is delay in reaching care while the third is delay in

receiving care at the health facility. The results of a detailed analysis of maternal deaths in Nigeria indicate that 40% of delays associated with maternal deaths were due to the first type of delay, 20% were due to the second, while the third accounted for 40% of cases.[22] Scientific evidence has clearly established the inverse relationship between skilled attendants at birth and the occurrence of maternal deaths.[23] Thus, the considerable variation in the maternal mortality estimates between different locations within the same region can be attributed, to a large degree, to access to modern maternal health services.[10]

Fully equipped health facilities with skilled attendants (doctors, nurses, and midwives) are not the only means to reducing maternal mortality. It is only when the services provided are effectively utilised by pregnant women that positive results can be achieved. Pregnant women need to adequately plan and prepare for labour and delivery in the presence of a skilled attendant. They should also anticipate and prepare for possible complications and emergencies. Birth preparedness and emergency readiness is a concept that will significantly contribute to reduction of maternal mortality and morbidity. This study will provide information for informed Public Health actions targeted towards reduction of maternal mortality and morbidity. It will also contribute to research in the area of improvement of maternal health.

1.3 AIM AND OBJECTIVES

AIM: To assess the birth preparedness and emergency readiness of antenatal clinic attendees in Amaku General Hospital Awka , Anambra State.

SPECIFIC OBJECTIVES

1. To assess the plans for delivery of pregnant women attending antenatal clinic in Amaku General Hospital Awka, Anambra State.
2. To assess the preparedness of the pregnant women for emergencies during pregnancy, delivery, and post-delivery.
3. To ascertain sociodemographic and other factors influencing adequate planning for delivery and emergency by the pregnant women.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 BIRTH PREPAREDNESS AND EMERGENCY READINESS

Over the last twenty years the international community, realizing that the tragedy of women dying during pregnancy and childbirth could no longer be tolerated, launched a series of initiatives aimed at making safe motherhood a cornerstone of health services in all countries.[25] Making pregnancy and delivery safe events is particularly complex, as it involves infrastructural and logistic, as well as technical issues.[25]

Women die because they have no access to skilled personnel during pregnancy and at the time of delivery and because, if an emergency situation arises, they cannot reach a health facility where emergency obstetric services are available. Basic emergency obstetric services include: provision of parenteral antibiotics, parenteral oxytocic drugs, and parenteral sedatives for eclampsia; manual removal of placenta; removal of retained products of conception; and assisted vaginal delivery, while comprehensive emergency

obstetric services include, in addition to basic emergency obstetric services, provision of caesarean section (surgery, anaesthesia) and safe blood transfusion services.[26] Birth preparedness and emergency readiness involves definite and specified plans and resolutions by pregnant women for delivery including anticipation and preparation for emergencies that could arise during pregnancy, childbirth, and even post-partum.

Antenatal care services provide opportunity for early detection of diseases and timely treatment. It also provides opportunities for preventive health care services such as immunization against neonatal tetanus, prophylactic treatment of malaria through the use of intermittent presumptive treatment approach, and HIV counselling and testing. Furthermore, antenatal care exposes pregnant women to counselling and education on various issues concerning their own health and that of their children. Antenatal care enables a pregnant woman to plan adequately for labour and delivery in a health facility. It also imparts the knowledge of danger signs indicating imminent emergency and life threatening situations, thereby enabling the attendees to anticipate and prepare adequately for obstetric emergencies. Thus, antenatal care may be particularly advantageous in resource-poor developing countries, where health seeking behaviour is inadequate, access to health services is otherwise limited, and most mothers are poor, illiterate or rural dwellers[23]. With the strong positive

association that has been shown to exist between the level of care obtained during pregnancy and the use of safe delivery care, antenatal care also stands to contribute indirectly to maternal mortality reduction. [27]

The level of utilization of orthodox health care facilities for maternal care among women in Nigeria is low. Indeed utilization of maternal health care services is lower in Nigeria than in many countries in sub-Saharan Africa. [23] A study showed that 60.3% [23] of Nigerian mothers utilized antenatal care services during their last birth, the comparative figures were 88.0% for Benin (2006 DHS) , 72.8% for Burkina Faso (2007 DHS) , 83.4% for Cameroon (2004 DHS), and 91.9% for Ghana (2003 DHS). [28]

2.2 PLANNING FOR LABOUR AND DELIVERY

Labour and delivery are natural processes which should not be seen as emergencies because a woman has the period of pregnancy lasting nine months to prepare adequately for them. Adequate planning and preparation for a pregnant woman entails identifying a place for delivery, saving money towards

delivery, and purchasing materials and other supplies needed for labour and delivery. [2, 3, 30] Place of delivery advocated is a health facility with a skilled provider (doctor, nurse, or midwife) in attendance.

In a study in Ile-Ife, Nigeria, 78.8% of pregnant women identified a health facility for delivery; 9.8% chose their home, church or a traditional birth attendant's (TBA) place for delivery; and 64.8% were saving money towards delivery .[2] A similar study in Nairobi, Kenya showed that 62.9% of pregnant women were saving money towards delivery. [30] Another study in Burkina faso revealed that 71% of pregnant women planned for delivery in a health facility, while 61.1% were saving money towards delivery. [3]

In a study in Burkina faso, planning to save money towards delivery was associated with the actual use of skilled birth attendants during delivery more than planning to use skilled birth attendants and other birth-preparedness behaviours. [3] Women in later stages (6-9 months) of pregnancy are more likely to have initiated planning activities than women in the first five months of pregnancy. [3]

2.3 EMERGENCY READINESS

Complications and emergencies can arise at any time during pregnancy, childbirth, and post-partum period. These emergencies can be life-threatening requiring urgent intervention to mitigate their effects thereby reducing maternal morbidity and mortality, leading to the achievement of Millennium Development Goal number three. A woman is said to be ready for emergency if she has identified a blood donor and made adequate arrangements for transport in emergencies. [2, 3, 30]

Emergency readiness is a concept developed to address the three delays that influence the provision and use of obstetric services in obstetric complications or emergencies. [3]

To be emergency ready, a pregnant woman is expected to have an adequate knowledge of some danger signs which herald the onset of complications or emergencies. Emergency readiness is very crucial, as more maternal deaths are likely to follow obstetric emergencies. [2] Health education by health care providers during antenatal clinic sessions is one means of imparting this knowledge to pregnant women.

In a study by Onayade, et al, 62.3% of pregnant women made adequate arrangements for transport while 11.3% identified a blood donor. [2] A similar study in Nairobi, Kenya revealed that 84.3% of pregnant women made arrangements for transport, 67% knew at least one danger sign while only 6.9% knew of three or more danger signs. [30] In another study in Burkina faso 51.1% of pregnant women made arrangements for transport. [3]

2.4 SOCIODEMOGRAPHIC AND OTHER FACTORS INFLUENCING BIRTH PREPAREDNESS AND EMERGENCY READINESS

Current discussions on health recognize that the health status of individuals in a society is more a function of social factors than the actions taken to access health facilities as well as protect and improve their health status. [31] These discussions also indicate that personal health is not simply a matter of individual decision and action but that it is dependent on several factors, many of which may be beyond the control of the individual. [11] This emphasis has led to discussions about the social determinants of health and the analyses of the social conditions that determine the health of the individual as a member of the family, the community, and the larger society.

The discussions indicate that action on the social determinants of health is of relatively more importance than individual and public actions to improve personal health through providing more access to health facilities, services, and products. [32, 33, 34] Social determinants of health refer to the conditions in which people are born, grow, live, work, and age. [35] These are circumstances shaped by the distribution of money, power and other resources at the global, national and local levels. [35] They are mostly responsible for health inequities – the unfair and avoidable differences in health status seen within and between countries. [35]

For these reasons, there is now a large body of literature on the social determinants of health which refer to both the specific features and pathways by which societal conditions affect health and that potentially can be altered by informed action. [35, 36, 49, 63,64] Factors such as education, unemployment, gender inequality, poverty, distance to health facility, cultural inhibitions and beliefs, fear of going alone to health facilities, inability to make informed choices, and the need to obtain permission from some authority figure such as the husband in the case of some married women are some social determinants of health in Nigeria among others .

GENDER INEQUALITY

Gender inequality is a key aspect of the social gradient.[11] Within the group of the poor, women occupy an even lower position than men. Gender inequality translates into lower status, lack of empowerment, higher rates of illiteracy, and higher levels of poverty for the women.[11]

POVERTY

Poverty is a state of marginalization and deprivation in the conditions needed to make life meaningful for individuals as members of distinct social groups.[11]

Poverty has implications for access to health facilities and cost of treatment.[39, 41] Poor people are less likely to be able to afford the cost of treatment in a health facility. They are also less likely to be able to access health facilities, which are located far away from them as the cost of transportation may be above the means available to them. This fact is eloquently demonstrated when inequalities between the richest (70.0%) and the poorest (12.2%) segments of the Nigerian population along the dimensions of the number of births attended by skilled health personnel are compared.[38] Economic reason ranks strongly in the preference of some Nigerian women

for TBAs as their services have been reported to be more affordable. [23] Additionally, TBAs may offer a more convenient user-charges payment system that allows payment to be spread over a period of time or even to be made in kind. [39]

INCOME

Income is the sum of all wages, salaries, profits, interests, payments and other form of earnings received in a given period of time. [49] Income inequality refers to the extent to which income is distributed in an uneven manner. It reflects differentials in the earnings of different groups in the economy. [11]

Income inequality has a major effect upon health for individuals as members of social groups. The National Population Commission NDHS 2003 survey revealed that whereas 83.3% of women in the highest wealth bracket were attended to by either doctors or nurses during delivery, only 10.6% of women in the lowest wealth bracket were attended to by the same category of health personnel. In fact, 20.3% of this category of women was not attended by anyone during delivery while another 34.3% of the women were attended by relatives. [40] As many as 31.6% of the women were attended by TBAs. [40]

Studies have documented positive relationship between economic status and

early antenatal care use, [42, 43, 44] delivery in medical settings, [42, 45, 46] and utilization of postnatal services. [47, 48]

EDUCATION

Education is any act or experience that has a formative effect on the mind, character, or physical ability of an individual. [49] It is a means of overcoming handicaps, achieving greater equality, and acquiring wealth and status for all. [49] The purpose of education is to develop every individual to their full potential. Education serves as a proxy for information, cognitive skills, and values; education exerts effect on health-seeking behaviour through a number of pathways. [50] These pathways include higher level of health awareness and greater knowledge of available health services among educated women, improved ability of educated women to afford the cost of medical health care, and their enhanced level of autonomy that results in improved ability and freedom to make health-related decisions, including choice of maternal services to use. [51, 52, 53]

In Nigeria, the education of a mother is shown to strongly affect type of antenatal care provider, type of person providing assistance during delivery, access to health care facilities among other health indicators. [11] Whereas no

one provided antenatal care to 56.9% of mothers without education, the corresponding figure for mothers with education higher than secondary school was only 1.7%. [40] 70.2% of mothers with education higher than secondary school received antenatal care from doctors with only 8.2% of women who had no education receiving antenatal care from same. [40] The percentage of women provided antenatal care by a doctor dramatically increases as the level of education of the mother rises .[40]

Education also has clear implications for the type of health personal attending to mothers during delivery .[11] Women with no education tend to be more attended by TBAs (26.3%), relatives (32.1%), or no one (26.8%) during delivery. [40] 88.9% of women with education higher than secondary school are attended by skilled birth attendants during delivery. [40] Studies in Peru, [54] and Guatemala [55] showed that women with primary level education were more likely to utilize maternal health compared to those without any formal education.

TRADITIONAL AND CULTURAL BELIEFS

The role of traditional and cultural beliefs as well as the perception of women with regards to comparative efficacy of the medical versus traditional

birth attendants may also be contributory to failure to have skilled attendants at birth. [23] As Addai [56] pointed out, modern (medical) and indigenous maternal health care services coexist in most African communities, particularly in rural areas, and women may have to choose between the two options. Some previous studies had reported that many Nigerian women, particularly those in rural areas, rate the services of the traditional birth attendants (TBAs) as being of higher quality than that of medical healthcare practitioners, particularly with regards to interpersonal communications and relationships. [57, 58] TBAs have been reported to be more considerate and to provide more compassionate care. [23] Women in rural Guatemala have similarly been reported as being less likely to deliver in medical settings because of lack of social support provided by health-care professionals compared with traditional midwives. [59]

ETHNICITY

Whereas ethnicity seems to make no significant difference for use of antenatal care, it does for use of skilled assistance and postnatal care. [23] The level of service utilization was significantly higher among the Igbos (in the south) and

the "minority" tribes compared to the Hausas. [23] The pattern is consistent with the general picture of wide regional disparity in health status in Nigeria's diverse and multi-ethnic setting as has been reflected, for example, in the NDHS. [40]

CHAPTER THREE

3.0 METHODOLOGY

3.1 DESCRIPTION OF THE STUDY AREA

The study area is Awka, the capital city of Anambra State. It is located at latitude 6.12'25"N and longitude 7.04'04"E, about 600 miles east of Lagos in the centre of the densely populated Igbo heartland in south eastern Nigeria.[61] Awka was famous for metal working and its blacksmiths before the 20th century and were prized throughout the region for making farming implements, guns and tools. Over the years Awka has attracted people from other States in Nigeria and has a significant number of immigrants from northern Nigeria, Delta state, Cameroon and Ghana.[61] Awka is in the tropical zone of Nigeria and experiences two distinct seasons brought about by the two predominant winds that rule the area: the south western monsoon wind from the Atlantic Ocean and the north eastern dry winds from across the Sahara desert.[61] Seven months of heavy tropical rains (April – October) are followed by five months of dryness (November – March). The harmattan, a particularly dry and dusty

period occurs for about two weeks within the dry season. The temperature is generally hot and humid in the range $27^0C - 28^0C$ during July through December but rising to 35^0C between February and April.[61]

The major source of water supply is from privately owned boreholes within easy reach of most neighbourhoods and hand dug wells. The inhabitants are mainly civil servants, hardly a surprise since many state and federal institutions are located there. There are however, traders, artisans and few subsistent farmers. Awka has two tertiary institutions, Nnamdi Azikiwe University and Paul University, and other amenities including private educational institutions at nursery, primary and secondary levels and their government counterparts, commercial banks, markets, post office, police stations, hotels among others. Awka has one primary health care centre at Umuokpu and five health posts at Nkwelle, Umudioka, Agulu Awka, Amikwo, and Ifite. There are also two mission and numerous privately owned health facilities in Awka.

The study site, Amaku General Hospital, is the major government owned health care facility and serves as the major reference point for other public, mission and private health facilities in Awka metropolis. It is a secondary

health facility. The cadre of staff employed there include specialist medical doctors, general medical practitioners, staff nurses, midwives, laboratory scientists, pharmacists, cleaners, administrative staff. It is currently being upgraded to a Teaching Hospital to serve Anambra State University Uli. The centre runs two antenatal clinics per week, with a range of 45 – 50 clients seen per clinic.

3.2 THE STUDY POPULATION

The reference population was pregnant women in Awka while the target population was pregnant women attending antenatal clinic at Amaku General Hospital, Awka.

3.3 THE STUDY DESIGN

This is a cross-sectional descriptive study carried out to determine the birth preparedness and emergency readiness of antenatal clinic attendees at Amaku General Hospital, Awka.

3.4 SAMPLE SIZE ESTIMATION[62]

Sample size was estimated using the formular:

$$n = \frac{z^2 pq}{d^2}$$

where,

n = the minimum sample size

z = standard normal deviate (1.96)

p = proportion of pregnant women in Awka (5% = 0.05)[63]

q = 1 – p = 1 – 0.05 = 0.95

d = degree of accuracy desired (0.05)

therefore,

$$n = \frac{1.96^2 \times 0.05 \times 0.95}{0.05 \times 0.05}$$

$$n = \frac{0.182476}{0.0025}$$

n = 72.99 (approx. 73)

the sample size that was used for this study was 100

3.5 SAMPLING TECHNIQUE

Consecutive antenatal clinic clients who gave their informed consent were recruited into the study until the desired number was reached.

3.6 DATA COLLECTION

The study was done in May-July 2010. A semi-structured , interviewer administered questionnaire was used to obtain data from recruited clients with the aid of research assistants, who were properly trained on vernacular translation of the key words in the research and record keeping. Data obtained from respondents included socio-demographic data namely; age, marital status, parity, educational status, occupation. The other section of the questionnaire contained questions that assessed the birth preparedness and emergency readiness of the respondents as well as their knowledge of signs of severe illness in pregnancy.

The respondents were usually recruited after they had been attended to in the clinic during routine antenatal clinic visits. Thorough information regarding the

nature, scope and importance of the study was provided to the clients before requesting for their consent. They were also assured that their responses would be treated with confidentiality. Once consent was obtained, the questionnaire was completed.

Composite variables derived from the responses to various questions were used to determine socioeconomic status, adequate knowledge of signs of severe illness, birth preparedness and emergency readiness of the respondents. A woman was classified as belonging to low socioeconomic status if she and her family live in one or two rooms in a rented or family house and the family had no means of transport or just bicycle.[2] A woman had adequate knowledge of signs of severe illness if she was able to mention four or more of the signs of severe illness enumerated in the questionnaire spontaneously without prompting. A woman was classified as birth prepared if she had identified a place of delivery, was saving money towards delivery and had commenced purchase of materials needed for delivery. A woman was classified as emergency ready if she had identified a blood donor and made adequate arrangements for transport in emergencies.

3.7 PRE – TESTING

The questionnaire was administered to similar antenatal clients at General Hospital Enugwu-ukwu, to check for its reliability and validity and necessary adjustments were made. The collected data did not form part of the present study.

3.8 DATA ENTRY AND ANALYSIS

Data collected was cleaned and edited manually and with the aid of the computer. Frequency distributions of all relevant variables was presented in tables and charts for easy appreciation. Relevant means and standard deviations were calculated. Tests of statistical significance using chi – square and Fisher's Exact Test were conducted using SPSS version 17 software package with accepted level of statistical significance set at p value < 0.05.

3.9 ETHICAL CONSIDERATION

Ethical clearance and approval for this study was obtained from the Nnamdi Azikiwe University Teaching Hospital Ethical Committee (NAUTHEC).

In addition, before the questionnaires were administered, the concept of the study was carefully explained to the respondents and their informed consent sought.

3.10 LIMITATIONS

All information from respondents was based on self reports, with no means of verification.

CHAPTER FOUR

RESULTS

Table 1: Socio-demographic characteristics of respondents

Characteristic	Frequency (n =100)	Percent
Age group (years)		
19 – 23	17	17.0
24 – 28	43	43.0
29 – 33	28	28.0
34 – 38	9	9.0
39 – 43	3	3.0
Parity		
Primigravida	32	32.0
1 – 3	56	56.0
4 – 5	12	12.0
Educational level		
Primary	9	9.0
Secondary	47	47.0
Tertiary	44	44.0
Marital status		
Married	99	99.0
Widowed	1	1.0
Occupation		
Public / civil servant	20	20.0
Trader	31	31.0
Artisan	8	8.0
Unemployed	41	41.0

Socio-demographic characteristics of respondents cont'd

Characteristics	Frequency (n=100)	Percent
Religion		
Roman catholic	47	47.0
Anglican	19	19.0
Pentecostal	30	30.0
Others	4	4.0
Socioeconomic status		
Low	44	44.0
High	56	56.0

The total number of recruited pregnant women was one hundred with the age range of 19 – 43 years while the mean age was 27.9 years and standard deviation 4.5 years. As low as 9% of the respondents received only primary education with the rest receiving at least secondary education. Up to 41% of the respondents were unemployed while 31% were traders, 20% civil servants and 8% artisans. As much as 47% of the respondents were Roman catholics while 30% were Pentecostals.

Table 2: Registration for ANC and plans for delivery

Characteristic	Frequency (n = 100)	Percent
When registered for ANC		
Before 20 weeks	50	50.0
After 20 weeks	50	50.0
Place identified for delivery		
Maternity home	7	7.0
Health facility	93	93.0

Half (50%) of the respondents registered for ANC before 20weeks gestational age. As much as 93% of the respondents identified a health facility for delivery.

Table 3: Plans for delivery and emergencies

Characteristic	Frequency (n=100)	Percent
Buying materials for delivery	78	78.0
Has started saving	65	65.0
Arranged for company	86	86.0
Arranged for transportation	70	70.0
Arranged for someone to look after home	70	70.0
Identified a blood donor	6	6.0

As much as 78% of the respondents had started buying materials and supply needed for delivery and 65% were already saving money for delivery. Although 70% of the respondents had arranged for emergency transportation, only 6% had made arrangement for a blood donor should the need for blood transfusion arise.

Table 4: Knowledge of signs of severe conditions in pregnancy or labour

Knowledge assessed	Frequency (n=100)	Percent
Vaginal bleeding	70	70.0
Abnormal vaginal discharge	7	7.0
Fever	46	46.0
Severe headache	11	11.0
Trouble with vision	3	3.0
Dizziness	16	16.0
Leg swelling	22	22.0
Convulsion	0	0.0
Premature rupture of membrane	32	32.0
Prolonged labour	1	1.0
Abdominal pain	12	12.0

These are multiple responses. None of the respondents mentioned convulsion as a danger sign, only 1% mentioned prolonged labour, 22% leg swelling and 70% vaginal bleeding. Only 12% of the respondents knew four (4) or more danger signs and 41% of the respondents knew only two (2) danger signs. While 20% and 24% of the respondents knew three (3) and one (1) danger sign(s) respectively as low as 3% had no knowledge of danger signs.

Table 5: Prophylaxis and preparation for delivery and emergencies

Assessment	Frequency (n=100)	Percent
On routine drugs	97	97.0
Has had TT	84	84.0
Malaria prophylaxis	26	26.0
Prepared for delivery	56	56.0
Ready for emergency	6	6.0

Although 97% and 84% of respondents are on routine drugs and had received tetanus toxoid respectively, only 26% had received malaria prophylaxis.

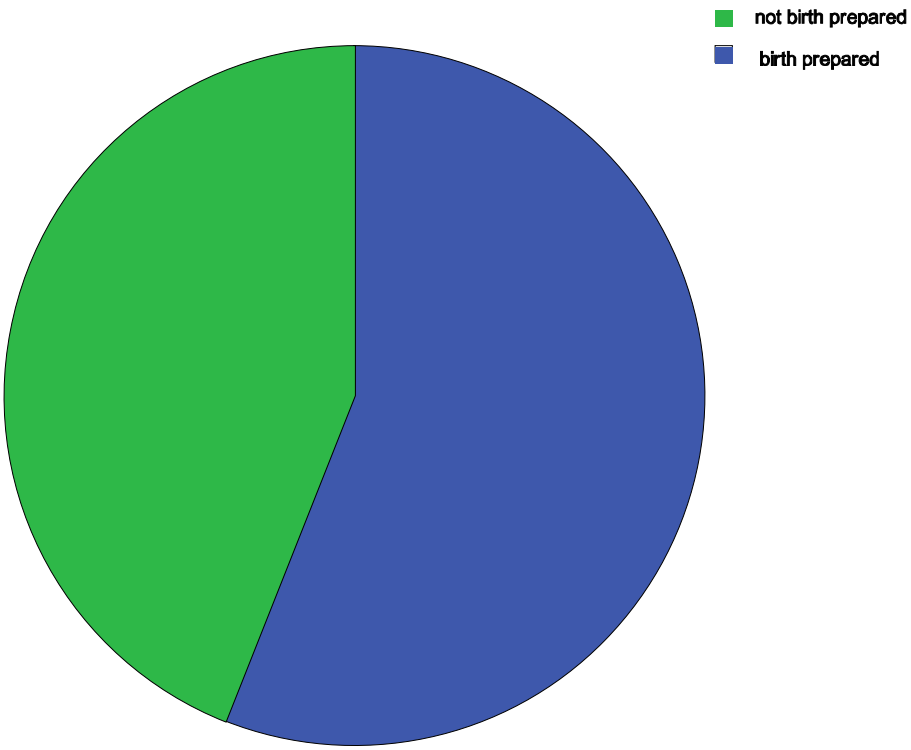

Figure I: Birth preparedness of respondents

Up to 56% of the respondents were birth prepared.

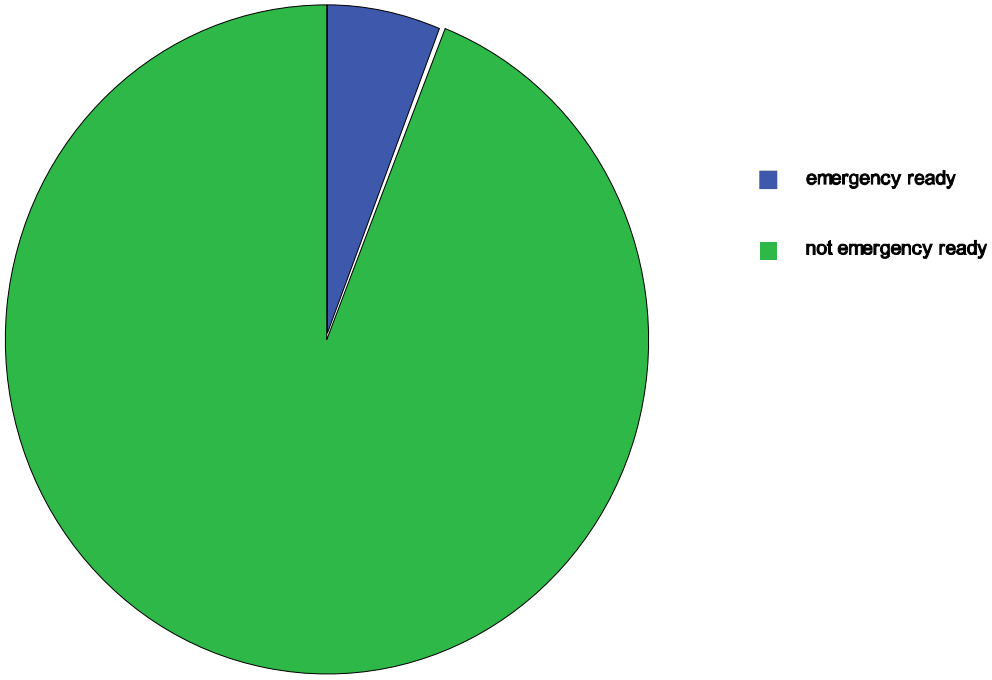

Figure II: Emergency readiness of respondents

As low as 6% of the respondents were emergency ready.

Table 6: Birth Preparedness in relation to age

Age group (years)	Birth prepared Frequency (%)	Not Birth Prepared Frequency (%)	Total (%)
<28	28 (58.3)	20 (41.7)	48 (100.0)
>=28	28 (53.8)	24 (46.2)	52 (100.0)
Total	56 (56.0)	44 (44.0)	100 (100.0)

Pearson x^2 = 0.204, df =1, p. value = 0.652 (not statistically significant)

The difference in Birth preparedness between the two age groups is not statistically significant and so is likely to be due to chance; consequently, Null hypothesis is upheld.

Table 7: Emergency readiness in relation to age

Age group (years)	Emergency ready Frequency (%)	Not Emergency ready Frequency (%)	Total (%)
<28	3 (6.3)	45 (93.8)	48 (100.0)
>=28	3 (5.8)	49 (94.2)	52 (100.0)
Total	6 (6.0)	94 (94.0)	100 (100.0)

Pearson $x^2 = 0.10$, df = 1, p. value = 0.919

Yates correction = 0.000, df = 1, p. value = 1.000(not statistically significant)

The difference in Emergency readiness between the two age groups is not statistically significant and so is likely to be due to chance; consequently, Null hypothesis is upheld.

Table 8: Birth Preparedness in relation to parity

Parity	Birth prepared Frequency (%)	Not Birth prepared Frequency (%)	Total (%)
Primigravida	15 (46.9)	17 (53.1)	32 (100.0)
1 – 3	38 (67.9)	18 (32.1)	56 (100.0)
>= 4	3 (25.0)	9 (75.0)	12 (100.0)
Total	56 (56.0)	44(44.0)	100 (100.0)

Pearson x^2 = 8.957, df = 2, p = 0.011 (statistically significant)

The difference in Birth preparedness in relation to parity is statistically significant and not due to chance; and so Alternative hypothesis is upheld while Null hypothesis is rejected.

Table 9: Emergency readiness in relation to parity

Parity	Emergency ready Frequency (%)	Not Emergency ready Frequency (%)	Total (%)
Primigravida	2 (6.3)	30 (93.7)	32 (100.0)
1 – 3	4 (7.1)	52 (92.9)	56 (100.0)
>= 4	0 (0.0)	12 (100.0)	12 (100.0)
Total	6 (6.0)	94 (94.00	100 (100.0)

Pearson $x^2 = 0.899$, df = 2, p. value = 0.638

Fisher's Exact Test = 0.461 p. value = 1.000(not statistically significant)

The difference in Emergency readiness with regards to parity is not statistically significant and is likely to be due to chance; consequently, Null hypothesis is upheld.

Table 10: Birth preparedness in relation to educational level

Formal education	Birth prepared Frequency (%)	Not Birth prepared Frequency(%)	Total (%)
Primary	3(33.3)	6(66.7)	9 (100.0)
Secondary	30(63.8)	17(36.2)	47 (100.0)
Tertiary	23(52.3)	21(47.7)	44 (100.0)
Total	56 (56.0)	44 (44.0)	100 (100.0)

Pearson $x^2 = 3.294$, df = 2, p. value = 0.193

Fisher's Exact Test = 3.237, p. value = 0.193(not statistically significant)

The difference in Birth Preparedness in relation to educational level is not statistically significant and is likely due to chance; consequently, Null hypothesis is upheld.

Table 11: Emergency readiness in relation to educational level

Formal education	Emergency ready Frequency (%)	Not Emergency ready Frequency(%)	Total (%)
Primary	0 (0.0)	9 (100.0)	9 (100.0)
Secondary	1 (2.1)	46 (97.9)	47 (100.0)
Tertiary	5(11.4)	39 (88.6)	44 (100.0)
Total	6 (6.0)	94 (94.0)	100 (100.0)

Pearson $x^2 = 4.068$, df = 2, p = 0.131

Fisher's Exact Test = 3.150, p. value = 0.167 (not statistically significant)

The difference in Emergency readiness in relation to educational level is not statistically significant and is likely due to chance ; consequently, Null hypothesis is upheld.

Table 12: Birth preparedness in relation to occupation

Occupation	Birth prepared Frequency (%)	Not Birth prepared Frequency(%)	Total (%)
Public / civil servant	8 (40.0)	12 (60.0)	20 (100.0)
Trader	19 (61.3)	12 (38.7)	31 (100.0)
Artisan	5 (62.5)	3 (37.5)	8 (100.0)
Unemployed	24 (58.5)	17 (41.5)	41 (100.0)
Total	56 (56.0)	44 (44.0)	100 (100.0)

Pearson $x^2 = 2.674$, df = 3, p. value = 0.445

Fisher's Exact Test = 2.652, p. value = 0.457(not statistically significant)

The difference in Birth preparedness with regards to the occupation of respondents is not statistically significant and is likely due to chance; consequently, Null hypothesis is upheld.

Table 13: Emergency readiness in relation to occupation

Occupation	Emergency ready Frequency (%)	Not Emergency ready Frequency(%)	Total (%)
Public / civil servant	2 (10.0)	18 (90.0)	20 (100.0)
Trader	0 (0.0)	31 (100.0)	31 (100.0)
Artisan	0 (0.0)	8 (100.0)	8 (100.0)
Unemployed	4 (9.8)	37 (90.2)	41 (100.0)
Total	6 (6.0)	94 (94.0)	100 (100.0)

Pearson $x^2 = 4.082$, df = 3, p. value = 0.253

Fisher's Exact Test = 3.747, p. value = 0.218 (not statistically significant)

The difference in Emergency readiness with regard to the occupation of respondents is not statistically significant and so is likely due to chance; consequently, Null hypothesis is upheld.

Table 14: Birth preparedness in relation to religion

Religion	Birth prepared Frequency (%)	Not Birth prepared Frequency (%)	Total (%)
Roman catholic	28 (59.6)	19 (40.4)	47 (100.0)
Anglican	8 (42.1)	11 (57.9)	19 (100.0)
Pentecostal	18 (60.0)	12 (40.0)	30 (100.0)
Others	2 (50.0)	2 (50.0)	4 (100.0)
Total	56 (56.0)	44 (44.0)	100 (100.0)

Pearson $x^2 = 1.986$, df = 3, p. value = 0.597

Fisher's Exact Test = 2.104, p. value = 0.580 (not statistically significant)

The difference in Birth preparedness in relation to religion is not statistically significant and is likely to be due to chance; consequently, Null hypothesis is upheld.

Table 15: Emergency readiness in relation to religion

Religion	Emergency ready	Not Emergency ready	Total (%)
	Frequency (%)	Frequency (%)	
Roman catholic	3 (6.4)	44 (93.6)	47 (100.0)
Anglican	0 (0.0)	19 (100.0)	19 (100.0)
Pentecostal	3 (10.0)	27 (90.0)	30 (100.0)
Others	0 (0.0)	4 (100.0)	4 (100.0)
Total	6 (6.0)	94 (94.0)	100 (100.0)

Pearson $x^2 = 2.331$, df = 3, p. value = 0.530

Fisher's Exact Test = 1.928, p. value = 0.530 (not statistically significant)

The difference in Emergency readiness in relation to religion is not statistically significant and is likely due to chance; consequently, Null hypothesis is upheld.

Table 16: Birth preparedness in relation to gestational age

Gestational age	Birth prepared Frequency (%)	Not Birth prepared Frequency(%)	Total (%)
<2o weeks	1 (12.5)	**7** (87.5)	8 (100.0)
>= 20 weeks	55 (59.8)	37 (40.2)	92 (100.0)
Total	56 (56.0)	44 (44.0)	100 (100.0)

Pearson $x^2 = 6.678$, df = 1, p. value = 0.010

Yates correction = 4.897, df = 1, p. value = 0.027 (statistically significant)

The difference in Birth preparedness in relation to gestational age is statistically significant and not due to chance and so Alternative hypothesis is upheld while Null hypothesis is rejected.

Table 17: Emergency readiness in relation to gestational age

Gestational age	Emergency ready Frequency (%)	Not Emergency ready Frequency(%)	Total (%)
<20 weeks	0 (0.0)	8 (100.0)	8 (100.0)
>= 20 weeks	6 (6.5)	86 (93.5)	92 (100.0)
Total	6 (6.0)	94 (94.0)	100 (100.0)

Pearson $x^2 = 0.555$, df = 1, p. value = 0.456

Yates correction = 0.000, df = 1, p. value = 1.000 (not statistically significant)

The difference in Emergency readiness in relation to gestational age is not statistically significant and so is likely due to chance; consequently, Null hypothesis is upheld.

Table 18: Birth preparedness in relation to socioeconomic status

Socioeconomic status	Birth prepared Frequency (%)	Not Birth prepared Frequency(%)	Total (%)
Low	28 (63.6)	16 (36.4)	44 (100.0)
High	28 (50.0)	28 (50.0)	56 (100.0)
Total	56 (56.0)	44 (44.0)	100 (100.0)

Pearson $x^2 = 1.860$, df = 1, p = 0.173 (not statistically significant)

The difference in Birth preparedness in relation to socioeconomic status is not statistically significant and so is likely due to chance; consequently, Null hypothesis is upheld.

Table 19: Emergency readiness in relation to socioeconomic status

Socioeconomic status	Emergency ready Frequency (%)	Not Emergency ready Frequency(%)	Total (%)
Low	1 (2.3)	43 (97.7)	44 (100.0)
High	5 (8.9)	51 (91.1)	56 (100.0)
Total	6 (6.0)	94 (94.0)	100 (100.0)

Pearson $x^2 = 1.935$, df = 1, p. value = 0.164

Yates correction = 0.935, df = 1, p. value = 0.334 (not statistically significant)

The difference in Emergency readiness in relation to socioeconomic status is not statistically significant and so is likely due to chance; consequently, Null hypothesis is upheld.

CHAPTER FIVE

DISCUSSION

Birth preparedness and emergency readiness involves well-defined preparation and precise decisions made by a pregnant woman for delivery. It also involves plans and arrangements made in anticipation of emergencies that may arise at any time during pregnancy, delivery or after delivery. All these are aimed at significantly reducing maternal mortality and morbidity. The study revealed that 78% of the respondents had started buying materials and supplies needed for delivery. This was comparable to that in Ile-Ife (87.5%)[2]. The finding that 65% of the respondents were already saving money towards delivery is also comparable to the findings in Ile-Ife (64.8%)[2], Nairobi (62.9%)[30] and Burkina Faso (61.1%).[3]

The study showed that 93% of the respondents planned for delivery in a health facility. This was higher than that reported in Ile-Ife (78.8%)[2] and Burkina Faso (71%).[3] The study also showed that 56% of the respondents were birth prepared as against 60.8% reported in Ile-Ife.[2] The observation that none of the respondents planned to deliver in a

TBA's place was unexpected as it has been documented in previous studies that many Nigerian women patronise TBAs for many reasons, including affordability, convenient user-charges payment system and good interpersonal relationships.[23, 39, 57, 58]

The finding that 70% of the respondents made arrangements for transport was higher than that reported in Ile-Ife (62.3%)[2] and Burkina faso (51.1%),[3] but lower than that reported in Nairobi (84.3%).[30] This could be attributed to the fact that most of them had their own means of transport. The study revealed that only 6% of the respondents identified a blood donor as compared to the 11.8% reported in Ile-Ife.[2] This finding might be due to the fact that most pregnant women do not want to anticipate undesirable events in pregnancy, delivery and after delivery, hence they make no plans for emergencies, hoping and believing that everything will be normal.

As much as 85% of the respondents knew at least one danger sign while 12% knew of four or more danger signs. This, though higher than that reported in Nairobi,[30] is indeed worrisome as it indicates that the respondents knowledge of danger signs was quite low. This brings to the fore the content and quality of health education and counselling

services provided by health care workers during antenatal clinic sessions. This could be also due to the fact that most pregnant women come to the antenatal clinic after the health talk must have been delivered just to be seen by the doctor and to collect their prescription. They are ignorant of the importance and benefits of the health education sessions hence they do not avail themselves the opportunity of participating in the sessions.

Results from this study also showed the birth preparedness rate to be 59.8% amongst respondents of gestational age >= 20 weeks in comparison with 12.5% for respondents of gestational age < 20 weeks. This is supported by the finding in Burkina faso that women in later stages (6-9 months) of pregnancy are more likely to have initiated planning activities than women in the first five months of pregnancy.[3] This could be due to the fact that most pregnant women feel that it is best to wait till they are in the later stages of pregnancy before they can start getting prepared for delivery as they are almost sure the pregnancy is for real at that time. Those in early pregnancy feel they have ample time to get prepared for delivery hence they wait till the pregnancy is advanced before initiating any form of preparation. Higher

gestational age was, however, not associated with being emergency ready.

This study also revealed that the birth preparedness rate amongst respondents of parity one to three was 67.9% in comparison with 46.9% of primiparous respondents and 25% of respondents of parity greater than or equal to four. This could be attributed to the fact that the primiparous women may not be fully aware of what to do or what it entails to be birth prepared as it is their first pregnancy. The respondents of parity greater than or equal to four on the other hand, having had many pregnancies, may feel that they know all there is to pregnancy and birth preparation that they fail to pay close attention to important details of birth preparedness thereby trivializing it. The respondents of parity one to three seem to have a measure of awareness as touching preparation for birthing and they also paid close attention to details without feeling that they know it all. No association was however found between parity and emergency readiness.

The finding that higher educational status and high socioeconomic status were not positively associated with being birth prepared and

emergency ready was unexpected and surprising. This contrasts with the finding in a study in Ile-Ife.[2] This finding could be attributed to the fact that in spite of high educational and socioeconomic status, the concerned respondents were ignorant of the concept of birth preparedness and emergency readiness. This could be due to the fact that they have not been adequately exposed, via health education and counselling, to the important details of the concept. This could be due to inadequacies on the part of the health care providers whereby the content of health education provided does not adequately address the issue of birth preparedness and emergency readiness. It could also be as a result of the respondents not participating in health education sessions.

The observation that religious denomination did not affect emergency readiness was quite surprising, as it was expected that the respondents of the Pentecostal denomination will be less emergency ready than their counterparts belonging to other religious denomination. This is because, due to faith teachings they receive in their churches, they have the practice of "rejecting" bad things and saying that complication in pregnancy, during delivery and post-partum is not their "portion". This

attitude undermines the principle of emergency readiness. In the course of this study it was observed that a greater majority of the respondents irrespective of their religious denomination exhibited the same attitude. This could probably be due to the fact that other religious denominations apart from the Pentecostal denomination also engage in teachings of faith.

Worthy of note is the fact that although 97% and 84% of respondents are on routine drugs and had received tetanus toxoid injection respectively, only 26% had received malaria prophylaxis (intermittent presumptive treatment with sulphadoxine and pyrimethamin, IPTsp). This is a source of concern, as pregnant women are meant to receive two doses of IPTsp four weeks apart starting at quickening or when pregnancy is up to 16 weeks and above, and three doses for HIV positive pregnant women.[60] This could be attributed to ignorance on the part of the health care providers who may not be aware of the policy hence they do not get the pregnant women to comply with it.

CHAPTER SIX

CONCLUSION

In conclusion this study has revealed that majority of the pregnant women in the study area made adequate plans in anticipation of normal delivery but an extremely small proportion were ready for emergencies. The major reason for this is that most of the pregnant women do not want to be associated with complications or undesirable events, hence no plans are made in anticipation of possible complications.

This study has also revealed that a significantly higher proportion of respondents in later stages of pregnancy were more birth prepared than their counterparts in earlier stages of pregnancy. This study has also shown that respondents of parity one to three were more birth prepared than their primiparous and grandmultiparous counterparts.

This study has further shown that respondents education and socioeconomic status had no influence on their birth preparedness and

emergency readiness. Furthermore respondents knowledge of signs of danger in pregnancy, during labour and delivery, and post-partum was low.

Recommendations

1. In spite of efforts to provide fully equipped health facilities for basic and emergency obstetrics care, pregnant women in the study area need to be re-oriented to anticipate and plan for untoward events.
2. Health care providers should be trained on effective health education and counselling skills in order to be able to impart knowledge on clients.
3. Health education and counselling on different aspects of birth preparedness and emergency readiness should be provided to all antenatal clients repeatedly and at every given opportunity.
4. Use of reputable peer educators to reach out to the pregnant women will also prove valuable as they will tend to identify

with the pregnant women making them know that there is nothing wrong with anticipating and preparing for birthing and emergencies.

5. Health education on different aspects of birth preparedness and emergency readiness should be provided to all in the community, so that they will serve to further counsel pregnant women and support fully those of them who opt for being birth prepared and emergency ready.

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APPENDIX I

Informed consent

Birth preparedness and emergency readiness plans of antenatal clinic attendees in Amaku General Hospital Awka Anambra State, Nigeria

Dear Madam,

I am Dr. Ifeoma Njelita, a Senior Registrar with NAUTH Nnewi, currently undergoing a course in Public health at Nnamdi Azikiwe University Awka. This research will be submitted as part of the requirements for the award of MPH.

This study is intended to determine how ready and prepared antenatal clinic attendees are for normal delivery and emergencies. It will also assess their knowledge of danger signs in pregnancy, labour and after delivery. The study will involve asking you questions from a questionnaire and your answers would be

recorded accordingly. It will take about 15 minutes to fill the questionnaire. Your honest responses to the questions will help achieve the purpose of this study, thereby leading to improved maternal health.

You are free to participate or decline to take part in this study. You are also free to withdraw from this at any time you wish without any adverse consequence for your decision. I will however greatly appreciate your cooperation in responding to the survey and taking part in the study. I wish to assure you that your responses will be treated with utmost confidentiality. There are no risks involved in participating in this study. You are however given an opportunity to contribute to improved maternal health through the views you express here. You will not be given any inducement for this study but you and the society at large can benefit from improved care by virtue of the outcome of the study.

Now that this study has been explained to you, and you fully understand the study purpose and process, if you are willing to participate in the survey, do sign your signature or print your thumb print in space provided.

Participant's signature…….

Participant's address……

NB: In case of further enquiries regarding this study, contact;

Dr. Ifeoma Njelita

Dept of community medicine NAUTH Nnewi

08030938716.

APPENDIX II

QUESTIONNAIRE ON BIRTH PREPAREDNESS AND EMERGENCY READINESS PLANS OF ANTENATAL CLINIC ATTENDEES IN AMAKU GENERAL HOSPITAL AWKA, ANAMBRA STATE

This is an academic research project by Dr Njelita Ifeoma A, an MPH student of Nnamdi Azikiwe University, Awka.

Questionnaire No----------

Signature of interviewer----------

Greetings! The purpose of this interview is to obtain information on the birth preparedness and emergency readiness plans of antenatal clinic attendees in this health facility. Your responses shall be treated with confidentiality. Thank you for your co-operation.

SECTION A. BIODATA

1. How old are you? ----------
2. Parity ----------
3. Address ----------
4. Type of apartment where client resides ----------

    1) One room ---------
    2) Two rooms ----------
    3) Two bedroom flat ----------
    4) Three bedroom flat ----------
    5) Duplex ----------
    6) Others specify ----------

5. Marital Status

    1) Never married ----------
    2) Currently married ----------
    3) Separated ----------
    4) Divorced ----------

5) Widowed ----------

6) Cohabiting ----------

6. Highest level of formal education attained by client

1) Nil ----------

2) Primary ----------

3) Secondary ----------

4) Tertiary ----------

7. Occupation of client

1) Farmer --------

2) Trader ----------

3) Public/Civil Servant ----------

4) Others specify ----------

8. Spouse's occupation

1) Farmer ----------

2) Trader ----------

3) Public/Civil Servant ----------

4) Others specify ----------

9. Means of transportation in the family

    1) Nil ----------
    2) Bicycle ----------
    3) Okada ----------
    4) Car ----------

10. Religion/denomination

    1) Pentecostal ----------
    2) Anglican ----------
    3) Roman Catholic ----------
    4) Jehovah's Witness -------
    5) Sabbath ----------
    6) Moslem ----------
    7) Traditionalist ----------
    8) Others specify ----------

11. Ethnic group / tribe

    1) Igbo ----------
    2) Hausa ----------

3) Yoruba ----------

4) Others specify ----------

SECTION B.

1. Which month of your pregnancy did you register for ANC ----------

   ----

2. When was your LMP? ----------

3. Do you know your expected date of delivery?

   1) Yes ----

   2) No -----

4. Are you on routine drugs?

   1) Yes -----

   2) No ------

5. Have you received TT?

   1) Yes -----

   2) No ------

6. If yes, how many doses? ----------

7. Have you received malaria prophylaxis?

    1) Yes -----

    2) No ------

8. If yes, how many times? ----------

9. Is health education one of the services provided in this clinic?

    1) Yes -----

    2) No ------

10. If yes, what topics have been covered?

    1) Proper nutrition ----------

    2) Preparation for safe delivery ----------

    3) Labour signs ----------

    4) Danger signs of pregnancy ----------

    5) Others specify ----------

11. Have you identified where to deliver?

    1) Yes -----

2) No ------

12. If yes, where

1) Home ----------
2) TBA ----------
3) Church/mission ----------
4) Maternity home ----------
5) Health facility ----------

13. Have you started buying materials needed for delivery?

1) Yes -----
2) No ------

14. Have you started saving money towards delivery?

1) Yes -----
2) No ------

15. What are the signs of danger in pregnancy or labour?

1) Vaginal bleeding ----------
2) Abnormal vaginal discharge ----------

3) Fever ----------

4) Severe headache ----------

5) Trouble with vision ----------

6) Dizziness ----------

7) Leg swelling ----------

8) Convulsions ----------

9) Premature rupture of membrane ----------

10) Prolonged labour ----------

11) Abdominal pain ----------

12) Others specify ----------

16. Have you made arrangement for transportation to hospital in event of an emergency?

1) Yes -----

2) No ------

17. Have you arranged for someone to look after your home while in hospital?

1) Yes -----

2) No ------

18. Have you arranged for someone to accompany you to the place of delivery?

    1) Yes ----
    2) No -----

19. Have you identified a blood donor, in case need for blood transfusion arises?

    1) Yes -----
    2) No ------