



Assessment of childbirth complications associated with women of reproductive age in Ilorin Metropolis, Nigeria

Dr. Akorede Seun Nurudeen

Department of Human Kinetics and Health Education Faculty of Education, Ahmadu Bello University, Zaria, Nigeria

Abstract

The study investigated the childbirth complications associated with women of reproductive age in Ilorin metropolis. Relevant literature from different authorities, agencies and scholars were reviewed. Some of the areas reviewed include the definition, causes and implication associated with women reproductive. Two research questions and hypotheses were formulated to guide the study. The descriptive survey design method of research was used for the study. The population used for the study consists of women of childbearing age in Ilorin metropolis, Kwara State. Simple random sampling techniques were used to select three hundred and eighty-four respondents for the study. The instrument used for this study to collect data was a constructed questionnaire which was validated and tested for the reliability. The researcher administered the instrument with the research assistants; the data collected was analysed using descriptive statistics of frequency count, percentage, inferential statistics of one sample t-test and regression analysis was used to analyse the hypotheses set for the study at 0.05 alpha level of significance. The finding of this study shows that: Childbirth complication among women of childbearing age in Ilorin metropolis is significant in Ilorin metropolis, Women of childbearing age differ in childbearing complication based on education and level of income. Based on the findings of the study, it was concluded that Childbirth complications are prominent among women of childbearing age in Ilorin metropolis and Childbirth complications among women of childbearing age in Ilorin metropolis differ based on their age and level of income. However, in the cases of marital status and level of education, it does not differ. Therefore, it was recommended that Health care services should be made available to women at risk of having pregnancy and childbirth complications to avoid fatal outcomes during pregnancy or delivery and The Federal government should involve women of childbearing age in Ilorin metropolis about complications associated with childbirth and how to take proper and necessary care of themselves no matter their age or level of income.

Keywords: childbirth, complications women, childbearing, reproductive age

Introduction

According to the World Health Organization (WHO) (2012), The term maternal health includes the health of women during pregnancy, childbirth and the postpartum period. It encompasses the health care dimension of family planning, preconception, prenatal and postnatal care to reduce maternal morbidity and mortality. Maternal mortality is a serious health problem especially in African countries including Nigeria and Kwara state in particular. Maternal mortality rates in many countries have remained essentially a public health challenge (WHO, 2007). Worldwide, over 500,000 women of childbearing age die of complications related to pregnancy and childbirth each year. According to WHO (2007) over 99 per cent of these deaths occur in developing countries such as Nigeria. At least 150,000 African women die of pregnancy-related complications each year and the number of maternal deaths continues to rise each year in many countries (WHO, 2001). Maternal mortality has generated great concern among United Nations (UN) and International Agencies as well as National Governments in 3rd world countries like Nigeria (Onuzulike, 2006) [7]. WHO (2003) [14] categorized women of childbearing age in the age range of 15-49 years. For women between 35 and 45 years of age for whom earlier childbearing

is not an option, this decade remains safe enough that maternal age alone should not be a contradiction to childbearing (Hernandez, Toh & Cnattinguis, 2009) [5]. However, women do face decreasing fertility and an increase in the risks of miscarriage and chromosomal abnormalities. There is no universal definition of advanced reproductive age in women, in part because the effects of increasing age occur as a continuum, rather than as a threshold effect (Salihu, Shumpert & Slay, 2003) [9]. Fertility declines with advancing age, especially after the mid-30s, and women who conceive are at greater risk of pregnancy complications. WHO (2009) found out that approximately 8% of all women giving birth are affected by prolonged labour among other childbirth complications that may lead to serious conditions. Furthermore, WHO (2010) stated that more maternal deaths occur in countries in sub-Saharan Africa. This is because women in developing countries have many pregnancies and deliveries on average; their lifetime risk more accurately reflects the overall burden of these women. Martin, Hamilton, Ventura, Osterman, Kirmeyer and Mathews (2009), states that the rates of stillbirth among mothers aged 35 to 40 were significantly elevated (55/10 000 and 62/10 000 total births respectively) while other cohort study showed (43/10 000 total

births). Intrapartum stillbirth occurred in 8.1%, 7.9%, and 13.3% of all stillbirths in age groups 20 to 29, 35 to 40, respectively. In recent studies (Martin, Hamilton, Ventura, Osterman, Kirmeyer and Mathews, 2009), it has shown that the age at first birth is increasing as more women are delaying childbirth due to societal changes, cultural expectations, and financial situations. This has led to an increased birth rate in women of advanced maternal age (AMA) compared with younger aged women. In 2011, the birth rate in women more than age 40 years increased (aged 40–44 years) or remained steady (aged 45–49 years) compared with declining birth rates in all age groups less than 40 years (Say, Chou and Gemmill (2014) ^[10] ascertain that teenage pregnancy occurs when women aged less than 20 years become pregnant. This is of serious concern because maternal age plays a significant role in adverse outcome and complications of pregnancy. Teenage pregnancies represent a high-risk group in reproductive terms because of the double burden of reproduction and growth. Complications of pregnancy and childbirth are the leading cause of mortality among girls aged 15–19 years in developing countries such as Nigeria. It is also found in research by Say, Chou and Gemmill (2014) ^[10] that serious infectious illness in the mother can have non-specific fetal or obstetric effects and lead to miscarriage, premature labour or fetal death; these infections must be treated as any other serious illness. Teenage pregnancy is a social problem distributed worldwide, has serious implications on maternal and child health, especially in the context of developing countries. From the biological point of view, among the consequences of pregnancy in adolescence are the high rates of hypertensive disorders of pregnancy, anaemia, gestational diabetes and delivery complications, determining an increase in maternal and fetal mortality. It is important to note that some studies showed an increased trend of prenatal, intrapartum, and postpartum intercurrent events among pregnant adolescents. As to problems with the newborn, gestation during adolescence is associated with higher rates of low birth weight (LBW), preterm delivery, respiratory diseases, and birth trauma, besides a higher frequency of neonatal complications and infant mortality (Graham, 2001) ^[3]. Maternal deaths into direct and indirect obstetric deaths. Direct obstetric deaths are deaths resulting from obstetric complications during pregnancy, labour or puerperium, or interventions, omissions or incorrect treatments or a chain of events resulting from pre-eclampsia, postpartum haemorrhage or sepsis. Indirect obstetric deaths are those deaths resulting from a previously existing disease or a disease that developed during the pregnancy. Examples are anaemia, HIV and AIDS, malaria or heart disease. These deaths accruing from pregnancy-related complications have some causes (Graham, 2001) ^[3]. Maternal mortality occurs from risks attributable to pregnancy and childbirth as well as from poor availability and quality of health services. The most common causes of maternal mortality in sub-Saharan Africa include haemorrhage (34%), sepsis/infections (10%), hypertensive disorders (9%), (HIV/AIDS) (6%), and other direct causes (5%); other indirect causes contributed approximately 17% (Ouma, 2010). From the record, it has been shown that Nigeria is one of the countries with the highest maternal mortality ratios in the world. Maternal death has been defined as the death of a woman while pregnant or

within 42 days of delivery, miscarriage or termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes (Lewis & Drife, 2001). The complications of pregnancy may be experienced during pregnancy or delivery itself or may occur up to 42 days following childbirth. Maternal mortality in the context of the present study is defined as the death of a woman during pregnancy, in labour or first six weeks after delivery or termination of pregnancy from causes directly due to pregnancy or to conditions aggravated by pregnancy. Obstructed labour always put the mother at risk of developing Vesico-Vaginal Fistula (VVF), Recto-Vaginal Fistula (RVF), infection rupture of the uterus fatal maternal exhaustion and death. This contributes 11 per cent of maternal deaths (FMH, 2007). Unsafe abortion is defined as the termination of unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal standards, or both. Globally, it has been estimated that some 68,000 women die each year as a consequence of unsafe abortion and 5.3 million suffer disability (Ahman & Shah, 2002) ^[1]. WHO (2005) indicated that puerperal sepsis causes about 17 per cent of maternal deaths. It is characterized by high fever abdominal pains vomiting headache and loss of appetite. These types of deaths occur mostly in women of childbearing age. Women of childbearing age are referred to as women aged 15–45 years. Women of childbearing age in this study refer to women aged between 15–49 years in Ilorin metropolis, Kwara state. WHO also stated that girls and adolescent women have a high risk of pregnancy-related complications. This may be because they lack adequate knowledge for the prevention of maternal mortality due to their under-age. Lack of knowledge of maternal mortality may be a reason for the negative attitude towards maternal mortality.

Statement of the Problem

Childbirth is one most important events in the life of every woman. This is an opportunity for hope and joy or time to fear, suffer, and even death (Hekari, 2011) ^[4]. There is evidence that maternal mortality is a public health concern with higher rates in developing countries including Nigeria than in developed countries of the world. Women die from many causes such as haemorrhage, hypertension, unsafe abortion, sepsis, obstructed labour, anaemia, malaria among others. Of great importance to this ugly situation is the fact that knowledge and attitude of women may be implicated to further compound the problem particularly as they affect their understanding the causes and preventive measures regarding the maternal mortality. The factors associated with complications of childbirth have the potential to increase the Maternal Mortality Ratio and neonatal deaths. However, the researcher found out that there was no research on the prevalence and factors associated with complications of childbirth among women of reproductive age (15–49 years) in Ilorin metropolis. On this note, there is a need to assess the existing complications of childbirth among women of reproductive age (15–49 years) in Ilorin metropolis. It is on this note researcher intend to assess childbirth complications associated with women of reproductive age in Ilorin metropolis and to determine if women of childbearing age

differ in childbirth complications based on demographic characteristics (i.e. age, level of income and education).

Research Questions

1. What are those childbirth complications associated with women of childbearing age in Ilorin metropolis?
2. Are there differences in childbirth complications among women of childbearing age in Ilorin metropolis based on demographic characteristics (i.e age, level of income, marital status and education)?

Research Hypotheses

The following null hypotheses were formulated to guide this study.

1. Childbirth complication associated with women of childbearing age in Ilorin metropolis is not significant.
2. Women of childbearing age in Ilorin metropolis do not significantly differ in childbirth complication based on demographic characteristics (i.e. age, level of income, marital status and education).

Methodology

This study adopted a descriptive research design of survey type. The population of the study comprised all 38,400 women of childbearing age (15-49) who lives in Ilorin Metropolis according to the National Population Commission (2006). Simple random sampling was used to select one per cent (1%) out of the total population of 38400 childbearing age women in Ilorin metropolis amounted to 384 childbearing age women which serve as the respondents for this study. The researcher constructed questionnaire was used as an instrument in gathering data for this study. The questionnaire was to elicit some responses to the childbirth complications associated with women of childbearing age. In the questionnaire, each

respondent is expected to react to the statement on childbirth complications by ticking with the assistance of medical personnel employed as research assistance to help give description to the items in questionnaire to enable objective responses. The use of Dichotomous questions was used in the close-ended questionnaire: YES, and NO. Judgement was based on a benchmark mean of 1.0, in this case, mean score responses of above 1.0 will be positive and mean score responses of below 1.0 will be negative. However, the ranking of occurrence will be done to ascertain the most common complication among women of childbearing age in Ilorin metropolis. The instrument was validated by three experts in the Department of Health Promotion and Environmental Health Education, Faculty of education, University of Ilorin, Ilorin. The test re-test method was employed to test the reliability of the instrument in Ilorin Metropolis. The researcher administered twenty (20) copies of the questionnaires to twenty (20) women and it was administered to another set of respondents (apart from the selected population) at an interval of one week. Pearson Product Moment Correlation (PPMC) was used to correlate the first and second scores. A correlation coefficient of 0.74 ‘r’ was obtained considered reliable for the study. The researcher administered the instrument with the help and support of four trained research assistants. Descriptive statistics of mean and standard deviation were used to answer the research question while inferential statistics of one sample t-test was used for hypotheses 1 and regression analysis for hypotheses 2. All hypotheses tested at 0.05 level of significance using statistical package for social science.

Research Question 1: What are those childbirth complications associated with women of childbearing age in Ilorin metropolis?

Table 1: Showing the Mean and Standard deviation of Childbirth complications in Ilorin metropolis

Items	Mean	Std. Deviation
Hypertension is a childbirth complication that has affected me during previous delivery(s)	1.2396	.42739
Post-partum haemorrhage is a childbirth complication that has affected me during previous delivery(s)	1.2031	.40285
Pre-term labour is a childbirth complication that has affected me in previous delivery(s)	1.1172	.32206
Amniotic fluid embolism is a childbirth complication that has affected me during previous delivery(s)	1.0130	.11351
Uterine rupture is a childbirth complication that has affected me in the labour-process during previous delivery(s)	1.0104	.10166
Hellp syndrome is a childbirth complication that has affected me in labour-process during previous delivery(s)	1.0521	.22248
Obstructed labour is a childbirth complication that has affected me in labour-process during previous delivery(s)	1.1016	.30247
Umbilical cord problems is a childbirth complication that has affected me in labour-process during previous delivery(s)	1.0078	.08816
Cardiovascular disease and Cardiac arrest is a childbirth complication that has affected me in labour-process during previous delivery(s)	1.0182	.13395
Abnormal presentations is a childbirth complication that has affected me in labour-process during previous delivery(s)	1.0807	.27277
Multiple pregnancies are a childbirth complication that has affected me in labour-process during previous delivery(s)	1.1849	.38872
Delayed delivery or prolonged labour is a childbirth complication that has affected me in labour-process during previous delivery(s)	1.1484	.35600
Nuchal cord is a childbirth complication that has affected me in labour-process during previous delivery(s)	1.1120	.31575
Caesarean birth is a childbirth complication that has affected me in labour-process during previous delivery(s)	1.3672	.48267
Perineal tears are a childbirth complication that has affected me in labour-process during previous delivery(s)	1.2943	.45631
Aggregate Mean	1.13	

Table 1: The table above shows the childbirth complications that affect women of childbearing age in Ilorin metropolis. Careful observation highlights the most common types of childbirth complications that are in Ilorin metropolis which

include Caesarean birth, Perineal tears, Hypertension, Postpartum Haemorrhage and multiple Pregnancy with the Mean scores of 1.3672, 1.2943, 1.2396, 1.2031 and 1.1849 respectively. This table answers the research question of

“What are those childbirth complications associated with women of childbearing age in Ilorin metropolis?” as it highlights the most common childbirth complications by the mean score ranking.

Test of Hypotheses

Hypothesis 1: Childbirth complications among women of childbearing age in Ilorin metropolis is not significant

Table 2: Showing Statistical Analysis of Childbirth complications among women of childbearing age.

	N	Mean	Std. Deviation	t-value	df	P-value	Decision
Childbirth complication	384	16.9505	1.80662	183.858	383	0.000	Rejected

Table 2: From the above table on hypothesis two which states that “Childbirth complications among women of childbearing age is not significant”, reveals a T-value of 183.858 with the Mean score of 16.9505 and P-value of 0.000. The P-value of 0.000 was lower than 0.05 level of significance which implies that hypothesis one which states that, “Childbirth complications among women of childbearing age is not significant” was rejected, which shows that Childbirth complication among women of childbearing age in Ilorin

metropolis is significant. This implies that there are childbirth complications among women of childbearing age in Ilorin metropolis.

Hypothesis 2: Women of childbearing age in Ilorin metropolis do not significantly differ in childbirth complication based on demographic characteristics (age, level of income, marital status and education).

Table 3: Showing Statistical Analysis of Childbirth complications among women of childbearing age based on demographic characteristics (age, level of income, marital status and education).

Model Summary ^b						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
	0.411	0.169	0.160	1.65545		
Anova ^a						
Model	Sum of Squares	Df	Mean Square	F	Sig.	
Regression	211.406	4	52.852	19.285	0.000 ^b	
Residual	1038.653	379	2.741			
Total	1250.060	383				
Coefficients ^a						
Model	Unstandardized Coefficients		Standardized coefficients		T	Sig.
	B	Std. Error	Beta			
(Constant)	18.230	0.345			52.814	0.000
Age range	0.295	0.111	0.148		2.647	0.008
Marital status	0.548	0.124	0.246		4.406	0.000
Education	0.674	0.113	0.375		5.987	0.975
Level of Income	0.109	0.089	0.077		1.221	0.223

Table 3: Careful observation of table three on hypothesis two which states that “Women of childbearing age in Ilorin metropolis do not significantly differ in childbirth complication based on demographic characteristics (age, level of income, marital status and education)”. R² was found to be 0.059 with F-value of 5.947 and P-value of 0.000, which was lower than 0.05 level of significance, which means that hypothesis two which states that “Women of childbearing age in Ilorin metropolis do not significantly differ in childbirth complication based on demographic characteristics (age, level of income, marital status and education)” was rejected. However, marital status has a P-value of 0.000, education has a P-value of 0.000, while age and level of income have P-value of 0.008 and 0.223 respectively. This implies that women of childbearing age differ in childbirth complication based on age and level of income.

The P-value of 0.000 was lower than 0.05 level of significance which implies that hypothesis one which states that, “Childbirth complications among women of childbearing age is not significant” was rejected, which shows that Childbirth complication among women of childbearing age in Ilorin metropolis is significant. This implies that there are childbirth complications among women of childbearing age in Ilorin metropolis is in line with Igovik (2009) study that found out that approximately 8% of all women giving birth are affected by prolonged labour among other childbirth complications that may lead to serious conditions. Furthermore, WHO (2010) stated that more maternal deaths occur in countries in sub-Saharan Africa. This is because women in developing countries have many pregnancies and deliveries on average; their lifetime risk more accurately reflects the overall burden of these women.

Discussions

Hypothesis one

Which states that “Childbirth complications among women of childbearing age is not significant”, reveals a t-value of 183.858 with the Mean score of 16.9505 and P-value of 0.000.

Hypothesis two

Which states that “Women of childbearing age in Ilorin metropolis do not significantly differ in childbirth complication based on demographic characteristics (age, level of income, marital status and education)”. R² was found to be

0.059 with F-value of 5.947 and P-value of 0.000, which was lower than 0.05 level of significance, which means that hypothesis two which states that "Women of childbearing age in Ilorin metropolis do not significantly differ in childbirth complication based on demographic characteristics (age, level of income, marital status and education)" was rejected. However, marital status has a P-value of 0.000, education has a P-value of 0.000, while age and level of income have P-value of 0.008 and 0.223 respectively. This implies that women of childbearing age differ in childbirth complication based on age and level of income. This is in line with a study carried out by Sarka (2010) which states that the rates of stillbirth among mothers aged 35 to 40 were significantly elevated (55/10 000 and 62/10 000 total births respectively) while other cohort study showed (43/10 000 total births). Intrapartum stillbirth occurred in 8.1%, 7.9%, and 13.3% of all stillbirths in age groups 20 to 29, 35 to 40, respectively.

Conclusions

Based on the findings of this study, the following conclusions were made

- Childbirth complications are prominent among women of childbearing age in Ilorin metropolis
- Childbirth complications among women of childbearing age in Ilorin metropolis differ based on their age and level of income. However, in the cases of marital status and the educational level does not differ.

Recommendations

Based on the findings from the study, the following recommendations to reduce the risks of pregnancy and childbirth complications among women of childbearing age in Ilorin metropolis:

- Health care services should be made available to women at risk of having the pregnancy and childbirth complications to avoid fatal outcomes during pregnancy or delivery.
- Health education should be made available for women of childbearing age in Ilorin metropolis about complications associated with childbirth and how to take proper and necessary care of themselves no matter their age or level of income.

References

1. Ahman E, Shah I. Department of Reproductive Health and Research, World Health Organization (WHO RHR), Geneva, Switzerland. *Reprod Health Matters*. 2002; 10(19):13-7.
2. Federal Ministry of Health. *Maternal mortality in Nigeria (FMOH Report)*, 2007.
3. Graham J. *Teratogen updates; gestational effects of maternal hyperthermia due to febrile illnesses and resultant patterns*, 2001.
4. Hekari D. The assessment of adaptation rate of coronary artery disease female patients according to quadruple aspects of physiologic, self-perception, role-playing and independence/dependence in Tabriz Investigation, 2005-2006. *J Azad Univ of Med sci*. 2011; 18(3):187-93.
5. Hernandez-Diaz S, Toh S, Cnattingius S. Department of medical epidemiology and biostatistics and clinical epidemiology unit, Department of Medicine, Karolinska Institute, s- stockholm, Sweden, 2009, 171-77
6. Martin JA, Hamilton BE. Sutton PD. *Births: final data for Natl Vital Stat Rep*. 2009; 7(1):104-30.
7. Onuzulike MN. *Issues in Health*. (3rded). Owerri: Megasoft Publishers, 2006.
8. Ouma OW. *Acceptability and sustainability of the WHO Focused Antenatal Care package in Kenya*. Nairobi Kenya: Frontiers in Reproductive Health Program, Population Council; Insitute of African Studies, University of Nairobi, 2006.
9. Saliyu HM, Shumpert MN, Slay M. *childbearing beyond maternal age 50 and fetal outcomes in the United States*. *Obstet Gynecol*. 2003; 102:1006-1014
10. Say L, Chou D. Gemmill A. *Global causes of maternal death: A who systematic analysis*. *The Lancet Global Health*. [Online]. 2014; 2(6):pe323-e333.
11. World Health Organization. *The Disparity between developing and developed countries. A report in the international safe motherhood conference*. Nairobi: Kenya, 2010.
12. World Health Organization: *Guidelines or the prevention of postpartum haemorrhage*. Geneva: World Health Organization, 2007.
13. World Health Organization. *Iron Deficiency: Assessment, prevention and control*. Geneva, Switzerland, 2001, 15.
14. World Health Organization. *Beyond the numbers: Reviewing maternal deaths and complications to make pregnancy safer*, World Health Organization (WHO)/United Nations Children's Fund (UNICEF), *Antenatal Care in Developing Countries: Promises, Achievements and missed*, 2003.
15. World Health Organization. *Clarifying WHO Position on misoprostol use in the community to reduce maternal death*. Geneva, 2011.