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DEPT OF NURSING SCIENCES

***KNOWLEDGE AND PRACTICE OF MIDWIVES IN
MANAGEMENT OF ECLAMPSIA IN CHIPATA DISTRICT***

BY

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LIST OF ABBREVIATIONS

ANC	-	Antenatal Care
CSO	-	Central Statistics Office
DMO	-	District Medical Officer
EM	-	Enrolled Midwife
EmOC	-	Emergency Obstetric Care
FANC	-	Focused Antenatal Care
GNC	-	General Nursing Council
HELLP	-	Elevated Liver Enzymes and low Platelet count
HSSP	-	Health Services and Systems Program
MDG	-	Millennium Development Goals
MMR	-	Maternal Mortality Ratio
MOH	-	Ministry of Health
PMO	-	Provincial Medical Officer
PNC	-	Postnatal Care
RM	-	Registered Midwife
UNICEF	-	United Nations International Children's Fund
UTH	-	University Teaching Hospital
WHO	-	World Health Organization
ZDHS	-	Zambia Demographic and Health Survey

DECLARATION

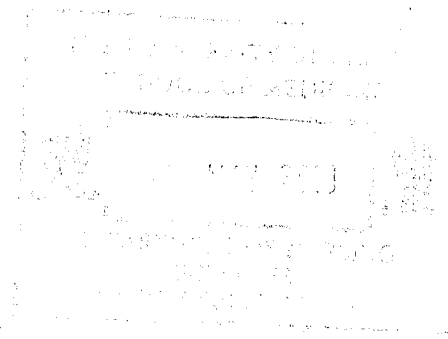
I, Esther Namwaba Banda, hereby declare that the work presented in this study for a Bachelor of Science Nursing Degree has not been presented either wholly or in part, for any other degree and is not being currently submitted for any other degree.

Signed: Esther Namwaba Banda
(Candidate)

Date: 03.05.2010

Approved by: [Signature]
(Supervisor)

Date: 03/05/2010



STATEMENT

I hereby, certify that this study is entirely the result of my own independent investigations. The various sources to which I am indebted are clearly indicated in the text and references.

DEDICATION

This research is dedicated to my husband Mr M. Banda, lovely son James Banda and my parents Mr & Mrs Simwaba for the continuous support in my success.

ABSTRACT

Eclampsia is the new onset of convulsions during pregnancy, labour or postpartum, unrelated to other cerebral pathological conditions, in a woman with pre-eclampsia and causes 14% of all maternal deaths. The midwife is in a unique position to identify those women with a predisposition to pre-eclampsia which is a precursor to eclampsia.

The purpose of the study was to determine knowledge and practice of midwives in management of eclampsia in Chipata Urban District.

The major hypothesis was that “there is a relationship between knowledge and practice of midwives in management of eclampsia”.

The study was conducted at Chipata General Hospital, kapata clinic, Lunkwankwa clinic, Msekera clinic, Namuseche and Chipata health centre. The above mentioned centres are all in Chipata Urban District in Eastern Province of Zambia. A cross sectional, quantitative study design was used. The study population included midwives working at Chipata General Hospital and five (5) health centres that were conveniently selected. A sample of 50 midwives was purposively selected from the study setting. Data was collected using a self administered questionnaire.

Data was analysed manually using single counting and a scientific calculator. Data from this study was presented according to the sequence and sections in the questionnaire. The findings of the study were presented in frequency tables, pie charts, histograms and bar charts to illustrate principal findings of the study to the reader. Cross tabulations of the variables helped to show clearly the relationship between demographic data and knowledge as well as demographic data and practice.

The study revealed that midwives who were working at the hospital had high knowledge levels and were competent in management of eclampsia than midwives working at the clinics. The study further revealed that enrolled midwives had high levels of knowledge and were well competent in management of eclampsia as practice levels was excellent as compared to registered midwives. While 70% of respondents had high levels of knowledge, only 40% of respondents knew the steps to take when

managing eclampsia. The study also revealed that magnesium sulphate the drug of choice in management of eclampsia was not always available in the hospital/clinic. Only (48%) of the respondents were testing urine for pregnant women while (52%) were not. The study revealed that only (8%) of the respondents had urinalysis reagents always while (92%) had them sometimes, rarely or never.

The study therefore concludes that there is a relationship between knowledge and practice in management of eclampsia as evidenced by the majority (80%) of respondents who had high knowledge levels and also were competent in management of eclampsia as they had excellent practice levels. The respondents with moderate levels of knowledge either had good levels of practice or poor levels of practice.

Key words: Management of eclampsia, Midwives, Practice and knowledge.

CHAPTER 1

1.0 INTRODUCTION

1.1 Background information

Pre-eclampsia is a hypertensive disorder of pregnancy associated with proteinuria with or without edema. If hypertension and proteinuria are complicated by seizures or coma, the condition is known as eclampsia (Morris, 2006). Fraser & Cooper, (2003) defines eclampsia as the new onset of convulsions during pregnancy or postpartum, unrelated to other cerebral pathological conditions, in a woman with pre eclampsia. While most pregnancies and births are uneventful, all pregnancies are at risk in that normally progressing pregnancies can be complicated at any stage of pregnancy, labour and during postpartum (World Health Organization (WHO), 2000). Around 15% of all pregnant women develop a potentially life threatening complication that calls for skilled care and some will require a major obstetrical intervention to survive.

Eclampsia develops after the 20th week of gestation and is considered a complication of severe pre-eclampsia. The progression from severe pre-eclampsia to seizures and coma is thought to be due to hypertensive encephalopathy, vasogenic edema associated cortical ischemia, edema, or haemorrhage (Morris, 2006). The cause of pre-eclampsia and later eclampsia remains unclear. Current research implicates uterine and placental ischemia and the subsequent release of humoral agents resulting in widespread vasoconstriction (Morris, 2006). Cases of eclampsia should be managed actively and delivery must occur within 12 hours of onset of convulsions to prevent further fetal compromise, increases in urinary protein and further rise in blood pressure (WHO, 2000).

Eclampsia is a clinical diagnosis with patients having seizures without evidence for Central Nervous System, metabolic, or other etiology of the seizure activity such as observed in epilepsy. Most patients with eclampsia have systolic Blood Pressures (BP) higher than 160 mm Hg or diastolic BPs higher than 110 mm Hg and proteinuria; however, eclampsia can occur with minimally elevated BP related to baseline and without proteinuria (WHO, 2000). Evidence of end-organ damage prior to development of seizures is common; symptoms include altered mental status;

headache; visual disturbances; and abdominal pain; and signs include haemoconcentration; haemolysis, impaired liver function with elevated liver enzyme levels, and thrombocytopenia (HELLP); proteinuria; oliguria; pulmonary edema; generalized peripheral edema; microangiopathic haemolytic anaemia; and fetal growth retardation (Morris, 2006).

It has been proven that successful management of obstetric complications can be achieved if a committed skilled attendant is available to attend to a woman in pregnancy and labour, if there is prompt access to emergency obstetric care through provision of reliable and efficient referral system i.e. appropriate transport and communication modalities; and there is availability of essential drugs and supplies, basic equipment and blood transfusion and operative delivery procedures (WHO, 2006). According to WHO, (1999), a skilled attendant is an accredited health professional such as a midwife, doctor or nurse who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated pregnancies, child birth and the immediate postnatal period), and in identification, management and referral of complications in women and newborns.

The midwife being skilled personnel has a key role in promoting the health and well being of child bearing women and their families before conception, antenatally and postnatally, including family planning. The midwife has responsibilities of diagnosing and monitoring pregnancies, labours and postpartum progress, to work with child bearing women and other health care professionals to achieve the best possible outcomes for each individual family (Fraser & Cooper, 2003). This demands a wide range of skills, knowledge and personal attributes.

Access to emergency obstetric care when a woman develops pregnancy and child birth related complications is critical for a woman's survival as it significantly contributes towards reduction of maternal mortality ratio (Ministry of Health (MoH), 2008). Emergency obstetric care is referred to care given to women experiencing complications occurring during pregnancy, labour and immediately after childbirth that will threaten the life of the mother and newborn unless timely and effective intervention (s) is/are instituted (MoH, 2006). This therefore entails that skilled professionals with obstetric care knowledge and skills should attend to every pregnancy and delivery.

The high blood pressure alone has little impact on pregnancy outcomes- nearly 10% of normotensive women experience abnormally elevated blood pressure at some point during pregnancy (Kidanto et al, 2009). There are several major categories of hypertensive disorders, including gestational hypertension or pregnancy induced hypertension, chronic or essential hypertension and super-imposed hypertension. Of all hypertensive disorders of pregnancy, eclampsia has the highest impact on morbidity and mortality, including renal or liver failure, clotting disorders, stroke, pre-term delivery, still birth or neonatal death.

Eclampsia is one of the conditions directly attributed to maternal mortality (MoH, 2005). Statistics available indicate that eclampsia accounts for 14% of all maternal deaths and it is assumed that pre eclampsia and eclampsia account for 50% of all hypertensive conditions (WHO, 2002).

It is estimated that every year eclampsia is associated with about 50 000 maternal deaths world wide, most of which occur in developing countries. The incidence of eclampsia is higher in developing countries (1 in 100-1700 deliveries) than in developed countries (1 in 2000 deliveries) (Fraser and Cooper, 2003). This is probably due in particular to pregnant women's lack of easy access to appropriate antenatal care in those settings. Even in countries with low maternal mortality, a substantial proportion of the maternal deaths will be attributed to eclampsia (Kidanto et al, 2009). Maternal mortality is an important indicator for women's programmes and reproductive health programmes in the country (Central Statistics Office (CSO), 2007).

Although eclampsia remains a cause of maternal and foetal morbidity and mortality in developed countries, the incidence has fallen considerably in developed countries due to high quality antenatal care (Kidanto et al, 2009). The immediate management of eclampsia is dependant on the prompt action of the midwife (Fraser & Cooper, 2003). The speed of this action while calling for medical aid will often help to determine the outcome for the mother or the baby.

A guide for essential practice which provides evidence based guidelines that empower health workers at all levels and protocols for management of eclampsia have

been developed for diligent use to compliment the current efforts to address maternal and neonatal morbidity and mortality (WHO, 2000).

The Zambian government has been engaged in the process of reforming the health sector since 1992 (MoH, 2006). In an effort to address poor maternal health indicators, Ministry of Health strengthened the provision of reproductive health services through strengthening referral systems and 86 ambulances were purchased for distribution to all the districts (MoH, 2005). The procurement of equipment and drug supplies for essential obstetric care in all the 72 districts has increased access to emergency obstetric care when a woman develops pregnancy and childbirth related complications (MoH, 2005).

The Millennium Development Goal (MDG) number 5 is to improve maternal health and the target is to reduce maternal mortality ratio by three quarters that is 162 deaths per 100,000 live births by 2015 in Zambia. The performance against this goal has been below expectations as the 2007 Zambia Demographic and Health Survey (ZDHS) maternal mortality ratio still remains high at 591 per 100,000 live births (CSO, 2007).

In Zambia, Antenatal care (ANC) provisions have been transitioned from the traditional to the Focused Antenatal Care (FANC) approach. Scheduling of visits for FANC are a minimum of four visits, especially for pregnancies progressing normally. This is an updated approach called FANC, which emphasizes quality of care during the visits over the quantity of visits. Another key FANC strategy is for each visit to be conducted by a skilled health provider (CSO, 2007). The antenatal coverage is 94 percent by a skilled health provider according to CSO 2007.

The midwives should to be able to prevent death from eclampsia by adequate prenatal monitoring of blood pressure and urine, and prompt management of complications when they arise (WHO, 1996). The ZDHS 2007 indicates that though the majority of women are weighed (91 percent) and had their blood pressure measured (80 percent) during antenatal, urine testing is only offered at 23 percent. The midwife is in a unique position to identify those women with a predisposition to pre-eclampsia and eclampsia (Fraser & Cooper, 2003).

The 2005 Annual report for Ministry of Health indicates that Emergency obstetric care (EMoC) needs assessment was conducted through out the country and refresher training in safe motherhood has been on-going in birth and emergency obstetric care preparedness. Protocols for management of eclampsia have been circulated to most maternity wings to use as guidelines in managing eclampsia as it is one of the emergency obstetric conditions (MoH, 2005). The guidelines for management of eclampsia recommend the use of magnesium sulphate as the drug of choice for preventing and treating convulsions in eclampsia.

Chipata district was one of the districts in Eastern province which was assessed for level of EmOC available (MoH, 2006). The assessment revealed that there was no health centre that had basic EmOC equipment and that there was a deficiency in the delivery of EmOC. After the assessment, recommendations were made to allow Health facilities to use their grants to procure minor but essential equipment e.g. Blood Pressure machine, stethoscopes and thermometers. Another recommendation was the need to maintain adequate supplies of prescribed drugs in the facilities and standardise the contents of an emergency tray and revision of the essential drug kit so that magnesium sulphate are supplied in adequate quantities (MoH, 2006). The assessment also revealed the need to enhance the skills of the skilled attendants in the health facilities through recruitment of midwives and Chipata has opened a Direct Entry Midwifery program to improve staffing of midwives (Chipata School of Nursing, Action plan 2008-2011).

Chipata district has 36 health facilities, 4 health posts, 1 first level referral centre at Mwami and 1 second level General Hospital (Chipata District Health management Action plan, 2008-2011). The population of the district is 486,953 (2009), out of these 107,130 are females in child bearing age (15-45 years) based on CSO, 2000 projections. The number of expected pregnancies for the year 2009 was 26,295 which was 5.4% of total population. Eclampsia is a common hypertensive disorder that complicates pregnancies in Chipata district and is one of the commonest causes of maternal mortality.

The researcher in this study determined the knowledge and practice of midwives' in management of patient's with eclampsia in Chipata Urban District.

1.2 Statement of the problem

Eclampsia is assumed to account for 50% of all hypertensive disorders in pregnancy. When pre-eclampsia is detected early and treatment is instituted early enough, no woman should progress to eclampsia unless it is the fulminating type (Fraser and Cooper, 2003). Eclampsia is a preventable condition that should not occur with good antenatal screening by midwives. Early detection and management of eclampsia in women with risk factors such as history of essential hypertension and pre eclampsia is critical to the management of eclampsia (WHO, 2000), hence the midwives need to be able to prevent progression to eclampsia by adequate prenatal monitoring of blood pressure and urine, and prompt management and referral of complications when they arise (WHO, 1996).

The maternal mortality rate for Chipata General Hospital was at 688 per 100,000 live births in 2007 and 487 per 100,000 live births in 2008 of which eclampsia was among the commonest cause. The midwife is in a unique position to identify those women with a predisposition to eclampsia (Fraser & Cooper, 2003).

Eclampsia cases continue to rise every year in Chipata district urban as shown in the table below.

Table 1.1: Cases of eclampsia out of total maternal complications

Year	Total maternal complications admitted	Cases of eclampsia	Percentage
2004	476	12	2.5%
2005	553	19	3.4%
2006	524	22	4.2%
2007	600	21	3.5%
2008	578	26	4.5%

Source: Chipata General Hospital medical records 2004-2008

Table 1.1 shows that out of total maternal complications at Chipata General Hospital, eclampsia accounts for an average of (4%). In unpublished Eastern Province MDR report, a total of 18 cases of maternal deaths occurred from January to June 2006 and 16% were due to eclampsia which is higher than maternal deaths due to eclampsia national wide which accounts for 13% (MoH, 2005).

Eclampsia is one of the conditions directly attributed to maternal mortality (MoH, 2005), it contributes to the high maternal mortality rate for Zambia which is estimated at 591 per 100, 000 live births (CSO, 2007). The Millennium Development Goal (MDG) number five (5) is to improve maternal health and the target is to reduce maternal mortality ratio by three quarters that is 162 deaths per 100,000 live births by 2015. The performance against this goal has been below expectations as the 2007 ZDHS maternal mortality ratio still remains high at 591 per 100,000 live births and eclampsia is among the direct causes.

The consequences of eclampsia include increased fetal compromise that leads to still births and macerated still births and this leaves psychological trauma to the woman and her family. The other consequences are related to permanent Central Nervous System damage secondary to recurrent seizures or intracranial bleeding (Morris, 2006). The most devastating consequence is maternal death and increased number of orphans who later become street kids.

The immediate management of eclampsia is dependant on the prompt action of the midwife (Fraser & Cooper, 2003). A woman with eclampsia will die when she reaches a health facility unless that facility has health staff properly trained in management of eclampsia and the necessary drugs available (WHO, 2006). The drug of choice for managing eclampsia is magnesium sulphate.

The researcher determined the knowledge and practice of midwives in management of eclampsia so as come up with evidence-based solutions to the problem of management of eclampsia.

1.3 Factors Contributing/Influencing Problem

Inadequate midwifery skill is attributed to mismanagement of eclampsia. Failure to identify the risk factors for eclampsia and inadequate care and observation during a fit hinders the specific skill to prevent and manage eclampsia (WHO, 1996).

Other contributing factors include delays in accessing health care at health centre level, long distances to health facility and attitude of some health staff. The factors may be categorised as service related, disease related and socio-cultural and economic factors.

1.3.1 Service related factors

1.3.1.1 Staffing of midwives

Adequate staffing reduces workload and quality maternal obstetric health service is given to pregnant mothers as per guidelines while inadequate staffing increases workload. This may lead to non detection of maternal complications and eclampsia will not be effectively managed.

1.3.1.2 Experience of midwives

Midwives with longer experience may manage eclampsia effectively than midwives with less experience. This is because long serving midwives may have attended to many patients with eclampsia and they may have been oriented to management protocols than midwives with less experience.

1.3.1.3 Emergency Obstetric Care (EmOC) services and equipment

Availability of emergency obstetric care equipment when a woman develops pregnancy and childbirth related complications prevent mismanagement of eclampsia while non availability of EmOC increases the risk of maternal deaths. It is difficult to adhere to management protocols for nursing emergency obstetric cases if equipment is not available while it becomes easy when available.

1.3.1.4 Medical and surgical supply

When an institution is well supplied with medical and surgical supplies, patients with eclampsia may be effectively managed than when an institution is not well supplied. The delay in management of eclampsia due to inadequate medical and surgical supplies may lead to mismanagement and maternal death.

1.3.1.5 In-service training in emergency obstetric care

Midwives who have been given refresher courses in managing emergency obstetric cases are more likely to effectively manage eclampsia than midwives who have not been oriented. Refresher courses update midwives with skills and competence to the current strategies in management of eclampsia.

1.3.1.6 Supervision of midwives

A supervisor makes one accountable for their actions. This in turn reduces cases of negligence. Midwives who are not adequately supervised may not manage patients with eclampsia as per protocol because there is no one to monitor and guide them on the required care while those adequately supervised may effectively manage eclampsia.

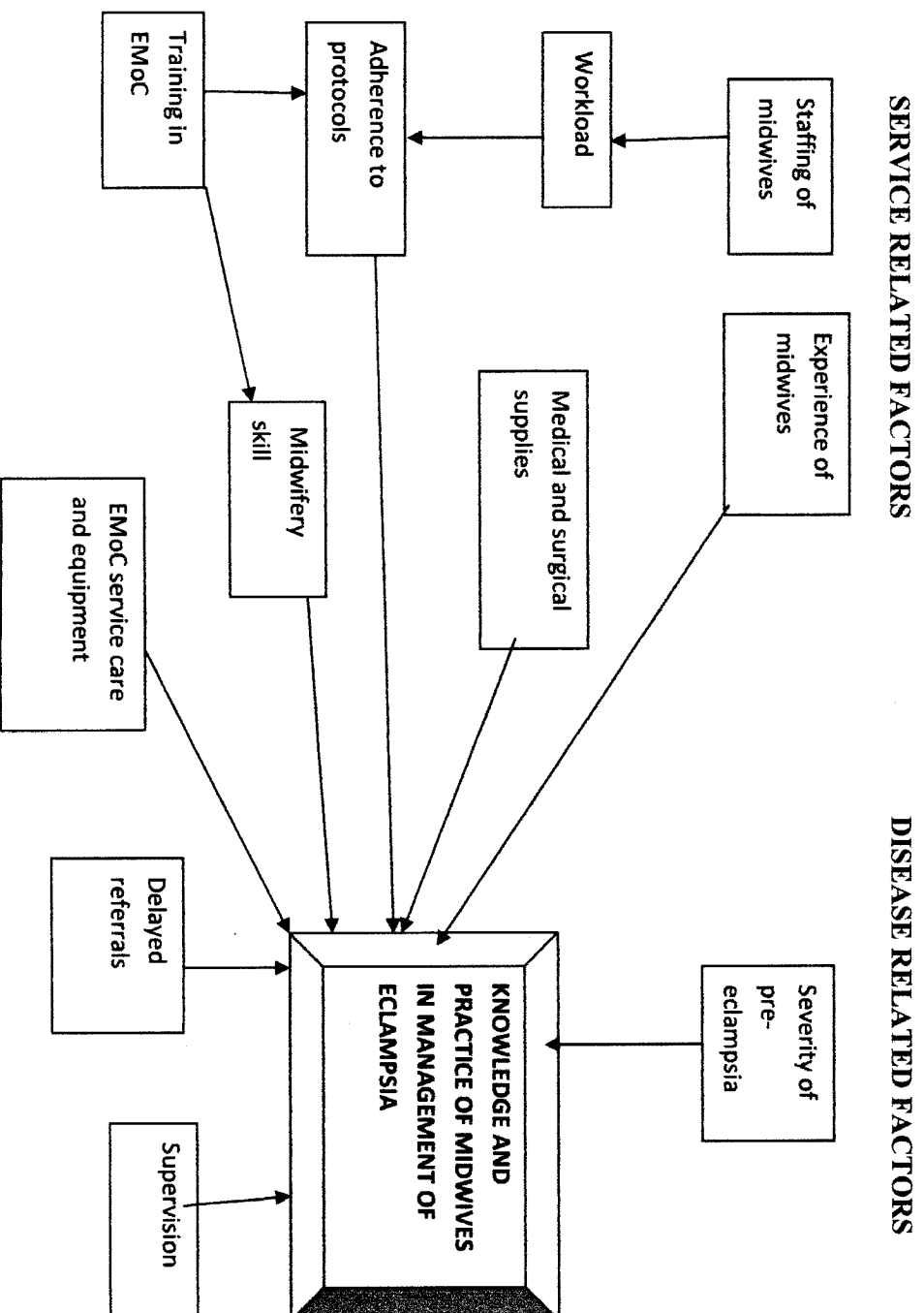
1.3.2 Disease related factors

1.3.2.1 Severity of pre-eclampsia

Usually pre-eclampsia is diagnosed and treatment instituted to prevent eclampsia but occasionally pre-eclampsia is so rapid in onset and progress that eclampsia ensues before any action can be taken and in this case eclampsia is termed 'fulminating'.

Figure 1.1

1.4. DIAGRAM OF PROBLEM ANALYSIS



1.5 Justification

The purpose of the study was to determine knowledge and practice of midwives in management of eclampsia so as to establish the relationship between the two variables and find ways of improving management of eclampsia.

The identification of risk factors for eclampsia is part of the specific skills the midwife needs to develop to prevent and manage eclampsia. The skills and performance of the midwife determine whether or not he or she can manage complications of pregnancy.

It is very important for midwives to be able to prevent death from eclampsia by adequate prenatal monitoring of blood pressure and urinalysis, and prompt management of complications when they arise. Early detection and management in women with risk factors is critical to the management of eclampsia and leads to more timely treatment and referrals in the case of complications.

When eclampsia is prevented, maternal mortality related to eclampsia will gradually reduce and this will improve the National Reproductive Health indicators that are currently not impressive as the Zambian maternal mortality rate stands at 591 per 100, 000 live births.

The study, therefore aimed to determine knowledge and practice of midwives towards management of eclampsia in Chipata Urban District. Available literature revealed that the studies conducted had all focused on availability of EmOC services but no study had looked at the quality of care offered by skilled personnel and the relationship between knowledge and practice in management of eclampsia.

The findings of this study will be used by the nurses, midwives and doctors to improve management of eclampsia cases. The findings will further give direction to policy makers to put up Emergency Obstetric and Neonatal care policies that will enhance management of eclampsia. The researcher has come up with the recommendations to the district authority on ways to improve management of eclampsia by midwives.

1.6 Research Objectives

1.6.1 General Objectives

To determine the knowledge and practice of midwives in management of eclampsia in Chipata Urban District so as to come up with solutions to prevent and effectively manage eclampsia.

1.6.2 Specific Objectives

1.6.2.1 To assess the level of knowledge of midwives in management of eclampsia

1.6.2.2 To determine the practice of midwives in management of eclampsia

1.7 Study Hypothesis

1.7.1 There is a relationship between knowledge and practice of midwives in management of eclampsia.

1.8 Definition of Terms

1.8.1 Operational Definition of study Variables

1.8.1.1 Eclampsia- eclampsia is a condition characterized by high blood pressure, proteinuria and fits/convulsions occurring after 20 weeks of pregnancy and 48 hrs after delivery.

1.8.1.2 Pre-eclampsia- pre-eclampsia is a condition peculiar to pregnancy characterized by raised blood pressure and proteinuria with or without oedema.

1.8.1.3 Midwife- A midwife is a nurse trained in midwifery care as a speciality and is able to attend to patients with eclampsia.

1.8.1.4 Knowledge- The midwife should be able to define eclampsia, give signs and symptoms, know that eclampsia is an emergency condition, know common risks for eclampsia, state steps to take in managing eclampsia, mention the drug of choice, know whether patients with eclampsia can recover and state how to prevent eclampsia.

1.8.1.5 Practice – The midwife should state the number of eclampsia cases attended, able to admit eclamptic patients in special obstetric rooms, has given magnesium sulphate before, always stock magnesium sulphate, mention the commonly used drug, say whether they have management protocols/guidelines for eclampsia, whether shortage of staff has an impact, follows observations to be done following an eclamptic fit and does urinalysis on pregnant women.

1.8.1.6 Emergency obstetric care- A midwife gives emergency obstetric care to a woman with eclampsia to prevent maternal death.

1.8.2 Conceptual Definition of Terms

1.8.2.1 Eclampsia- Eclampsia is a serious complication of pregnancy characterized by fits and accompanied by severe hypertension, oedema and proteinuria (Tiran, 2003).

1.8.2.2 Pre-eclampsia- pre-eclampsia is a precursor of eclampsia and it is a syndrome with three physical signs which occurs in pregnancy only, usually during the second half. The three signs are elevated blood pressure, proteinuria and generalized oedema (Tiran, 2003).

1.8.2.3 Midwife- A midwife is a person who, having been regularly admitted to a midwifery educational program, duly recognized in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and/ or legally licensed to practice midwifery (Tiran, 2003).

1.8.2.4 Knowledge- knowledge is what someone knows about a particular subject (Macmillan English Dictionary, 2002).

1.8.2.5 Practice- Practice is occasions when you do something in order to become better at it, or the time you spend doing this (Macmillan English Dictionary, 2002).

1.8.2.6 Emergency Obstetric care- This is the care given to pregnant women with obstetric complications to prevent maternal deaths (Mkumba et al, 2007).

1.9 Variables and Cut-Off Points

A variable is a characteristic of a person, object or phenomenon that can take on different values (Polit and Beck, 2008). Variables included in this study are derived from the conceptual diagram and from the research objectives.

1.9.1 Dependent Variable

A dependent variable is a variable that is the response, behaviour or outcome which the researcher wants to predict or explain and in this case it is;

Practice

1.9.2 Independent Variable

An independent variable is a variable that influences other variables and it is varied by researcher to create an effect on the dependent variable.

The independent variable in this study is;

Knowledge

Table1.2: Variable and Cut Off Points

VARIABLE	CUT OFF POINTS	INDICATOR	QUESTION NUMBER
Dependent Practice	Excellent Good Poor	Able to score 21-30 in the practice category Able to score 11- 20 in the practice category Able to score 1-10 in the category of practice	17- 30 (these questions carried 30 scores)
INDEPENDENT Knowledge	High level Moderate level Low level	Correct responses with scores 17-24 in the knowledge category Correct responses with scores 9-16 in the knowledge category Correct responses with scores 1-8 in the knowledge category	8 - 16 (These questions carried 24 scores).

CHAPTER 2

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

Literature review is a critical summary of research on a topic of interest, generally prepared to put a research problem in context or to identify gaps and weaknesses in prior studies so as to justify a new investigation (Polit & Beck, 2008).

Review of literature is a key step in research process and it refers to an extensive, exhaustive and systematic examination of publications relevant to the research project. One of the most satisfying aspects of the literature review is the contribution it makes to the new knowledge, insight and general scholarship of the researches (Basavanthappa, 2007).

According to Basavanthappa, 2007, the main objectives of the review of literature are as follows:

- To determine what is known and not known about a subject, concepts or problem.
- To determine gaps, consistencies, and inconsistencies in the literature about a subject, concept or problem.
- To discover unanswered questions about a subject, concepts or problems
- To generate useful research questions or projects/ activities for the discipline.
- To determine the need for replication of well designed study or refinements of a study.
- Uncover a new practice intervention to gain support for changing a practice intervention.

The importance of carrying out literature review assists the researcher not to duplicate work or researches that have been done already. It also helps the researcher to justify why further research is required. In this study, the researcher reviewed literature related to management of eclampsia from the global, regional and national perspective according to variables of the study and also reviewed literature on knowledge and practice of management of eclampsia.

2.2 PRACTICE

Midwives need to be aware of the legislation and guidelines defining their role, describing their scope of practice and specifying standards of practice (Fraser and Cooper, 2003).

In a study done by Ellis et al, (2007) at North Bristol NHS Trust, South Mead Hospital, Bristol, United Kingdom to compare the effectiveness of training and practice for eclampsia in local hospitals and a regional simulation centre, Midwives and obstetricians working at participating hospitals were randomly assigned to 24 teams. Performance was evaluated before and after training with a standardized eclampsia scenario captured on video. Outcome measures were completion of tasks, time to completion of tasks, administration of magnesium sulphate and quality of team work. The study concluded that training and practice resulted in enhanced performance with higher rates of completion for basic tasks, shorter times to administration of magnesium sulphate, and improved teamwork. In service training enhances management of eclampsia by midwives because they increase the practicing skill. When midwives practice to give magnesium sulphate more often and work as a team, they will become competent and speed and skill will improve and effective management will be rendered to patients with eclampsia.

The three-year study, dubbed the "Magpie" trial done in 2002, coordinated by the United Kingdom's Medical Research Council (MRC), with support from the Geneva-based research programme on reproductive health (HRP) at the World Health Organization (WHO) was carried out in 33 countries and involved nearly 10 000 pregnant women with pre-eclampsia, a condition marked by high blood pressure and protein in the urine. Pre-eclampsia predisposes pregnant women to the convulsions of full-blown eclampsia. This trial proves that a very inexpensive treatment with magnesium sulphate given to every pregnant woman when she needs it can cut deaths from eclampsia by almost half. The only sure way of treating pre-eclampsia and preventing eclamptic convulsions up to now has been to induce early delivery of the child but the Magpie study settles the issue for magnesium sulphate with scientific evidence. The 4968 women in the study who received an injection of magnesium sulphate had a 58% lower risk of eclampsia and an up to 45% lower risk of dying than the 4958 women given placebo. Side-effects were only minor: neither the mothers nor

their babies have so far shown any serious adverse effects from the treatment. Since magnesium sulphate has scientific evidence of lowering the risk of developing eclampsia and later death, the midwives need to know how to administer it and there is need for the drug to be available always in health institutions (WHO, 2002).

A Criteria-based audit on management of eclampsia patients at a tertiary hospital in Dar es Salaam, Tanzania assessed the quality of care among eclampsia patients and discussed possible interventions in order to improve the quality of care. The study involved a criteria based audit of 389 eclampsia patients admitted to Muhimbili National Hospital (MNH), Dar es Salaam, Tanzania between April 14, 2006 and December 31, 2006. Medical histories were incomplete, the majority (75%) of management plans were not reviewed by specialists in obstetrics, specialist doctors live far from the hospital and do not spend nights in hospital even when they are on duty, monitoring of patients on magnesium sulphate was inadequate, and important biochemical tests were not routinely done. The midwives need to collect full medical histories, monitor patients on magnesium sulphate and collect blood for haematological tests as they are directly involved with management of eclampsia. The patients with eclampsia need immediate medical aid if they have to survive (Kidanto et al, 2009).

Hofmeyr and Belfort, (2009), revealed that proteinuria which is a defining criterion for the diagnosis of pre-eclampsia is a poor predictor of either maternal or fetal complications in women with pre-eclampsia. Though Proteinuria has been proposed and studied as both an indicator of severity of disease and as a predictor of outcome in pre-eclampsia and many clinicians still make major management decisions based on the degree of proteinuria in such patients, the systematic review by Thangaratinam and colleagues (2009) reported that the degree of proteinuria alone does not have a strong association with adverse outcome. Maternal and fetal clinical condition and gestational age, complemented by hematologic and biochemical parameters, should for the time being remain the primary determinants for timing delivery in women with pre-eclampsia. Proteinuria should be complemented by haematological and biochemical parameters as well as high blood pressure to determine time of delivery because proteinuria alone can be caused by other conditions such as urinary tract infection in pregnancy.

In another study by Moodley et al, (1983) entitled "Eclampsia - a method of management". The Physicians at King Edward VIII Hospital in Durban, South Africa treated 67 eclamptic patients during a 12 month period in which 8 patients died (11.9%). The eclampsia rate was 2.3/1000 deliveries. Of the 8 that died, 7 had no antenatal care and the 8th made only 1 visit. The study revealed that basic principles of eclampsia management consist of provision of intensive care, control of convulsions, lowering of blood pressure, early delivery, and continuation of sedation and blood pressure control for at least 48 hours after delivery. Antenatal care is very important as it helps to detect complications early and interventions such as blood pressure checks, urinalysis and treatment of pre eclampsia with anti hypertensive drugs could be instituted on time and this prevents progression to eclampsia. If pregnant women do not seek antenatal care, it becomes difficult for a midwife to detect complications and monitor them as required hence these women end up with eclampsia and die as they come in a critical condition.

The needs assessment on emergency obstetric care in Zambia conducted by Mkumba et al (2005) revealed that emergency drugs were simply not there in a number of facilities and where they were stocked or available at times, supply was erratic. In a few cases, expired drugs were found in some facilities while some critical drugs such as anti hypertensives, anticonvulsants mainly Magnesium Sulphate, was not available, or in short supply or not used because the staff feels the patients do not need it despite the policy. In most cases, staff in public health facilities did not know what should be on the emergency tray. The drug of choice for eclampsia is magnesium sulphate and if it is erratic in supply, the midwives will not be competent in its use and they will keep going back to using Diazepam that is readily available.

2.3 KNOWLEGDE

The immediate management of eclampsia is dependant on the prompt action of the midwife with skill to detect and identify cases of eclampsia (Fraser and Cooper, 2003). Globally, more than half a million women die each year because of complications related to pregnancy and childbirth. It is estimated that each year, more than four million women will develop pre-eclampsia and approximately 100 000 women will have eclamptic convulsions, with over 90% occurring in developing

countries. Pre-eclampsia complicates 2-3% of all pregnancies and 2% of women will develop eclampsia (Royal college of obstetrics and gynaecology, 2009).

A prospective, descriptive study done by Douglas and Redman, (1994) on obstetricians and midwives using questionnaires on cases of eclampsia in the United Kingdom to measure the incidence of eclampsia, establish how often it is preceded by signs of pre-eclampsia and document the morbidity associated with eclampsia. The results were that Obstetricians and midwives notified 582 possible cases, and 383 were confirmed as eclampsia. Most convulsions occurred despite antenatal care (70%) and within one week of the woman's last visit to a doctor or midwife (85%). Three quarters of first seizures occurred in hospital, of which 38% developed before both proteinuria and hypertension had been documented. Nearly one in 50 women (1.8%) died, and 35% of all women had at least one major complication. The study concluded that eclampsia may be unheralded by warning signs. Knowledge of signs and symptoms impending eclampsia is very important for midwives to have for early notification and prevention.

Preliminary study of a novel technique for the prediction of pre-eclampsia, BJOG 2009; done in Australia showed that AtCor's SphygmoCor system, which measures central blood pressure and arterial stiffness noninvasively can predict the development of pre-eclampsia, which occurs in 3-5% of all pregnancies and is a leading cause of maternal and fetal mortality and preterm delivery. The study concluded that since the pre-eclampsia disease process is already established by the middle of the second trimester, it is likely that successful preventive measures will have to be established as early in pregnancy as possible. These findings may lead to development of a robust screening model that would be invaluable in the development of an early therapeutic strategy for the prevention of pre-eclampsia. The study emphasises the importance of early detection of pre-eclampsia to prevent eclampsia. The midwives can detect pre-eclampsia by checking the blood pressure and proteinuria as early as possible in pregnancy and preventive measures can be instituted.

Thompson et al, (2004) studied an on-site simulation to identify and correct potential deficiencies in the care of patients with eclampsia. Staff involved in the drill included midwives, obstetricians, anaesthetists, clinical support workers and staff in the operating department. The problems identified during drills included; Deficiencies in

the skills and knowledge of individuals in the management of eclampsia: positioning of the fitting patient; choice of first line anticonvulsant; safe administration of magnesium, immediate individual feedback and education; didactic instruction on magnesium administration in eclampsia protocol. Midwives need to be competent with the steps to take when managing patients with eclampsia such as maintaining a clear airway, calling for medical help, Setting up an intravenous line and monitoring the blood pressure, pulse and respirations. The midwives should know the drug of choice for managing eclampsia.

According to WHO, (1996) Midwifery Education Safe Motherhood Foundation developed training manuals to help equip midwives with essential life-saving skills. The manuals, which were widely field tested in Africa, Asia, and the Pacific prior to finalization, respond to the need for midwives to understand the conditions that lead to maternal death and know how to treat or prevent them. Logically organized and abundantly illustrated, the manuals aim to communicate in an imaginative way the sound knowledge that midwives need in order to think critically and make the right decisions. The development of the eclampsia module is supported by the study done by Kidanto et al, (2009) at Muhimbili National Hospital, Dar es Salaam, Tanzania which concluded that Potential areas for further improvement in quality of emergency care for eclampsia relate to standardizing management guidelines, greater involvement of specialists such as midwives in the management of eclampsia and continued medical education on current management of eclampsia.

In Zambia, every four (4) hours one woman dies from complications arising from pregnancy and childbirth and eclampsia accounts for 13% (MoH, 2006). A national assessment on the emergency obstetric care in Zambia was conducted by Mkumba et al (2007) and the respondents were various health workers at a facility working in maternity units. The findings generally showed that due to critical shortage of the midwives and other health staff, the quality of care was substandard. The initial assessment of clients in antenatal, labour ward, postnatal ward, nursery and theatres was also substandard. In all these areas only 23% of the 277 facilities conducted *deliveries and managed 3rd stage of labour followed the guidelines. In antenatal care*

the initial assessment of the client scored poorly. Despite having a check list on antenatal cards past obstetric and medical history was omitted in some cases.

Another study done by Chatterjee et al (1978) to review 79 cases of eclampsia at University Teaching Hospital revealed that 13 mothers died, making a mortality rate for those who received treatment to be 13%. The perinatal mortality rate among these cases was almost 29%. Both rates of mortality were directly related to such factors as the number of fits, the severity of eclampsia, delay in onset of treatment, and duration of labour. Although eclampsia was common in young primigravid patients, mortality was much higher among multiparous women over 35 years. Patients who received immediate treatment fared best suggesting that active rather than conservative obstetric management is preferable. Knowledge facilitates early detection and timely onset of treatment thereby improving the outcome of eclampsia.

2.4 CONCLUSION

Most studies indicate that early detection of pre-eclampsia through blood pressure checks and urine testing as well as instituting effective management would reduce the deaths related to eclampsia. Literature has revealed that high quality antenatal care in developed countries has decreased the incidence of eclampsia though it remains a cause of maternal and foetal morbidity and mortality. The universal adoption of such guidelines in all obstetric units would substantially reduce elements of substandard care which have repeatedly been identified in the triennial reports of the confidential enquiries into maternal deaths. Other studies have indicated that training results in enhanced performance with higher rates of completion for basic tasks, shorter times to administration of magnesium sulphate, and improved teamwork. The immediate management of eclampsia is dependant on the prompt action of the midwife with skill to detect and identify cases of eclampsia; hence it is important to determine the knowledge and practice of midwives in management of eclampsia.

CHAPTER 3

3.0 RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is the part of research proposal usually consisting of subjects, projects and data analysis (Basavanthappa, 2007). Thus, it refers to the decisions the researcher must make concerning the methods to be used to address the research question, sometimes the nature of the research question dictates the methods to be used. It has major implications on the validity and credibility of the findings. A research methodology includes: the research design and setting; study population and sample selection; data collection tools and techniques; pilot study and ethical consideration; and validity and reliability (Basavanthappa, 2007).

3.2 Research Design

The research design is the plan, structure, and strategy of investigations of answering the research question and it is the overall plan or blue-print the researchers select to carry out a plan (Basavanthappa, 2007).

A descriptive cross sectional study design with quantitative methods was used. A descriptive method is a broad class of non experimental studies (Polit & Beck, 2008). Its purpose was to observe, describe and document aspects of a situation as it naturally occurred and sometimes to serve as a starting point for the hypothesis generation or theory development. The reason for choosing the descriptive cross sectional study method was that it was ideal as it involved collection of data directly from the study sample at one point in time without manipulating the variables. The descriptive cross sectional study design was suitable as it was less expensive and less time consuming considering the limited time the study was given.

3.3 Research Setting

“Research setting is the physical location and condition in which data collection takes place in a study”, (Polit & Beck, 2008).

The study was conducted in Chipata district. Chipata district is the provincial headquarters for Eastern Province. The population of Chipata district is at **486,953**

(2009), with growth rate of 2.8% while the expected number of deliveries is 26,295 which is 5.4% of total population (Chipata DHMT, action plan, 2009-2011). The study setting was at Chipata general hospital and five (5) urban health centres in the district namely kapata, Lunkwakwa, Msekera, Namuseche and chipata health centre. Chipata general hospital is a second referral hospital in the district. The sites were purposively chosen because they all had maternity wings and midwives who attended to antenatal, intrapartum and postnatal mothers.

3.4 Study Population

This is the total group of individual people or things meeting the designated criteria of interest to the researcher (Basavanthappa, 2007). The study population were midwives.

3.4.1 Target population

The target population is the entire population in which the researcher is interested and to which he/she would like to generalise the results of the study (Polit & Beck, 2008). The target population for this study were midwives.

3.4.2 Accessible population

This is the population of people available for a particular study, often a non random subject of the target population (Polit & Beck, 2008). The accessible population were midwives in Chipata urban district at chosen research setting. The midwives are directly involved in the management of eclampsia and they are likely to provide first hand information.

3.5 Sample Selection

Sampling is the process of selecting a portion of the population to represent the entire population. It is a process by which the study participants are chosen from a large population (Polit & Beck, 2008).

In this study, the researcher used a purposively non-probability sampling method because the study population were few and had characteristics of interest. The midwives manage eclampsia and it is in their field of practice. In purposive sampling, the sample may be unrepresentative of study population and characteristics of the

units may be under/over selected. The researcher used the purposive sampling method because the midwives are few in Chipata Urban District.

3.5.1 Inclusion criteria- practising midwives on duty and on leave in selected study setting who were willing to participate in the study as they were able to give the required information since they were directly involved in management of eclampsia.

3.5.2 Exclusion criteria- Non midwives because they were not directly involved in management of eclampsia and midwives who were not willing to participate in the study. Midwives working in administration were also excluded because they did not practice midwifery alone but also other managerial tasks.

3.6 Sample Size

A sample size is the total number of subjects to represent the population under study (Polit & Beck, 2008).

For this study, 50 midwives were purposively included in the selected study setting during data collection when they consented. A sample of 50 was used because it was a minimum required number of respondents by the Department of Nursing Sciences and it was feasible in terms of time and resources. A number of 30 midwives were interviewed from Chipata general hospital while 20 midwives were interviewed from the 5 clinics that is four (4) per clinic.

3.7 Data Collection Tool

A data collection tool is a measuring device used in gathering of information needed to address a research problem (Polit & Beck, 2008).

In this study, a self administered questionnaire was used to collect data from the participants. A questionnaire is a paper and pencil instrument that a research subject is asked to complete (Basavanthappa, 2007). The tool had a set of predetermined questions which were 30 in number. The questions were closed ended except for one which was open as it asked for suggestions to improve management of eclampsia. The questionnaires were 50 in number. The questionnaire was used because it was easy to test for validity and reliability.

3.8 Data Collection Techniques

Data collection technique is the method followed in gathering of information needed to address a research problem (Polit & Beck, 2008).

The supervisor approved that the researcher goes ahead to collect data. Permission was further sought from the Provincial Medical Officer, Medical Superintendent and District Medical Officer in Chipata District. In this study, data was collected using a self-administered questionnaire. Two questionnaires were delivered in the morning, afternoon and night shifts every day. The researcher was available to clarify any queries from the respondents. The questionnaire was distributed purposively to midwives in Chipata urban district. Instructions were given on how to fill in the questionnaire and the researcher collected the filled questionnaires and put them in one big envelop. The questionnaire was used as it was efficient, fast and respondents remained anonymous.

3.9 Pilot Study

Pilot study is a small scale version, or trial run, done in preparation for a major study (Polit & Beck, 2008).

A pilot study was conducted at University Teaching Hospital (UTH) in labour wards and antenatal clinic which is a 3rd referral hospital in Lusaka district because it had midwives who manage eclampsia. A self administered questionnaire was purposively administered to five (5) participants which worked out to be 10% of the study sample. The pilot study enabled the researcher to determine participant's likely responses to actual research study and this enabled the researcher to make adjustments on the questionnaire and to test the validity of the methodology. The researcher changed some questions such as the question which was asking for denomination and replaced it with religion which was more encompassing to the participants. The question which asked for guidelines/protocols had a follow up question which needed participants to indicate where the guidelines were displayed was merged to make one question. The question which asked for the equipment used in management of eclampsia was removed because in the same labour ward at UTH, midwives were not consistent in answers given.

3.10 Validity

Validity is a quality criterion referring to the degree to which inferences made in a study are accurate and well founded; in measurement, the degree to which an instrument measures what is intended to measure (Polit & Beck, 2008).

The use of the questionnaire enabled the researcher to collect valid data as the questions focused on knowledge and practice of midwives in management of eclampsia. A pilot study was conducted before the main study and corrections were made. This tested the questions in the questionnaire for the information intended and needed. The validity was measured to minimise biases.

3.11 Reliability

Reliability is the degree of consistency or dependability with which an instrument measures an attribute (Polit & Beck, 2008).

Reliability is concerned with the consistency of measures. The researcher made questions simple, concise and brief to ensure reliability. The researcher used the supervisor to review the instrument before administering it to the respondents. The pilot study helped to elicit that the same information was being given from the same questions.

3.12 Ethical and Cultural Considerations

Ethics is a system of moral values that is concerned with the degree to which research procedures adhere to the professional, legal and social obligations to the study participants (Polit & Beck, 2008).

According to Basavanthappa, (2007), the ethical considerations safeguarding subject's rights must always be given the highest priority such as:

- The right to choose whether or not to participate, and option to withdraw without being penalised as the research continues.
- The right to full information about the research
- Protection from unnecessary risk or harm
- The right to privacy, dignity and confidentiality

➤ The right to be informed about research results

The researcher requested for permission and was granted written permission from the Provincial Medical Officer (PMO) of Eastern province, the District Medical Officer (DMO) and Medical Superintendent of chipata district and chipata general hospital respectively for the actual study. Permission was also sought from the in charges of the hospital/Clinics centres where the research was conducted. The participants were given written consent forms to sign individually for permission and cooperation.

The researcher explained the main objective of the study to the respondents; which was to determine the knowledge and practice of midwives in management of eclampsia in order to find evidence based solutions to the problem. The researcher reassured the participants of confidentiality by respecting privileged information and anonymity by use of serial numbers on questionnaires without names to protect the participant identity and prevent any long term longitudinal or follow up studies.

CHAPTER 4

4.0 DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 INTRODUCTION

The purpose of this chapter is to make a presentation on how research data was analysed and the information obtained there after. The study was carried out to determine knowledge and practice of midwives in management of eclampsia in Chipata Urban District. The study results were based on responses from fifty (50) midwives purposively selected in Chipata Urban District in Eastern Province of Zambia.

4.2 DATA ANALYSIS

Data analysis is conducted to reduce, organize and give meaning to pieces of information that are collected during a study (Burns and Grove, 2009). During data processing, the questionnaires that were administered were counted to ensure that the correct number was obtained.

All questionnaires were checked for completeness and consistence every evening; the data was then sorted out, categorized, coded and then entered on a data master sheet. The responses from closed-ended questions were entered on the data master sheet for easy manual analysis of data, while responses from open-ended questions were categorised and then coded.

Data was analysed manually using single counting and a scientific calculator. Data from this study has been presented according to the sequence and sections in the questionnaire. The findings of the study have been presented in frequency tables, pie charts, histograms and bar charts to ensure that the readers understand the findings of the research study easily. Cross tabulations of the variables helped to show clearly the relationship between variables.

4.3 PRESENTATION OF FINDINGS

The findings have been presented under sections A, B, C and D. Section A illustrates demographic data, section B illustrates knowledge responses, section C illustrates practice responses and section D illustrates cross tabulations. The data has been presented in tables, histograms, bar graphs and pie charts.

4.3.1 **SECTION A: DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE (n=50)**

Table 4.1: Respondents Demographic data (n=50)

Respondents	Frequency	Percentage
Sex		
Male	8	16%
Female	42	84%
Total	50	100%
Age		
31-40 years	17	34%
41-50 years	27	54%
51-60 years	6	12%
Total	50	100%
Place of work		
Hospital	30	60%
Clinic	20	40%
Total	50	100%
Religion		
Christianity	50	100%
Total	50	100%
Professional midwifery qualification		
Registered midwife	19	38%
Enrolled midwife	31	62%
Total	50	100%

Table 4.1 Respondents demographic data continued

Respondents	Frequency	Percentage
Years in service		
1-5 years	16	32%
6-10 years	10	20%
11-19 years	15	30%
20 years and above	9	18%
Total	50	100%

The table indicates that majority (84%) of the respondents were females while males were (16%). Majority (66%) of the respondents were aged between 41-60 years while only (34%) were aged between 31-40 years. Most (60%) of the respondents were working at the hospital while (40%) were working at the clinic. All respondents were Christians. Majority (62%) of the respondents were enrolled midwives while 38% were registered midwives. Less than half (32%) of the respondents had 1-5 years in service, (30%) of the respondents had 11-19 years in service while those who worked above 20 years were only (18%).

4.3.2 SECTION B: KNOWLEDGE RESPONSES

Table 4.2: Respondent's definition of eclampsia (n=50)

Definition of eclampsia	Frequency	Percentage
Childhood fits/convulsions in pregnancy	4	8%
A condition characterized by high blood pressure and fits/convulsions occurring after 20 weeks of pregnancy and 48hrs after delivery	46	92%
A condition characterized by low blood pressure and fits/convulsions occurring in pregnancy	0	0%
Fits/convulsions in any woman	0	0%
Total	50	100%

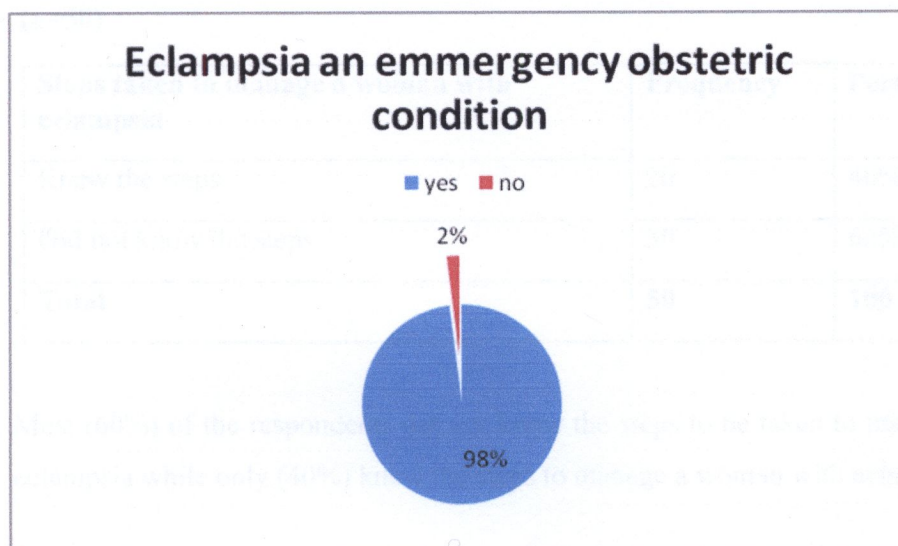
Majority (92%) of respondents defined eclampsia as a condition characterised by high blood pressure and fits/convulsions occurring after 20 weeks of pregnancy and 48 hrs after delivery while (8%) of respondents did not define eclampsia correctly.

Table 4.3: Responses on signs and symptoms of impending eclampsia (n=50)

Signs and symptoms	Frequency	Percentage
4 correct responses	12	24%
3 correct responses	19	38%
2 correct responses	6	12%
1 correct response	13	26%
Total	50	100%

Only (24%) of the respondents were able to identify 4 correct signs and symptoms (a sharp rise in blood pressure, epigastric pain, increased proteinuria, severe headache) of impending eclampsia while (26%) only identified one (1) correct sign and symptom.

Figure 4.1: Responses on whether eclampsia is an emergency obstetric condition (n=50)



Majority (98%) of the respondents knew that eclampsia is an emergency obstetric condition while only (2%) did not know.

Table 4.4: Responses on common risk factors for eclampsia (n=50)

Respondents	Frequency	Percentage
Common risk factors		
3 correct responses	29	58%
2 correct responses	10	20%
1 correct response	11	22%
Total	50	100%

More than half (58%) of the respondents identified 3 correct common risk factors (primigravida, history of pre eclampsia, essential hypertension) for eclampsia while (22%) only identified 1 correct common risk factor.

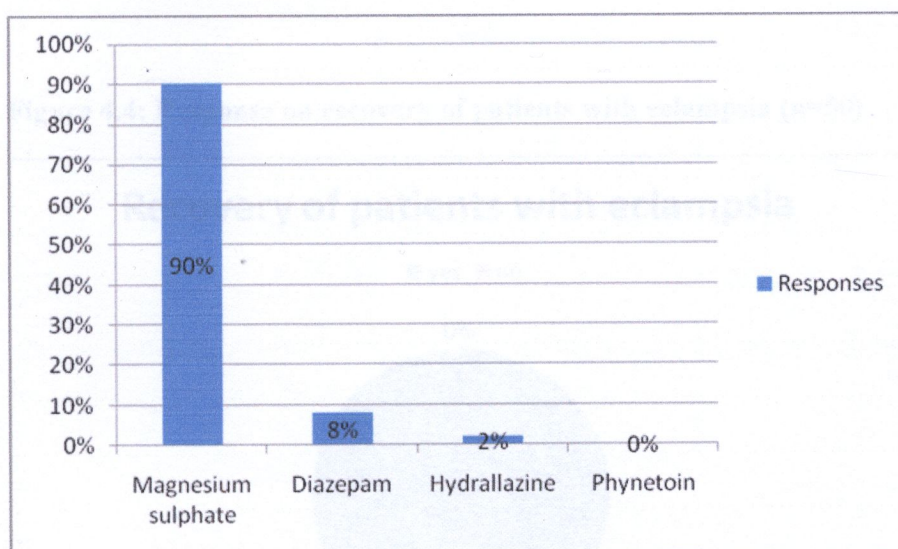
Table 4.5: Responses on steps taken to manage a woman with eclampsia

(n=50)

Steps taken to manage a woman with eclampsia	Frequency	Percentage
Knew the steps	20	40%
Did not know the steps	30	60%
Total	50	100

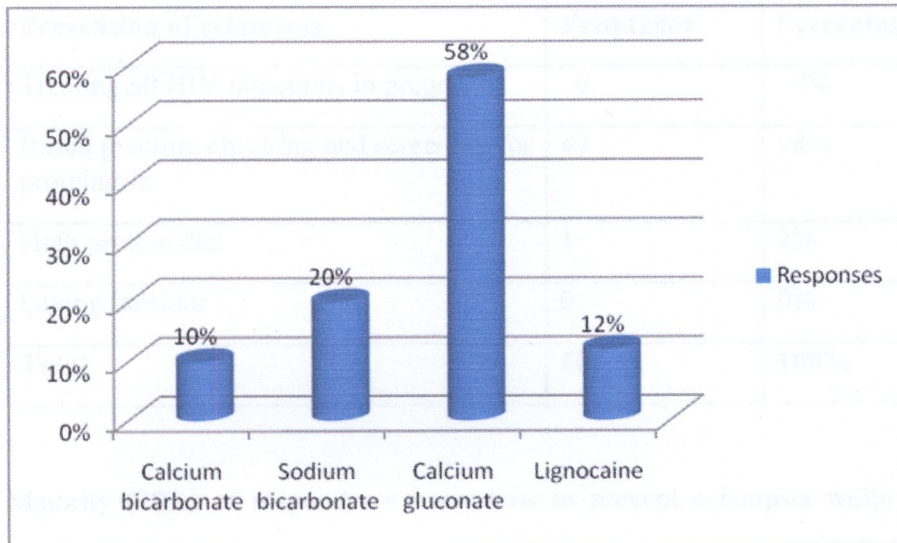
Most (60%) of the respondents did not know the steps to be taken to manage a woman with eclampsia while only (40%) knew the steps to manage a woman with eclampsia.

Figure 4.2: Responses of the drug of choice for managing eclampsia as per protocol/guidelines (n=50)



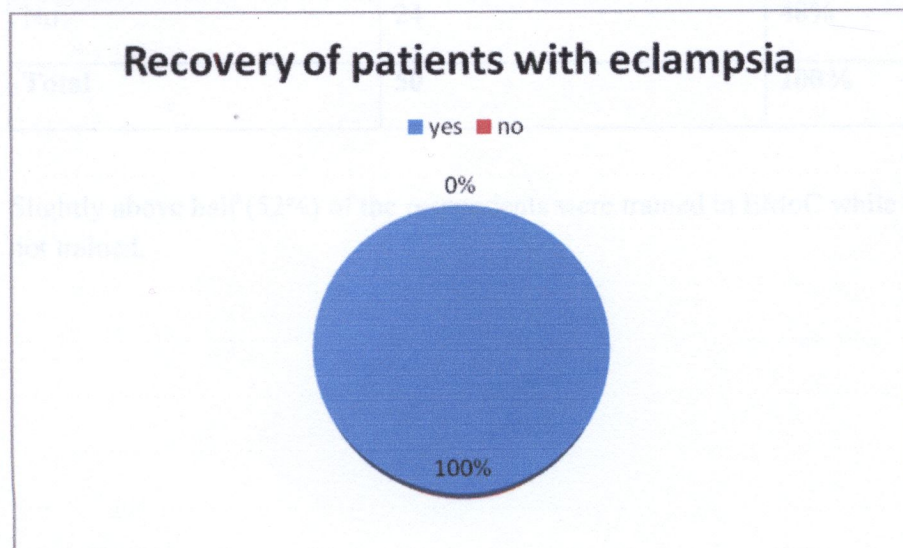
Majority (90%) of the respondents were able to mention the drug of choice for managing eclampsia while (10%) of the respondents did not know the drug of choice as per protocol/guideline.

Figure 4.3: Responses on the antidote for the drug of choice (n=50)



More than half (58%) of the respondents knew the antidote for magnesium sulphate the drug of choice in management of eclampsia while (42%) did not know the antidote for the drug of choice.

Figure 4.4: Response on recovery of patients with eclampsia (n=50)



All (100%) respondents knew that patients with eclampsia can recover.

Table 4.6: Responses on how to prevent eclampsia (n=50)

Prevention of eclampsia	Frequency	Percentage
Treating all HIV infections in pregnancy	0	0%
Blood pressure checking and screening for proteinuria	49	98%
High protein diet	1	2%
Giving fansidar	0	0%
Total	50	100%

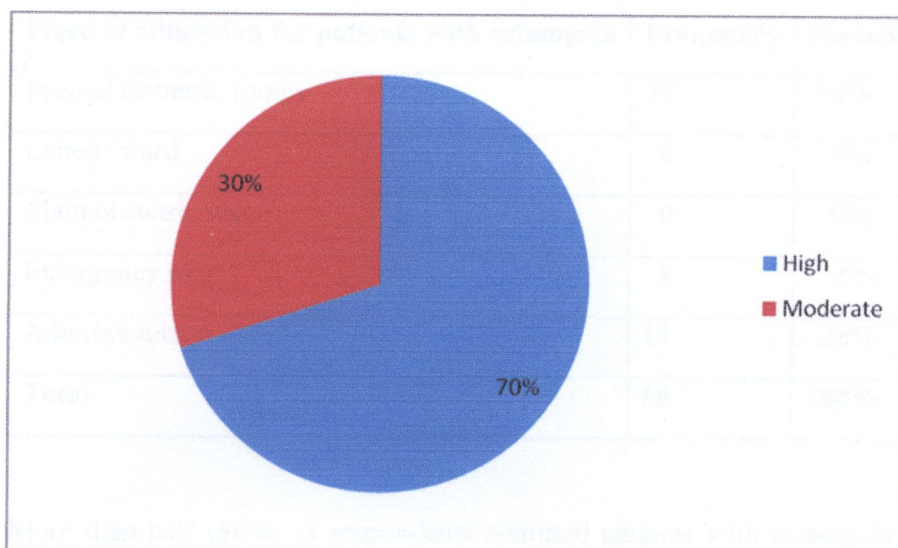
Majority (98%) of respondents knew how to prevent eclampsia while only (2%) did not know.

Table 4.7: Responses on training in EMoC (n=50)

Trained in EMoC	Frequency	Percentage
Yes	26	52%
No	24	48%
Total	50	100%

Slightly above half (52%) of the respondents were trained in EMoC while only (48%) were not trained.

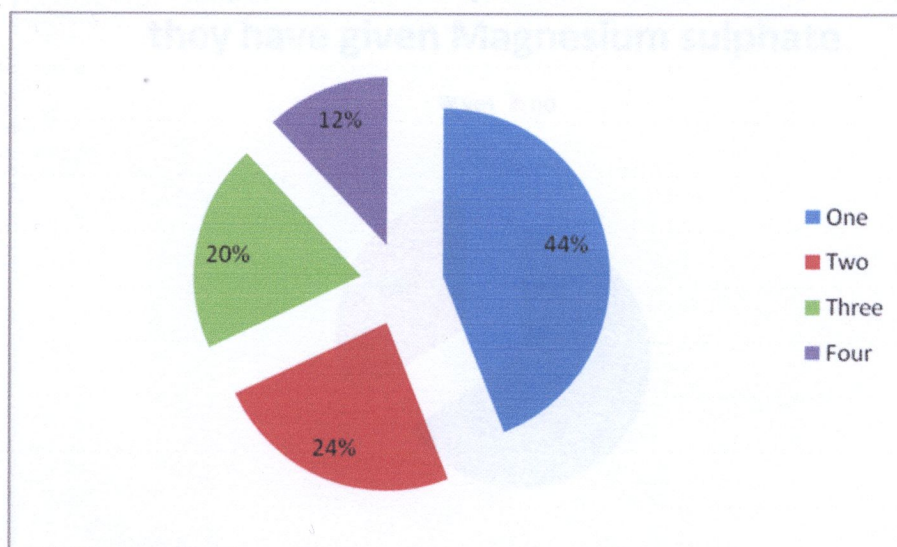
Figure 4.5: Distribution of respondents' level of knowledge (n=50)



Most (70%) of the respondents had high levels of knowledge, while (30%) had moderate levels of knowledge in management of eclampsia.

4.3.3 SECTION C: PRACTICE RESPONSES

Figure 4.6: Responses on cases of eclampsia attended to in one month (n=50)



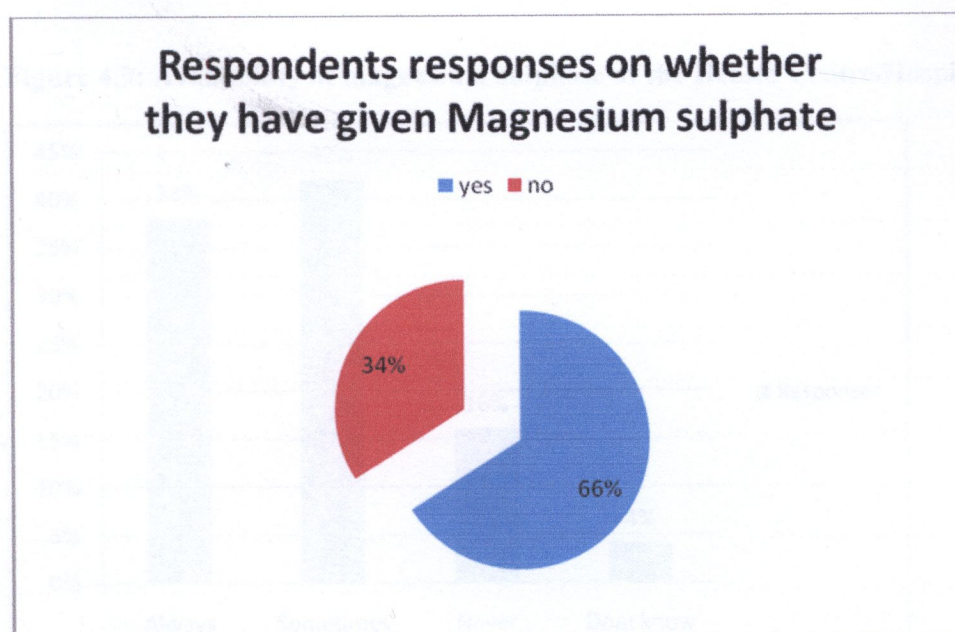
Slightly below half (44%) of the respondents attended to one case of eclampsia in one month while only (12%) attended to four cases

Table 4.8: Responses on where they admitted patients with eclampsia (n=50)

Place of admission for patients with eclampsia	Frequency	Percentage
Special obstetric rooms	29	58%
Labour ward	4	8%
Main obstetric ward	0	0%
Emergency bay	3	6%
Admission bay	14	28%
Total	50	100%

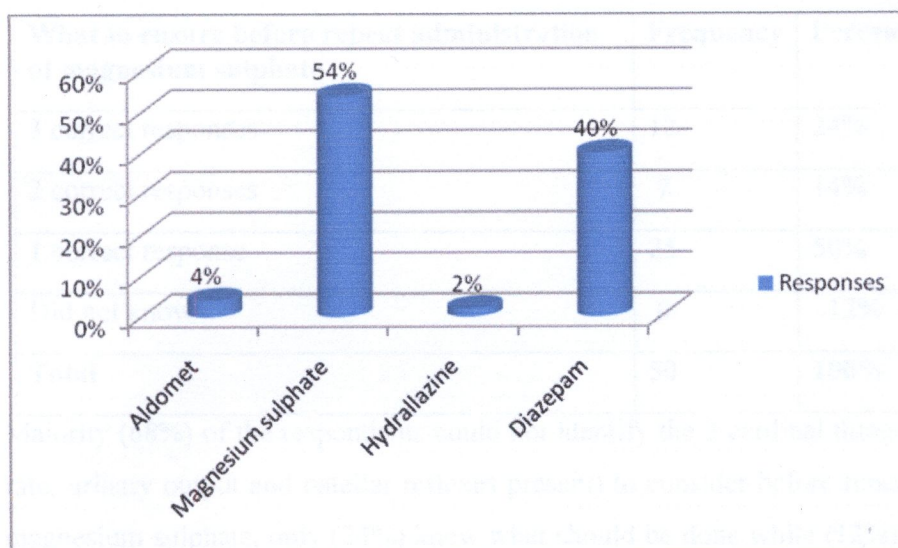
More than half (58%) of respondents admitted patients with eclampsia in special obstetric rooms while only (3%) of respondents admitted patients on emergency bay.

Figure 4.7: Responses on whether they had given magnesium sulphate to a patient with eclampsia (n=50).



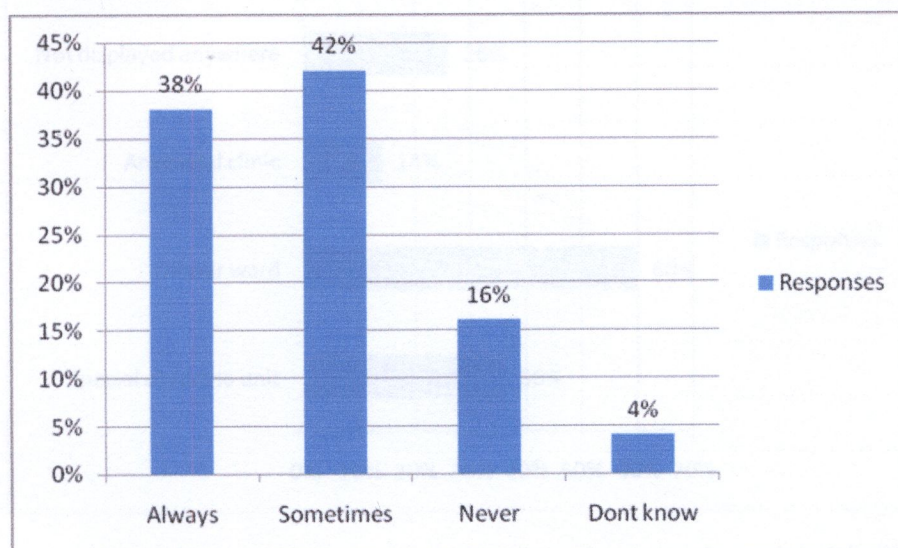
Most (66%) of the respondents had given magnesium sulphate to a patient with eclampsia while (34%) of the respondents had not given.

Figure 4.8: Responses on the commonly used drug in management of eclampsia in their health centre/hospital (n=50)



More than half (54%) of the respondents commonly used magnesium sulphate in management of eclampsia while (46%) commonly used other drugs such as aldomet, hydralazine and diazepam.

Figure 4.9: Availability of magnesium sulphate at the Health Centre/Hospital (n=50)



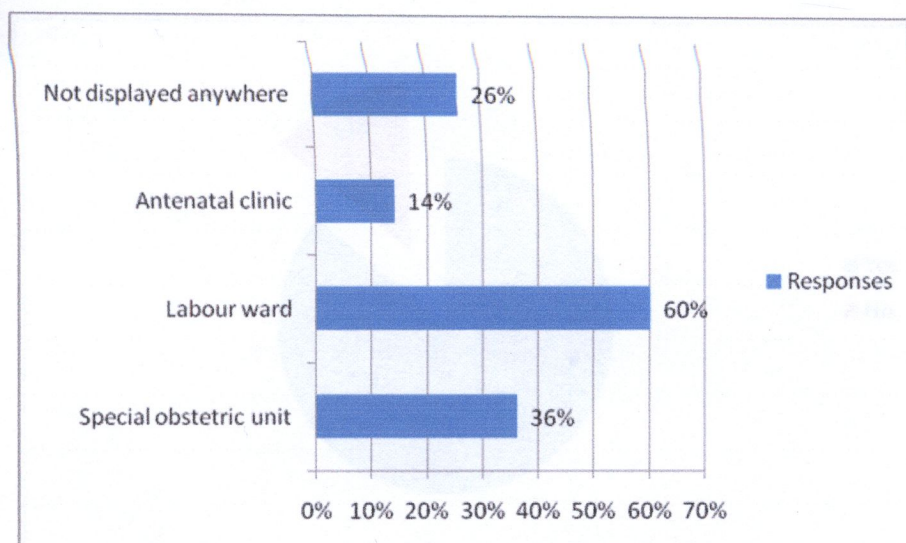
Most (62%) of the respondents did not always have magnesium sulphate while only (38%) of respondents always had magnesium sulphate in their health centre/hospital.

Table 4.9: Responses on what to ensure before repeat administration of magnesium sulphate (n=50)

What to ensure before repeat administration of magnesium sulphate	Frequency	Percentage
3 correct responses	12	24%
2 correct responses	7	14%
1 correct response	25	50%
Did not know	6	12%
Total	50	100%

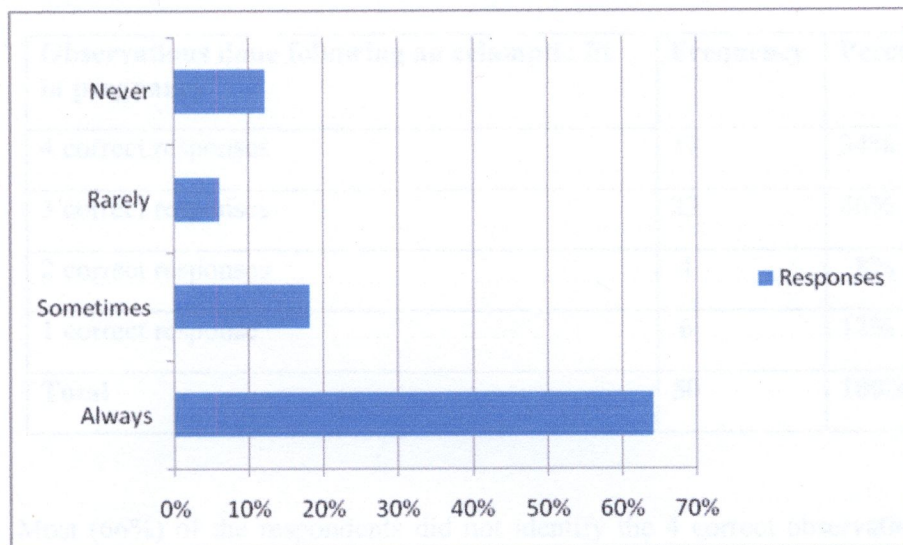
Majority (68%) of the respondents could not identify the 3 cardinal things (check respiratory rate, urinary output and patellar reflexes present) to consider before repeat administration of magnesium sulphate, only (24%) knew what should be done while (12%) did not even know what should be done.

Figure 4.10: Responses on where they have displayed guidelines/protocols for management of eclampsia (n=50).



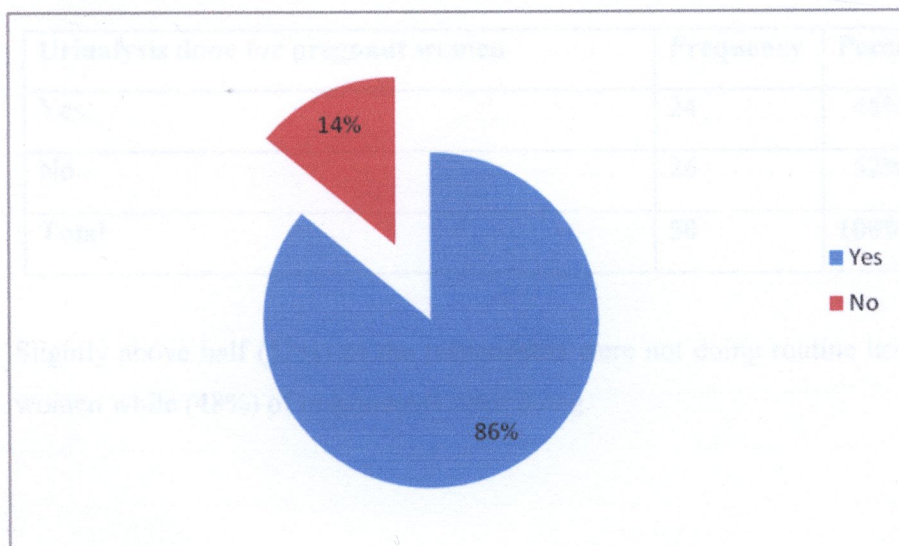
Most (60%) of the respondents had guidelines for managing eclampsia displayed on the wall in labour ward, (36%) of respondents displayed in special obstetric unit, (14%) displayed in antenatal clinic while (26%) of respondents did not have the guidelines displayed anywhere.

Figure 4.11: Responses on how often they observed the guidelines for managing eclampsia (n=50)



Most (64%) of the respondents always followed the guidelines when managing eclampsia while (36%) of the respondents did not follow the guidelines always.

Figure 4.12: Responses on whether shortage of staff affects the way they manage eclampsia (n=50).



Majority (86%) of respondents were affected by shortage of staff when managing patients with eclampsia while (14%) were not affected by shortage of staff.

Table 4.10: Responses on observations done following an eclamptic fit in pregnancy (n=50)

Observations done following an eclamptic fit in pregnancy	Frequency	Percentage
4 correct responses	17	34%
3 correct responses	23	46%
2 correct responses	4	8%
1 correct response	6	12%
Total	50	100%

Most (66%) of the respondents did not identify the 4 correct observations (blood pressure, pulse and respirations, level of consciousness, cervical dilatation and fetal heart rate) to be done following an eclamptic fit in pregnancy while only (34%) identified the 4 correct observations.

Table 4.11: Routine urinalysis for pregnant women (n=50).

Urinalysis done for pregnant women	Frequency	Percentage
Yes	24	48%
No	26	52%
Total	50	100%

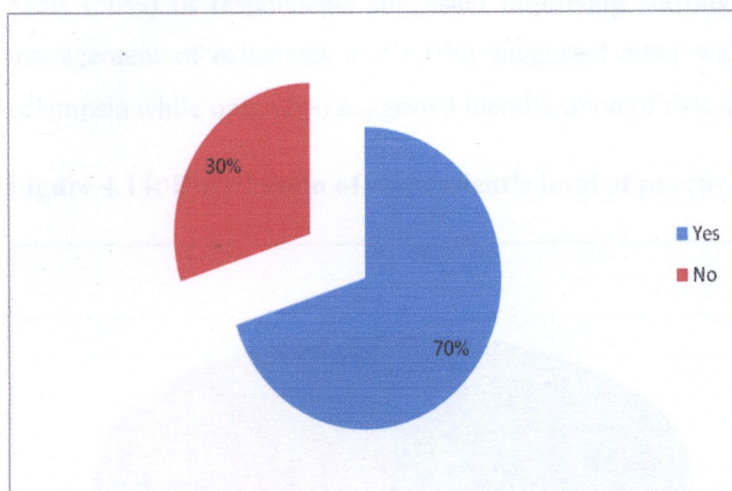
Slightly above half (52%) of the respondents were not doing routine urinalysis for pregnant women while (48%) of respondents were doing.

Table 4.12: Availability of urinalysis reagents at the health centre/hospital (n=50).

How often they had urinalysis reagents at their health centre/hospital	Frequency	Percentage
Always	4	8%
Sometimes	24	48%
Rarely	16	32%
Never	6	12%
Total	50	100%

Majority (92%) of the respondents did not always have urinalysis reagents at their hospital/health centre while only (8%) always had urinalysis reagents.

Figure 4.13: Working blood pressure machines at the hospital/health centre (n=50).



Majority (70%) of respondents had enough working sphygomanometers while (30%) did not have.

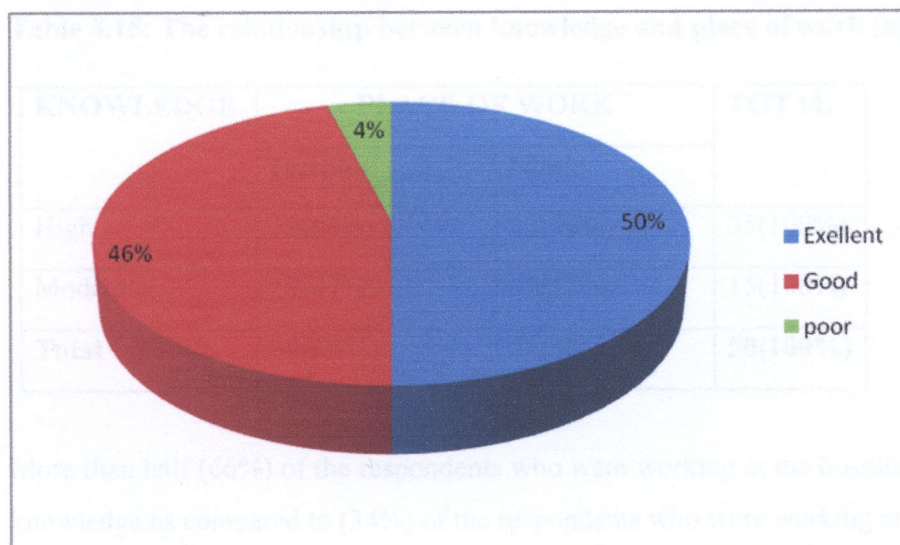
Table 4.13: Suggestions for improving management of eclampsia (n=50)

Ways for improving management of eclampsia	Frequency	Percentage
Identify risk factors	1	2%
Availability of magnesium sulphate	6	12%
Availability of urinalysis reagents	6	12%
Improve staffing of midwives	28	56%
Train all midwives in EMoC	11	22%
Availability of working BP machines	3	6%
Others	35	70%

Total did not add up to 100% because each respondent had a chance of giving two (2) answers.

Most (56%) of respondents suggested improving staffing levels of midwives to improve management of eclampsia and (70%) suggested other ways of improving management of eclampsia while only (2%) suggested identification of risk factors.

Figure 4.14: Distribution of respondent's level of practice (n=50)



Half (50%) of the respondents had excellent levels of practice, (46%) had good levels of practice while (4%) had poor levels of practice.

4.3.4 SECTION D: CROSS TABULATIONS

Cross –tabulation is a determination of the number of cases occurring when simultaneous consideration is given to the values of two or more variables (Polit and Beck, 2008). The results have been typically presented in tables with rows and columns divided according to the values of the variables. The cross-tabulations in this section illustrate the relationship between demographic data variables and distribution of respondent's level of knowledge as well demographic data variables and distribution of respondent's level of practice.

Table 4.14: The relationship between knowledge levels and age (n=50)

KNOWLEDGE	AGE			TOTAL
	31-40years	41-50years	51-60years	
High	13(37%)	19(54%)	3(8.6%)	35(100%)
Moderate	4(26.6%)	7(46.6%)	4(26.6%)	15(100%)
Total	17(34%)	26(52%)	7(14%)	50(100%)

Out of the 35 respondents with high levels of knowledge, (54%) were aged 41-50 years while only (8.6%) were aged 51-60 years.

Table 4.15: The relationship between knowledge and place of work (n=50)

KNOWLEDGE	PLACE OF WORK		TOTAL
	Hospital	Clinic	
High	23(66%)	12(34%)	35(100%)
Moderate	7(47%)	8(53%)	15(100%)
Total	30(60%)	20(40%)	50(100%)

More than half (66%) of the respondents who were working at the hospital had high levels of knowledge as compared to (34%) of the respondents who were working at the clinic.

Table 4.16: The relationship between knowledge levels and midwifery qualification (n=50)

KNOWLEDGE	MIDWIFERY QUALIFICATION		TOTAL
	Registered Midwife	Enrolled Midwife	
High	15(43%)	20(57%)	35(100%)
Moderate	4(27%)	11(73%)	15(100%)
Total	19(38%)	31(62%)	50(100%)

Out of the 15 respondents with moderate levels of knowledge, (73%) were enrolled midwives while (27%) were registered nurses.

Table 4.17: The relationship between knowledge levels and years in service (n=50)

KNOWLEDGE	YEARS IN SERVICE				TOTAL
	1-5 years	6-10 years	11-19 years	20 years above	
High	11(69%)	8(80%)	11(73%)	5(56%)	35(70%)
Moderate	5(31%)	2(20%)	4(27%)	4(44%)	15(30%)
Total	16(100%)	10(100%)	15(100%)	9(100%)	50(100%)

Majority (80%) of the respondents who had 6-10 years work experience had high levels of knowledge as compared to (56%) of respondents with 20 years and above.

Table 4.18: The relationship between level of Practice and Sex (n=50)

PRACTICE	SEX		TOTAL
	Male	Female	
Excellent	6(75%)	19(45%)	25(50%)
Good	2(25%)	21(50%)	23(46%)
Poor	0(0%)	2(5%)	2(4%)
Total	8(100%)	42(100%)	50(100%)

Out of the 8 male respondents, (75%) had excellent practice while out of 42 female respondents (50%) had good practice in management of eclampsia.

Table 4.19: The relationship between level of practice and age (n=50)

PRACTICE	AGE			TOTAL
	31-40 years	41-50 years	51-60 years	
Excellent	9(36%)	13(52%)	3(12%)	25(100%)
Good	7(30%)	13(57%)	3(13%)	23(100%)
Poor	1(50%)	1(50%)	0(0%)	2(100%)
Total	17(34%)	27(54%)	6(12%)	50(100%)

Slightly above half (52%) of the 25 respondents who had excellent levels of practice were aged between 41-50 years while (12%) were aged between 51-60 years.

Table 4.20: The relationship between the level of practice and place of work (n=50)

PRACTICE	PLACE OF WORK		TOTAL
	Hospital	Clinic	
Excellent	22(88%)	3(12%)	25(100%)
Good	7(30%)	16(70%)	23(100%)
Poor	1(50%)	1(50%)	2(100%)
Total	30(60%)	20(40%)	50(100%)

Majority (88%) of the respondents who had excellent levels of practice were working at the hospital while (12%) were working at the clinic.

Table 4.21: The relationship between level of practice and midwifery qualification (n=50)

PRACTICE	MIDWIFERY QUALIFICATION		TOTAL
	Registered midwife	Enrolled midwife	
Excellent	9(36%)	16(64%)	25(100%)
Good	10(43%)	13(57%)	23(100%)
Poor	0(0%)	2(100%)	2(100%)
Total	19(38%)	31(62%)	50(100%)

Most (64%) respondents with excellent levels of practice were enrolled midwives while only (36%) were registered midwives.

Table 4.22: The relationship between level of practice and years in service (n=50)

PRACTICE	YEARS IN SERVICE				TOTAL
	1-5years	6-10years	11-19years	20years above	
Excellent	11(44%)	5(20%)	6(24%)	3(12%)	25(100%)
Good	5(22%)	3(13%)	8(35%)	7(30%)	23(100%)
Poor	0(0%)	1(50%)	1(50%)	0(0%)	2(100%)
Total	16(32%)	9(18%)	15(30%)	10(20%)	50(100%)

Among the 25 respondents who had excellent practice (44%) had 1-5 years work experience, (24%) had 11-19 years, (20%) had 6-10 years and (12%) had 20 years and above.

Table 4.23: The relationship between the levels of knowledge and the levels of practice (n=50)

PRACTICE	KNOWLEDGE		TOTAL
	High	Moderate	
Excellent	20(80%)	5(20%)	25(100%)
Good	15(65%)	8(35%)	23(100%)
Poor	0(0%)	2(100%)	2(100%)
Total	35(70%)	15(30%)	50(100%)

Majority (80%) of the respondents who had excellent levels of practice also had high levels of knowledge while only (20%) of respondents who had moderate levels of knowledge had excellent levels of practice.

4.3.5 CONCLUSION

The data was collected from 50 midwives selected purposively from Chipata urban District. The researcher in this study analyzed data manually using a data master sheet and a scientific calculator. The presentation of data findings were according to variables divided in sections from A to D. The variables included Demographic data, Knowledge and Practice. Cross tabulations were used to identify the relationship between variables.

CHAPTER 5

5.0 DISCUSSION OF FINDINGS AND IMPLICATIONS FOR THE HEALTH CARE SYSTEM.

5.1 INTRODUCTION

This chapter looks at the study interpretations and discusses the findings as well as the implications to the health care system. The discussion of findings is based on data collected from a sample of 50 midwives who were selected purposively from Chipata General Hospital and clinics located in Chipata Urban District. The general objective of the study was to determine knowledge and practice of midwives in management of eclampsia.

5.2 CHARACTERISTICS OF THE SAMPLE

Section A, of the questionnaire had questions on demographic data from the respondents. The results revealed that the majority (84%) of the respondents were female with only (8%) being males (**Table 4.1**). This could be attributed to the fact that nursing profession predominantly consists of females as documented by General Nursing Council (GNC), 2004. The other reason could be because of the standard gender guidelines for female to male ratio which is 3:1 at enrolment into midwifery school (MoH, 2007). The respondent's age ranged from 31-60 years, the mean age was 43 years and the mode was 41 years. Most (60%) of the respondents were working at the hospital while (40%) of respondents were working at the clinic (**Table 4.1**). This could be attributed to the fact that the hospital is the second level referral health institution attending to complicated maternal cases and therefore requires more midwives than the clinics. The MoH, (2007) restructured establishment has more positions for midwives at hospitals than clinics.

All the respondents (100%) were Christians and this could be probably due to the declaration of Zambia as a Christian nation (CCA, 2005).

Most of the respondents (62%) were enrolled midwives and (38%) were registered midwives. This could be as a result of Chipata district being near Katete town which has an enrolled midwifery training school and the midwives after training are likely to work in Chipata which is a provincial town. In addition most registered midwives

leave the country for greener pastures within the region and abroad. MoH, (2005) in support has documented that the already inadequate health systems in Zambia has suffered further deteriorations due to high attrition rates attributed to the migration of health professionals (midwives inclusive) as a result of competitive local, regional and international market for health staff(MoH, 2005).

Slightly above half (52%) of the respondents had worked for 1-10years, while (48%) of the respondents had worked for over 11years and above. This could mean that most of the long serving nurses had either gone on voluntary separation, reached their retirement age or had resigned in search of better conditions in non governmental organizations.

5.3 DISCUSSION OF EACH VARIABLE

5.3.1 KNOWLEDGE

Questions on the level of knowledge of midwives in management of eclampsia were included in section B of the questionnaire. In accordance with CSO (2003) it was established that knowledge is a prerequisite for proper or higher utilization of any given service. As hypertensive disorders are unlikely to be prevented, early detection and appropriate management can minimise the severity of the condition.

Majority (92%) of the respondents were able to define eclampsia while the study revealed that only (24%) could identify the correct signs of impending eclampsia which were sharp rise in blood pressure, Epigastric pain, increased proteinuria and severe headache. This finding is not consistent with what Fraser and Cooper, (2003) documented that midwives have knowledge that help them identify women who are predisposed to eclampsia.

Thompson et al (2004) documented that midwives included in his study had deficiencies in knowledge on most components of managing patients with eclampsia. These findings are consistent with the findings of this study, most (60%) of the respondents did not know the steps to take in management of a patient with eclampsia (Table 4.5).

Kidanto et al, (2009) documented that continued medical education on current management of eclampsia is required for the quality of emergency care to improve.

This could be the reason for the (66%) respondents who were working at the hospital having high levels of knowledge (**Table 4.15**). The hospital is a second level referral centre where midwives interact with specialist doctors in gynaecology and obstetric wards. The midwives in hospitals also handle more complicated cases including eclampsia more often than midwives in clinics that refers complicated cases to higher levels for management. Chipata General Hospital is also a training ground for the nurses and midwives, hence their knowledge is up to date as they teach student nurses/midwives.

The study revealed that most respondents (70%) had high levels of knowledge while (30%) had moderate levels of knowledge (**Figure 4.5**). This could be as a result that slightly above half (52%) of the respondents were trained in EmOC which has a component in management of eclampsia. Eclampsia is one of the competencies identified in the EmOC (WHO, 2000).

The study reveals that majority of respondents (73%) with moderate levels of knowledge were enrolled midwives while (27%) were registered midwives. (**Table 4.16**). This could be attributed to the fact that most enrolled midwives practice midwifery on the wards and clinics while registered midwives concentrate on managerial jobs. Handling eclampsia cases more often increases the knowledge base for midwives as they interact with the specialists who review such cases and learn new methods of managing eclampsia as documented by Kidanto et al, (2009).

The study also revealed that majority (80%) of the respondents who had 6-10 years work experience had high levels of knowledge while (56%) of those who had 20 years and above had high levels of knowledge. This could probably mean that respondents who had 6-10 years work experience had just qualified from midwifery training and still had knowledge they acquired at midwifery school in management of eclampsia. On the other hand, the respondents who had worked for over 20 years could have not been involved in refresher courses, workshops and clinical presentations.

The researcher therefore rejects the null hypothesis which states “there is no relationship between knowledge and practice in management of eclampsia”. This study has evidence that there is a relationship between knowledge and practice in that

(80%) of the respondents who had excellent levels of practice also had high levels of knowledge (**Table 4:22**).

5.3.2 PRACTICE

Practice is defined as the habitual doing or carrying out of something; usual or customary action of performance; action as opposed to profession, theory and knowledge (Woodford and Jackson 2003). Midwives need to be aware of the legislation and guidelines defining their role, describing their scope of practice and specifying standards of practice (Fraser and Cooper, 2003). Questions on the level of practice in management of eclampsia were included in section C of the questionnaire

Thompson et al, (2004) documented that eclampsia is an uncommon but serious condition that affects 1 in 2000 pregnancies in the United Kingdom, with a mortality of 1.8%. This is consistent with the findings of this study that indicated that (44%) of the respondents attended to one case of eclampsia in a month while only (12%) attended to 4 cases of eclampsia in a month (**Figure 4.6**). The infrequent presentation of patients with eclampsia leads to staff inexperience in the condition and untested emergency systems (Thompson et al, 2004).

The study revealed that less than half (38%) of respondents had magnesium sulphate always in stock at the institution while most (62%) of respondents had erratic supply of magnesium sulphate (**Figure 4.8**). Though most (66%) respondents had given magnesium sulphate to a patient with eclampsia, (34%) of the respondents had not given magnesium sulphate before. The study also revealed that majority (68%) of the respondents did not even know what to do before repeat administration of magnesium sulphate while only (24%) knew what to do. The erratic supply of magnesium sulphate could explain why most respondents did not know what to do before repeat administration. Mkumba et al, (2007) also revealed the non availability of magnesium sulphate in health institutions. The drug of choice for eclampsia is magnesium sulphate and if it is erratic in supply, the midwives will not be competent in its use and they will keep going back to using Diazepam that is readily available as evidenced by (40%) of the respondents in this study who commonly used diazepam when managing eclampsia. The Magpie study done in (2002) by in more than 33 countries proved that a very inexpensive treatment with magnesium sulphate given to

every pregnant woman when she needs it can cut deaths from eclampsia by almost half (WHO, 2002).

Figure 4.10 indicates that (60%) of the respondents had guidelines displayed on the walls in labour ward while (26%) of the respondents did not have the guidelines at their institution for management of eclampsia. Salha and Walker, (1999) advocates for the universal adoption of such guidelines in all obstetric units because midwives can easily follow the steps in managing eclampsia and substantially reduce elements of substandard care.

This study further revealed that shortage of staff affects the way eclamptic patients are managed. The midwives in Antenatal ward, labour ward and postnatal clinic likely to nurse patients with eclampsia indicated that it was practically difficult to follow all the recommended steps in management of eclampsia because of shortage of staff. This meant that most health institutions were in short supply of skilled personnel who were to give quality standard care to pregnant women. Mkumba et al, (2007) findings also showed that due to critical shortage of the midwives and other health staff, the quality of care was substandard.

The study also revealed that slightly above half (52%) of the respondents were not doing routine urinalysis for pregnant women while (48%) were doing. Urinalysis is a very important investigation done to rule out proteinuria which is one of the cardinal sign of impending eclampsia. Only (8%) of the respondents had urinalysis reagents always while (92%) did not have the urinalysis reagents always but sometimes, rarely and never (**Table 4.12**). Lack of urinalysis reagents makes midwifery practice very difficult to detect eclampsia early. The findings of this study is in line with the findings of CSO, 2007 that indicated that urine testing were the ANC components least likely to be offered at 23 percent.

The study revealed that (52%) of the respondents aged between 41-50 years had excellent levels of practice than (12%) of respondents aged between 51-60 years. Those respondents aged 51-60 years could have practiced for longer periods. Fraser and Cooper, (2003) documented that the average age at which menopause occurs is about 50 years and the midwives aged 51-60 years could have been experiencing

effects of menopause which include mood swings, hot flushes and forgetfulness there by affecting their practice.

Majority (88%) of the respondents who were working at the hospital had excellent levels of practice than (12%) of the respondents who were working at the clinic (**Table 4.20**). The reason could be attributed to the fact that the hospital is a referral health institution and complications such as eclampsia are nursed there hence midwives tend to attend to eclamptic patients more often there by enhancing their practicing skill.

The study also revealed that (64%) of the enrolled midwife respondents had excellent levels of practice than (36%) of the registered midwife respondents (**Table 4.21**). Enrolled midwives practice midwifery on the wards and in clinics than registered midwives who hold managerial positions because of their virtue of training. Less than half (44%) of the respondents who had 1-5 years in service had excellent practice levels while only (12%) of the respondents with 20 years and above had excellent levels. This could be attributed to that the respondents with 1-5 years in service could have just returned from midwifery training and still had excellent practice skills. The respondents with 20 and above years in service mostly could have been pending retirement hence their practice levels declines.

Fraser and Cooper, (2003) documented that identification of risk factors for eclampsia are part of the specific skills the midwife needs to develop to prevent and manage eclampsia. This is contrary to the finding of this study because when asked for suggestions of ways to improve management of eclampsia, only (2%) of the respondents suggested identification of risk factors while majority (70%) suggested other ways (**Table 4.13**).

The study revealed that half (50%) of the respondents had excellent practice levels, (46%) had good practice levels while (4%) had poor practice levels (**Figure 4.14**). Excellent practice may denote standard and quality management of patients with eclampsia while good and poor practice may compromise quality of care thereby offering substandard care. Kidanto et al, (2009) documented in line with the findings of this study that identification of criteria of best practice and applying the set standards against the current practice would improve management of patients with eclampsia.

The researcher rejects the null hypothesis by providing evidence that there is a relationship between knowledge and practice in management of eclampsia. Majority (80%) of the respondents who had excellent levels of practice also had high levels of knowledge while only (20%) of respondents who had moderate levels of knowledge had excellent levels of practice (**Table 4:22**).

5.4 IMPLICATIONS TO THE HEALTH CARE SYSTEM

Health care systems are designed to meet the health care needs of target populations. Midwives are an integral part of our health care system (Webmaster, 2010). According to MoH, (2005) existing midwives were 2,273 while the recommended establishment was 5,600 and the variance being 3,327. Though the variance is critical, midwives need to be recognized as full partners in health care delivery system to ensure that women have access to comprehensive and quality health care services. Having below the required number of midwives leads to short cuts and not following guidelines when managing patients with eclampsia. The implications of the findings of this study to the health care system have been discussed below.

5.4.1 NURSING PRACTICE

The study revealed that (50%) of midwives had excellent levels of practice, (46%) had good practice levels while (4%) had poor levels of practice in management of eclampsia. This implies that midwifery practice needs to strictly adhere to the set standards of practice and all health institutions need to have these standards available to improve in management of eclampsia.

The study revealed that only (48%) of the respondents were doing urinalysis for pregnant women while (52%) were not. Urinalysis helps to detect pre-eclampsia cases early. This implies that midwives need to be reminded in their practice to do routine urinalysis on pregnant women to rule out proteinuria. The study also revealed that only (24%) of the respondents could identify the 4 impending symptoms and signs of eclampsia while (76%) could only identify 3, 2 or 1. The midwife should be alert to any of the signs and summon medical assistance to prevent death of the mother and fetus (Fraser and Cooper, 2003). The midwives need to be conversant with the symptoms and signs impending eclampsia for possible prevention and its effective management.

The study further revealed that though (60%) of the respondents had guidelines displayed in labour ward, (26%) did not even have them displayed any where. Not having guidelines displayed any where implies provision of substandard care to women because midwives will have no where to refer standard steps to follow. For the women to recover from eclampsia, nursing practice needs to improve to acceptable standards.

5.4.2 NURSING ADMINISTRATION

Nursing administration is the direction, co-ordination and control of many persons to achieve some purposes or objective (Basavanthappa, 2000). Administration has to do with getting things done with accomplishment of defined objectives. The study revealed that (62%) of the respondents did not always have magnesium sulphate while only (38%) of respondents always had magnesium sulphate in their health centre/hospital. The study also revealed that (92%) of the respondents did not always have urinalysis reagents at their hospital/health centre while only (8%) always had urinalysis reagents. The implication is that nurse administrators need to work hand in hand with pharmacy staff to ensure that the drug of choice for management of eclampsia (magnesium sulphate) is ordered and always available. The nurse administrators need to plan for enough urinalysis reagents and encourage midwives to practice routine urinalysis for pregnant women to rule out proteinuria. The study also revealed that shortage of staff when managing patients with eclampsia affects its management in that substandard care is offered. Nurse administrators need to lobby for more midwives and plan to train more enrolled midwives because they practice midwifery and had high knowledge levels and excellent practice levels.

5.4.3 NURSING EDUCATION

Nurses are socialized in a unique way during their education and experience in practice and they should therefore be prepared like no other group to monitor nursing practice (Grohar-Murray and DiCroce, 2003). Nursing education prepares students for the realities of changing care needs. Nursing education needs to update their curriculum yearly so as to be in line with current or modern management of eclampsia. The study revealed that (70%) of the respondents had high levels of knowledge while (30%) had moderate levels of knowledge. Among the respondents

with high knowledge, (80%) also had excellent levels of practice. This implies that knowledge influences practice levels and knowledgeable nurses and midwives would offer quality standard care to women who develop eclampsia.

The study revealed that Majority (68%) of the respondents could not identify the 4 cardinal things to consider before repeat administration of magnesium sulphate, only (24%) knew what should be done while (8%) did not even know what should be done. This could imply that most midwives were not conversant with the use of magnesium sulphate because of its erratic supply. Nurse educators could consider giving midwives refresher training on the use of magnesium sulphate.

Learning is a continuous process hence all nurses should be encouraged to further their education. Nursing education also need to consider advances in computer technology which has an endless potential for change of management of eclampsia.

5.4.4 NURSING RESEARCH

Research is a scientific process because results are verifiable. It is a systematic search for answers to questions about facts and relationship between facts (Basavanthappa, 2007). There is a strong indication that every nurse in the future can expect to be involved in research.

There is need to do further research in management of eclampsia by midwives to determine their practice during antenatal, intranatal and postnatal period. The other angle for further research could be to determine the quality of care given to patients with eclampsia. The study revealed that (52%) of the respondents were trained in EmOC while (48%) were not trained. There is need to do further research to determine the relationship between training and practice of midwives in management of eclampsia.

5.5 RECOMMENDATIONS

The recommendations were based on the findings of the study as follows:

5.5.1 MINISTRY OF HEALTH

According to WHO, (1999), it has been proven that successful management of obstetric complications can be achieved if a committed skilled attendant is available to attend to a woman in pregnancy and labour. The Ministry has to improve staffing levels and enhance skills of skilled attendant by opening more midwifery training schools and ensuring equitable distribution and retention of midwives. The ministry needs to provide guidelines for emergency obstetric care as per national protocol. The ministry has to strengthen programs for health education, screening and treatment of obstetric complications such as eclampsia. All health facilities must be equipped with all the necessary equipment such as sphygmomanometers, stethoscopes, test tubes for urinalysis and mouth gags in the right quantities. The ministry should procure enough magnesium sulphate and urinalysis reagents.

5.5.2 CHIPATA GENERAL HOSPITAL

The hospital management should lobby for more midwives to improve staffing levels. The maternal death reviews should be strengthened so as to improve on management of obstetric complications such as eclampsia. The hospital management should have clinical presentations and in-service workshops to increase on knowledge levels of midwives. Part time allowance for maternity department should be increased and this will attract midwives on leave or off duty to do party time and shortage of staff will be relieved. Guidelines for management of eclampsia should be displayed in ANC, labour ward, postnatal ward and in all gynaecology and obstetric units for easy reference. Supervision and monitoring should be strengthened to ensure quality obstetric care. There is need to stock enough urinalysis reagents and magnesium sulphate at the hospital.

5.5.3 CHIPATA DISTRICT HEALTH MANAGEMENT

There is need for increasing the number of ambulances in the district to ensure that women that develop complications can reach facilities where these complications can be managed without unnecessary delays. The district should arrange for quarterly

meetings for midwives to share their knowledge with those midwives working at the general hospital. Support supervision to health facilities should have an emphasis on maternal health issues, especially to monitor the quality of ANC, management of labour and postnatal services. Health facilities should be allowed to use their grants to procure minor but essential equipment e.g. Blood Pressure machine, stethoscopes and urinalysis reagents.

5.6 DISSEMINATION OF FINDINGS

The researcher intends to disseminate the findings by making copies of the study document and sending them to the following; Department of Nursing Sciences, School of Medicine and the University Medical Library.

The executive summary of the study report will be distributed to MOH, Provincial Health Office-Chipata, Chipata General Hospital Management Team and the District Health Office-Chipata.

The researcher also intends to disseminate the findings in meetings and seminars that take place in the district especially concerning MCH. Information will also be disseminated to Non-Governmental organisations that have reproductive health programmes running such as HSSP.

5.7 LIMITATIONS OF THE STUDY

A sample of fifty (50) respondents from Chipata Urban District was selected for the study due to inadequate time and resources, as such, results of the study can not be generalised to the rest of the midwives in the province.

The purposively sampling method was also a limitation because it did not give an equal chance of participants being selected into the study. To minimise this limitation, the researcher purposively administered questionnaires to respondents in different shifts that is; morning, afternoon and night shifts.

The researcher did not come across any study done in Zambia specifically on determining knowledge and practice of midwives in management of eclampsia hence no comparison could be made. The researcher had to search for similar studies done on management of eclampsia by midwives in other countries.

5.8 CONCLUSION

The study was done to determine knowledge and practice of midwives in management of eclampsia in Chipata urban district.

This study therefore concludes that there is a relationship between knowledge and practice of midwives in management of eclampsia because (80%) of midwives who had excellent practice levels also had high levels of knowledge. Knowledge is a prerequisite for proper or standard practice in management of eclampsia.

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APPENDIX 1

**UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
DEPT OF NURSING SCIENCES**

SELF ADMINISTERED QUESTIONNAIRE FOR MIDWIVES

TITLE: KNOWLEDGE AND PRACTICE OF MIDWIVES IN MANAGEMENT OF ECLAMPSIA.

Questionnaire number: _____

Hospital/ clinic: _____

Date: _____

INSTRUCTIONS TO THE RESPONDENTS

1. Do not write your name on the questionnaire
2. Tick √ against the most appropriate answer/s in the box provided ☐
3. For responses without alternatives, write the responses in the spaces provided
4. Answer all questions
5. Information given will be considered confidential

SECTION A: DEMOGRAPHIC DATA

FOR OFFICIAL USE ONLY

1. What is your sex?

a. Male

b. Female

--

2. What was your age on the last birthday? _____

--

3. What is your place of work?

a. Hospital

b. clinic

--

4. What is your Religion?

a. Christianity

b. Islamic

c. Hinduism

d. Any other, specify _____

--

5. What is your professional midwifery qualification?

a. Registered midwife

b. Enrolled midwife

--

6. How long have you been working?

a. 1 – 5 years

b. 6 – 10 years

c. 11 – 19 years

d. 20 years and above

--

SECTION B: KNOWLEDGE QUESTIONS

7. What is eclampsia? (tick \checkmark only one)
- a. Childhood fits/convulsions in pregnancy
 - b. A condition characterized by high blood pressure and fits/convulsions occurring after 20 weeks of pregnancy and 48 hrs after delivery.
 - c. A condition characterized by low blood pressure and fits/convulsions occurring in pregnancy.
 - d. Fits/convulsions in any woman

--

8. What are the signs and symptoms of impending eclampsia? (tick \checkmark all applicable)
- a. A sharp rise in blood pressure
 - b. Epigastric pain
 - c. Increased proteinuria
 - d. Severe headache

--

9. Is eclampsia an emergency obstetric condition?

a. Yes

b. No

--

10. What are the common risk factors for eclampsia?

(Tick ✓ all applicable)

a. Primigravida

b. History of pre-eclampsia

c. malaria

d. Essential hypertension

--

11. What steps do you take to manage a woman

with eclampsia? (Tick ✓ all applicable)

a. routine admission of patient

b. maintain a clear airway

c. Relatives observe patient

d. Call for medical help

e. Set up intravenous line

f. Give available emergency drugs

g. Monitor the blood pressure, pulse
and respirations

h. Insert an airway during a fit

--

12. What is the drug of choice for managing eclampsia
as per protocol/guidelines. (tick ✓ only one)

a. Magnesium sulphate

b. Diazepam

c. Hydrallazine

d. Phenytoin

--

13. What is the antidote for the drug of choice mentioned in question 13?(tick $\sqrt{\quad}$ only one)

- a. Calcium bicarbonate
- b. Sodium bicarbonate
- c. Calcium gluconate
- d. Lignocaine

--

14. Do patients with eclampsia recover?

- a. Yes
- b. No

--

15. How do you prevent eclampsia? (tick $\sqrt{\quad}$ only one)

- a. Treating all HIV infections in pregnancy
- b. Blood pressure checking and Screening for proteinuria
- c. High protein diet
- d. Giving Fansidar

--

16. Have you been trained in emergency obstetric care?

- a. Yes
- b. No

--

SECTION C: PRACTICE QUESTIONS

FOR OFFICIAL USE ONLY

17. How many cases of eclampsia do you attend to in a month?(tick ✓ only one)

- a. 1
- b. 2
- c. 3
- d. 4

--

18. Where do you admit patients with eclampsia? (tick ✓ only one)

- a. Special obstetric rooms
- b. Labour ward
- c. Emergency bay
- d. Main obstetric ward
- e. Admission bay

--

19. Have you ever given magnesium sulphate to a patient with eclampsia?

- a. Yes
- b. No

--

20. How often do you have magnesium sulphate at your hospital/clinic?

(tick ✓ only one)

- a. Always
- b. Sometimes
- c. Never
- d. Don't know

--

21. Before repeat administration of magnesium

FOR OFFICIAL USE ONLY

Sulphate, what do you ensure?

(tick ✓ all applicable)

- a. Temperature normal
- b. Check respiratory rate
- c. Urinary output normal
- d. Patellar reflexes present

--

22. At your hospital/ health centre, what drug do you commonly use in management of eclampsia? (tick ✓ only one)

- a. Aldomet
- b. Magnesium sulphate
- c. Hydrallazine
- d. Diazepam

--

23. Where are the guidelines/protocols for managing eclampsia displayed? (tick ✓ all applicable)

- a. Special obstetrics unit
- b. Labour ward
- c. Antenatal clinic
- d. Not displayed anywhere

--

24. How often do you follow/observe the guidelines for managing eclampsia?

(tick ✓ only one)

- a. Always
- b. Sometimes
- c. Rarely
- d. Never

FOR OFFICIAL USE ONLY

--

25. Does shortage of staffing affect the way you manage eclampsia?

- a. Yes
- b. No

--

26. What observations do you do following an eclamptic fit in pregnancy?

(tick ✓ all applicable)

- a. Blood pressure, pulse and respirations
- b. Level of consciousness
- c. Cervical dilation
- d. Fetal heart rate

--

27. Do you do urinalysis for pregnant women?

- a. Yes
- b. No

--

28. How often do you have urinalysis reagents

at your hospital/clinic?

(tick ✓ only one)

- a. Always
- b. Sometimes
- c. Rarely
- d. Never

--

29. Do you have enough working blood pressure machines at your hospital/clinic for monitoring patient's with eclampsia?

- a. Yes
- b. No

--

30. Give 2 suggestions for improvement in management of eclampsia?

- a. _____
- b. _____

--

END OF QUESTIONS

Thank you very much for taking time to answer these questions.

APPENDIX II: INFORMED CONSENT

Dear respondent,

My name is Esther N. Banda, I am a 4th year student at the University of Zambia, School of Medicine at the Department of Nursing Sciences studying Bachelor of Science in Nursing .

In partial fulfillment of my training in Bachelor of Science degree program, I'm required to undertake a research project of which my topic is knowledge and practice of midwives in management of eclampsia in chipata urban district. The main objective of the study is to determine the knowledge and practice of midwives in management of eclampsia.

You have been purposively selected to participate in this study and I wish to inform you that participation in this study is voluntary and therefore, you are free to withdraw at any stage of the study if you so wish. You will answer questions on knowledge and practice in management of eclampsia and you will give information on your demographic data. Any information given will be kept in confidence and no name will be written on the interview schedule.

There are no monetary benefits from the study but you will benefit from the study results by improving ways of managing eclampsia. The information that you will give will assist the researcher to establish the relationship of knowledge and practice in management of eclampsia and the findings will be used by policy makers, midwifery schools and other organizations in finding ways to prevent the complication of eclampsia.

Ihere by called the respondent understands the guidelines of this study and I am willing to participate in the study.

Dated thisday of2009

Signature/ thumb print of respondent.....

Witness.....

APPENDIX III: RESEARCH WORK SCHEDULE

	TASK TO BE PERFORMED	DATES	WEEKS	PERSONNEL	DAYS REQUIRED
1.	Literature review	Continuous		Researcher	
2.	Finalize research proposal	22 nd June, 2009 8 th Aug, 2009	2 – 9	Researcher	56 days
3.	Data collection tool	10 Aug, 2009- 15 August, 2009	9 – 10	Researcher	7days
4	Submit first draft copy of proposal to supervisor	17 th Aug, 2009 – 24 th Aug, 2009	10-11	Researcher	7 days
5	Clearance from relevant authorities	24 th August to 31 st August , 2009	11 -12	Researcher, Nursing science department, Supervisor, UTH Executive Director, Lusaka	7 days
6.	Pilot study	31 st August to 7 th September, 2009	13 th	Researcher	7 days
7.	Data collection	5 th October to 2 nd November, 2009	14 -18 th	Researcher	31days
8.	Data analysis	9 th November to 24 December, 2009	19-21	Researcher	15 days
9.	Report writing	26 th December to 8 th January, 2010	22 -25	Researcher	21 days
10.	Submission of draft copy of research report to supervisor	11 th January to 01 February, 2010	26-29	Researcher	21 days
11.	Finalizing research report and binding	11 th February, 2010 25 th February, 2010	29 -31	Researcher	14 days
12.	Deposition of final research report	16 th April, 2010- 05 May 2010	32 nd	Researcher	21 days
13.	Monitoring and evaluation	Continuous		Researcher	

APPENDIX IV: THE GANTT CHART

Activity	Responsible Person	Jun	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Literature Review			→										
Finalizing research proposal			↔	↔								→	
Data collection Tool				↔									
Submission of 1 st draft copy to supervisor				↔									
Clearance from relevant authority				↔									
Pilot study				↔									
Data collection						↔							
Data analysis							↔						
Report writing								↔					
Submission of 1 st Draft copy of report to supervisor									↔				
Finalising research report and binding										↔			
Deposition of final research report											↔		
Monitoring and evaluation		→										↔	→

APPENDIX V: BUDGET PROPOSAL

No.	ITEM	UNIT COST (ZMK)	QUANTITY	TOTAL (ZMK)
1	STATIONARY			
	Ream of paper	30, 000	4 reams	120,000
	Pencils	1, 000	50	50,000
	Ball pens	1, 500	5	7, 500
	Tippex	40, 000	1	40, 000
	Note books	10, 000	2	20, 000
	Staples	25, 000	1 box	25, 000
	Scientific calculator	200, 000	1	200, 000
	Sub total			462,500
2	Secretarial services			
	Typing research proposal	3, 000	50 pages	150, 000
	Typing draft report	3, 000	85 pages	255, 000
	Typing final report	3,000	80 pages	240, 000
	Binding final report	50, 000	5 copies	250, 000
	Sub total			895, 000
3	Personal			
	Lunch	50, 000	21 days	1050, 000
	Sub total			1050, 000
	Total			2, 407, 500
	Contingency funds 10%			240, 750
	Grand total			2, 648, 250

BUDGET JUSTIFICATION

The proposed budget has been outlined below.

STATIONERY

Stationery will be required for typing the research proposal, writing the final research report as well as typing and printing the report. Self administered questionnaires will be developed using the same stationary. The notebooks will be needed for record keeping during data collection and analysis. The scientific calculator will be required for data analysis. Tippex will be used to erase errors.

SECRETARIAL SERVICES

These will help the researcher to type the work, photocopy the questionnaires and reports as well as binding.

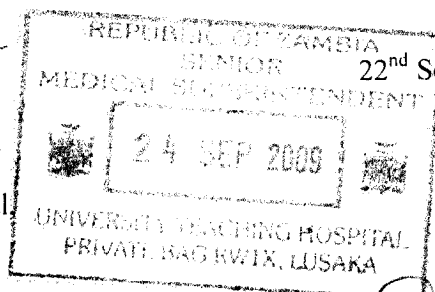
PERSONNEL

The researcher will need money for Lunch and any other unforeseen circumstances during the study.

CONTINGENCY- Contingency fund will be required in case of any unforeseen circumstances like inflation and unstable currency. The contingency fund is 10% of the total budget.

The University of Zambia,
School of Medicine,
Department of Nursing
Sciences,
P. O. Box 50110,
Lusaka.

The Medical Superintendent,
University Teaching Hospital
Lusaka.



UFS: The Head – Department of Nursing Sciences

Dear Sir/Madam,

RE: Request for permission to undertake a pilot research study

I am a 4th year student pursuing a Bachelor of Science Degree program in Nursing at the University of Zambia, School of Medicine. In partial fulfilment of the award of the Bachelor of Science Degree in nursing, am required to carry out a research study.

The topic for my study is **“knowledge and practice of midwives in management of eclampsia in Chipata Urban District”**.

I am therefore requesting for permission to administer questionnaires to the midwives as part of the pilot study to test the validity and reliability of the questionnaire. I intend to carry out this exercise at your hospital from 28th to 30th of September, 2009.

Your favourable consideration to this request will be highly appreciated. Thanking you in advance.

Yours faithfully,

Esther N Banda

4th year BSc. NRS student

22nd September, 2009

24 SEP 2009

UNIVERSITY TEACHING HOSPITAL
PRIVATE BAG RWIX, LUSAKA

Hegoma

Go ahead
27/9

Approved

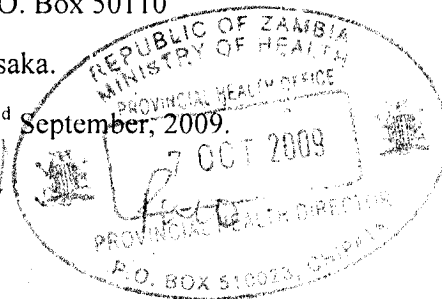
*Approved
Subordinate
Teacher
M. Ngil*

The University of Zambia,
School of Medicine,
Department of Nursing
Sciences,

P. O. Box 50110

Lusaka.

22nd September, 2009.



The Provincial Medical Officer,
Eastern Province,
Chipata.

Approved

Approved

UFS: The Head – Department of Nursing Sciences

Approved

Dear Sir/Madam,

RE: Request for permission to undertake a research study

Approved

I am a 4th year student pursuing a Bachelor of Science Degree program in Nursing at the University of Zambia, School of Medicine. In partial fulfilment of the award of the Bachelor of Science Degree in nursing, am required to carry out a research study.

The topic for my study is **“knowledge and practice of midwives in management of eclampsia in Chipata Urban District”**.

I am therefore requesting for permission to collect data from midwives in Chipata Urban District and Chipata General Hospital from the 5th of October to 31st of October, 2009.

Your favourable consideration to this request will be highly appreciated. Thanking you in advance.

Yours faithfully,

Esther N Banda

Esther N Banda

4th year BSc. NRS student