AN EXPLORATION OF MIDWIVES' AND CLIENTS' EXPERIENCES OF EMERGENCY CAESAREAN SECTION AT BWAILA MATERNITY UNIT

A MASTER OF SCIENCE (MIDWIFERY) DESSERTATION

BY

RUTH CYNTHIA MWALE

UNIVERSITY OF MALAWI

KAMUZU COLLEGE OF NURSING

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Master of Science (Midwifery) Thesis

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AUGUST, 2012

DECLARATION

I, the undersigned hereby declare that this thesis/dissertation is my own original work which has not been submitted to any other institution for similar purposes. Where other people's work has been used acknowledgements have been made.

RUTH CYNTHIA MWALE

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Full legal Name

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Signature

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Date

Certificate of Approval

The undersigned certify that this thesis represents the student's own work and effort and has been submitted with our approval.

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Member Supervisory Committee

DEDICATION

I dedicate this dissertation to my Late Father Ryson Hastings Ngwira who always wanted to see me excel with education and gave me the best in life, but never lived long to see the fruits of his efforts; To my mother Edias Ngwira for her encouragement and inspiration for me to work hard and never give up; To my husband, Davie Dominic Evans Mwale for his endurance, moral, financial and material support throughout my study period; To my wonderful children, Francis, Margret, Victor and Pamela for their constant and untiring encouragement for me to go on and for giving me the reason to do so despite the maternal deprivation they suffered during my absence from home. God should richly bless all of you for the individual contributions you each have made towards the success of my studies.

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ABSTRACT

Worldwide 35.7 % of women suffer from major complications post caesarian section (Mukherjee, 2006). These include but are not limited to pelvic infection, generalized sepsis, deep vein thrombosis, and minor complications such as fever, urinary tract infections, and wound sepsis. Major complications are almost double in emergency caesarian sections compared to those in elective caesarian section. There is evidence that preoperative care rendered to mothers before emergency caesarean section helps to reduce complications postoperatively.

A study was conducted at Bwaila maternity unit to determine midwives' and clients' experiences of preoperative care before emergency caesarean section. The objectives of the study were: to establish midwives' perception of the components of standard preoperative care of clients undergoing emergency caesarian section; to assess midwives' actions on components of standard preoperative care for emergency caesarian section; to determine clients' perception of the preoperative teaching rendered to them prior to undergoing emergency caesarian section; to determine clients' reaction to preoperative care they received prior to undergoing emergency caesarian section. to determine if there was an association between preoperative emergency care rendered and the incidence of postoperative complications.

The study used a combination of retrospective and prospective designs using quantitative methodologies. A sample size of 87 clients and 28 midwives was obtained through convenient sampling. Data was collected using structured questionnaires and structured interview guides and a checklist was used to collect data from client chart review. The data obtained was analyzed using the statistical package for social science (SPSS Version 16.0). Data has been summarized using frequency tables, and bar charts and tables have been used to present the results. The Chi-Square test was used to determine the significant statistical association between the preoperative care rendered to the clients and the incidence of postoperative complications. Independent-samples t-test was used to examine statistically significant differences between the complications expressed by clients and those documented in the clients' charts. Imogene King's middle range theory of Goal Attainment guided this study.

Chi-Square test showed a statistically significant association between preoperative teaching offered to the clients on deep breathing and coughing exercises, and the incidence of postoperative complications ($P<0.05$). Complications expressed by the clients (mean = 0.84, S.D. = 1.7) scored statistically significantly higher ($p<0.05$) than those documented in the clients' charts. Although results showed that midwives were able to mention most of the components of basic preoperative care for clients undergoing emergency caesarean section, only 25% mentioned that they would check vital signs prior to emergency caesarean section, 28.6% mentioned that they would allow the client

to ask questions, and 25% mentioned that they would answer client's questions. Gaps were also noted between the mentioned components of care and those documented in the clients' charts the least documented being vital signs (19.5%), psychological reassurance of the client (3.4%) and preoperative teaching of the client (1.1%). The main contributing factors were poor deployment of midwives to this hospital; lack of preoperative care guidelines; and lack of in-service training for the midwives in perioperative care.

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LIST OF ABBREVIATIONS AND ACRONYMS

BT	Blantyre
CHAM	Christian Health Association of Malawi
CPD	Cephalopelvic disproportion
C/s	Caesarean section
DHO	District health Officer
Em C/s	Emergency caesarean section
IV	Intravenous
KCN	Kamuzu College of Nursing
LL	Lilongwe
Mls	Milliliters
MOH	Ministry of Health
NMCM	Nurses and Midwives Council of Malawi
NRCT	Nonrandomized controlled trial
Post op	Post operative
PPH	Post partum hemorrhage
QECH	Queen Elizabeth Central Hospital
RCT	Randomized controlled trial

RH	Reproductive Health
RHU	Reproductive Health Unit
USAID	United States Aid for International Development
Vs	Versus

CHAPTER 1

Introduction

Caesarean section is associated with a fourfold increase in maternal mortality rate (Harper, Byington, Espeland, et al, 2003). Worldwide 35.7 % of women suffer from major complications post caesarian section such as pelvic infection, sepsis, deep vein thrombosis, and minor complications such as fever urinary tract infections and wound sepsis (Mukherjee, 2006). Furthermore major complications are almost double in emergency caesarian sections compared to those in elective caesarian sections (van Ham, van Dongen, & Mulder, 1997). There is further evidence that emergency caesarean section has a high risk of febrile morbidity, a higher risk of blood loss of more than 1000 mls, and an increased risk of a longer duration of postoperative stay of more than 7 days in the hospitals (Soltan, Chowdhury, & Adelusi, 1996).

Nurses and midwives have a major role to play in the preoperative care of patients in order to reduce morbidity and mortality in postoperative period. Preoperative teaching that nurses give to patients includes instruction in breathing and leg exercises that prevent postoperative complications such as pneumonia and deep vein thrombosis. Furthermore preoperative teaching on frequent position changes after surgery promotes mobility, prevents venous stasis, improves circulation, and promotes optimal respiratory function (Smeltzer, Bare, Hinkle, & Cheever, 2008).

Background

An estimated 94 % of all the caesarian sections performed in Malawi are emergency caesarian sections, most of which are due to obstructed labour and ruptured uterus. Anaemia and hypervolemia are common problems in women who obtain emergency caesarian sections. The women that are poorly prepared for caesarian section and poorly monitored postoperatively, experience an increased risk of morbidity and mortality (Fenton, Whitty & Reynolds, 2003).

The author has observed that the care provided to clients undergoing emergency caesarian section at Bwaila Maternity Unit varies according to who has prepared the client before operation. Most of these clients are from rural areas, where care is of poor quality before arrival at Bwaila, and they frequently suffer from severe dehydration, anaemia, and/or sepsis. Records at Bwaila indicate that of the 1,433 mothers who had emergency caesarian section in 2008, 34 (2.4%) developed puerperal sepsis postoperatively, 23 (1.6%) had gaping wounds, and 25 (1.7%) were anaemic postoperatively. Good preoperative preparation can help to prevent some of these complications.

The Ministry of Health Reproductive Health Unit developed reproductive health standards (RH standards) in 2008 for nursing/midwifery staff to follow when rendering preoperative care to maternity patients (National Reproductive Health standards, 2008). The standards specifically refer to preoperative preparation of women with obstructed labour. However there are some gaps as the standards do not clearly stipulate all the preoperative care required for a patient undergoing emergency caesarian section. The RH standards stipulate that preoperative care of the client before caesarian section should consist of the following components as indicated in table 1.

Table 1: Preoperative care standards for caesarean section

Rehydration of the patient to maintain normal plasma volume and prevent or treat dehydration and ketosis.
Check vital signs
Give broad spectrum antibiotics to prevent puerperal sepsis i.e. Chloramphenicol, 1gm Qid for 48 hrs iv, Metronidazole 400mg tds for 48 hrs iv, and Gentamycin 80mgs tds for 2 days 1v;
Alternative treatment,
Ampicillin 1gram tds for 48 hrs iv
Metronidazole 400mg tds for 48 hrs iv:
Take blood for Hemoglobin, grouping and X-matching
Perform bladder catheterization

Source: National Reproductive Health Standards, MOH, 2008.

Much of the knowledge that midwives use in preoperative preparation of the patients undergoing emergency caesarian section is based on their general knowledge of preparation of any surgical patients. Routine preoperative surgical care includes: full blood count, grouping and cross-matching, informed consent, preoperative teaching related to: type of surgery, expectation postoperatively, operative risks, and activities that the client can perform which decrease postoperative complications, such as deep breathing and coughing exercises, leg exercises, and early ambulation (Smeltzer, Bare, Hinkle, & Cheever, 2008).

Midwives and nurses are responsible for most of the preparation of women who undergo caesarian section in hospital settings worldwide. However, there is little

literature, both locally and internationally, on the preoperative care that midwives/nurses should render to women undergoing emergency caesarian section. This study therefore intends to explore the midwives' and clients' experiences of caring for or receiving emergency caesarean section.

Problem statement

Personal observation has shown that there are incomplete standards for preoperative preparation of clients undergoing emergency caesarian section in Malawi. The standards stipulated in the Reproductive Health Guidelines are in respect of obstructed labour and they have been used to prepare all mothers undergoing caesarian section whether elective or emergency. Mukherjee (2006) reported that worldwide 35.7 % of women suffer from major complications post caesarian section. These include but are not limited to pelvic infection, generalized sepsis, deep vein thrombosis, and minor complications such as fever, urinary tract infections, and wound sepsis. Furthermore, major complications are almost double in emergency caesarian sections compared to those in elective caesarian section. Records at Bwaila show that of the 1,433 mothers who had emergency caesarian section in 2008, 34 (2.4%) developed puerperal sepsis postoperatively, 23 (1.6%) had gaped wounds, and 25 (1.7%) were anaemic postoperatively. The number of emergency caesarean sections performed at Bwaila maternity unit continues to rise. For example, in 2009 there were 1,756 emergency caesarean sections, and in 2010, there were 1,772 (Bwaila maternity unit Annual Report, 2008). However, no studies have been done to document the type of preoperative care that is rendered to mothers undergoing emergency caesarian section in Malawi. Poor preparation of mothers undergoing caesarian section may lead to more complications such as anaemia and wound problems postoperatively and this could prevent the achievement of MDG 5 of reducing maternal mortality rate. It is against this background that this study was conducted.

Significance of the study

This study would identify gaps in the provision of preoperative care to women undergoing emergency caesarean section. The findings would assist to inform caregivers

and policy makers for the modification of existing standards related to preoperative care of clients undergoing emergency caesarian section.

Conceptual Framework

Introduction

The study was guided by the middle range theory from Imogene M. King Theory of Goal Attainment. This theory was derived from the interpersonal systems theory in which two people, who are usually strangers, come together in a health care organization to help and be helped to maintain a state of health. The theory's focus on interpersonal systems reflects King's contention that the practice of nursing is differentiated from other health professions by what nurses do with and for individuals (George, 2008).

The basic assumption for King's theory of goal Attainment is that nurses and clients communicate information, set goals mutually, and then act to attain these goals. This is also the basic assumption of the Nursing process (George, 2010). Hence the focus of the theory is attainment of goals. King's assumptions about nurse-client interactions include that perception of nurse and client influence the interaction process. Individuals and families have a right to knowledge about their health. They have a right to accept or reject health care. They have a right to participate in decisions that influence their life, their health and community services. Health professionals have a responsibility to share information that helps individuals make informed decisions about their health. Furthermore, king contends that health professionals have a responsibility to gather relevant information about perceptions of the client so that their goals and the goals of the client are congruent (George, 2010, p.247).

According to king, the nurse and client communicate, first in interaction and then in transaction to attain mutually set goals. The relationship takes place in space identified by their behaviours and occurs in forward-moving time as they make decisions and take action on those decisions. The nurse-client relationship of interaction and transaction occurs because the client's interactions with the environment in some way require support, information or intervention. King indicates that the nurse and client bring

knowledge and information to the relationship that will support the identification and development of interventions to attain mutually set goals. The theory predicts that the use of mutually set goals will lead to favorable outcomes.

In this study the theory of goal attainment will attempt to explain what specialized knowledge and skills the midwife brings to the midwife- client relationship in preoperative care prior to emergency caesarean section, and what interventions are actually done to the client in order to attain the goal of quality preoperative care. The Theory will attempt to explain why factors such as perception, action, and reaction can influence outcomes in preoperative care for emergency caesarean section. The theory could be used to motivate midwives to give quality preoperative care to help prevent postoperative complications in emergency caesarean section.

The major concepts used in this theory are Perception, Action, and Reaction.

Perception

King defined perception as reality as seen by each individual. The elements of perception are the importing of energy from the environment and organizing it by information, transforming energy, processing information, storing information and exporting information in the form of observable behaviors (George, 2010, p. 240).

Action

This was defined by King as a sequence of behaviours of interacting persons, which includes (1) recognition of presenting conditions; (2) operatives or activities related to the condition or situation; and (3) motivation to exert some control over the events to achieve the goals. The nurse and the client take some mental action (Fawcett, 2005 p.100). Action is the same as transaction and is described by King as a series of exchanges between human beings and their environment that includes observable behaviours that seek to reach goals of worth to the participants. Transactions represent the aspect of human interactions in which values are apparent and involve compromising, conferring, and social exchange. When transactions occur between nurses and clients, goals are attained. (George, 2010)

Reaction

King defined reaction as a phase where the nurse and the client react mentally to each one's perceptions of the other.

The concepts of the theory utilized in this study are Midwives perception, Midwives action, Midwives reaction, client perception and client reaction (Fawcett, 2005, p100).

Midwives perception

The midwives perception refers to what specialized knowledge and skills the midwife is bringing to the midwife-client interaction which is helpful in setting goals for preoperative care prior to emergency caesarean section. Midwives had learnt, either from training college, on the job, and from other sources, about basic components of preoperative care before emergency caesarean section, and are able to recall and verbalize what these basic components are. Therefore the midwives were asked to recall what they considered to be the basic components of preoperative care for emergency caesarean section.

Midwives Action

In this study midwives action refers to the application of the components of pre operative care for emergency caesarian section. It refers to what the midwife was able to put into practice during the preoperative care of the client making sure that she had carried out each of the components of the preoperative care on the client and it also includes documentation of each of the components of the care given by the midwife in the clients' chart. Hence the clients' charts were reviewed to check which of the components of preoperative care for emergency caesarean section had been documented.

Client perception

The client perception refers to information that the clients had received from the midwife in terms of pre operative teaching. It refers to what the client was able to recall from the preoperative teaching given by the midwife before the client went for emergency

caesarean section. Hence the clients were asked to recall what type of preoperative teaching they got from the midwife before emergency caesarean section.

Client Reaction

Client reaction in this study refers to how the clients felt about the pre operative care that was rendered to them. Therefore the clients were asked to state how they felt about the care rendered to them by the midwife and the likelihood of them coming back to deliver at Bwaila during the next pregnancy. In addition it refers to the postoperative complications that the client may have developed following the emergency caesarean section. Therefore the clients were asked what complications they had following the emergency caesarean section and the client' charts were also reviewed for the documented complications. Kings Model is illustrated in figure 1

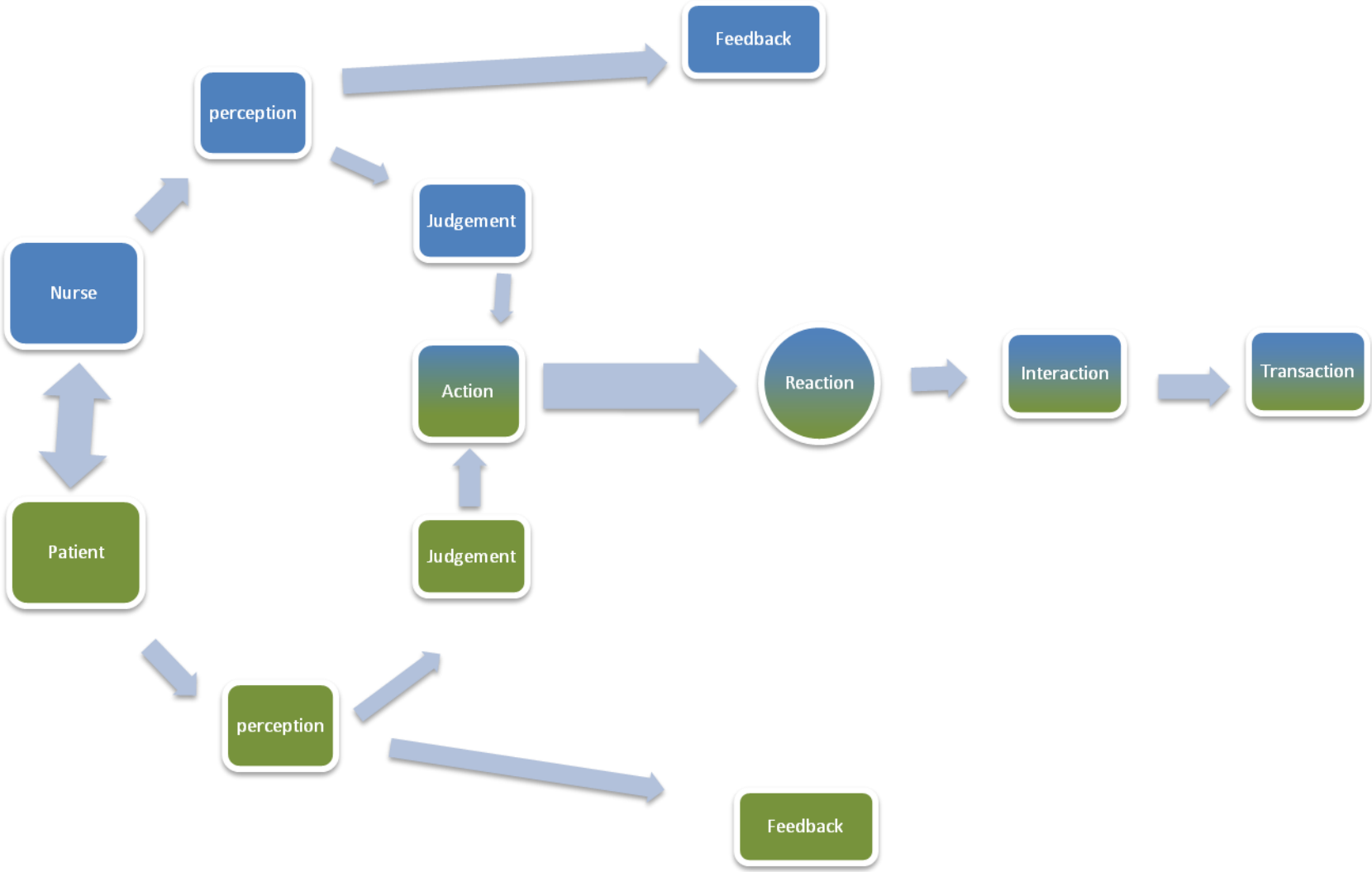

Figure 1. Kings model of the nursing process (Fawcett, 2005 p 102)

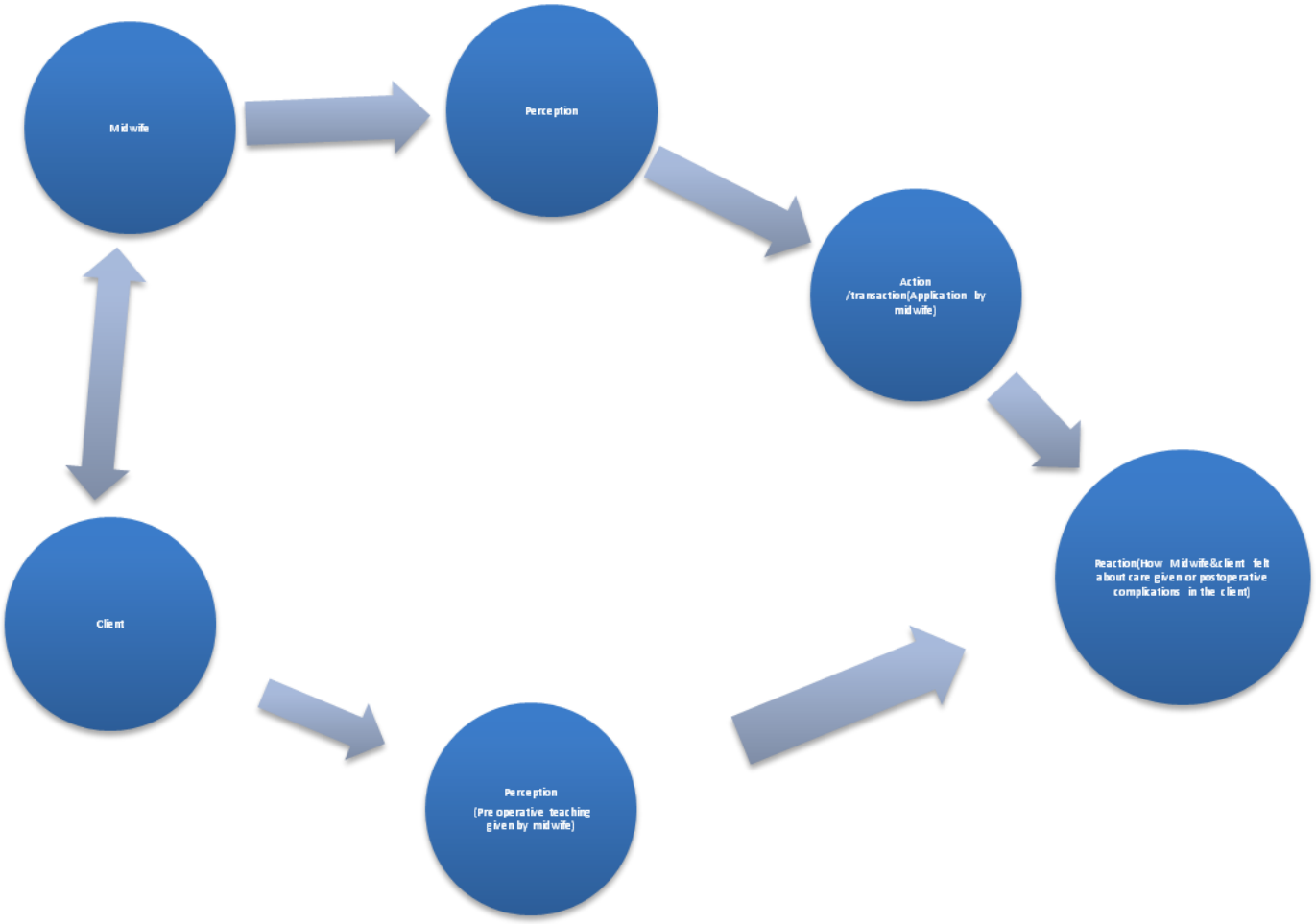

Figure 2; Modified Kings model of the Nursing process; Adopted from Kings Model of the Nursing Process (Modified from Fawcett 2005, p.102.

Objectives of the study

Aim of the study

To determine midwives' and clients' experiences of preoperative care before emergency caesarian section at Bwaila maternity wing.

Specific Objectives

The following are the specific objectives of the study and are consistent with the theoretical framework of the study:

1) To establish midwives' perception of the components of standard preoperative care of clients undergoing emergency caesarian section.

2) To assess midwives' actions on components of standard preoperative care for emergency caesarian section

3) To determine clients' perception of the preoperative teaching rendered to them prior to undergoing emergency caesarian section.

4) To determine clients' reaction to preoperative care they received prior to undergoing emergency caesarian section.

5) To determine if there was an association between preoperative emergency care rendered and the incidence of postoperative complications.

Operational definitions

Caesarean section

Caesarean section refers to a surgical procedure performed after 28 weeks gestation in which an incision is made on the uterus through the woman's abdomen to deliver the baby.

Elective caesarean section

A term which refers to a planned caesarean section that is performed on a pregnant woman on the basis of an obstetrical or medical indication, or at the request of the pregnant woman before labour starts.

Emergency caesarean section

Emergency caesarian refers to an unplanned caesarean section which is carried out when adverse conditions develop during pregnancy or labor (Fraser et al, 2006).

Preoperative care

Refers to all nursing and midwifery management rendered to a client from the time a decision to perform an operation is made to the time the patient is transferred to the operating theater.

Perioperative

This term refers to three phases of surgical experience, namely, preoperative, intraoperative, and postoperative. (Smeltzer et al, 2008).

Preoperative teaching or education

Refers to the imparting of knowledge or information to a client who is about to undergo surgery with the aim of alleviating their fears and anxieties, helping them understand the procedure to be done on them, making them aware of what to expect to hear or feel in

theater and after surgery, and imparting them with specific skills on how they can participate in their own care postoperatively.

Client

In this study client refers to a woman who has undergone an emergency cesarean section.

Enrolled Midwife/Midwifery Technician

Is a person who, having regularly been admitted to a midwifery technician or enrolled educational programme 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 enrolled and or legally licensed to practice midwifery by the Nurses and Midwives Council of Malawi. He/ She must be able to give the necessary supervision, care and advice to women during pregnancy, labor and the postpartum period, to conduct low risk deliveries on his/her own responsibility. He/she is also responsible for the care of the newborn and the infant (Nurses and Midwives Council of Malawi, 2008).

Registered Professional Midwife

Is a person who has undergone undergraduate or graduate studies in midwifery at a tertiary educational institution duly recognized in the country in which it is located, has successfully completed the prescribed course of studies in advanced midwifery for a period of 2 years and has acquired requisite qualifications to be registered and licensed to practice by the Nurses and midwives Council of Malawi. He/she assumes his/her extended and expanded roles while utilizing critical cognitive skills and evidence based knowledge to plan, implement and evaluate maternal and new born care. She plays a significant role in devising projects and programs for enhancing midwifery care for childbearing families. He/She takes advantage of the prevailing political and socioeconomic environment to lobby and advocate for quality maternal health services at institutional and community levels (Nurses and Midwives Council of Malawi, 2008).

Primipara

A woman who has had one pregnancy that resulted in one or more viable young.

Multipara

A woman who has had two or more pregnancies resulting in viable fetuses regardless of whether the offspring were alive at time of birth or not.

Grandmultipara

A woman who has had six or more pregnancies resulting in viable fetuses regardless of whether the offspring were alive at time of birth or not.

CHAPTER 2

Literature Review

Introduction

This chapter will discuss the literature reviewed according to the studies that have been done in relation to emergency caesarean section preoperative care. The purpose of the literature review was to address the research objectives which were in line with the conceptual framework.

Caesarean deliveries account for 5-21.8 % of all births in Sub-Saharan Africa. In Africa cesarean deliveries account for about 8.8% of all births and are associated with maternal mortality ratios of 305 per 100,000 live births and still birth ratios of 36.6 per 1000 live births (Shah et al, 2009). In Malawi caesarean section rates account for 3.7% of all institutional deliveries (MoH, 2010). From the literature reviewed, specific rates of emergency caesarean section are unknown but the most common indications for performing emergency caesarean sections include cephalopelvic disproportion, dystocia or failure to progress, fetal distress, cord prolapse, and malpresentation (Ghaem & Maghami, 2001).

Prior to performing an emergency cesarean section various interventions are carried out that have proved to be beneficial to the client in preventing postoperative complications. These interventions are collectively known as preoperative care and various authors agree that they constitute the following aspects of care: Obtaining of informed consent and signing of the actual consent form; administration of intravenous fluids; collection of blood specimens for hemoglobin, grouping and cross matching; checking of vital signs; bladder catheterization; and administration of preoperative antibiotics.

In addition there are other aspects of care which include psychological care teaching or educating the client on deep breathing and coughing exercises, turning exercises, leg exercises, and early ambulation (American College of Obstetrics and Gynecologists, 2007; Edwards & McColgan, 2011; Berghella, 2012).

In Malawi, the guidelines that exist on what constitutes preoperative care for emergency caesarean section are in reference to obstructed labour, which is one of the indications for emergency caesarean section (National Reproductive Health Standards, 2008). These guidelines stipulate rehydration of the patient to maintain normal plasma volume and prevention or treatment of dehydration; checking of vital signs; administration of broad spectrum antibiotics to prevent puerperal sepsis; taking blood for hemoglobin grouping and cross-matching; and performance of bladder catheterization. However they do not address all aspects of preoperative care necessary for emergency caesarean section. For instance the guidelines do not stipulate obtaining of informed consent, preoperative education and psychological care.

Informed consent in emergency caesarean section

A consent form is a legal document that signifies that the client has been told in full about, and understands all aspects of a specific invasive procedure (Simm & Darly, 2008). It guards the client against unwanted invasive procedures and also protects the health care facility and the health care professionals when the client denies understanding the procedure that was or is planned to be performed (Smeltzer, et al, 2008). Informed consent is an important aspect of preoperative care which ensures that the client understands all aspects of the specific invasive procedure.

For consent to be valid there must first be voluntary consent which is freely given without coercion. Secondly, the individual must be autonomous and if this is not the case consent must have legal defense, for example, in patients who are cognitively impaired, mentally ill, or neurologically incapacitated. Thirdly, the informed subject must have a written consent explaining the procedure and risks, description of benefits and alternatives, an offer to answer questions about the procedure, instructions that the patient may withdraw consent, a statement informing the patient if the protocol differs from the

customary procedure. Lastly, the patient must be able to comprehend, that is, the consent must be written and delivered in language that is understood by the patient and questions must be answered to facilitate comprehension if the material is confusing (Aiken, 2004).

The midwives' responsibility is to ensure that the client or surrogate readily understands and receives an honest, accurate, and fair statement of what is expected during and after surgery and that the client understands it before informed consent is given. However, there is limited information given to women on psychological implications associated with an operative delivery before the consent form is signed (McFarlin, 2004).

Psychological care before emergency caesarean birth

Emergency caesarean section is associated with high levels of post-traumatic stress syndrome and post traumatic stress disorder than other modes of delivery. The importance of providing psychological care to women before caesarean section has been well documented in the literature.

There is evidence from literature that many women have tokophobia (anxiety regarding labor and child birth), and that more women undergoing emergency caesarean section express negative feelings towards their delivery as compared to those undergoing elective caesarean section (Graham et al, 2005). When this anxiety is manifested in patients undergoing emergency caesarean section it can increase their risks and present added potential for complications both psychological and physiological (Pritchard, 2009).

Anxiety can cause quite a wide range of physiological responses such as tachycardia, hypertension, increased temperature, sweating, nausea and increased sensory perception such as touch, smell and hearing (Pritchard, 2009). It has also been shown that there is a correlation between anxiety levels and perception of pain which may require increased doses of analgesics and alternatives leading to increased risk of client and unborn baby experiencing side effects (Hong & Koong, 2003). Furthermore, pain, depression, fatigue and discomfort are all negatively influenced by anxiety amongst patients undergoing emergency caesarean section (Montgomery & Bovbjerg, 2004; Carr, Thomas, & Wilson-Barnet, 2005). Despite all this evidence it has been shown that health care professionals have little time to talk to patients to ascertain their level of anxiety or to establish whether they require any additional information (Pritchard, 2009).

Checking of vital signs before emergency caesarean section

Checking of vital signs before emergency surgery allows baseline assessment to be done. For example, checking the respiratory rates allows baseline assessment of ventilatory function to be made and can give early indications of respiratory deterioration. Literature shows that there are gaps in recording of the respiratory rates amongst nurses in emergency departments (Hogan, 2006).

Blood tests before caesarean section

Blood tests help to identify anemia or blood clotting abnormalities. They also are important for cross matching in case of a likely transfusion (Leifer, 2007).

Intravenous fluid administration before caesarean section

These are given to reduce gastric acidity and speed stomach emptying before surgery. Ante partum administration of a balanced electrolyte solution without excess glucose infusion can ensure homeostasis but at the same time minimize the incidence of fetal hyperglycemia and hyponatremia (Grylack & Scanlon, 1984; Blackburn, 2007)

Administration of preoperative antibiotics prior to caesarean section

Studies done on administration of preoperative antibiotics have shown that preoperative antibiotic administration in cesarean section significantly decreases the incidence of postpartum endometritis by 53% and total infectious morbidities by 50% (Constantine, Rahman, Ghulmiya, et al, 2008)

Urinary bladder catheterization prior to caesarean section

The major rationale for urinary bladder catheterization before caesarean section is to prevent uterine atony and postoperative urinary retention. However, studies have revealed that not placing a urinary catheter before caesarean section has been associated with lower incidence of UTI's and relative risk was 0.08 in RCT and 0.10 in NRCT, women in this group have also demonstrated a lower rate of

discomfort at first void and shorter time before ambulation. This resulted in shorter length of hospital stay and lower health costs (Li, Wen, Wang, Li & Li, 2010; Yong, 2011).

Preoperative teaching prior to caesarean section

Preoperative teaching refers to all the instruction that is given to the client before surgery so that the client fully understands what is happening and knows what to expect after surgery (Black, Hawks, & Keene (2001). Knowing what to expect helps the client to anticipate these reactions and thus attain a higher degree of relaxation (Leifer, 2007). The components of preoperative teaching include deep breathing and coughing exercises, turning exercises, leg exercises, and ambulation

Emergency caesarean section is associated with many complications such as pneumonia, paralytic illeus, and deep venous thrombosis, among others. However postoperative ambulation has been shown to decrease or prevent all these complications (Smeltzer et al, 2008). Postoperative ambulation after caesarean section has been shown to aid in drainage of lochia to prevent stasis of lochia which can cause infection, and also assisting in uterine contraction which aids in uterine involution. In addition early ambulation increases heart rate and cardiac output and stimulates circulation to all body systems (Black et al, 2001). The increase in circulation helps to get rid of body effects of anesthesia. Ambulation also increases respiratory rates and minute ventilation and helps to mobilize respiratory secretions. The increased circulation to the intestinal tract helps to stimulate peristalsis and increased blood flow to the kidneys stimulates urine production. Blood flow to the skin and muscle brings nutrients needed for wound healing. Ambulation also stimulates calf muscles and promotes venous return. By incorporating enhanced preoperative patient instruction with return demonstrations perioperative nurses can improve patient postoperative complications (Smeltzer et al, 2008).

Similarly the risk of deep venous thrombosis is 3-5 times higher in patients undergoing caesarean section therefore; leg exercises are beneficial to prevent circulatory problems by facilitating venous return to the heart.. The effect of preoperative teaching has proved that patients who received the efficacy –enhancing teaching ambulate significantly longer than those in the usual care group (Oetker-Black, Jones, & Estok, 2003).

Deep breathing exercises are taught to the client as an intervention to decrease the risk of postoperative pulmonary complications and hypoxemia atelectasis and pneumonia. Deep breathing slows the respiratory rate and produces a sustained maximal inspiration. It increases lung volume and increases tidal volume and minute ventilation. It also generates increased flow rates and stimulates surfactant to help keep the alveoli open (Black et al, 2001). Deep breathing has also been used as a technique for pain reduction in the postoperative period. Encouraging the patient to take deep breaths while moving or changing position may help to prevent tensing the muscles; this often tends to worsen post operative pain. Deep breathing also helps to expand the collapsed alveoli in the lungs and prevents postoperative pneumonia and atelectasis. Coughing exercises remove retained secretions from the bronchi and larger airways. The client can be taught how to splint the surgical incision to minimize pressure and control pain during coughing Turning exercises prevents stasis thrombophlebitis, pressure ulcer formation and respiratory complications. (Black et al, 2001).

In conclusion, most authors agree that the components of preoperative care for clients undergoing caesarean section include obtaining of informed consent; administration of preoperative antibiotics; administration of intravenous fluids; bladder catheterization; and collection of blood specimens for hemoglobin, grouping and cross matching; and checking of vital signs. In addition they also agree that the care also includes psychological care; teaching or educating the client on deep breathing and coughing exercises, turning exercises, leg exercises, and early ambulation.

Literature has also revealed that the RH guidelines that are currently being used in the maternity units in Malawi stipulate these components of preoperative care specifically in relation to obstructed labour but do not include some elements such as obtaining of informed consent; psychological care of the client such as allowing the client to ask questions, and answering the questions from the client; and preoperative education of the client.

The available literature is mainly about caesarean section in general, but there is very limited literature on emergency caesarean section and experiences of clients and midwives in the preoperative period on the same hence necessitating the study.

CHAPTER 3

Methodology

Introduction

This chapter describes the study design, setting, population, sample and sampling method, instruments, data collection methods, data analysis, ethical considerations and study limitation.

Research design

The study was a descriptive, retrospective and prospective quantitative design. The main purpose of descriptive quantitative methodology is to observe, describe, and document aspects of a situation (Polit & Beck, 2008, p 189). A retrospective design is used to examine changes overtime in which both the proposed cause and proposed effect have already occurred. In prospective studies the cause may have occurred but the effect has not (Burns, 2009, p 240). The quantitative study was used because it was expected to provide detailed information about the variables, namely the midwives and clients experiences whilst providing and receiving preoperative care for emergency caesarian section.

Setting

The study took place at Bwaila Maternity Unit in Lilongwe District. Bwaila Maternity Unit is located in the district of Lilongwe in the Central Region of Malawi. It is the district referral Maternity unit which serves a population of 2,203,911. Out of this population 506, 900 are women of child bearing age. The number of expected pregnancies is estimated at 110,196 (Lilongwe District Health Office). The hospital had 13, 617 admissions in the year 2008 and out of these 2,621 were referrals from surrounding health centers and other surrounding districts. A total of 12,000 deliveries were conducted out of which 1,524 were caesarian sections. The hospital averages 170 emergency caesarian sections per month. The hospital was chosen because it is the main referral unit for the district of Lilongwe and there are more women with complications from labour who are referred here for emergency caesarian section.

The hospital has a total of 28 midwives who are allocated in the two departments that are responsible for providing preoperative emergency c/s care. The nurses are positioned in the labour ward (19) and the Antenatal Ward (9).

Sampling method

Sample Size of women who experience emergency caesarian section

Records at Bwaila showed that there were 1524 caesarian sections conducted at Bwaila in 2008 and out of these 94% were emergency caesarian sections, therefore to come up with the sample the following formula was used:-

$$n = \frac{Z^2 p (1-p)}{e^2}$$

Where n = sample size

Z = the value associated with levels of confidence. For 95% confidence, Z = 1.96

p= the women undergoing emergency caesarian section at Bwaila Maternity Unit.

Therefore; $\frac{1433}{1524} \times 100 = 94\ \% (0.94)$

e = margin of error and is equal to 5% (0.05).

Therefore $n = \frac{1.96^2 \times (0.94)(1-0.94)}{0.05^2}$

$$= \frac{3.8416 \times (0.94)(0.06)}{0.0025}$$

$$= \frac{0.2167}{0.0025}$$

$$= 86.68$$

The sample size was therefore 87.

Purposive sampling was used to come up with the desired sample size. Purposive sampling is a non-probability sampling method where the researcher identifies the participants based on personal judgment about who will be most informative (Polit & Beck, 2010, p 565). The sample size adequacy was verified by a statistician.

Eligibility and exclusion criteria

Inclusion criteria

The study included all women regardless of parity, who had undergone emergency caesarean section at Bwaila Maternity Unit during the period of data collection, and had received preoperative care from a midwife at Bwaila. Only those women who were willing to participate in the study; were fluent in Chichewa and English; had delivered a live infant; and were in their second postoperative day were included in the study.

The study also included midwives working at Bwaila regardless of cadre who rendered preoperative care to clients undergoing emergency caesarean section during the period of data collection.

Exclusion criteria

The study excluded all women who did not receive preoperative care for emergency caesarean section from a midwife at Bwaila and were not able to communicate in English and Chichewa. The study also excluded those women who were less than forty eight hours post emergency caesarean section; those that had passed the second day post emergency caesarean section; those who did not deliver a live infant; and those who were sicker, critically ill or mentally unstable.

The study also excluded those midwives working at Bwaila in wards other than Antenatal, Labour and delivery who were not directly involved in preoperative care of women undergoing emergency caesarean section.

Study population

The study targeted all women who underwent emergency caesarian section at Bwaila Maternity Unit and all midwives who rendered preoperative care to women undergoing emergency caesarian section.

Study Period

The study period was between the months of January 2011 to December 2011. The activities during this time included topic search, literature review and proposal development, submission of the proposal to supervisor then to COMREC. After COMREC approval the study tools were piloted at QECH then after amendments data collection was conducted at Bwaila Maternity Unit , followed by data analysis and finally report writing and submission of the thesis.

Data Collection

Data collection took place at Bwaila maternity Unit in the postnatal ward for all the clients who had undergone emergency caesarian section. Data for the Midwives was collected from the labour ward and Antenatal ward. Data from the clients' chart review was automatically collected from the charts of all the clients who had been interviewed according to the inclusion criteria in the postnatal ward. All clients were interviewed on day two postoperative because at this time recall of preoperative care would be possible and recovery from surgery would have begun.

Data was collected with the assistance of one trained data collector, from September 2011 to October 2011. The research assistant was a trained and mature midwife with more than fifteen years of midwifery experience and also had previous knowledge in research methods. She was given orientation to the research tools for two days before the actual data collection. At the end of the orientation interview rehearsals were conducted with her including role plays until it was proved that she had mastered the interviewing techniques and was familiar with the obstetrical language in the research tool in both English and Chichewa.

Data Collection Instruments

This study utilized a methodological triangulation of three data collection instruments which included a client structured questionnaire, a midwife structured questionnaire and a checklist for client chart review. Methodological triangulation involves using more than one method to gather data, such as interviews, observation, questionnaires and documents (Burns & Grove, 2009; Polit & Beck, 2008). The purpose of using triangulation is to minimize the limitations that stem from using a single method (Ziyani, King, & Etilers, 2004).

Instrument One- Midwives Questionnaire

Data collection from the midwives was done through the use of a structured questionnaire (Appendix I). Data was collected from registered midwives, enrolled nurse midwives, and nurse midwife technicians who met the inclusion criteria. All the interviews were conducted by the research assistant (trained midwife), who was unknown to the midwives to ensure anonymity. The midwives' interviews were in English as all training for nurses and midwives is conducted in English in Malawi.

The instruments were developed based on the study objectives and the conceptual frame work of the study. The instrument consisted of three sections, Section A, B, and C. Section A consisted of demographic data of midwives which included gender, age, cadre, highest educational level, highest professional qualification, year of qualification as a midwife, years of practice as a midwife, and length of stay in the current ward or department.

Section B contained the perception questions on components of preoperative care for emergency caesarean section. Midwives were asked to recall the components of routine preoperative care for emergency caesarean section and they were further asked to recall the preoperative education or teaching rendered to the client before emergency caesarean section. The missing components on obtaining of informed consent, psychological care and client education were added. The questionnaire also contained questions on midwives' source of knowledge for the preoperative care they rendered; attendance of any in-service training in perioperative care; and whether guidelines for preoperative care for EmC/s were available on their wards or departments. The interviews took approximately 30 to 45 minutes to administer.

Data for the midwives' action on components of preoperative care was obtained from review of 87 clients' charts using a checklist. The checklist was developed by the researcher based on the components of preoperative care stipulated in the National Reproductive health standards. The missing components from the guidelines which were obtained from literature were added to the checklist. The review of the checklist took place immediately after the interview of the client and took approximately twenty minutes. The midwives were also asked on their source of knowledge for the preoperative care they gave; whether they had had any training in perioperative care; and whether guidelines of preoperative care for emergency caesarean section were available on their wards or departments.

The midwives were also asked on their source of knowledge for the preoperative care they gave; whether they had had any training in perioperative care; and whether guidelines of preoperative care for emergency caesarean section were available on their wards or departments.

Instrument Two-Client's questionnaire

Data was collected from the clients who had undergone emergency caesarian section on the second day after operation (48hrs post op) using a structured interview guide (Appendix II). All interviews were conducted in the Postnatal High Risk Ward. The structured questionnaire was used because it provides an opportunity for the interviewer to clarify questions hence there is less likelihood of misinterpretation of questions by the respondents (Polit & Beck, 2006, p 296). Furthermore the interviewer also establishes rapport with respondents and this increases cooperation (Leedy & Ormrod, 2010, p188).This can lead to a higher response rate and better quality of data.

The client's questionnaire consisted of four sections, A, B, C, and D. Section A mainly contained the clients' demographic data which included the clients' age, highest educational level, how many pregnancies client had had, how many children client had had, previous caesarean sections and type.

Section B contained questions on clients' reaction to preoperative care rendered by the midwife prior to EmC/s and included questions on whether the client had been given any information on the reason or indication for the emergency caesarean section; if they had had any specific worries or concerns; and whether these were adequately addressed by the midwife. The section also contained specific questions on the preoperative teaching that the client had received prior to undergoing emergency caesarean section.

Section C questions specifically addressed the clients' reaction to the preoperative care they had received prior to EmC/s.

Section D was specifically addressing the postoperative complications that the client had experienced after EmC/s.

The client interview took approximately thirty to forty five minutes.

Validity and Reliability of Instruments One and Two

To ensure validity for both instruments, the questions were formulated consistent with the objectives and the conceptual framework.

Validity of both questionnaires was achieved through consultation with experts in midwifery and information was obtained from the National Reproductive Health Standards and literature. . Both questionnaires were pre-tested on three midwives and three clients from the maternity ward at Queen Elizabeth Central Hospital and adjustments were made accordingly to ensure clarity of the questions.

Instrument Three- Checklist

Data collection from the clients' records (Appendix III) was done through a checklist to identify documented components of preoperative care that the clients received from the midwives, and the post operative complications that were documented in the clients' charts. A checklist is a list of behaviors, characteristics, or other entities that a researcher is investigating. Depending on the study the researcher simply checks whether each item on the list is observed, present, or absent (Leedy & Ormrod, 2010).

The checklist contained two sections, Section A mainly consisted of the general preoperative care including the preoperative teaching documented in the clients chart. Section B contained the postoperative complications documented in the clients' chart. The presence of a documented component of preoperative care given was ticked 'yes' while the absence was ticked 'no'. The chart review took approximately fifteen to twenty minutes to complete.

Validity and Reliability of the Checklist

The content for the checklist was adopted from the already existing RH Standards. However, since the content in the RH standards was considered to be incomplete, midwifery experts were contacted to verify the additional information of the basic components of preoperative care for emergency caesarean section that were obtained from literature. These components included obtaining of an informed consent, psychological reassurance, and preoperative teaching components which were missing in the RH standards. . A pretest of the instrument was conducted by two individuals who independently reviewed client records and compared results for consistency to check for reliability.

Data Collection Process

Data collection process for Client questionnaire (Instrument II)

On the first day of data collection the Matron's office was informed that data collection was beginning. The ward Sister in-Charge for High risk Postnatal Ward was also informed and the ward register was checked to identify clients who had undergone emergency caesarian section and were in their second postoperative day.

Each client was approached individually and the purpose of the study was explained in detail. The consent information sheet was read to the client explaining the risks and benefits of the research. The client was allowed to ask questions and clarification was provided. Once the client had given a verbal consent written consent was also obtained and an agreed upon time was set to conduct the interview process. The questionnaire was administered at the agreed upon day and time. The respondents were thanked at the end of each interview.

Checklist (Instrument III)

Soon after the interview each client's chart was checked to identify the midwife involved in preoperative care of the client. A list was compiled of all midwives who were identified as having provided preoperative care to the study participants. The chart was also reviewed using the checklist for documented elements of preoperative care and the postoperative complications.

Data collection process for Midwife questionnaire (Instrument I)

Midwives that had been documented during chart review as providers of preoperative EmC/S care were approached individually, depending on their availability, to ask them about their willingness to participate in the study. The

purpose of study was explained and informed consent was obtained. A time was then set for the interview which was conducted in privacy. The interview took approximately 30-45 minutes.

Data Management and Analysis

At the end of each data collection period all the structured interview guides, and the checklists were reviewed for completeness and accuracy so that any missing information could be verified with the research assistant as well as the clients. This was important to ensure quality of data to be analyzed. Completed questionnaires were put in sealed envelopes at the end of the interview and kept in a locked cupboard at the end of the day.

At the end of the data collection period the data was first cleaned and entered into the Statistical Package for Social Science Version 16.0. The data obtained was analyzed using the statistical package for social science (SPSS Version 16.0). Frequencies were used to summarize the data. The association between preoperative care rendered and incidence of preoperative complications were determined by use of cross tabulations followed by the Chi-Square test to determine the significant statistical association between the variables. An independent–samples t-test was used to examine statistically significant differences between the complications expressed by the clients and those documented in the clients' charts.

Presentation of Results

Data has been summarized and presented using tables and bar graphs.

Ethical Considerations

The essential purpose of research ethics is to protect the welfare of research participants (Blanche, Durrheim & Painter, 2006 p. 61). Ethical consideration was observed in all the areas of Research. As follows:-

The research proposal was sent for review at the college of medicine ethics Committee through Kamuzu College of Nursing and approval was granted (Appendix section). Consent was obtained from the District Health officer for Lilongwe to conduct research at the facility of Bwaila maternity unit (Appendix section). Permission to review the records was sought from the District Health Officer and the matron of Bwaila Hospital. No names of clients were used on the checklists to protect clients' confidentiality and also to protect the midwives who cared for them.

Since the principal investigator was the Chief Nursing Officer at Bwaila maternity unit before proceeding for her studies at KCN, she did not participate in interviewing the midwives in order to protect anonymity of the midwives as the midwives would most likely answer questions to please her, leading to biased results. A data collector was hired to interview all the midwife participants of the study. Throughout the entire period of data collection, the researcher and assistant were always in plain clothes to avoid bias when interviewing the clients.

The ethical principles of autonomy, which give research subjects the right to agree to choose to participate in the research or not, and Justice, which guarantees a right to fair treatment (Johnston, 2009), anonymity and confidentiality were honored. Thus participants were approached individually in private and full explanation was given to them about the purpose of the study to give their verbal consent before signing the written consent form. The informed consent process assured that participants were fully informed about the risks and benefits of the research before giving consent (Appendix IV, V (a), V (b)).

Additionally participants were given the liberty to refuse to answer questions and to withdraw from the study at any time that they so wished and assurance was given to them that there would be no penalties inflicted on them because of refusal to participate in the study.

The structured interview guides and the checklists did not contain client names, only numbers were used and all the questionnaires were kept separate from the consent forms to ensure anonymity. Data was stored in sealed envelopes at the end of each interview then in a locked drawer.

Since the respondents had undergone surgery some of them were found to be in pain, therefore they were reported to the midwife for administration of pain killers and the interview was rescheduled for a later time when the pain had subsided.

Dissemination of Results

The results of the study will be disseminated to the following institutions:-

The Ministry of Health Headquarters (Reproductive Health Unit); the District Health Office Lilongwe; Bwaila maternity unit; Kamuzu College of Nursing Library; and COMREC Secretariat. The findings will also be disseminated at Reproductive Health Conferences locally; International Confederation of Midwives Conferences; International Council of Nurses (ICN); and East Central and Southern African college of Nursing (ECSACON) conferences. Part of the research findings have already been presented at Sigma Theta Tau Conference held in Blantyre on 5th June 2012. The researcher has already submitted part of the findings for publication in the International Journal of Childbirth, awaiting review and feedback.

Study Limitations

This study was conducted at Bwaila maternity wing which is a district referral unit in the central region of Malawi; therefore it would be difficult to generalize the results to other districts of the country given the differences in stability of the hospitals. There is a possibility of selection bias as all clients who were on their second day post op were automatically considered. Follow up of clients for postoperative complications were not addressed due to time limitations. Standardization of diagnosis was limited; analysis of postoperative complications was focused on few known common complications of emergency caesarean section

CHAPTER FOUR

Results

Introduction

This chapter presents the findings of the study based on the objectives of the study.

Midwives demographic characteristics

The respondents were predominantly female (92.9%, n=26) and only 7.1%, n=2 were male. The ages ranged from 21 to over 50 years, but the majority of them (39.3%) were less than 30 years of age. Malawi School Leaving Certificate of Education (MSCE) was predominantly the highest level of education attained by the respondents (89.3%, n=25). The cadre of the midwives is shown in Figure 1. A larger share of midwifery care was being provided by Nurse Midwife Technicians (39.3%, n=11) and Enrolled Nurse Midwives (35.7%, n=10). The registered nurse midwives and registered midwives were few (Figure 3).

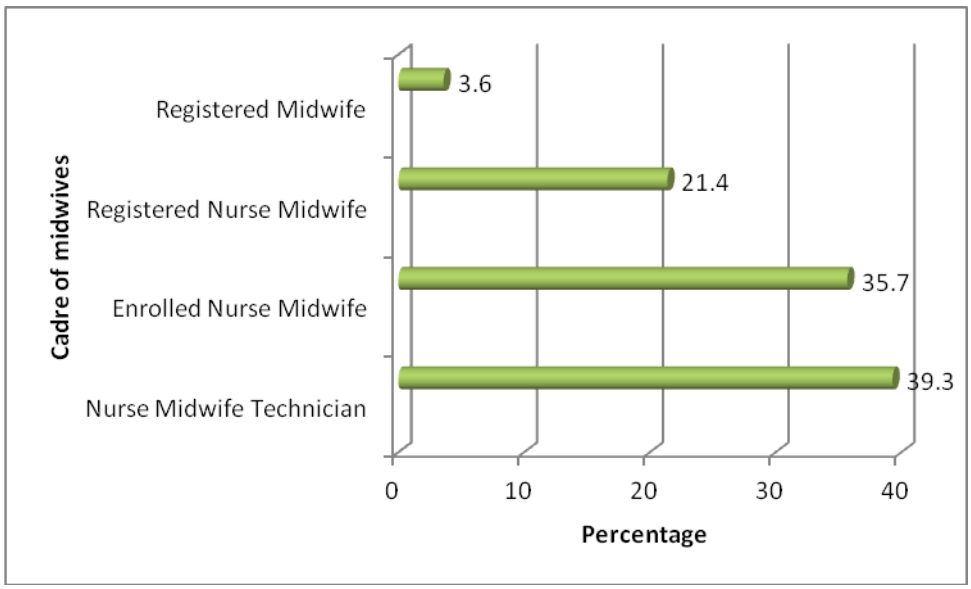

Figure 3. Percentage of midwives by cadre providing preoperative midwifery care for emergency caesarean section in Antenatal and labour ward at Bwaila Maternity Unit.

A higher percentage of midwives providing care at Bwaila held Certificate in Nursing and Midwifery (39.3%, n=11) followed by a few (25%, n=7) that held college Diplomas. The least were those with upgrading Diploma (10.7%, n=3) and those with a Bachelors degree from KCN comprised (17.9 %, n=5) (Figure 4).

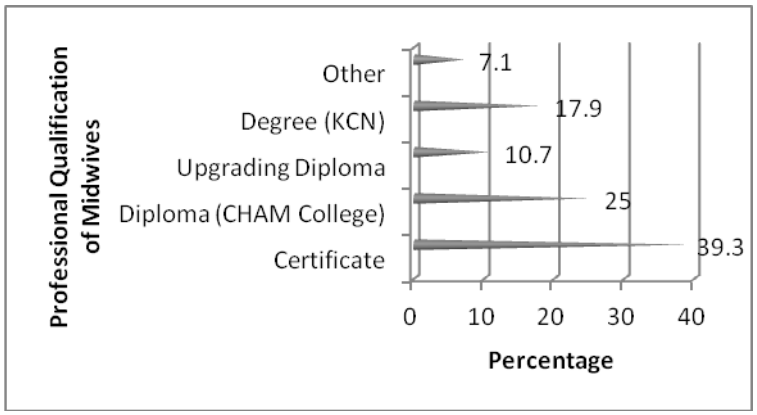

Figure 4: Professional qualification of midwives rendering preoperative care at Bwaila maternity Unit.

The respondents' years of qualification, years of practice as a midwife, and length of stay in the present ward or department are shown in Figure 3. Most of the respondents (53.6%, n=15) had graduated from college less than five years ago; 7.1%, n=2 had graduated 5-10 years ago; 10.7%, n=3, graduated 10-15 years ago, 14.3%, n=4 graduated 15-20 years ago; and a further 14.3%, n=4 had graduated more than 20 years ago (Figure 5).

The number of years in practice as midwives was less than five for 64.3%, n=18 of the respondents; 5-10 for 7.1%, n=2 of the respondents; 10-15 for another 7.1%, n=2 of the respondents; 15-20 for 10.7%, n=3 of the respondents; and more than 20 for another 10.7%, n=3 of the respondents respectively. The majority (92.9%, n=26) had only been practicing in their present department or ward for less than five years; 3.6%, n=1 had been practicing for 5-10 years; and another 3.6%, n=1 had been practicing for 15- 20 years (Figure 5).

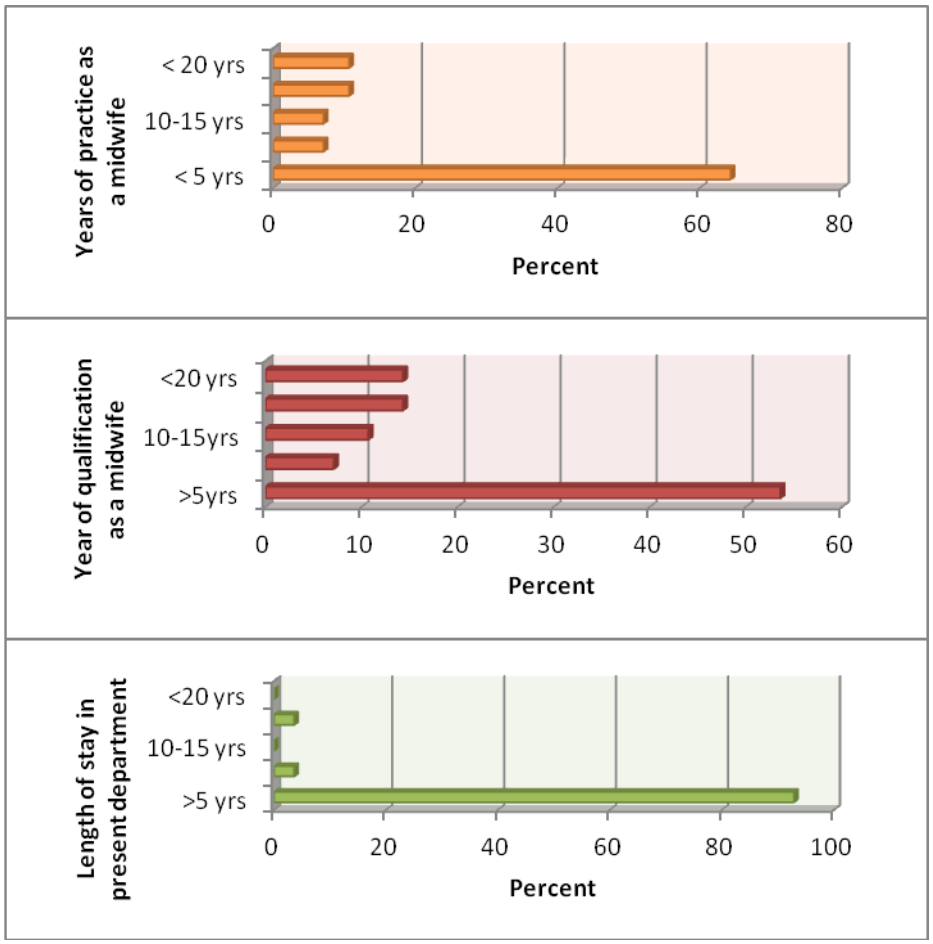

Figure 5. Midwives' years of qualification as a nurse/midwife, years of practice as a midwife and length of stay in the present department.

Midwives perception of the components of standard preoperative care for clients undergoing emergency caesarian section

All the respondents (100%) were aware of the need to perform bladder catheterization before emergency caesarean section. A large proportion (96.4%, n=27) were aware of the need for administration of intravenous fluids, and obtaining informed consent from the client (92.9%, n=26). Respondents were also aware of administration of preoperative antibiotics (82.1%, n=23); collection of blood specimens for hemoglobin, grouping and cross matching (78.6%, n=22); offering the client psychological support (60.7%, n=17); and offering surgery information to the client (57.1%, n=16).

There was very little awareness however in the areas of checking vital signs (Table 2). Only 28.6%, n=8 of the respondents s mentioned blood pressure check before emergency caesarean section, few (25%, n=7) mentioned the checking of the following; pulse rate, respiration rate, and temperature before emergency caesarean section. Few respondents (28.6%, n=8) mentioned that they allow the client to ask questions; and only 25%, n=7 mentioned that they answer clients' questions before emergency caesarean section.

Table 2. *Midwives perception of the components of standard preoperative care for clients undergoing emergency caesarean section*

Variable	***Yes***		***No***	
	Frequency	*Percent*	*Frequency*	*Percent*
Obtain informed consent	26	92.9	2	7.1
Offer surgery information	16	57.1	12	42.9
Allow client to ask questions	8	28.6	20	71.4
Answer client questions	7	25	21	75
Offer psychological support	17	60.7	11	39.3
Administer IV fluids	27	96.4	1	3.6
Check vital signs	8	28.6	20	71.4
Bp check	8	28.6	20	71.4
Pulse rate check	7	25	21	75
Respirations check	7	25	21	75
Temperature check	7	25	21	75
Administer Preoperative antibiotics	23	82.1	5	17.9
Collect blood specimens	22	78.6	6	21.4
Perform bladder catheterisation	28	100	0	0

Preoperative teaching offered to clients

A larger percentage of respondents (more than 80%) were not able to recall each of the components of preoperative teaching rendered to clients before emergency caesarean section (Table 3). Client teaching on deep breathing and coughing exercises was mentioned by only 11.1% n=4 of the respondents, while 88.9%, n=24 had no knowledge of this component. Teaching on leg exercises was mentioned by only 10.7%, n=3 of the respondents as compared to a high percentage (89.3%, n=25) that did not mention. Similarly only 14.3%, n=4 of the respondents had knowledge regarding frequent turning in bed and early ambulation as compared to the majority (85.7%, n=24) that did not know. Few respondents (19.2%, n=5) mentioned that they instructed clients on when to take food or water following surgery but the majority (80.8%, n=21) did not (Table 3). Amongst the few who were able to recall the components of the preoperative teaching, there was a variation in the actual content that was taught to the client. The content varied from theater expectations to anesthesia.

Table 3: *Midwives perception of preoperative teaching rendered to clients prior to emergency c/section.*

Variable	**Yes**		**No**	
	Frequency	*Percent*	*Frequency*	*Percent*
Deep breathing and coughing exercises	3	11.1	24	88.9
Leg exercises	3	11.1	25	89.3
Frequent turning in bed	4	14.3	24	85.7
Early Ambulation	4	14.3	24	85.7
When to take food or water	5	19.2	21	80.8

Midwives source of knowledge for components of preoperative care for emergency caesarean section

All respondents (100%) mentioned that they had not attended any form of training in perioperative care. The majority of them (89.3%, n=25) mentioned that their source of knowledge for preoperative preparation of clients undergoing emergency caesarean section was from the nursing college where they had been trained as nurse/midwives during pre-service training. A further majority (82.1% n=23) also mentioned that there was a lack of availability of National Reproductive Health Standards for clients undergoing emergency caesarean section. However, only a few (17.9%, n=5) mentioned that the RH guidelines were available in their wards.

Midwives action on the components of standard preoperative care for clients undergoing emergency caesarean section

The respondents' action on the components of standard preoperative care for clients undergoing emergency caesarean section refers to the care that was documented in the clients' charts according to the conceptual framework . Table 4 provides a summary of the documented care in the clients' charts. Consent form was present and signed in 77%, n=67 of the client charts. However there was no documentation on whether the clients had informed consent or not. Furthermore, some of the charts (23%, n=20) did not have consent forms attatched and there was no documentation in the notes to show that the client had signed the form to back up in case the consent form had fallen off. However there was strong evidence to suggest that the consent forms may have fallen off as most of the charts were not properly filed and some papers were loose and almost falling off.

In 51.7%, n=45 of the charts, the administration of intravenous fluids was documented while documentation lacked in 47.1%, n=41 of the cases. There was documented evidence that bladder catheterisation was done in 50.6%, n=44 of the charts while there was no documentation in 49.4%, n=43 of the charts. There was also documented evidence that the respondents had administered preoperative antibiotics in 37.9%, n=33 of the charts while in 62.1%, n=54 of the charts there was none. Further analysis of the data shows that in 14.9%, n=13 of the charts the respondents

documented the indication for the emergency caesarean section while there was no doccumentation in 85.1%, n=74 of the charts (Table 4).

The least documented components of preoperative care were the vital signs, and psychological reassurance of the client. Blood pressure check and pulse rate were documented in only 19.5%, n=17 of the charts whereas in 80.5%, n=70 of the charts there was no documentation. Respiratory rates and temperature were documented in only 4.6%, n=4 of the charts while in 95.4%, n=83 of the charts there was no documentation. Only 3.4%, n=3 of the charts showed documented evidence of the midwife giving psychological reassurance to the client.

Preoperative teaching of the client on deep breathing and coughing exercises was only recorded in 1 chart (1.1%), while there was no documentation in the majority 98.9%, n=86 of the charts. There was no documentation in all charts reviewed on frequent position changes (100%), leg exercises (100%), early ambulation (100%), incision area care (100%), and instruction on when to start eating or drinking (100%).

Table 4: *Midwives action on components of standard preoperative care for clients undergoing emergency caesarean section.*

Variable	*Documented*		*Not Documented*	
	Frequency	Percent	*Frequency*	Percent
Explanation of reason for operation	13	14.9	74	85.1
Psychological reassurance given	3	3.4	84	96.6
Informed consent	67	77	20	23
Blood pressure check	17	19.5	70	80.5
Pulse rate check	17	19.5	70	80.5
Respirations check	4	4.6	83	95.4
Temperature check	4	4.6	83	95.4
Administration of IV fluids	45	51.7	41	47.1
Collection of blood samples	9	10.3	78	89.7
Administration of preoperative antibiotics	33	37.9	54	62.1
Bladder catheterisation	44	50.6	43	49.4
PREOPERATIVE TEACHING				
Deep breathing and coughing exercises	1	1.1	86	98.9
Frequent position changes	0	0	87	100
Leg exercises	0	0	87	100
Early ambulation	0	0	87	100
Incision area care	0	0	87	100
Instruction on when to start eating or drinking	0	0	87	100

Clients' Demographic Characteristics

The majority of the respondents (70.1%, n=61) were aged twenty five years and below. A higher percentage of them had attained secondary school education (63.2%, n=55), but close to half of them had attended college or university (31%, n=27). The respondents were mainly primiparae (49.4%, n=41), those having 2-4 children were 41.4%, n=36, and the grandmultiparae were 9.2%, n=8. There were more respondents

that underwent caesarean section for the first time (67%, n=58) as compared to those having a second to third caesarean section (32%, n=28). Most of the respondents had undergone an emergency caesarean section before (58%, n=50). 62%, of the respondents (n=54) were referred from other health facilities to Bwaila while (38%, n=33) were from the townships surrounding Bwaila Health facility.

Clients' perception of Preoperative care received prior to emergency caesarean section

The majority of the respondents (85%, n=74) felt that they received good explanation on the reason for their emergency caesarean section. However some stated that they were very worried and concerned when they learnt about the impending surgery (43%) while 57% felt that emergency caesarean section was a relief for them. The major worries and concerns included fear of death (70%, n=61), and fear of postoperative pain, (30%, n=26). Out of the respondents who were worried and concerned about impending surgery, 57%, n=49 felt that their concerns and worries were adequately addressed by the midwife while 43%, n=37) felt that the midwife was too much in a hurry to allow them ask questions. Others stated that they were afraid to ask questions because the midwife was not open to them. However Results on their satisfaction with preoperative care rendered by the midwife revealed that 68%, (n=59) expressed the likelihood of seeking care at Bwaila again with the next pregnancy. There were however 32%, n=28 who did not wish to do so in the next pregnancy because of the perceived poor care they had received. Clients that had tubal ligation did not see a need to give an opinion as to whether they were satisfied with the services or not.

Clients' Perception of preoperative teaching received prior to emergency caesarean section

Only 8% n=7 of the respondents recalled having received information on what to do after caesarean section whereas 92% n=80 did not . The respondents also mentioned that they received teaching postoperatively mostly day two post operative (92%). Those who did not receive any teaching relied on knowledge received from previous

caesarean section, but others mentioned that they got the knowledge from other women who had undergone caesarean section before. Results further reveal that only 2 respondents (2.3%) received information on deep breathing and coughing exercises while 85 clients (97.7%) did not; another 2 (2.3%) received information on leg exercises while 97.7%, n=85 did not; furthermore, only 3 (3.5%) received information on frequent position changes while 96.5% n=83 did not, and another 3 (3.5%) received information on getting out of bed early while 94.3% n=82 did not (Table 5)

Table 5: *Clients' perception of preoperative teaching received prior to emergency caesarean section.*

Variable	*Yes*		*No*	
	Frequency	*Percent*	*Frequency*	*Percent*
Given information on what to do after C/s	*7*	*8.0*	*80*	*92*
Given information on deep breathing and coughing	*2*	*2.3*	*85*	*97.7*
Given information on leg exercises	*2*	*2.3*	*84*	*96.6*
Given information on frequent position changes	*3*	*3.5*	*83*	*96.5*
Given information on getting out of bed early	*3*	*3.5*	*82*	*94.3*

Clients' reaction to preoperative care rendered prior to emergency caesarean section

There was a striking difference between complications experienced by the client and those documented in the clients' charts. The proportion of clients 59 (72%) that reported to have not experienced any complication was lower from those obtained from chart review 79 (90.8%) (Table 6). There were 7 clients (8.5%) who verbalized that they had had excessive bleeding but the chart recorded only 3 (3.4%). Another

striking difference was that 5 respondents (6.1%) expressed pneumonia as a complication but none was documented in the chart as a complication. Similarly 1 respondent (1.2%) verbalized that she had had localized pain or heat in one of the legs while on client chart review this was not documented as a complication.

Table 6: *Comparison of complications experienced by clients and those documented*

	Frequency	*Percent*	*Frequency*	*Percent*
	59	*72*	*79*	*90.8*
	7	*8.5*	*3*	*3.4*
	7	*8.5*	*2*	*2.3*
	0	*0*	*1*	*1.1*
	2	*2.3*	*2*	*2.3*
	5	*6.1*	*0*	*0*
	1	*1.2*	*0*	*0*

T-test results showed that complications expressed by the clients (mean = 0.84, S.D. = 1.7) scored statistically significantly higher (t (80) = 4.36, p= 0.000) than those documented in the clients' charts (mean= 0.26, S.D. 1.0).

Association between preoperative care rendered and incidence of postoperative complications

The association between preoperative care rendered to clients and incidence of postoperative complications did not show any statistical significance ($P>0.05$) for most of the variables. However, there was a statistically significant association between preoperative teaching offered to the client on deep breathing and coughing exercises, and the incidence of postoperative complications ($P<0.05$) (Table 7).

Table7. *Chi-square analysis results of association for preoperative care rendered to clients undergoing emergency caesarean section versus postoperative complications.*

Variable	***P value***	***Comment***
Client given explanation on reason for surgery vs postop comlications	0.79	n/s
Client given psychological reassurance before EmC/svs postop complications	0.07	n/s
Client gave informed consent vs preop complications	0.75	n/s
Client's blood pressure checked before emC/s vs postop complications 0.71	0.71	n/s
Client's pulse rate checked before emC/s vs postop complications	0.71	n/s
Client's respiratory rate checked before emC/s vs postop complications	0.98	n/s
Client, temperature checked before emC/s vs postop complications	0.98	n/s
Blood samples collected from client before emC/s vs postop complications	0.22	n/s
Preoperative antibiotics administered to client before emC/s vs postop complications	0.40	n/s
Bladder catheterization performed before emC/s vs postop complications	0.50	n/s
IV fluid administration done before emC/s vs postop complications	0.89	n/s
Preoperative teaching vs postop complications		
Client instructed on what to do after emC/s vs postop complications	0.549	n/s
Client given instructions on deep breathing and coughing exercises before emC/s vs postop complications	0.010	Significant
Client instructed on leg exercises before emC/s vs postop complications	0.99	n/s
Client instructed on frequent position changes before emC/s vs postop complications	0.99	n/s
Client instructed on getting out of bed early before emc/s vs postop complications	0.99	n/s

CHAPTER FIVE

Discussion

Introduction

This section presents a discussion of the study results in relation to the conceptual framework of Kings Theory of Goal Attainment and has been discussed consistent with the objectives of the study. These were to: establish midwives' perception of the components of standard pre operative care of women undergoing emergency caesarian section; assess midwives' actions on components of standard preoperative care for emergency caesarian section; determine clients' perception of the preoperative teaching rendered to them prior to undergoing emergency caesarian section; determine clients' reaction to pre operative care they received prior to undergoing emergency caesarian section and to determine if there was an association between pre operative emergency care rendered and the incidence of postoperative complications.

Midwives' demographic characteristics

The results on the age ranges showed that 39.3% of the respondents were below thirty years, but they also showed that 60.7% were thirty to over 50 years of age. This implies that there were midwives who had been practicing for a long time in the system. According to King, , age of the nurse can influence perceptions (George, 2010). Hence in this study since all the respondents mentioned that they had not received any form of in-service training in perioperative care, it implies that some of the older midwives may have been practicing for a long time without updating their knowledge. However, a study done amongst pediatric nurses in Pakistan showed that there were knowledge gaps amongst young pediatric nurses most of who had qualified with diplomas with only 6 months to 2 years in practice (Essani & Ali, 2011) necessitating the need for in service education for all age ranges of the midwives.

Results further show that a larger share of midwifery care provided at Bwaila was being provided by Nurse Midwife technicians (39.3%) and Enrolled Nurse

midwives (35.7%), but very few Registered Midwives (21.4%). The Nurse Midwife Technician/Enrolled Midwife is normally trained to conduct low risk care and deliveries for mothers without complications. On the other hand the Registered Midwife is trained in extended and expanded roles while utilizing critical cognitive skills and evidence based knowledge to plan, implement and evaluate maternal and new born care and to supervise the enrolled midwife (Nurses and Midwives Council of Malawi, 2008). Bwaila being a major referral center which receives high risk deliveries needs more Registered midwives to be able to cope with the high risk referrals as well as to supervise the Lower cadres. Since 89.3% of the midwives had attained MSCE as their highest level of education, this shows that, this cadre can easily be upgraded to the Registered Midwife level as the minimum entry requirement for upgrading is MSCE.

Demographic characteristics of the respondents further demonstrate that there is a problem with the deployment of the midwives at this hospital. At the time of conducting this study 53.6% of the respondents deployed at this facility were novices who had graduated less than five years from training college. Furthermore 64.3% had been practicing midwifery for not more than five years, and 92.9% had been working in their respective departments for less than five years. Kaye (2000) also found that in addition to other factors, a lack of proper deployment policies was one of the major contributing factors to poor quality care amongst midwives in Uganda. Currently the Deployment Policy for all health carders in the Malawi Ministry of Health is still not officially out (M. Kaliranwe, personal communication, March 26, 2012). In the absence of such a policy, haphazard staffing of maternity units will continue.

Midwives' perception of the components of preoperative care

From the study findings it is evident that most of the respondents had some knowledge about the components of standard preoperative care since most of the components were mentioned by more than 50% of the respondents. However there were gaps noted in the knowledge levels, for example, all the respondents mentioned bladder catheterization but there were gaps in all other components, the worst being in the psychological care of the client.

According to King's theory of Goal attainment in the Nurse patient interaction the nurse (in this case the midwife) brings special knowledge and skills which are to

be integrated for application to a concrete situation. In this case the midwife brings special knowledge and skills on care of the client prior to emergency caesarean section. Therefore if the midwife has inadequate knowledge according to King He/she will neither be able to communicate information, set goals with the client nor be able to act to attain the goals (George, 2010).

Midwives source of knowledge for components of preoperative care for emergency caesarean section

The study results revealed that 89.3% of the respondents mostly relied on knowledge from pre-service training as none of them had attended any form of in-service training on perinatal care. Additionally the results showed that 82.1% of the respondents were not aware of the availability of preoperative care guidelines in their wards. The results tally with those of Kay (2000) who also found that lack of in-service training and absence of standard treatment guidelines were major contributing factors for poor quality of care among midwives in Uganda. The fact that some of the respondents were able to mention the availability of guidelines in their wards and yet the majority were not, suggests that there may also be a problem with orientation of the midwives to the guidelines. Orientation of midwives and adherence to guidelines has been associated with a significant reduction in maternal morbidity (Rizvi, Mackey, Barret, McKenna, & Geary, 2007).

Midwives' Action on components of standard preoperative care prior to emergency caesarean section

The study results showed a wide gap between the respondents' knowledge of the components of preoperative care and what was actually documented in the clients' charts. This implies that though midwives were aware of the components of preoperative care they were not able to put them into practice. This has adverse consequences on clients' outcomes as it prevents continuity of care and also contributes to omission of care for the client.

A wider gap was noted in components of bladder catheterization where 100% of the respondents had mentioned that they would catheterize the client prior to emergency caesarean section, yet only 50.6% of them documented in the clients' charts. Although there is a lot of debate on routine bladder catheterization prior to caesarean section it has still been proved to be beneficial for the prevention of a full

bladder during and immediately after operation (Nasr, et al, 2009). In Malawian hospitals routine bladder catheterization is practiced with all caesarean sections to prevent full bladder that is one of the major causes of PPH. This is one of the leading causes of maternal deaths (Kongnyuy, et al, 2009). The benefits of catheterization in this country therefore outweigh the risks.

Similarly informed consent was mentioned by 92.9% of the respondents but only 77% documented. It is argued that due to high levels of illiteracy in the developing world as well as in Malawi it is extremely difficult to obtain informed consent (Muula, 2007). It is therefore important that information pertaining to how the decision was reached to decide on caesarean section be well recorded. This is important in case of adverse maternal or neonatal outcome which could be attributed to the procedure.

Administration of preoperative antibiotics was mentioned by 82.1 % of the respondents but was only documented by 37.9% of the respondents. There is strong evidence that prophylactic antibiotics administration is important in prevention of post caesarean surgical wound infection, and post caesarean maternal infections such as endometritis, urinary infections, and pneumonia (Tita, et al, 2008a, 2008 b, and 2009). Therefore midwives who do not administer the antibiotic prophylaxis to preoperative clients undergoing emergency caesarean section put them at high risk of such serious postoperative infections.

It was also noted from the results that only 28.6% of the respondents mentioned that they would allow the client to ask questions, 25% mentioned that they would answer the clients' questions, and 60.7% would offer psychological support to the client. However review of the clients' charts showed documentation by only 3.4% of the respondents on psychological care of the client.. The inability of most of the midwife respondents to mention that they would allow the client to ask questions, for them to answer the clients' questions and to offer psychological support implies that the psychological care of the clients was a neglected part of their preoperative care. These results tally with those found by Lungu, Malata, Mbendera, & Chirwa, (2011), who also found that clients did not feel comfortable to ask questions and were not given an opportunity to ask questions in the antenatal clinic of the same facility. This is unfortunate because the unplanned nature of an emergency caesarean birth often

forces the woman to deal with less time between decision for surgery and time of surgery compared to a planned caesarean birth. These circumstances often deprive a woman the chance to prepare psychologically and this may limit the woman's ability to adjust to this unfamiliar situation leading to severe anxiety. When this anxiety is manifested in patients undergoing emergency caesarean section it can increase their risks and present added potential for complications both psychological and physiological (Pritchard, 2009).

In a study done amongst Swedish women the respondents expressed that asking questions and receiving more information during childbirth would have been more helpful to understand what was happening to them (Somera, Feeley, & Ciofani, 2009). Psychological care of a woman is therefore important as adaptations which seem to occur around the time of delivery and the first weeks of motherhood are important for the development of the maternal role (Wiklund, Edmund, Larson & Andolf, 2009).

King in his Theory of Goal Attainment contends that individuals have a right to knowledge about themselves and that individuals have a right to participate in decisions that influence their life, their health and community services. Although King assumes that in the nurse-client interactions the clients have a right to participate in decisions about their care, she does not say they have a responsibility. Thus clients are requested to participate, not expected to do so. King further contends that the client has information, knowledge, and self which they bring to the Nurse- Client interaction and they can communicate concerns and viewpoints to help in mutual goal setting (George, 2010). Psychological care has been noted to be one of the missing components in the National Reproductive Health Standards in Malawi and there's need to review the RH guidelines to include this component of preoperative care.

The results further revealed that only 28.6% of the respondents mentioned checking of vital signs implying that clients were being prepared for EmC/s without checking vital signs. Generally vital signs provide baseline data which is important in detecting signs of impending deterioration especially in such cases as emergency caesarean section. Knowing the clients' vital signs is important before operation for the detection of overt or covert complications such as hypovolemia, high blood pressure and tachypnoea (Nunney, 2008).The results of this study are in tandem with

the Malawi EmONC needs assessment (2010) which also revealed some gaps in the checking of vital signs to clients in labour wards of most facilities in Malawi. Similar studies have reported gaps in checking of vital signs amongst nurses in America (Parkes, 2011; Smith, 2008).

Midwives Action on preoperative teaching rendered to clients prior to emergency caesarean section.

The results of this study portrayed that only 11.1% of the respondents were able to mention that they would teach the client deep breathing, coughing exercises and leg exercises prior to emergency caesarean section; 14.3% mentioned frequent turning in bed and early ambulation, and 19.2% were able to recall the elements of preoperative teaching rendered to clients before emergency caesarean section.. This was confirmed by few client respondents who received preoperative education. For example, only 2.3% stated that they received information on deep breathing and coughing, and leg exercises, while 3.5% received information on frequent position changes and getting out of bed early. Additionally, review of the client charts also confirmed gaps in preoperative teaching as 99% of the charts reviewed did not show evidence of documented preoperative teaching rendered to the clients suggesting a wide gap in this area of preoperative care.

The study has also revealed that the type of preoperative teaching rendered to clients varied from one midwife to another. This implies that clients were not getting the preoperative teaching that was required and that some clients missed out on important information. King contends that health professionals have a responsibility to share the information that helps the individual to make informed decisions about their health care (George, 2010).These findings are consistent with those by Fitzpatrick and Hyde, (2005), who found that a group of nurses in Ireland had varying views on what exactly patient education comprised and had different perceptions on its relative importance as an aspect of preoperative care. The Fitzpatrick and Hyde study showed that the diversity and quality of client education was influenced by the knowledge and experience of the individual nurse and depended on how long the individual nurse had been working in the ward and how long they were qualified..

The results of the Fitzpatrick study could help explain the discrepancies in client education at Bwaila as this study revealed that 53.6% of the respondents were novices, 64.3% had practiced midwifery for less than 5 years since their year of qualification, and over 90 % had been working in the present department for less than five years. . Malata et al, (2007) found that the absence of an education programme was the major contributing factor to the lack of consistency and quality of education nurses were rendering to antenatal mothers in Malawi.

The Fitzpatrick and Hyde study further found that nurses who were new in the department and were not qualified tended not to get involved in client education and the whole' question and answer thing', so they just left it or relied more on the senior nursing staff to tell them what to say to the patient. There were only seven registered midwives at Bwaila rendering care in both the Antenatal and Labour wards, in addition these midwives were not experienced themselves, meaning that the availability of senior midwifery staff to be consulted , to supervise, or to be relied upon to actually conduct the education was a challenge.

Clients' perception of preoperative teaching rendered before emergency caesarean section

This study revealed that 92% of the respondents did not receive any preoperative teaching before emergency caesarean section. The findings tally with those from a study in Ghana in which mothers expressed that they lacked information on how to take care of their babies (Bansa, Obrien, & Oware-Gyekye, 2009). This is a big area of concern as preoperative teaching is beneficial for both patients and the organization in terms of outcomes such as pain, anxiety and rate of recovery.

Lack of information and teaching before emergency caesarean section can lead to complications that can be detrimental to the clients' life. Furthermore lack of teaching can lead to clients getting wrong information from other clients leading to complications (Bansa et al, 2009). In this study clients mentioned that the information on what to do after emergency caesarean section was mainly from previous knowledge for those who had had a previous caesarean section. However for those who were having the caesarean section for the first time the information was from fellow clients as well as guardians. Bansa (2009) found that receiving information

from informal support system tended to increase tension that led to increased doubt and anxiety on the part of the woman.

Clients' reaction to preoperative care received prior to emergency caesarean section

A significant proportion of the respondents (68%) expressed satisfaction with the care rendered to them prior to emergency caesarean section. These results however are surprising as 92% of them did not receive preoperative teaching prior to surgery and 43% felt that the preoperative worries and concerns which they had prior to surgery were not adequately addressed by the midwife. Most of them also thought that the midwife was too much in a hurry and was not open to them to allow them to ask questions. This could be attributed to the fact that the clients may not appreciate the role of preoperative teaching prior to surgery due to the pain fear and anxiety they are experiencing at that time but could also be due to lack of civic education on the importance of preoperative education. Somera et al, (2010) found that after going through an emergency caesarean section women felt relieved to give birth to a healthy infant and thus are relieved that their emergency caesarean section resulted in a positive outcome, therefore they feel that the end justified the means. This is in tandem with Kings assumptions that the perceptions of the client may be influenced by the functioning of the clients sensory system which could be compromised when news of impending surgery is suddenly broken to them (George 2010, p.243).

Since 62% of the respondents were referred from other health facilities they were quite aware of the likelihood of another referral during the next pregnancy. There were quite a significant proportion of clients (68%) who expressed that they felt that Bwaila, being a referral hospital was better equipped, and that there was better midwifery care than the health centers where they were coming from. These findings could explain the clients' likelihood of seeking care at Bwaila during the next pregnancy. However, 32% expressed that they did not wish to come back to Bwaila because of the poor care that they had received. The proportion of respondents who mentioned that they would not come back to Bwaila for the next delivery also included those that had had a tubal ligation.

Incidence of the postoperative complications after emergency caesarean section

The study results showed that 90.8% of the respondents did not have any complications postoperatively. The common complications in this study population were PPH (3.4%), Fever or sepsis (1.1%), Anaemia (2.3%), and wound problems (2.3%). The results are in tandem with literature and the current trend in the country which shows that PPH is one of the major complications of emergency caesarean section.

When comparing the common causes of febrile morbidity in Saudi Arabia amongst women who had had an emergency versus elective caesarean section, it was found that febrile morbidity following emergency caesarean section was significantly higher than that which followed elective caesarean section. Febrile morbidity was significantly commoner in young women below 35 years, primiparous women, those with low parity, and also in those women who had had transverse incisions (Soltan, Chowdhury, & Adelusi, 1996). These findings tally with those of this study as the respondents' demographic characteristics showed that 70.1% were aged 25 years and below. Furthermore most of them had one child (49.4%) whilst another significant proportion (41.4%) had 2-4 children indicating that the majority of the clients were of low parity. This group of clients is often the one that have cephalopelvic disproportion and are therefore more likely to have prolonged labour, which also subjects them to many vaginal examinations in labour, and subsequently putting them at high risk of developing infections postoperatively. In addition transverse incisions are mostly used when performing all types of caesarean section at Bwaila.

A striking finding of this study showed that there was a difference between them complications expressed by the client and those documented in the clients' chart. This finding suggests that clients experienced more complications than those that were documented in their charts.

This could be attributable to lack of proper monitoring of the clients to detect complications on the part of the midwifery personnel. Since most of the clients are discharged from the hospital on the fourth day postoperative these complications could easily be missed on discharge. Inadequate monitoring of clients was ranked second amongst the major health worker factors contributing to maternal deaths in Malawi (Kongnyuy, Mlava, & Van den Broek, 2009). However it could also be

attributed to a lack of communication between the midwives and the clients. One finding in this study was that clients expressed a lack of openness on the part of midwives; therefore this lack of openness could hinder clients from expressing their problems, hence coupled with poor monitoring of the clients many of these complications could be missed.

Association between preoperative care rendered and incidence of postoperative complications

The study results showed that there were no significant differences between the preoperative care rendered and incidence of preoperative complications for the variables of explanation on reason for surgery, psychological reassurance, informed consent, vital signs check, and collection of blood samples, administration of preoperative antibiotics, bladder catheterization, and IV fluid administration.

Similarly in the preoperative teaching category there were no significant differences for the variables on client instruction on what to do after emergency C/s, instruction on leg exercises, instruction on frequent position changes and instruction on getting out of bed early. However there was a significant association between the client preoperative teaching on deep breathing and coughing exercises with the incidence of postoperative complications. This suggests that clients who received preoperative teaching on deep breathing and coughing exercises prior to emergency caesarean section did not develop postoperative complications as compared to those who did not. In agreement with the above finding a study done in Taiwan found that an intervention group which received preoperative instruction on deep breathing and coughing exercises got out of bed sooner than the group that did not making them less at risk of developing complications such as pneumonia (Ling & Wang, 2005).

Conclusion

This chapter presents the conclusion based on the study findings in relation to the objectives of the study as well as with the conceptual framework of the study.

- From the study findings it was evident that a larger percentage of care provided at Bwaila was being provided by Nurse Midwife Technicians and Enrolled Nurse Midwives but there were very few Registered Midwives. The study also revealed that

most of the midwives at Bwaila hospital were novices in the profession as evidenced by the fact that most of them had qualified less than five years before the study was done. The study also showed that most of these midwives were less experienced as evidence by the fact that the majority had been practicing midwifery for less than five years, and many of them had been working in their present departments for less than five years

- The study also found that the unique knowledge on components of standard preoperative care which the midwife was bringing to the Nurse- Client interaction in emergency caesarean section was inadequate. This was evidenced by the fact that most of the midwives failed to recall all the components of standard preoperative care of clients prior to emergency caesarean section, there were very few midwives who mentioned checking of vital signs, allowing the clients to ask questions and answering clients' questions, and preoperative teaching of clients. It was also evident from the client interviews that most of them did not get preoperative teaching. Contributing factors to the inadequate knowledge were lack of in-service training in perioperative care, unavailability of preoperative care guidelines in most of the wards, gaps in the care guidelines, and lack of orientation of midwives to the care guidelines.

- The study further found that there was a gap between the midwife's knowledge on components of standard preoperative care and the actual documentation of care as evidenced from the lack of documentation of care in most of the clients' charts. Documentation was also poor in informed consent, and in some instances consent forms were missing from some of the charts. There was also a discrepancy between the complications verbalized by the client and those documented in the clients' chart. Clients verbalized more complications than those that were actually documented in their charts.

- The study showed mixed feelings amongst the clients on satisfaction with the preoperative care rendered to them prior to emergency caesarean section.

- The commonest complications found by the study were PPH, Anaemia, wound problems, and fever or sepsis.

- The study also found that there was an association between the preoperative teaching rendered to clients on deep breathing and coughing exercises and the incidence of postoperative complications.

King states that the concern for nursing is helping people interact with their environment in a manner that will support health maintenance and growth toward self- fulfillment. Human beings have three fundamental health needs.

1. The need for health information that is usable at the time when it is needed and can be used.

2. The need for care that seeks to prevent illness.

3. The need for care when human beings are unable to help themselves (George, 2010, p. 234). From the above findings it can generally be concluded that the clients undergoing emergency caesarean section at Bwaila did not get the quality care in terms of health information that was needed when they needed it, the care that they received did not seek to prevent illness as there were gaps in the care with a lot of omissions putting the clients at risk of further illness. The clients did not get quality preoperative care which they were not able to provide themselves.

Recommendations

Improvement on deployment of staff to this hospital (MOH)

The ministry of health should make sure that there is a balance in skills and experience for all midwives who are posted to this hospital and to all new hospitals in the country in order to ensure that the novices get proper coaching from those who have experience. To do this the employment policy needs to be utilised. It is also hereby recommended that more senior midwives of the registered cadre are posted to this hospital in order not to compromise client care. The Ministry of Health should

also upgrade all junior midwives with the necessary qualifications to registered level so that they can be able to provide evidence based midwifery care at this hospital and that more registered midwives can be available to supervise the junior midwives.

Provide Guidelines for preoperative care for emergency caesarean section (RHU, NMCM)

There is need for policy makers in the Ministry of Health Reproductive Health Unit and the Nurses and Midwives Council of Malawi to determine what constitutes standard preoperative care, and development of guidelines for preoperative care for emergency caesarean section. This will ensure that that all clients get standardized care and information before emergency caesarean. The existing guidelines can also be revised to make sure that the psychological component of care and client educations are included.

Train all staff members in perioperative care (RHU)

Development or revision of existing guidelines may take long; therefore it is recommended that the Reproductive Health Unit conduct training in perioperative care to all midwives so that quality preoperative care can be provided to the clients.

Intensify supervision on documentation and record keeping (Health care providers)

It is recommended here that all midwives working at this facility take an active role in checking of vital signs and documenting all the care rendered to the clients. The first line managers should take an active role in supervision of all care rendered and its documentation, and proper keeping of client records, as the clients chart is a legal tool that can be used as evidence in a court of law.

Intensify civic education to the communities (Civil Society Organizations)

The study showed that there was a gap between the client satisfaction and the quality of care rendered. The civil society organizations should take an active role in civic education to make women aware of the importance of the type of care they get rather than just getting a live baby.

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APPENDIX I

Participant No._____

STRUCTURED QUESTIONAIRE FOR MIDWIVES

Section A: Demographic Characteristics

Question	**Answer and code**

1A. What is your gender?

M (1)

F (2)

02A. What is your Age?

> 30 (1)

30-35 (2)

35-40 (3)

40-45 (4)

45-50 (5)

<50 (6)

3A. What is your cadre?

Nurse midwife technician (1)

Enrolled Nurse/ Midwife (2)

Registered Nurse Midwife (3)

Registered midwife (4)

Enrolled midwife (5)

4A. What is your highest educational qualification?

JC (1)

MSCE (2)

5A. What is your highest professional qualification?

Certificate

(1)

Diploma (CHAM College)

(2)

Upgrading Diploma (MCHS)

(3)

Upgrading Diploma (KCN)

(4)

Degree (KCN)

(5)

Other (specify)……

(6)

6A. When did you qualify as a midwife ?

>5years ago	(1)
5-10 years ago	(2)
10-15 years ago	(3)
15-20 years ago	(4)
<20years ago	(5)

7A. How long have you practiced as a midwife?

>5 years	(1)
5-10 years	(2)
10-15years	(3)
15-20 years	(4)
<20 Years	(5)

8A. How long have you been working in the present ward/Dept?

>5 years	(1)
5-10 years	(2)
10-15years	(3)
15-20 years	(4)
<20 Years	(5)

Section B: Awareness of emergency c/s pre op care Standards

Question	AnswerCode

1B. List the routine preoperative care that you give to mothers before emergency caesarian section

Administration of intravenous fluids	Yes (1) / No (2)
Checking of vital signs (blood pressure, pulse, respirations, temperature)	Yes (1) / No (2)
Give pre operative antibiotics	Yes (1) / No (2)
Take blood for hemoglobin, grouping and cross matching	Yes (1) / No (2)
Perform bladder catheterization	Yes (1)/ No (2)
Give pre operative teaching on deep breathing, coughing, leg exercises, turning and early ambulation after surgery.	Yes (1) / No (2)
Offer psychological support (Give information on the surgery, allow mother to ask questions, and answer questions)	Yes (1)/ No (2)

Other (specify)…….

2B. Where did you get the knowledge for the emergency preoperative care you give?

From training college (1)

In-service education (2)

Reproductive health standards (3)

Other (Specify)…… (4)

3B. Have you had any training in perioperative care?

Yes (1)

No (2)

4B. If the answer to the above is yes, when did you attend the training?

>6 months ago (1)

<6 months ago (2)

3B. Do you have preoperative guidelines for emergency caesarian section in your Ward?

Yes (1)

No (2)

4B. What preoperative teaching do you give to the mothers before emergency caesarian section?

Type of operation and what is expected (1)

Deep breathing and coughing exercises (2)

Leg exercises (3)

Frequent turning in bed (4)

Early ambulation (5)

Others (specify)…… (6)

Section C: Overall impression of the Care

1C. How would you rate the pre operative care rendered to clients in your hospital?

Excellent	(1)
Satisfactory	(2)
Poor	(3)

2C Are you satisfied with the care you rendered to the clients?

Yes	(1)
No	(2)

APPENDIX II (a)

Participant No:_____

STRUCTURED INTERVIEW GUIDE FOR CLIENTS POST EMERGENCY C/S

SECTION A: Demographic Characteristics

	Question		**Answer and Code**
1A.	What is your age?	>20	(1)
		20-25	(2)
		25-30	(3)
		30-35	(4)
		<35	(5)
2A.	What is your highest educational level		
		Primary	(1)
		Secondary	(2)
		College/University	(3)
3A.	How many pregnancies have you had		
		First pregnancy	(1)
		2-4 pregnancies	(2)
		More than 4 pregnancies	(3)

4A. How many children do you have?

1 child (1)

2-4 children (2)

More than 4 (3)

5A. Have you ever had a caesarian section before?

Never (1)

Once (2)

Twice (3)

More than twice (4)

\

6A. If yes, what type of cesarean section was it?

Emergency (1)

Elective (2)

Section B: Preoperative Teaching Received

1B. Did you receive any information concerning the reason for your C/S from the midwife who was preparing you before you went for the operation?

Yes (1)

No (2)

2B. Did you have any concerns/ worries when you learnt that you were going for emergency C/S?

Yes (1)

No (2)

3B. If yes were the concerns/worries you had before C/S adequately addressed by the midwife?

Yes (1)

No (2)

4B. Did you get clear instructions of what to do after C/S?

Yes (1)

No (2)

5B. What specific instructions did you receive before going for emergency C/S?

Deep Breathing and coughing	Yes (1)/No (2)
Leg exercises in bed	Yes (1)/No (2)
Frequent position changes	Yes (1)/No (2)
Getting out of bed early after C/S	Yes (1)/No (2)
Care of the incision area	Yes (1)/No (2)
Others (specify)…….	Yes (1)/ No (2)

6B. If you did not receive any teaching before operation when did you get the teaching?

Did not get any teaching up to now (1)

Day 1 after operation (2)

Day 2 after operation (3)

7B. If you did not receive any teaching at all before and after operation, where did you get the knowledge on what to do after operation?

From previous c/s experience (1)

From other patients who had had c/s (2)

Other (3)

Section C: Overall Impression of care received

1C. What influenced you to come to Bwaila?

Friends (1)

Its near home (2)

I was referred from another hospital (3)

Past experience was good (4)

2C. Do you feel you have received adequate information about your operation and the health problems likely to arise as a result of the operation?

Yes (1)

No (2)

3C. If you were to seek care in your next pregnancy would you come to Bwaila?

Yes (1)

No (2)

Section D: Incidence of Postoperative complications

1D.What complications have you had following this emergency caesarian section?

Excessive bleeding	Yes (1)/No (2)
Anaemia	Yes (1)/No (2)
Sepsis	Yes (1)/No (2)
Wound Incision area problems (bleeding gaping or pus)	Yes (1)/ No (2)
Pneumonia	Yes (1)/No (2)
Removal of the uterus	Yes (1)/ No (2)
Localized pain or heat in one of the legs	Yes (1)/ No (2)

APPENDIX II (b)

MAFUNSO A KAFUKUFUKU WA AMAYI OMWE APANGIDWA OPELESHONI YAMWANA YADZIDZIDZI

CHIGAWO CHOYAMBA: **MBIRI YA MAYI**

Question	**Answer**	**Code**
1A.Kodi muli ndi zaka zingati	>20	(1)
	20-25	(2)
	25-30	(3)
	30-35	(4)
	<35	(5)

2A. Kodi Sukulu Yanu munaphunzila Kufika pati?

Pulaimale	(1)
Sekondale	(2)
Koleji/Univesite	(3)

3A. Kodi uchembelewu ndi wachingati?

Woyamba	(1)
Wachiwiri mpaka kanayi	(2)
Woposela kanayi	(3)

3A Kodi ana mwabeleka angati?

M’modzi (1)

Awiri mpaka Anayi (2)

Oposela Anayi (3)

4A Kodi munayamba mwapangidwapo opeleshoni wamwana?

Inde (1)

Ayi (2)

4A Kodi opeleshoniyo anali wotani?

Wadzidzidzi (1)

Wokonzekela (2)

CHIGAWO CHACHIWILI: Maphunzilo omwe munalandila musanapite kuopeleshoni

1B. Kodi azamba omwe amakuthandizani musanapite kuopeleshoni anakufotokozelani chifukwa chimene mumakapangidwila opeleshoni musanapite kuopeleshoniko?

Inde (1)

Ayi (2)

2B. Kodi musanapite ku opeleshoni munali ndi nkhawa kapena zokuopsani?

Inde (1)

Ayi (2)

3B. Nkhawa kapena zokuopsani zinali zotani

Kuopa imfa (1)

Ululu wabala laopeleshoni (2)

Ndani asamale mwana (3)

Kuyamwitsa mwana (4)

4B. Kodi nkhawa zanu zinayankhidwa mokwanila ndi azamba omwe amakuthandizani?

Inde (1)

Ayi (2)

5B. Kodi munauzidwa mwachimvekele zomwe munayenela kuchita mukapangidwa Opeleshoni?

Inde (1)

Ayi (2)

6B. Kodi munauzidwa zotani?

Kupuma mwakuya ndi kutsokomola mutagwila pa bala (1)

Kuyendetsa miyendo mumbedi muli chigonele (2)

Kusintha mbali yogonela potembenuka (3)

Kuyamba kuyenda mwachangu (4)

Kasamalidwe ka bala (5)

Zina (tchulani) ……. (6)

7B. Ngati Simudalandile uphungu uliwonse pazomwe mumayenela kuchita mutapangidwa opeleshoni musanapite kuopeleshoniko, kodi azamba adakupatsani liti uphunguwu mutabwelako kuopeleshoni?

Sadandipatse mpaka pano (1)

Tsiku loyamba nditabwela ku opeleshoni (2)

Tsiku lachiwili nditabwela ku opeleshoni (3)

8B. Ngati Simudalandile uphungu ulionse musadapite ku opeleshoni komanso mutabwelako kuopeleshoniko mpaka napano kodi uphunguwu mukuutenga kuti?

Ndikugwilitsa nchito uphungu womwe ndidalandila pa opeleshoni yakale (1)

Kwa anzanga amene adapangidwapo kale opeleshoni (2)

Chulani kwinanso kumene mukutenga uphunguwu (3)

CHIGAWO CHACHITATU: Manganizo anu pachithandizo chomwe munalandila

1C Kodi chidakupangitsani ndi chiyani kuti mubwele kudzachilila kuno ku Bwaila?

Anzanga (1)

Ndipafupi ndi kunyumba (2)

Ndinachita kutumizidwa kuchokela chipatala china (3)

Zabwino zomwe ndidakumana nazo ulendo wina (4)

2C. Kodi munganene kuti munalandila uphungu wokwanila wokhuzana ndi opeleshoni yanu komanso zovuta zimene zingachitike chifukwa cha opeleshoniyi?

Inde (1)

Ayi (2)

3C. Kodi ulendo wina mungazasankhenso kudzachilila kuno ku Bwaila?

Inde (1)

Ayi (2)

CHIGAWO CHACHINAYI:

Zoopsa zomwe mwakumana nazo mutapangidwa opeleshoniyi:

Tchulani zoopsa zomwe mwakumana nazo mutapangidwa opeleshoniyi:

Kutaya magazi kwambili	Inde (1) /Ayi (2)
Kusowa magazi mthupi	Inde (1)/ Ayi (2)
Kutentha thupi	Inde (1)/ Ayi (2)
Mavuto a bala (kutuluka magazi pabala, mafinya pa bala, kapena kuphwethuka kwa bala)	Inde (1)/ Ayi (2)
Chibayo	Inde (1)/ Ayi (2)
Kutentha ndi kupweteka malo amodzi a miyendo	Inde (1)/ Ayi (2)
Kuchotsedwa chibelekelo	Inde (1)/ Ayi (2)

Zina (tchulani)

……

APPENDIX III:

Client No: _____

CHART REVIEW CHECKLIST FOR ROUTINE PREOPERATIVE CARE

Section A. Documented Pre operative care

ACTIVITY

RESPONSE

- Explained reason for operation to the patient Yes (1)/No (2)
- Offered psychological reassurance Yes (1)/No(2)
- Obtained informed consent from client and signed consent form Yes (1)/No (2)
- Offered preoperative teaching to the client on :
  - Deep breathing and coughing exercises Yes (1)/No (2)
  - Leg exercises Yes (1)/No (2)
  - Frequent position changes Yes (1)/No (2)
  - Early ambulation Yes (1)/No (2)
  - Incision area care Yes (1)/No (2)
- Administered intravenous fluids for rehydration of the patient Yes (1)/No (2)
- Checked vital signs (blood pressure, pulse rate, respirations, Temperature Yes (1)/No (2)
- Gave broad spectrum antibiotics Yes (1)/No (2)
- Took blood sample for Hemoglobin, Grouping and X-matching Yes (1)/No (2)
- Performed bladder catheterization Yes (1)/No (2)

Section B.

Documented Post Operative Complications in patients, chart:

- Postpartum haemorrhage Yes (1)/No (2)
- Fever or Sepsis Yes (1)/No (2)
- Anaemia Yes (1)/No (2)
- Sepsis Yes (1)/No (2)
- Pneumonia Yes (1)/No (2)
- Wound problems (bleeding, gaping, or pus discharge) Yes (1)/No (2)

APPENDIX IV

INFORMATION AND INFORMED CONSENT SHEET FOR MIDWIVES

Welcome to this study, I would like you to know the following about this study,

Purpose of the study: My name is Ruth Cynthia Mwale. I am a master student at Kamuzu college of Nursing conducting a study on midwives and clients experiences of emergency caesarian section at Bwaila maternity Unit in the district of Lilongwe. The study is in partial fulfillment of the Master of Science degree in midwifery which I am pursuing.

Procedures: If you consent you will be interviewed about routine preoperative care that you render to mothers undergoing emergency caesarian section, knowledge of reproductive health standards and your overall impression of the preoperative care that you give to these clients.

Risks and benefits: You are free to participate or refuse to participate in the study. No penalty will be inflicted on you for refusing to participate or for deciding to withdrawal during the study. You are free to decline to answer some questions which may make you feel uncomfortable without giving reasons for your action. However it is important to note that the information you give may help to make recommendations to improve pre operative care for emergency caesarian section. Please note that whatever information you give will be treated as confidential and will not be passed on to my supervisors.

Participation is voluntary: Participation in this study is voluntary and you can choose to withdraw at any time without giving reasons. If you have questions please do not hesitate to contact:

Ruth Cynthia Mwale,
Kamuzu College of Nursing,
P.O Box 415, Blantyre.
Tel:01 823673; Mobile: 0999308929 Email:rutemwal@yahoo.com or

Dr Address Malata
Kamuzu College of Nursing,
P/Bag 1
Lilongwe, Malawi
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Email: amalata@kcn.unima.mw or addressmalata@kcn.unima.mw

Prof. Joseph Mfutso-Bengo
Chairperson, COMREC, College of Medicine,
Private Bag 360
Chichiri
Blantyre 3, Malawi
Tel: 0999957805

Participant Number _____

CONSENT STATEMENT FOR MIDWIVES

I…… (Full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdrawal from the project at any time, should I so desire. I voluntarily agree to participate in this study

Signature of
participant……Date……..

Thumb print of participant…….

Witness…….

APPENDIX V (a)

INFORMATION AND INFORMED CONSENT SHEET FOR CLIENTS

Welcome to this study, I would like you to know the following about this study,

Purpose of the study: My name is Ruth Cynthia Mwale. I am a master student at Kamuzu college of Nursing conducting a study on midwives and clients experiences of emergency caesarian section at Bwaila maternity Unit in the district of Lilongwe. The study is in partial fulfillment of the Master of Science degree in midwifery which I am pursuing.

Procedures: If you consent to participate in this study , you will be asked questions concerning the care that was given to you by the midwife before you went for the operation, how you view the care and whether you were satisfied with it or not.

Risks and benefits: You are free to participate or refuse to participate in the study. No penalty will be inflicted on you for refusing to participate or for deciding to withdrawal during the study. You are free to decline to answer some questions which may make you feel uncomfortable without giving reasons for your action. However it is important to note that the information you give may help to make recommendations to improve pre operative care for emergency caesarian section. Please note that whatever information you give will be treated as confidential and will not be passed on to my supervisors.

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Ruth Cynthia Mwale,
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Prof. Joseph Mfutso-Bengo
Chairperson, COMREC, College of Medicine,
Private Bag 360
Chichiri
Blantyre 3, Malawi
Tel: 0999957805

Participant Number _____

CONSENT STATEMENT FOR CLIENTS

I…… (Full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdrawal from the project at any time, should I so desire. I voluntarily agree to participate in this study

Signature of participant……Date……

Thumb print of participant…….

Witness…….

APPENDIX V (b)

Kalata Yofotokozela anthu ofuna kulowa nawo mukafukufuku wa azimayi opangidwa opeleshoni ya mwana mwadzidzidzi

Okondedwa, Mwalandiridwa ku kafukufukuyu ndipo khalani omasuka

Cholinga cha Kafukufuku: Ine ndine Mayi Ruth Mwale m,modzi mwa ophunzila pa sukulu ya anamwino ya Kamuzu college of nursing. Malingana ndi zofunikila kukwanilitsa maphunziro anga ndikupanga kafukufuku wa zimene azimayi opangidwa opeleshoni ya mwana mwadzidzidzi , ndiponso azamba amakumana nazo panthawiyi.

Inu mukabvomela kulowa nawo mukafukufukuyu ine ndi anzanga othandizana nawo kafukufukuyu tidzakufunsani mafunso a m'mene azamba anakuthandizilani musanapite ku opeleshoni komanso m'mene inuyo mwachionela chithandizochi. Zindikilani kuti mayankho anu onse omwe mungapeleke akhala a chinsisi ndipo sauzidwa kwa munthu wina aliyense ngakhale aphunzitsi wondiyan'anila pakafukufukuyu.

Kulowa kafukufuku ameneyu ndikwaulele komanso kosakakamizidwa. Mulinso ndi ufulu wosayankha mafunso ena ngati muona kuti ndiokuvutani kuyankha. Ngati mukana kulowa kafukufukuyu sizikutanthauza kuti chithandizo chimene mukulandila chikhoza kusintha chifukwa choti mwakana ayi koma muli ndi ufulu kutelo. Koma dziwani kuti mayankho ndimaganizo amene mungapeleke pakafukufukuyu akhoza kuthandiza kusintha kwa zinthu makamaka m'mene Azamba athu amathandizila azimayi wopita ku opeleshoni yamwana yadzidzidzi.Ngati muli ndi mafunso kapena nkhawa zokhuzana ndi kafukufukuyu imbani foni kwa anthu awa:

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Chisindikizo cha chivomelezo

Ine…… (lembani maina anu onse athunthu) ndikuvomeleza kuti ndamvetsetsa zonse zimene zalembedwa m'kalata yofotokozela zakafukufukuyu ,komanso ndamvetsetsa cholinga cha kafukufukuyu , ndipo ndili wokonzeka kutenga nawo mbali mkafukufukuyu.

Ndikuzindikilanso kuti ndili ndi ufulu wosiya kutenga nawo mbali mkafukufukuyu nthawi ina iliyonse imene ndingafune. Ndikuvomela mosakakamizidwa kulowa mkafukufukuyu.

Sindikizani siginechala yanu ……Tsiku…….

chidindo chachala chachikulu chakumanja……

Mboni…….