EXPERIENCES OF OPERATING ROOM NURSES IN THEIR WORK ENVIRONMENT AT A STATE HOSPITAL IN ETHIOPIA

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DECLARATION

In accordance with Rule G4.6.3, I Negat Woldehawariat student No. 204035961, hereby declare that the Treatise/dissertation/thesis for student qualification to be awarded is my own work and that it has not previously been submitted for assessment or completion of any postgraduate qualification to another University or for another qualification.

Negat Woldehawariat

30th March 2012

DEDICATION

This research is dedicated to my lovely late brother Mamush Woldehawariat who was supportive in various ways. Mamushae, you wanted me to study further and I promised you I would, I know you are not going to be there but I will keep my promise.

About our loss we can't ask why as you are the perfect Master and do not make mistakes but thanks be to you, Lord, for the strength you have given us.

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ABSTRACT

Operating room nursing skills are some of the most demanding skills in the nursing profession. At the moment nurses trained in operating room technique are in very short supply in Ethiopia, due to the exodus of nurses to better working environments with more reasonable payment. This is especially noticeable in one of the state hospitals in Addis Ababa, Ethiopia, as emerged in conversations with the head nurse of the operating room in this hospital about the high turnover rate, as well as the high absenteeism rate amongst the nurses working in the operating room. Nurses working in the operating room also expressed unhappiness in their work environment which could cause them to look for other jobs or to be absent from duty. The nurses were facing numerous problems in their work environment such as work overload due to staff shortage, stress due to shortage of supplies because they are not able to do their job as much as the need requires. The researcher identified the need to explore the challenges that the operating room nurses are experiencing in their work environment.

The researcher used the following questions to meet the research objectives:

- What are the experiences of the operating room nurses in their work environment?
- What potential assistance would such nurses need to better cope with the problems they experience in their work environment?

The research study aimed to explore and describe the experience of operating room nurses in their work environment and on the basis of the findings to develop guidelines to assist the operating room nurses in coping more effectively with their work environment.

The researcher used a qualitative approach with an explorative, descriptive and contextual design. Fifteen registered nurses were selected using purposive sampling. Informed consent was obtained from the participants and permission from the Ethics Committee of the Nelson Mandela Metropolitan University, as well as Yekatit 12 Hospital. Data were gathered using face to face interviews and field notes were taken to determine the experiences of the participants. Data were analyzed using Tesch's method of descriptive data analysis (in Creswell, 2003:13).

Two main themes with two sub-themes related to the experience of the registered nurses working in the operating room of the state hospital were identified. Main theme one focused on the non-conducive work environment and it focused on the lack of support from management and the problems experienced in the environment. It was found that OR nurses had good working relationships among the nursing staff. Main theme two focused on the limited training opportunities in OR techniques. The sub-themes described the limited exposure to new technology and the quality of nursing education which the participants felt was not taken seriously in Ethiopia.

Based on the identified themes guidelines were formulated to assist the registered nurses working in the operating room of a state hospital in Ethiopia. Utilization of these guidelines should assist the registered nurses to cope more effectively with their work environment.

Recommendation were made, further research and limitations identified.

Key words: Operating room, operating room nurse, experience, work environment.

CHAPTER ONE OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

Operating room nursing is defined as: “The identification of the physiological, psychological and sociological needs of the patient and the development and implementation of an individualized programme of nursing actions, based on the knowledge of the natural and behavioural sciences, to restore or maintain the health and welfare of the patient before, during and after surgical intervention” (McGarvey, Chamber and Boore, 2000: 1093).

According to Higgins and MacIntosh (2010:322) the OR is a dynamic, exciting, technical and intense workplace. OR nurses require knowledge of surgical procedures, nursing processes and require excellent organizational skills. They often work in conditions that challenge their concentration. OR nursing is mentally, emotionally and physically demanding. The OR is an environment that differs from other clinical areas. While nurses in other settings focus their attention on direct patient care and planning, OR nurses have a brief yet important period for patient care prior to anesthesia, with most time spent facilitating surgery. Time spent with physicians is usually one-to-one, for eight to twelve hours. Nurses must stay in the theatre to ensure patient safety. Close contact over long uninterrupted workdays during the operative period consisting of the pre, intra and postoperative period.

The pre-operative period commences as soon as the decision for surgical intervention has been made and ends with the introduction of anaesthesia. It can be as early as an initial assessment of the patient in the outpatients’ clinic, or at home, or as a short-term procedure in an immediate pre-operative patient assessment within the operating room’s vicinity.

Nursing in the pre-operative period is concerned primarily with the preparation of the patient for surgery from both a physical and psychological perspective. Specific patient-

related activities include identifying and checking the patient's details and the safe, while other activities include preparing the equipment and the instruments (McGarvey *et al*., 2000:1097).

The intra-operative phase runs from the time the patient is transferred to the operating table to the time she/he is admitted to the recovery area. During this time, positioning of the patient for their particular operation on the operating table will take place, and then undergoes a specific surgical or investigative procedure. Nursing responsibilities revolve primarily around maintaining the overall safety and dignity of the patient at such a crucial time. This includes monitoring the patient's physical status, ensuring the safe use of surgical equipment, monitoring the sterile field, and carrying out safety checks associated with the use of equipment and swabs. In some cases, the anaesthetic may be regional and the patient may be fully conscious or merely under sedation. The operating room nurses also has responsibilities toward the patient in terms of offering information and reassurance, in addition to ensuring continued comfort and physiological monitoring (McGarvey *et al.,* 2000:1097).

The post-operative phase begins with the admission of the patient to the recovery area, and it ends when the surgeon is satisfied with the patient's condition and stops the follow-up care. The range of nursing activities include, at a basic level, the passing of information about the patient's surgery to the appropriate personnel in the recovery area, but potentially it could extend to a post-operative evaluation in the ward, clinic or even the patient's home. Essentially, the post-operative role relates to ensuring that the patient has a safe recovery from the anaesthesia and the surgery. The perioperative nurse is responsible and accountable for the major nursing activities occurring in the surgical suite. These include, but are not limited to the following:

- Assessing of the patient's physiological and psychological status before, during, and after surgery
- Identifying priorities and implementing care based on sound nursing judgment and individual patient needs
- Functioning as a role model of a professional perioperative nurse for students and colleagues

- Functioning as a patient advocate by protecting the patient from incompetent, unethical, or illegal practices during the perioperative period
- Coordinating all activities associated with the implementation of nursing care by other members of the health-care team
- Demonstrating a thorough knowledge of aseptic principles and techniques to maintain a safe and therapeutic surgical environment
- Directing or assisting with the care and handling of all supplies, equipment, and instruments, to ensure their economic and efficient function for the patient and personnel under both normal and hazardous conditions
- Performing as a scrub or circulating nurse as needed, based on knowledge and expertise for a specific procedure
- Participating in continuing education programs directed toward personal and professional growth and development (McGarvey *et al.,* 2000:1097).

According to Carrington, (2009:6) the registered nurse specializing in Perioperative Nursing practice performs nursing activities in the preoperative, intraoperative, and postoperative phases of the patients' surgical experience. Registered nurses enter perioperative nursing practice at a beginning level depending on their expertise and competency to practice. As they gain knowledge and skill, they progress on a continuum to an advanced level of practice. Based on the American Operating Room Nursing Standards and Recommended Practices for Perioperative Nursing (Carrington, 2009:6) the operating room nurse provides a continuity of care throughout the preoperative period, using scientific and behavioral practices with the eventual goal of meeting the individual needs of the patient undergoing surgical intervention. This process is dynamic and continuous, and requires constant reevaluation of individual nursing practice in the operating room.

According to Carrington, (2009:6) Whether scrubbing, circulating, or supervising other team members, the perioperative nurse is always aware of the total environment, as well as the patient's reaction to the environment and the care given during all three phases of surgical intervention. The perioperative nurse is knowledgeable about aseptic technique, patient safety, legal aspects of nursing, and management of nursing activities associated

with the specific surgical procedure being performed.. Perioperative nursing practice has one continuous goal: to provide a standard of excellence in the care of the patient before, during, and after surgery.

It is the operating room nurse's responsibility to care physically and mentally for the patients and to protect them from physical harm, while still considering their personal dignity during each of the three phases. Furthermore, Lindwall (2003:247) remarks that the peri-operative phase requires sufficient time and staff with a sound knowledge of continuous nursing care from the beginning to the end.

Bull and Gerald (2006:3) state that the relationship between operating room nurses and the patient is one of the most important relationships existing in the operating room. The central purpose of the nurse and patient relationship is to ensure the safety of the patient during the time s/he remains in the operating room. For many patients, entry into the technological space of the operating room is accompanied by feelings of fear and anxiety. The patients are physically and emotionally dependent and they rely heavily on the nurses' ability to complement the technical components of their role with the caring aspects. Lack of ability to care and comfort the patient due to fear of the unknown or uncertainty of the OR nurse can create an unpleasant work environment.

In this regard, Veelen (2003:1078) remarks that the operating room environment is ever changing because of new advances in technology, instrumentation or procedures. This changing technological environment again places additional educational requirements on practising professionals. Furthermore, technologically driven changes constantly challenge the skills of operating room nurses which may increase their occupational stress.

Stress is usually associated with the environment or situation in which it is being experienced, such as at work. Occupational stress is the harmful physical and emotional responses that occur when the requirements of a job do not match the capabilities, resources, or needs of the workers (Veelen, 2003:1078). Robert (2005:352) states that

the interpersonal work relations cause more stress than any of the other perceived job stressors. Work politics, physician attitudes and co-workers who have neglected their duties contribute to interpersonal work strain.

According to Chung, Chen, Lin, Wang, and Hsu (2009: 200) nurses are the backbone of the medical system and act as the first line of patient medical care. Therefore nursing quality is one of the most important factors determining medical service performance. Nursing work is one of the most stressful and challenging vocations because of its need for specialization, complexity, and requirement to handle emergency situations. The negative influence of job stress on nurses and hospitals is manifested through absence, unhealthiness, staff conflict, depression, staff turnover, and inferior service. Job satisfaction affects quality of life. To promote OR nurse work performance and life quality, it is important to study the interactive relationships.

Barden (2005:16-20) remarked that the work environment and the level of perceived support is the main reason for nurses' decision to retire or to stay working. Creating a healthy work environment for operating room nurses must extend beyond addressing the physical hazards. A healthy work environment also has to ensure proper allowance for the psycho-social issues, such as recognition, leadership, collaboration and healthy communication with all members of the health care team.

Christmas (2008:317) states that dissatisfaction with management, scheduling difficulties such as repeated and long duty hours and departmental relationships are all contributors to staff turnover. The work environment is a major aspect of the day-to-day grind that drives the turnover of the health-care professionals. In hospitals, many factors influence the staff turnover, such as staff relationships, shortage of staff and the lack of motivation. Interpersonal relationships can also have a negative impact. If peer behaviour is threatening, isolating, or hostile, then this negativity can also drive staff turnover.

According to Ruth (2002:124), operating room nurses are the main resource personnel in the operating room. To utilize such resource effectively, in-service education is crucial so that they can render better services. In the OR the nurses knowledge of infection control

and aseptic techniques is evidence based, ensuring accountability in practice. OR nurses require knowledge of anatomy and physiology to be able to be competent at the table. They have the ethical and professional obligation to ensure the protection of the patient from the incompetence of other members of the operating team. The role is defined as combination of technical knowledge and expertise associated with the sophisticated instruments, techniques and drugs in current use, and the basic nursing skills acquired through training and experience that are vital to the care, physically and mentally of the patient and to protect them from physical harm, while still considering their personal dignity.

Chikanda (2005:162) states that nurses migrating from developing to industrialized countries often leave behind an already-disadvantaged system. The nurses who remain behind will have heavier workloads, reduced work satisfaction and lower morale which may contribute to high levels of absenteeism and a deteriorated quality of care delivery.

The researcher decided to conduct this research based on the experiences of the operating room nurses in their work environment in one of the six state hospitals in Addis Ababa, Ethiopia. The hospital concerned is a regional hospital in the city of Addis Ababa, Ethiopia. This hospital has the capacity of admitting 45 surgical, 28 medical, 18 burns, 10 plastic surgery, 16 gynaecology, 8 maternity, 45 paediatric and 30 neonatology patients at any particular time.

In the Ethiopian context the operating room nurse is a registered nurse who is working in the operating room through experience in the field and who has only received in-service education. This in-service education is given by the operating room head nurse who may have been trained as an operating room nurse overseas for one year. In Ethiopia this nurse educates the other registered nurses working in the operating room for a minimum of three months. This is the only form of formal training as there is no operating room nurse training available in the country at this stage.

After the in-service education, the registered nurses will scrub with other experienced registered nurses for about two to three months. Thereafter, they will scrub and take

charge of the nursing duties in the operating room on their own. These registered nurses work as scrub nurses, and they also work as circulating nurses**.**

In this state hospital which is consisting of three operating rooms there are one trained operating room nurse, 14 registered nurses working in the operating room as scrub nurses or circulating nurses and one assistant nurse working on the autoclave side of the operating room. There are also one porter and four cleaners working in the operating room.

The staff allocation for day duty is as follows: six registered nurses to scrub or circulate; one coordinator to monitor the overall intra-operative activities; one nurse assistant to work at the autoclave section, one cleaner and one porter to work in the three operating rooms. Night duty allocation is as follows: two registered nurses and one cleaner. Weekend duty allocation consists of two registered nurses and one cleaner. The other staff will be off duty. The staff members are allocated to the three operating rooms until all cases for the day are done.

The scrub nurse and the circulating nurse assigned in each operating room will do all the cases scheduled for the day and they are responsible for washing, drying and packing the instruments to be autoclaved after each operation, while the cleaner does the rest of the cleaning. Only one cleaner is allocated to all three operating rooms.

1.2 PROBLEM STATEMENT AND RESEARCH QUESTIONS

The research project was motivated by the researcher's own experience while working in the operating room and from continuous discussions with the head nurse and other colleagues in the operating room of one of the state-owned hospitals in Ethiopia. Two of the problems identified by the head nurse are a high turnover rate of staff as well as a high absenteeism rate. It appears that the high turnover rate of the operating room staff, the high rate of absenteeism and the seeming lack of job satisfaction are critical problems observed in the afore-mentioned hospital.

Operating room nurses usually complain about aspects such as not participating in the decision-making and inadequate feedback from the hospital management. These can result in a lack of motivation and limited job satisfaction, which in turn, bring stress among these nurses.

Another problem is the engagement of registered nurses in non-nursing tasks due to the shortage of auxiliary staff. Such engagements include cleaning, washing, packing and the sterilizing of the instruments in order to make them free of micro-organisms as they are to be used on incised tissue. Freshly incised or traumatized tissue can become easily infected, regardless of the body. Intact skin and mucous membranes are the body's first line of defence against infection, but a portal for microorganisms is created if the integrity of the skin is interrupted (Berry and Kohn, 2004:256).

Although the levels of coping with the problems differ according to the individual's ability, according to the researchers own observation while working in the same operating room and as the information gathered during informal discussion with the head nurse, most of the operating room nurses end up by becoming physically ill; looking unhappy and suffering from burnout, as well as experiencing a loss of interest in the job. These factors tend to affect the quality of patient care and proper operating room management.

At the moment there is also no clear job description that nurses can utilize in doing their jobs. There are also no clear guidelines on how to manage problems arising from the operating room nurses' utilization of the environment and the problems they are experiencing. There is a lack of empirical research on the experiences of operating room nurses in their working environment in the Ethiopian context.

The following research questions were intended to be answered in this research project:

- What are the experiences of the operating room nurses in their work environment?
- What potential assistance would such nurses need to better cope with the problems they experience in their work environment?

1.3 RESEARCH OBJECTIVES

According to De Vos, Strydom, Fouche and Delport (2005:104), an “objective“ is the step one has to take realistically at a grass-roots level, within a certain time span in order to attain the dream. In order to answer the research questions, the following objectives were set as a guide to the process.

The researcher had the following two objectives to guide the study.

Primary objective: To explore and describe the experiences of operating room nurses in their work environment.

Secondary objective: To develop guidelines which can be used to assist the operating room nurses in coping more effectively with their work environment.

1.4 CONCEPT CLARIFICATION

The following section provides clarification of the central concepts as they apply within this study.

Operating room nurse (ORN)

An operating room nurse is a healthcare worker who is a professional, registered nurse and assists the surgeon and the surgical team in their tasks as well as taking responsibility for surgical supplies and keeping an inventory of all the items. Operating room nurses provide care for the patient who is going through a surgical procedure in the operating room. Operating room nursing takes place in a particular environment with special equipment and it requires advanced training. The OR nurse must have a background in aseptic techniques to prevent any cross-infection. In this study the operating room nurse is a professional nurse working in the operating room using the knowledge she/he has acquired through in-service education by the qualified head nurse of the operating room. The nurse is responsible for each and every activity in the operating room and supervises the work organization within the operating room and mediates between the various hospital departments, the surgeons and the management (Shirley, 2005:184). Operating room nurse will be referred to as OR nurse in this study.

Operating room (OR)

The operating room is a unit in the hospital where surgical procedures are performed and it is usually a restricted area not open to staff who are not working in this area. A controlled environment for sterile and aseptic techniques is maintained within an operating room (Berry and Kohn, 2004:185).

Work environment

The work environment comprises the physical location, equipment, materials processed or used and the activities of an employee while engaged in the performance of his/her work (Babylon Dictionary, 1997-2009). In this study the work environment comprises the operating room itself, the equipment, the materials used, the setting of the operating room, the activities of the nurses, the relationship between the nurses and doctors, as well as the management of the state hospital in Addis Ababa, Ethiopia.

Experience

Encarta World English Dictionary (2009) defines experience as “the sum total of the things that have happened to a person and of his/her past thoughts or feelings, and also to be exposed to, involved in or affected by something”. In this study experience refers to the knowledge or skill gained by the nurses working in an operating room as their work environment.

1.5 PARADIGMATIC PERSPECTIVE

This research study was based on the nursing theory reflected in WJ Kotze (1998:3) “An anthropological Nursing Science: Nursing Accompaniment Theory“.

1.5.1 METAPARADIGMS

Kotze's model of Nursing Accompaniment explains her theory in terms of the concepts of man/human being/person, world, health and nursing which will now be discussed.

1.5.1.1 MAN/ HUMAN BEING/ PERSON

According to Kotze, (1998:4), man is a unique multidimensional total being, invisibly body-psyche-spirit, continuously becoming within an inseparable dynamic relationship with world, time, fellow-beings and God. She sees man as a three-dimensional being who has a physical body, psyche and a spirit. In order to meet the person's health needs an individual should be approached in a holistic manner. In this study man would refer to the registered nurses working in the operating room who are experiencing problems with their working environment.

1.5.1.2 WORLD

World refers to the world in which man exists. This world includes the world of science and technology, nature, ecology, astronomy and microorganisms (Kotze, 1998:4). Kotze (1998:4) refers to a personal world and a surrounding world which includes the world of work. Personal world refers to the life world which is the co-existence and the dimension of time in which man exists (Kotze, 1998:4). In this study world refers to the life world of operating room nurses and the physical and psychological challenges they may encounter within the working environment. The surrounding world includes the work world which is the physical and clinical environment in which the OR nurses work.

1.5.1.3 HEALTH

Health refers to physical and mental health or illness of an individual. It is a dynamic process relating to the degree of ability of a person to maintain the health within him/her self optimally in relationships (Kotze, 1998:4). The stress experienced by the Ethiopian

nurses in their work environment may affect their physical or mental health. This study sought to determine how OR nurses experience the effect of working in the operating room on their health.

1.5.1.4 NURSING

Nursing is a scientific process and the nursing role is to accompany the patient to wellness. In nursing care the nurse accompanies the patient from dependence to total independence (Kotze, 1998:4). This study focuses on the operating room nurse. The role of the nurse in the operating room will be to take the lead, teach, organise, and implement quality service, assist, and support in order to maintain continuity of service.

The research design will now be discussed.

1.6 RESEARCH DESIGN

The research design in this study was a qualitative, exploratory, descriptive and contextual design. A more detailed description of each of these concepts will be given in Chapter 2.

1.7 RESEARCH METHOD

The research method is the research process which involves population and sample, data collection and data analysis (Babbie and Mouton, 2004:75). The research population and sampling, data collection method, data analysis, literature control, pilot study and ensuring trustworthiness will be discussed under the research method.

De Vos *et al.,* (2005:193) define the research population as the term that sets boundaries to the study. It refers to individuals who possess the same specific characteristics. For this particular study the study population was all the registered nurses working in the operating room.

The research population was the registered nurses working in the operating room of the state hospital in Ethiopia. As there were only 15 registered nurses who met the inclusion criteria, no sampling took place. This means that the research population encompassed all the registered nurses who met the inclusion criteria and who were willing to participate in the study and they were all interviewed face-to-face.

1.7.1 DATA COLLECTION METHOD

Data collection is the accurate systematic gathering of information relevant to the research objectives or questions of the study (Burns and Grove, 2005:421). The data collection method was by means of semi-structured interviews using a structured interview guide. According to De Vos *et al.* (2005:292), the semi-structured interview is more free-flowing, with no restrictions on the participant's opinion and is conducted more like a normal conversation, but with a purpose. Semi-structured interviews make use of questions that are contained in the interview guide with a focus on the issue to be covered, and the questions are asked in an open-ended manner to allow the participant to express his/her feelings without restriction. This is done in order to understand the experiences of the participants and the meanings they attach to those experiences.

All the interviews were conducted in Amharic which is the participants' working language. They were audio-taped with the consent of the participants. The interviews were transcribed and translated from Amharic into English by a language expert. The data collection method used in the study will be discussed in more detail in Chapter 2.

1.7.2 METHOD OF DATA ANALYSIS AND INTERPRETATION

According to Creswell (2009:183) the process of data analysis involves making sense out of text and image data. It involves preparing the data for analysis, conducting different analysis, moving deeper and deeper into understanding the data (some qualitative researchers like to think of this as peeling back the layers of an onion), representing the data, and making an interpretation of the larger meaning of the data. It is an on-going process involving continual reflection about the data, asking analytic

questions and writing memos throughout the study. Qualitative data analysis is conducted concurrently with gathering data, making interpretation, and writing reports, while interviewing are going on (Creswell.2009:184).

For the purpose of this study the researcher followed the steps as proposed by Tesch, (in Creswell, 2003:192) to analyse the data. After themes and categories had been identified, a literature control was done. These will be discussed in depth in Chapter 2.

1.8 PILOT STUDY

A pilot study can be defined as the small-scale version of the major study or a dress rehearsal of the main study. By doing a pilot study, the researcher can recognize and address any potential problems (Brink, 2006:54). The researcher conducted one interview with a participant who met the inclusion criteria. Data analysis was done and necessary changes were made to the interview guide after discussion with the supervisors. The implementation of the pilot interview will be discussed in Chapter 2.

1.9 TRUSTWORTHINESS

Lincoln and Guba's model of ensuring trustworthiness (cited in Babbie and Mouton, 2004:279) was used to ensure the rigour of the study. The key criterion or principle of a good qualitative research project is found in the notion of trustworthiness. To ensure trustworthiness the four criterions of Lincoln and Guba as (cited in Babbie and Mouton, 2004:277) were used, namely credibility, transferability, dependability and Confirmability. The research method and design will be discussed in more detail in Chapter 2.

1.10 ETHICAL CONSIDERATIONS

Anyone involved in research needs to be aware of the general agreement on what is proper and what is improper in scientific research (Babbie and Mouton, 2004:520). For the purpose of this study, the following ethical issues were explained, so that the

participants would be protected according to the principles of human rights, namely, the right to self-determination, to privacy, to anonymity and confidentiality and to be protected from any discomfort or harm (Brink, 2006:31).

1.10.1 THE RIGHT TO SELF DETERMINATION

This implies that an individual has the right to decide whether or not to participate in a study without prejudicial treatment. In addition, he or she has the right to withdraw from the study at any time (Brink, 2006:32). The researcher ensured that the participants' choice or decision was respected as mentioned in the written informed consent statement.

1.10.2 INFORMED CONSENT

The researcher obtained written informed consent by using the consent form for participants in order to acknowledge that the rights of participants were protected. This form acknowledges that participants' rights have been protected during the study time (Creswell, 2003:64). Participants were provided with sufficient information about the study to allow them to decide for or against their participation. Informed consent forms were given once they had been given all the information. According to Creswell (2003:64), the consent form should include all the following information:

All participants have the right to voluntary participation and withdrawal at any time and this is explained to them.

Clear information about the nature of the research, the purpose and the likely impact on the participants is given to them.

The following information is also explained to the participants:

- The procedure of the study, so that individuals can reasonably expect what to anticipate in the research.

- The right to ask questions, to obtain a copy of the results and have their privacy respected.
- The benefits of the study that will accrue to the individuals.
- The signatures of the participant and the researcher, when the consent form is signed agreeing to these provisions.

The Director of the Hospital, the Matron of the Hospital and the operating room head nurse were asked to give their permission to conduct the study. The permission letters are attached.

1.10.3 THE RIGHT TO PROTECTION FROM DISCOMFORT AND HARM

According to Brink (2006:32) individuals participating in the research should not experience harm in any way, be it physical, emotional, spiritual, economic, social or legal. De Vos *et al.* (2005:58) state that the participants should be thoroughly informed in advance about the potential impact of the investigation. The participants have the right to determine whether or not to participate in the study without any risk, or to withdraw from the study and to be protected from any discomfort and harm (Brink, 2006:32). The researcher assured that the participants were not exposed to excessive stressful or harmful conditions during the interview/study. After the interview, the researcher did debriefing or arranged for a counsellor, if needed, in order to reassure them.

1.10.4 THE RIGHT TO PRIVACY

The participant had the right to expect that the information collected from the participant would remain confidential (Brink, 2006:34), and the researcher ensured the privacy and the dignity of the participants (Brink, 2006:47). During the interview, only the researcher and the participant were present in the venue.

1.10.5 THE RIGHT TO CONFIDENTIALITY

Within a qualitative study design the most important concern in the protection of the participants' interests and wellbeing and the protection of their identity. The researcher would be in a position to make public the report given by the participant for the benefit of other researchers, but the participants were informed and assured that their confidentiality would be protected (Babbie and Mouton, 2004:523). In this study, the researcher kept the identities confidential and participants were known only by their code, so that nobody except the researcher could identify them.

1.11 CHAPTER DIVISION

Chapter 1 Overview of the study

Chapter 2 Research methodology

Chapter 3 Discussion of findings and literature control

Chapter 4 Guidelines, Conclusions, limitations and recommendations

1.12 CONCLUSIONS

A brief overview of the study, the problem statement and the research objectives has been given and explained. The study sought to assess the experiences of operating room nurses in a state hospital in Ethiopia regarding their work environment. The research design and method, the method of data collection, as well as data analysis, including ethical considerations have also been discussed. The researcher also sought to develop guidelines to assist the operating room nurses to cope more effectively within their work environment. In chapter two the research design and methodology to be used in the study will be discussed in more detail.

CHAPTER TWO: RESEARCH DESIGN AND METHODOLOGY

2.1 INTRODUCTION

In Chapter One an overview of the research study was presented, and the problem statement and the research objectives were described. In Chapter Two the research design and methodology will be discussed in detail.

The study has been done to explore the experiences of operating room nurses in their work environment at the state hospital in Ethiopia. Data were collected by means of semi-structured interviews utilizing a structured interview guide. The aim of the study was to develop guidelines which can be used to assist the operating room nurses in coping more effectively with their work environment.

2.2 RATIONALE

In the Ethiopian context the operating room nurses are registered nurse working in the operating room by getting experience through in-service education and experience. There is no formal operating room nurse training available in the country at this stage as discussed on page 5.

According to the information obtained from the operating room head nurse, there is a high turnover rate and high absenteeism. It is suspected that this may be caused by how nurses experience the environment and the stress they derive from this experience. The researcher wanted to determine how the nurses working in one of the operating rooms of the state hospitals experience their working environment.

2.3 THE RESEARCH OBJECTIVES

The researcher was guided by two objectives which were the basis for the research:

Primary objective: to explore and describe the experience of operating room nurses of their work environment.

The second objective: to develop guidelines which can be used to assist the operating room nurses in coping more effectively with their work environment.

2.4 RESEARCH DESIGN

According to De Vos *et al.* (2005:132), the research design refers to a plan for conducting research. It is implemented to find answers to the researcher's focused questions and to test any hypothesis that has been formulated. The researcher intended to explore and describe the experiences of operating room nurses regarding their work environment in a state hospital in Ethiopia. The research design in this study was a qualitative, exploratory, descriptive and contextual study.

2.4.1 QUALITATIVE DESIGN

A qualitative design aims to understand and interpret the meaning that participants give to their everyday lives (De Vos *et al.,* 2005: 270). Qualitative methods focus on qualitative aspects of meaning, experience and understanding. Furthermore, qualitative methods study human experiences from the viewpoint of the research participants within the context where the action takes place (Brink, 2006:113). According to Babbie and Mouton (2004:270), a qualitative design consists of the following key features:

- It is conducted in the natural setting
- The focus is on the process rather than the outcome
- The participants' perspective is emphasized.
- The primary aim is to obtain in-depth descriptions and understanding of actions and events.

- The main concern is to understand social action in terms of its specific context, rather than attempting to generalize to some theoretical population.
- The research process is often inductive in its approach resulting in the generalization of a new hypothesis and/or theories.
- The qualitative researcher is seen as the main instrument in the research process (Babbie and Mouton 2004:270).

The researcher used a qualitative methodology to determine the experiences of the operating room nurses in their work environment. The researcher also used a qualitative method of analysis to determine the experiences of the participants of their working environment (Berg, 2001:6).

2.4.2 EXPLORATORY DESIGN

According to Babbie. E. (2009:88) the purpose of exploratory research is to explore a topic, that is, to start to familiarize a researcher with that topic and to investigate unknown situations. Exploratory researchers explore new territory and map it out for future research. This approach typically occurs when a researcher examines a new interest or when the subject of study is relatively new. Exploratory studies are most typically done for three purposes:

- To satisfy the researchers curiosity and desire for better understanding
- To test the feasibility of undertaking a more extensive study and
- To develop the methods to be employed in any subsequent study.

Exploratory studies are quiet valuable in social scientific research. They are essential whenever a researcher is breaking new ground, and they can almost always yield new insight into a topic for research (Babbie and Mouton, 2004:80).

2.4.3 DESCRIPTIVE DESIGN

According to Brink (2006:104), in a descriptive design the researcher merely searches for accurate information about the characteristics of a single sample of subjects, groups, institutions, or situations. These designs describe the variables in order to answer the research question (Brink, 2006.102). A descriptive strategy of inquiry was used as part of the research design for this study. It allowed the researcher the opportunity to look with intense accuracy at the phenomenon of the moment, namely the description of the experience of operating room nurses in their work environment in their own words, as well as to describe the researcher's personal observations of the participants' emotional expression during the interview. A major purpose of many social scientific studies is to describe situations and events. The researcher observes and then describes what was observed (Babbie. E. 2009:88).

2.4.4 CONTEXTUAL DESIGN

Contextual design refers to the phenomenon being studied within its immediate surroundings (Creswell, 2003:51). A contextual design is used to study people in their natural setting (Babbie and Mouton, 2004:272). This research study was conducted in the specific context of the operating room in the state hospital of Addis Ababa in Ethiopia to gain information about the experiences of the operating room nurses of their work environment.

2.5 RESEARCH METHOD

The research method involved a description of the research population and sampling, data collection method, data analysis method, doing literature control and doing a pilot study and ensuring rigour in the research process. Each of these factors will now be discussed.

2.5.1 RESEARCH POPULATION AND SAMPLING

De Vos *et al.,* (2005:193) define the research population as the term that sets boundaries to the study. It refers to individuals who possess the same specific characteristics. For this particular study, the study population was all the registered nurses working in the operating room of a state hospital in Addis Ababa.

The inclusion criteria were the following:

- The participants were registered nurses working in the operating room of this state hospital.
- The registered nurses had a minimum of two years of work experience in the operating room of the state hospital.

As there were only 15 registered nurses who met the inclusion criteria, no sampling took place. This means that all the individuals who met the inclusion criteria and who were willing to participate in the study were interviewed.

2.5.2 METHOD OF DATA COLLECTION

Polit and Hungler (2001:455) define data gathering as the gathering of needed information to address the research problem. The data gathering process will give us more information than we usually know.

2.5.2.1 INTERVIEWING:

According to Babbie and Mouton (2004:2289), a qualitative interview is essentially a conversation in which the interviewer establishes a general direction for the conversation and pursues specific topics raised by the respondent. Ideally, the respondent does most of the talking.

The data were collected by means of semi-structured interviews using a structured interview guide as well as field notes and audio tapes taken by the researcher during the interview time. The semi-structured interview was more free-flowing, with no restrictions on the participant's opinion and was conducted more like a normal conversation, but with a purpose (De Vos *et al.,* 2005:292).

The researcher began the process of data collection after getting permission from the hospital authorities to conduct the study. The researcher contacted the operating room head nurse to explain the inclusion criteria and to ask if it was possible to see the participants to explain about the study. The researcher then saw the participants and explained about the study. The researcher did make sure that the participants who agreed to participate in the study understood the content of the permission letter and consent form before they signed their consent. Individual appointments were made to sign the informed consent form. The participants signed the consent form after indicating an understanding of the process and a follow-up appointment was scheduled for the actual research interview at a place, date and time convenient to them.

Semi-structured interviews were used to obtain information. The questions used are stated in the structured interview guide (see annexure E) with a focus on the issue to be covered, and the questions were asked in an open-ended manner to allow the participant to express his/her feeling without restriction. This was done in order to understand the experiences of the participants and the meanings they attach to those experiences (De Vos *et al.,* 2005:292).

According to Brink (2006:153), all interviews should occur at a time and place that is convenient to both the researcher and the participant. Allowing adequate time was crucial to the completion of the interview schedules. The interviewer ensured as much privacy as possible for the interview.

Interviewing is the predominant mode of data collection in qualitative research. According to De Vos *et al.,* (2005:287), the conversation-like interview has central focus but is not one sided. Interviewing the participant involves description of the experience

being studied but also involves reflection on the description. De Vos *et al., (*2005:287) define qualitative interviews as attempts to understand the world from the participants' point of view, to unfold the meaning of people's experience to uncover their lived world prior to scientific explanations. All the interviews were conducted in Amharic which is the participants' working language and were audio-taped with the consent of the participants as mentioned on page 11.

According to Babbie and Mouton (2004:251), the presence of the researcher should not affect a respondent's perception of the question and the answer given. One of the ways to achieve this is to match the interviewer and respondent on several characteristics such as:

- The ability to speak the home language of the respondent
- Using the interviewer from the same area

In this case the researcher had the privilege to fulfil the above as she speaks the same language as the participants and she is from the same area as well, so this made the interviewing process much more understandable and easier.

Interview guide was developed by the researcher in English and translated into Amharic by a language expert and was then used to generate relevant data. The researcher used the following questions as a guide in interviewing the operating room nurses:

Main question:

- Tell me about your experience of the work environment in the operating room.

Probing questions:

- Tell me about the challenges you are facing while working here.
- Is there any support you are getting from the management to cope with the problems?
- What do you suggest to help the operating room nurses to cope more effectively with the work environment?

The researcher in conducting the interviews used the following techniques of probing in order to get more information from each participant as described by Creswell (2003:186-187). During all the interviews the researcher made a conscious effort initially to establish trust and build rapport and tried at all times to ask questions that were related only to the study. The researcher demonstrated careful listening by using verbal cues to show interest; clarifying questions, for example “Are you saying that…?” and neutral but encouraging phrases, such as “Could you tell me more about that…?” This technique was also used to provide feedback about the interview progress (Creswell, 2003:186-187).

The researcher used a voice recorder/audio tape, field notes and observation of participant emotional expression as the means of data collection. The interviews were recorded in the participants’ working language which is Amharic and transcribed into English by a language expert.

2.5.2.2 FIELD NOTES:

According to De Vos (2005:319), field notes are a written account of the things the researcher sees, hears, experiences and thinks in the course of collecting or reflecting on the data obtained during the study including observation and interpretation. The researcher used observations and made field notes during the interviews as well as during the analysis period. The researcher used observations and made field notes during the interviews as well as during the analysis period. According to Creswell (2009:181) observational notes are those researcher takes field notes on the behaviour or activities of individuals at the research site. In this field notes the researcher records, in unstructured or semistractured way (using some prior questions that the inquirer wants to know), activities in the research site.

2.5.3 METHOD OF DATA ANALYSIS:

The method of qualitative data analysis is non-numerical, usually in the form of written words or video/audio tapes. Analysis of data in qualitative studies therefore involves an examination of words. Researchers using qualitative approaches tend to spend hours

reflecting on the possible meanings and relationships of the data (Brink, 2006:184). This type of analysis is described as a ‘hands-on process’ during which the researcher becomes deeply immersed in the data; it is also sometimes referred to as ‘dwelling’ with the data (Brink, 2006:184). The gathered interview data and field notes were transcribed and formed the data base.

To analyze the data the researcher followed the steps as proposed by Tesch (in Creswell, 2003:192). These steps included:

- Get a sense of the whole. Read all the transcriptions carefully. Write down some ideas as they come to mind.
- Pick one interview, the most interesting one, try to understand its underlying meaning, write thoughts in the margin.
- Make a list of all topics. Cluster together similar topics. Form these topics into columns as major topics, unique topics, and leftovers.
- Take this list and go back to your data. Abbreviate the topics as codes and write the codes next to the appropriate segments of the text.
- Find the most descriptive wording for your topics and turn them into categories. Group related topics together.
- Make a final decision on the abbreviation for each category and alphabetize these codes.
- Assemble the data material belonging to each category.
- If necessary recode your existing data.

The main themes and sub-themes were identified and the researcher made use of a language expert as mentioned above and an independent coder so as to create a good understanding between the supervisors, the independent coder and the researcher. Findings of the interviews and the literature control will be done in chapter three.

2.6 METHODS OF DATA VERIFICATION

Lincoln and Guba (in Polit, Beck and Hungler. 2001:312) suggested four criteria to ensure the trustworthiness of qualitative data. The researcher used the following four criteria, namely credibility, dependability, conformability and transferability to ensure the of truth value in accordance with each of the above criteria.

2.6.1 CREDIBILITY:

Credibility refers to confidence in the truth of the data and their interpretations. Qualitative researchers must strive to establish confidence in the truth of the findings for the particular participants and contexts in the research (Polit and Beck, 2008:539). The researcher used the following strategies to ensure credibility:

- **Interviewing technique**: Qualitative interviewing is essentially a conversation in which the interviewer establishes a general direction for the conversation and pursues specific topics raised by the respondent. Ideally, the respondent does most of the talking (Babbie and Mouton, 2004:289).The researcher used semi-structured interviews, using a structured interview guide in order to put similar questions to all the participants. The researcher used verbal and non-verbal interview techniques to encourage the participants to describe their experiences.

- **Triangulation:** The best way to obtain the various and different constructions of reality that exist within the context of the study is by asking different questions, seeking different sources and using different methods (Babbie and Mouton, 2004:277). The researcher triangulated the collected data through interviews, research notes and a literature control. Literature control was done using books, journals and the internet. The researcher used an independent coder experienced in qualitative research to analyse the data. This means that the data were analysed by the researcher, the independent coder as well as the supervisors of the study to ensure that all of them agreed on the research themes.

- **Peer review:** This was done with similar status colleagues who were outside the context of the study, who had a general understanding of the nature of the study and with whom the researcher could review perceptions, insights and analyses (Babbie and Mouton, 2004:270). For the data analysis the researcher worked with the independent coder as well as being guided by two supervisors and did independent checking of data. Consensus was reached between the researcher, the independent coder and the supervisors.

2.6.2 DEPENDABILITY

The dependability of qualitative data refers to data stability over time and under certain conditions (Polit *et al.,* 2001:315). The researcher used the following strategies to ensure trustworthiness as discussed below:

- **Inquiry audit**: An auditor examines documents and interview notes and the running account of the process of inquiry (Babbie and Mouton, 2004:278). The researcher made use of an independent coder to audit the quality of the interviews and field notes.
- **Pilot study**: in qualitative research the pilot study is usually informal with the purpose of determining whether the relevant data can be obtained (De Vos, 2005:337). The researcher conducted a pilot interview to assess whether the sequence and wording of the questions were understandable to the participants. The interview was transcribed and presented to the supervisors. The supervisors read through the interview and gave the go-ahead.

2.6.3 CONFIRMABILITY

Confirmability refers to the objectivity or neutrality of the data, such that two or more independent people would agree on the data's relevance or meaning (Polit *et al.,* 2001:315). Confirmability is the degree to which the findings are the product of the focus of the inquiry and not of the biases of the researcher (Babbie and Mouton 2004:278). In this specific study conformability was ensured by the following strategy:

- **Confirmability audit:** The researcher made use of an independent coder to assess the quality of the data and the findings as already described. The two supervisors also ensured that data of a high quality were used.

2.6.4 TRANSFERABILITY

Transferability refers to the extent to which the findings from the data can be applied in another context or with other respondents (Babbie and Mouton 2004:277). Qualitative research is not primarily interested in generalizations and does not claim that the knowledge gained from one context will necessarily have relevance for another context or in the same context in another time frame. The researcher is obliged to ensure that findings are generalized from a sample to its target population, and the obligation for demonstrating transferability rests on those who wish to apply it (Babbie and Mouton 2004:277). The researcher in this study had ensured transferability using the following strategy:

- **Dense description**: Transferability in a qualitative study depends on similarities between sending and receiving context, the researcher collects sufficiently detailed descriptions of data in context and reports them with sufficient details and precision to allow judgements about transferability to be made by the researcher (Babbie and Mouton 2004:277). The description of the research design and method as well as the literature control was given by the researcher to maintain clarity. The dense description was given in order to enable another researcher to follow the research methodology to interpret whether the findings can be applied to his/her context.

2.7 CONCLUSION

Brief overviews of the research design and methodology, the research objectives, have been explained. The study seeks to assess the experiences of operating room nurses in a state hospital regarding their work environment. The method of data collection, as well as data analysis has also been discussed.

In chapter three discussions of findings how the researcher implimented the research process the techniques used in data collection as well as the data analysis and literature review will now be discussed.

CHAPTER THREE: DISCUSSION OF FINDINGS AND LITERATURE CONTROL

3.1 INTRODUCTION

In Chapter Two, the research design as well as research method were described in depth. Chapter Three will present a discussion of the results obtained from the data gathering. The results will be presented based on the main themes and sub-themes identified from the collected data. Quotations of the respondents will be included in the discussion to illustrate the themes or sub-themes. A literature control was conducted to corroborate the findings. The findings of the study will now be discussed

3.2 DISCUSSION OF THE CHARACTERSTICS OF THE RESEARCH POPULATION

The research population consisted of fifteen registered nurses who met the inclusion criteria. The participants were interviewed in December 2009 at one of the state hospital's operating rooms in Addis Ababa, Ethiopia. Each interview lasted 30-45 minutes.

To follow is biographical information of the participants to show that the researcher included all age group and gender without any discrimination.

Both gender groups were included, namely 12 females and three males.

- All the participants spoke Amharic which is the language the researcher speaks well and is also the official language in Ethiopia.
- The registered nurses' length of employment in this specific operating room was as follows:
  - Nine nurses had 5 years of experience and less.
  - Four nurses had between 5 - 9 years of experience.
  - Two nurses had more than 10 years of experience.

- The age groups of participants were as follows:
  - Four nurses were between 25 – 32 years.
  - Eight nurses were between 33 – 40 years.
  - Three nurses were between 41 – 48 years.

- Fourteen of the participants were Christians, from different denominations and one was of the Islamic faith.
- Eleven of the participants were married and four of them were single.

3.3 IMPLEMENTING THE RESEARCH PROCESS

After permission and ethical consent were granted by the Faculty of Health Sciences' Committee for Research, Technology and Information (FRTI) of NMMU, the data were gathered from the operating room nurses working in one of the state hospital operating rooms in Ethiopia during December 2009. The data gathering process commenced after permission to conduct the study as well as ethical permission had been granted by the Ethiopian state hospital authority, namely the medical director, the matron and the operating room head nurse. After permission was obtained, the researcher asked the operating room head nurse to act as a gatekeeper to arrange an appointment for the researcher to meet all the operating room nurses. During the meeting the researcher explained the purpose of the research and its procedure to the respondents. The researcher spent some time socializing with the nurses to put them at ease. All the operating room nurses were supportive of the study and willing to take part. During this time the researcher observed how the nurses interacted with each other and how supportive and close they were to each other. The researcher asked each prospective participant to sign a consent form and made appointments for interviews to be conducted at the participants' convenience. After this preparation, data collection started. Doing the interview, the independent coder and the literature control will be discussed below.

- **Conducting the interviews:** The researcher conducted one pilot interview and it was transcribed and translated into English so that the supervisors could study it. As no problems were experienced with the data, the pilot interview was included

in the data base. After approval by the supervisors, the researcher continued with the interviewing process. Interviews were conducted according to the format described in Chapter Two. The aim of the qualitative interview is to be able to see the world through the eyes of the participant. Interviews can be a valuable source of information, provided they are used correctly (Maree, 2007: 87).

The researcher made use of a semi-structured interviewing approach, using an interview guide with predetermined questions, which allowed for probing and clarification of answers. All participants were asked the same questions as set out in the interview guide (see annexure D).

The interviews were captured using a tape recorder as it allowed capturing every detail of the conversation. The researcher furthermore made notes of observation to enable her to use field notes to accurately capture all non-verbal data. The researcher noted non-verbal cues on how the participants were behaving to express their feeling at the time of the interview. Most of the interviews were conducted in the duty room of the operating room. Two interviews were conducted outside the hospital according to the participants' choice. This was pre-arranged by the researcher.

The researcher transcribed the interviews in Amharic and made use of a language expert who is fluent in both English and Amharic to translate the Amharic transcription into English. The language expert ensured that the English translation reflected the thoughts and verbalization of each participant. The field notes indicating the reaction of their feeling were added to the transcribed interviews in order to form the data base.

- **Analyzing data:** The researcher analyzed the data base by reading each interview carefully and tried to identify the meaning. Coding is defined as marking the segments of data with symbols by using descriptive words or unique identifying names. It means that whenever you find a meaningful segment of text in a transcript, you assign a code or label to it, to signify that particular segment (Maree, 2007: 105). The researcher followed Tesch's model of analysis (in Creswell, 2003:192) to assign a code or label to signify the particular segments as

mentioned in Chapter Two. The two main themes with sub-themes under each main theme were identified.

- **The role of the independent coder:** The researcher was supported by an experienced qualitative researcher as an independent coder. The independent coder identified the themes related to the experiences of the operating room nurses of their work environment. The independent coder had completed a master's degree programme and had a good knowledge of qualitative research. After discussion with the coder, supervisor, co-supervisor and researcher it was confirmed that data saturation had been reached. The independent coder and the researcher had a discussion on the themes and sub-themes and came to consensus on the identified themes.

- **Utilization of a literature control:** According to Burns and Grove (2005:93), a literature control is an organised written presentation of what has been published on a topic by scholars. The purpose of the literature control is to convey to the reader what is currently known regarding the topic of interest. The researcher conducted the literature control by means of studying information on the internet, research articles in nursing journals, as well as information on textbooks in order to identify what was known about the research topic and any previous documentation on the identified themes. Literature control was carried out after themes were identified through data analysis. It was essential for the researcher to conduct a literature control in order to locate existing similar or related studies that could serve as a basis for the study at hand (Brink, 2006:52). The research findings will now be discussed as follows.

3.4 DISCUSSION OF FINDINGS

Two main themes and two sub-themes under each main theme were identified from the interviews. The two main themes and the two sub-themes under each main theme are set out in Table 3.1 below.

Table 3.1: Identified themes related to the experiences of the operating room nurses in their work environment at a state hospital in Ethiopia.

Main Themes	Sub-Themes
1 Main Theme 1 Nurses working in the operating room of the state hospital experienced their work environment as **"non-conducive"** (unfavorable or stressful)	**Sub-Theme 1.1** Participants' experience related to the lack of supportive management - Insufficient supplies, instruments and equipment, inadequate numbers of staff assigned to the work place. - Long working hours due to the new staffing system namely Business Process Re-engineering (BPR). - The nurses are worried about their health which is at risk due to the long hours they need to stand and are exposed to hazardous chemicals and possible needle prick injuries. - Lack of motivation and recognition by management. - Some surgeons do not respect the nurses working in the operating room - Nurses are exposed to medico-legal risks by working outside of their scope of practice.
	Sub-Theme 1.2 In spite of the "non-conducive" work environment, a good working relationship exists amongst the nursing staff.
2 Main Theme 2 Nurses working in the operating room mentioned that they have **limited training opportunities**.	**Sub-Theme 2.1** Limited exposure to new technology which may limit the OR nurses' ability to function optimally due to: -Lack of post-basic training limits the OR nurses' knowledge and skill. -Lack of in-service education which limits exposure to new technology -Lack of a proper orientation programme prevents new employees from adopting more quickly to the new work environment
	Sub-Theme 2.2 Many participants are feeling frustrated because they think that nursing education is not taken seriously in Ethiopia which results in the public having a low opinion of nurses.

The participants described their feelings and the experiences they had while working in the operating room of a state hospital in Ethiopia. The first main theme stated that nurses working in the operating room of the state hospital experienced their work environment as “non-conducive” (unfavorable or stressful) with two sub-themes. In sub-theme one they related a lack of supportive management. However, in sub-theme two they described that there is a good work relationship among the nursing staff.

In main theme 2, participants expressed their concern about a lack of training for both basic and post-basic nurses. Under main theme 2 two sub-themes were identified, namely sub-theme 1 where the nurses expressed concern that nurses are not exposed to new technology which results in incapability to function optimally in what is a highly skilled area. Under sub-theme 2 many of the participants expressed their frustration about the quality of nursing education which is not taken seriously by the government, which results in the public having a low opinion of nurses.

Main theme 1 will now be discussed.

3.4.1 MAIN THEME 1: Nurses working in the operating room of the state hospital experienced their work environment as non-conducive.

In this theme the participants described their work environment as non-conducive and gave different reasons for this. The working environment refers to equipment, supplies, instruments and operation room staff. The working environment can be pleasant or stressful depending on the support and the value the nurses have while working there. Support and value play a major role in the positive outcome of the nurses’ job. Operating room nurses have responsibilities in the work environment to fulfil the needs of the patient. For OR nurses to work optimally and effectively support and encouragement will play a major role in motivating them to do their best. According to Kotze (1998:6), in nursing accompaniment theory as discussed in Chapter one a person designs and creates his/her personal world, setting up a home and establishing a family; he/she

makes this world his/her own and should make him/herself at home / in his/her work environment. However he/she does not always have control over a work environment.

Because of differences in patient conditions, workload and instruments among different types of hospitals, OR nurses in different working environments may perceive job stress and job satisfaction differently (Chung-Kuang et al., 2009: 200). An improved work environment in hospitals should help nurses deliver safe care to patients and enable nurses to experience professional fulfilment and job satisfaction in the OR. They will then remain in their positions, with less staff turnover, less job stress, and less burnout (Schmalenberg and Kramer, 2008:65).

This study will focus on the non-conducive work environment the participants described while working in the operating room and sub-theme 1 will now be discussed after its diagrammatic representation.

Figure 3.2: Diagrammatic representation of participants' experience related to lack of supportive management: Sub-theme 1.1 with components.

3.4.1.1 SUB-THEME 1 Participants' experience related to the lack of supportive management.

Participants identified factors in the work environment that cause problems and they were brought to the attention of the management. However such concern did not receive attention from management. Participants found it hard to deal with the factors due to the lack of management support such as surgeons' negative attitude towards nurses, lack of respect, lack of recognition, lack of motivation and proper remuneration, shortage of supplies, equipment and instruments and lack of a safe work environment. These experiences led to a high turnover of staff, stress and health problems.

According to Christmas, (2008:316) when every workday is negative, you are on a slippery slope and it is human nature to seek another situation. When opportunities abound, turnover begins. In short, every influence on the work environment such as management, peer behavior, patient acuity, equipment availability, the physical plant should be assessed for impact on the workforce. Even when things are going well, there is always room for improvement.

The management issue will now be discussed in detail under each bullet:

- **Insufficient supplies, instruments, equipment and inadequate number of staff assigned in the work place.**

The participants explained that they were struggling with a shortage of staff, supplies, equipment and well-functioning instruments. In the past they brought these shortages to the attention of the hospital management to be sorted out. The management seems not take the complaints seriously. The operating room nurses also do not have a professional representative in management who understands how the OR environment should be managed and who could explain their concerns to management. The participants mentioned that the shortages of supplies, equipment and instruments were the main causes of conflict between the nurses and surgeons. When the instruments are not functioning well they throw the instruments on the floor and shout at the nurses, blaming them. These incidents occur very often and can be very stressful for the nurses.

"There is no support from management; they don't care about our problems, as far as they get the work done. The only thing they want is to get the work done no matter what."

"Management should consider, giving us enough supplies, and changing the old instruments with the new ones as it is the main cause of conflict with the surgeons."

"Whenever the instruments are not working properly, the surgeons blame the nurses and they throw instruments. And I can't keep quiet when such things happen and I tell them nicely "you are going to use the same instrument tomorrow so don't quarrel with me just go and talk to the management as they listen to surgeons rather than the nurses."

"When I am coming to work I am worried about the quarrel with the surgeons due to shortage of instruments and supplies, so I start my day with tension."

Appropriate space, sufficient equipment and adequate supplies are essential for the work environment to be conducive, so that the staff members can give quality care to the patient. Having appropriate and sufficient equipment and supplies available to complete patient care is the responsibility of the hospital management. They are also responsible for planning, directing and controlling the organization's human resources (Nel, Worner, Haasbroek, Poisat and Schultz. 2008:125).

The availability of necessary equipment in each work area and ease in locating it are among the top things that will influence workflow and nurse satisfaction. Many organizations are simply not realistic in evaluating how much equipment is required, leaving nurses to scramble for the tools they need to get things done (Christmas, 2008:318).

Participants described that the nurses were leaving the employment of the state hospital when they get a better job offer as there is no motivation for them to stay. This may lead to a shortage of experienced staff. Those who stay are having a hard time as they have to pick up the slack. They are stressed, have to work under pressure and this may expose them to health problems. The following statement is evidence of this.

"*They (management) are not worried, if we don't work; they will bring new staff, because there are lots of nurses in the country that graduate from many private and government nursing colleges. So we just wait until we get a better opportunity. They don't value our work and they don't have any idea what we are going through and they are not worried about the service quality".*

In this regard, Browne (2008:217) states that, in order to keep the work going smoothly and effectively, it is essential to have appropriate staffing with appropriate experience and sound knowledge for all levels of personnel.

- **Long working hours due to the new staffing system, namely Business Process Re-engineering (BPR)**

The participants stated that they were experiencing the implementation of the new Business Process Re-engineering system as problematic. This system had been planned and implemented by government policy makers and it is a trial aimed at accomplishing more work with less manpower. This means employees have to work long hours to overcome staff shortages in government services. It causes nurses to have to work continuously for up to 29 hours in a single shift. During this single shift they only rest for two hours. Working for such a long time continuously while struggling with old instruments and equipment makes the nurses tired and stressed. They may also lose concentration. The participants mentioned that it would have been better if it was applied in a well-facilitated and well-equipped work environment with functioning instruments as this would facilitate fast working without quarrel and stress. The following statement is evidence of this.

"BPR is designed to provide more service with a few staff, but I don't think it is ideal to try it in the health sector. We are dealing with human life and it is not a joke. We can't be expected to work long hours to give service to many clients without enough staff, supply and instrument and this will make us not to be effective and it creates a lot of problem on us. Due to this strain people are leaving their job whenever they get a better opportunity."

Among healthcare staff, sharp and needle stick injuries are reported to occur most often in nurses working shifts longer than 8 hours and this issue should be given serious attention by policymakers and managers (Mustafa, Elif, Evin, Sertac and Remzi, 2006:563).

Important determinants of work related injury and its severity include working rotating shifts, working more than 4 night shifts in a row, working more than 8 hours per shift, having reduced time between shifts, and working several consecutive workdays are more likely to be injured secondary to fatigue, decreased alertness, and sleep deprivation (Thomas,I.N.2006:25).

The participants reported that the nurses were not happy about the payment they were getting for working 29 hours per shift. The basic salary of a nurse is Birr 700 ($41) for diploma qualified nurses and Birr 1600 ($94) for degree qualified nurses. For working 29 hours straight the degree nurses are paid Birr 98 ($5.8) extra and for the diploma nurses Birr 48 ($2.8). As the cost of living is increasing nurses have to moonlight to cover the shortfall in their income. In moonlighting they earn more money. However, after the BPR programme was implemented nurses had to stop moonlighting because they did not have enough time. If they could not moonlight it was hard to cope with the cost of living and other expenses. Nurses working in the private sector receive a higher salary, almost double than that of the state hospital nurses. The statement follows is the evidence of this.

"If I tell you about myself, I served for long time and to improve my living condition I sponsored myself by moonlighting to get my degree and now I am getting Birr 1600 ($94). It is better from my previous salary which was about Birr 700 ($41) but due to the inflation it doesn't help much without extra income. I am now 42 years old and have two kids and my wife is a house wife so I have to struggle to cover every expense and the living cost increased by more than two fold. And with this new BPR program I stopped moonlighting and life is very tough and very stressful, so I might be leaving any time if the chance is coming and nurses are leaving the hospital because of the same problem."

Involving employees in decision making regarding their working conditions can affect them positively and is a form of empowerment and it can also motivate nurses. Involvement leads to greater commitment and facilitates possible change to new work methods (Dubrin, 2007:141). According to participants they had no role in decision making. They stated that management applies whatever it wants without consulting the nurses beforehand, while they are the ones who have to do the job. This situation creates unhappiness and will lead to a stressful work environment.

- **The nurses are worried about their health which is at risk due to the long hours they need to stand and are exposed to hazardous chemicals and possible needle prick injuries.**

Participants expressed fears that their health will suffer due to the current work pressure, such as long hours spent on their feet and exposure to hazardous chemicals and possible needle prick injuries. Standing for long periods of time exposes the nurses to developing varicose veins and to back pain. The following statement is the evidence of this.

"….. At the end of the day what I received is losing my health, I am suffering from varicose vein due to long standing".

"We stand for long hours and however, I never hated my profession through my entire working life. Sometimes I feel very exhausted and I ask myself why am I suffering like this? What if I end up with vertebral injury like my two friends. Oh….no I will have to leave this job".

Caring personnel are exposed to long working hours, extended days and shift-work schedules besides high workload and psychological strain. Standing for long hours could cause serious health problems. Workers who spend most of the working day on their feet are at risk of work-related varicose veins, poor circulation and swelling in the feet and legs, foot problems, joint damage, heart and circulatory problems and pregnancy difficulties. Unlike other work activities, health workers are in permanent contact with human suffering and death (Poissonnet and VeÂron. 2000:14).

The participants also expressed concern about their health as they are exposed to hazardous chemicals due to the halothane leakage from the anaesthesia machine. They reported the problem to management but the machine has not been repaired. They said that they do not even get paid a hazard allowance whereas the anaesthetists are getting paid.

"The other problem is the halothane leakage which may cause health problem and management didn't give solution to it. All of us are inhaling halothane and they are not even paying us risk allowance while the anesthetists are getting paid, and this created a bad feeling in addition to the health problem."

According to Prokes, Mikov and Glavaski (2009:893) halothane damages liver parenchyma. Concentration of "fritter away" halothane from the anesthesia machine in operating rooms exposed the nurses to the influence of halothane concentrations on the liver functions of operating room personnel.

Liver damage following occupational exposure to halothane has been reported in medical personnel. There is continuing debate concerning the possible fatal effects of occupational exposure of operating theatre personnel to inhalational anesthetics (Prokes et al., 2009:893). Participants expressed their fear that they might also encounter disease from needle prick injuries while working long shifts as they get tired and lose concentration.

"We could not protect ourselves since we are working in a difficult situation. We can have needle sting when we get tired and lose concentration due to long hours work per shift, so it is dangerous any way".

A study shows that there is increased risk and incidence of sharp and needle stick injury among nurses working more than eight hours a day. The authors suggest that this issue should be given serious attention by policy makers and managers (Mustafa, Elif, Evin, Sertac and Remzi, 2006:563).

- **Lack of motivation and recognition by management**

The participants stated that management gives incentives to doctors in different ways. This includes a housing allowance and top-up payment. However, nurses do not receive similar incentives. The participants explained that they are the ones who carry most of the burden but they are neither respected nor well paid. They also felt that nobody in management gives attention to their concerns.

"Most of the time when they call for a meeting, I don't want to participate. I just do my job and go home. I don't want to waste my time for something which will not be a solution for the problems. I leaved with it and I gave up, I know they are going to do nothing about us; they are not worried because they have told us that we can be replaced with new .Even though we are doing the scrub nurses job we are not getting any extra payment because we do not have the proper qualification as a scrub nurse and there is no place here we can receive the training.

Employees may present with positive attitudes towards their job, should they receive a higher wage, recognition and an opportunity for advancement. The participants also responded that communication between hospital support staff and surgeons is the leading cause of avoidable errors. Part of the problem is the tense atmosphere of the OR, where surgeons are the captains of the ship. They are honored because of their unique skills (Dubrin, 2007:161).

According to Dubrin (2007:151), workers at any level can be offered financial incentives for good performance. Using a financial incentive as a motivator is also another application of behavior modification. Financial incentives are usually more effective when they are linked to good job performance. Linking pay to performance generally motivates people to work harder because the link acts as reinforcement. Excessive work, no incentives and low salaries are all grounds for a high turnover rate. If the nurses were getting the support and motivation they would have felt appreciated (Dubrin, 2007:151).

- **Some surgeons do not respect the nurses working in the operating room**

The participants stated that some of the surgeons/doctors look down on nurses and may use them as their personal assistants. Participants stated that the doctors did not understand that the nurses have their own defined role and responsibility towards the work and the patient. OR is a place for team work, so nothing is going to be achieved unless the entire team puts an effort into the work; they need each other. Improved understanding of the roles and responsibilities of team members promotes better team coordination and cooperation.

The surgeons/doctors' attitude is one of the serious challenges that the OR nurses are struggling with. Most of the surgeons have no respect for the nurses. When they become frustrated, they shout at the nurses and throw instruments around. Due to this the participants felt that the profession of nursing is not valued by either the surgeons or by management. This makes the OR nurses lose hope and experience stress which will affect the quality of their work.

The nurses do understand that the surgeons are struggling with the old instruments but there is nothing the nurses can do other than trying their best, by choosing the best functioning instrument from what is available in the hospital.

"*Some of the doctors do not understand the role of the nurse and they don't appreciate what we are doing, they want us to work under their orders. Generally they have negative attitude towards us."*

"It makes me to feel that I am the loser in a way that I served for about 20 years and at the end of the day what I received is losing my professional respect, financially become disabled and leaving my work place where I spent my entire work life".

According to Browne (2008:217) Respect emerges as a primary nursing ethic that serves as the basis for our attitudinal, cognitive and behavioral orientation toward people. A comparison of respect to related nursing concepts reveals that respect is a component of

and antecedent to caring, presence, confirmation and humanized care. throughout health care, the word "respect" is fundamental to quality patient care and practice environments. It is defined as a basic moral principle among human rights that is accountable to the values of human dignity, worthiness, uniqueness of persons and self-determination. As guiding principle for action towards others respect is conveyed through the unconditional acceptance, recognition and acknowledgment of the above values in all persons. As a primary ethic of nursing, respect is the basis for our attitudinal, cognitive and behavioural orientation toward all. The effectiveness of a team also is significantly related to respectful and caring team member relationships. A shared understanding of the structure of a team, people's roles within it, their means and their objectives is the foundation for effective teamwork (Schmalenberg and Kramer, 2008:183).

- **Nurses are exposed to medico-legal risks by working outside their scope of practice.**

The participants reported that sometimes they were expected to work outside their scope of practice as surgeon assistants, which is a medico-legal risk. This issue is very stressful and risky for the nurses as well as for the patient. The participants stated that management is trying to use the available manpower at hand but is putting the patients' health at risk.

The role of the scrub nurse is to concentrate on the flow of the surgery and make the instrument to be used during the surgery available. Because of the shortage of assistant doctors, the nurse is sometimes asked to act as a surgeon's assistant on top of her responsibility as a scrub nurse. A surgeon's assistant is supposed to be a general practitioner who is not yet qualified as a specialist doctor. Being responsible for double duty as surgeon's assistant as well as scrub nurse could make the nurse distracted. It is not easy to handle two responsibilities at the same time and the distraction may cause the nurse to make mistakes. This is exacerbated by her working beyond her scope of practice. The participants reported this practice to management but did not receive any feedback. Participants were frustrated with management whom they perceived as being uncaring regarding their plight.

"….it is a big problem for the patient as well as the staff; one nurse with the surgeon is working as a scrub nurse and assistant. The nurse doesn't have control of the instrument the table will look terrible, could not protect ourselves when we are working in such working environment we are working in difficult situation. We can have a needle prick injury or there may be blood splash. It is so dangerous any way. We asked the management to sort out this problem but no solution has yet been given. They don't even ask if we are willing, they just tell us to do. Sometimes we may refuse to work as an assistant but whenever we are in position of refusing not to assist; it is the patient who is the victim so to avoid this we have to sacrifice whatever it takes."

The present work environment is characterized by technological advancement, professionalism, and efficiency. In nursing the situation is complicated because of high demand on quality nursing care, yet there are inadequate staff and equipment (Kom 2007:132).

The role of the operating room nurse as a scrub nurse is only to assist the surgeon with the instruments and be responsible for the wellbeing of the patient. This includes responsibility for both the patient and the instruments (Timmons and Tanner, 2004: 648). However, this does not include acting as a surgeon's assistant.

According to Jones, (2004:402) there was concern about quality and risk management issues and the lack of formalized qualifications of personnel undertaking the role. Shocking liabilities, accountability and the legal and ethical implications of practitioners performing outside their role also needed to be addressed.

3.4.1.2 SUB-THEME 2: In spite of the non-conducive work environment, a good working relationship exists among the nursing staff.

Participants reported that nurses working in the OR have a good working relationship with one another. This is seen as a motivating factor. Nurses work in close proximity and rely on each other for support and friendship. This helps them to cope with the stress

they are experiencing. They manage to work together as a team. They understand each other's problems and frustrations and support each other.

"… I love it. I love the staff relationship. We help each other. We understand each other. The nursing staff is wonderful. I love the support and understanding we have to each other in spite of the challenges we are having."

Good relationships and friendship provide one of the most enduring support systems in the hectic world of health care, and can be one of the most positive influences on the work environment. Recent studies and the Healthy Work Environment initiative by the American Association of Critical-Care Nurses address how behaviour and communication among peers must be as blameless and outstanding as are clinical skills (Christmas, 2008:316).

3.4.2 MAIN THEME 2: Nurses working in the operating room mentioned that they have limited training opportunities.

According to the responses of the participants they have limited exposure to new technology as they do not receive in-service education. This results in an inability to function optimally in what is a highly skilled area of nursing. In Ethiopia nurses receive a basic nursing training on diploma and degree level but after that the opportunity for post-basic training is limited. For instance, there is no operating room technique training in the country which would enable staff in the OR to acquire the necessary skills in order to function competently. The hospital does not provide in-service education to make them aware of new technology. New staff starting to work as OR nurses also do not receive proper orientation in the OR, which limits the ability of new staff to perform well within a short period of time. The following statement is evidence of this.

".. It is only our head nurse who took short term training in OR nursing abroad. There is no such training in the country except the one we did while we trained as a general nurse just to have a basic knowledge about operating room. I am working through experience nothing more."

Extensive knowledge of new technology is needed to work effectively in the OR. The technical and procedural knowledge needed was described as the embodiment of competence in relation to the development of the psychomotor skills needed to operate a vast and complex range of equipment. OR nurses need to keep up-to-date with the latest trends in surgical technologies and procedures as a means of maintaining their competence levels to meet the demands of these ever-increasing changes (Gillespie, Chaboyer, Wallis, Chang and Werder, 2009:1022).

Figure 3.3 illustrates the limited exposure to new technology which may limit the OR nurses ability to function optimally and the identified causes to the problem.

Figure 3.3: Diagrammatic representation of limited exposure to new technology which may limit the OR nurses ability to function optimally Sub-theme 2.1 with components

3.4.2.1 SUB-THEME 1: Limited exposure to new technology which may limit the OR nurses' ability to function optimally.

The participants described that except for the head nurse who had OR training abroad, all the nurses currently on the job only have experience in working in the OR and have not attended any formal OR programmes. Those who have the qualification were also trained outside the country.

The following discussion will be on the points which fall under 3.4.2.1 sub-theme 1

- Lack of post-basic training limits the OR nurses' knowledge and skill.
- Lack of in-service education which limits exposure to new technology.
- Lack of proper orientation programme prevents new employees from adapting more quickly to the new work environment.

The above mentioned ones are discussed below under the bullets.

- **Lack of post-basic training limits the OR nurses' knowledge and skill**

The participants stated that they need proper training to have a good knowledge and to be skilled in their practice area otherwise it is like working blindly. Even though they are working as OR nurse, they are not confident enough in what they are doing due to a lack of proper training. For instance, there is a policy in the hospital at large that once a year, all nurses have to rotate between the different departments. Some of the nurses are interested in staying in the OR but due to a lack of having a proper qualification, they cannot choose to stay there. These nurses are not qualified but have experience in working in an OR. When they are rotated out of the OR, they cannot claim specialist knowledge or qualification as a reason to stay in the OR. The system of rotation causes experienced nurses to be replaced with inexperienced ones. This rotation is a big challenge for the senior OR nurses, because whenever the experienced OR nurses leave, they have to orientate and train the newcomers. Until they become familiar with the work, the burden of work falls upon the senior nurses. If the current OR nurses had the necessary qualifications, they could stay. Keeping the old staff is also of benefit to

ensure that quality of service is delivered as the OR nurses accumulating skills through experience. The following statement is evident of this.

"Management should consider training facility to keep the nurses up-to-date to help us know what we have to do and this will help us to know what we are doing and be confident enough in what we are doing. Even just a workshop to help us know more about OR, we are straggling by ourselves no body taught us properly. You know this is not a place of leisure; we are dealing with life so if we don't have enough knowledge it is very frustrating."

According to Arakelian, Gunninberg and Larsson (2008:1425), having qualified staff, who are skilled in the job, prevents problems from occurring. The well-informed OR nurse will be able to anticipate and prevent problems. Staff will also enjoy their jobs more by seeing the meaning in their work. When staff sees the difference they have made by their performance, they may feel a sense of satisfaction. A positive work environment means job satisfaction, participation in the organization, comfort and well-being (Arakelian et al., 2008:1425).

The OR is one of the most stimulating and challenging hospital units in which nurses' work. According to Williams (2006:370) the overriding concern in practice is that individuals in all roles should be competent. In order to render quality service competently, training of peri-operative practitioners needs to be considered after basic qualification.

- **Lack of in-service education limits exposure to new technology**

The participants reported that they were not aware of the new technology in the field of the OR as there is no in-service education to keep them up-to-date. They have only been able to accumulate knowledge through experience. There is no one to give them in-service training to keep them connected with the new technology.

“It will be better if we can get at least short term training or in-service education. You know we are far from the new technology and it is so frustrating.”

According to Dubrin (2007: 140), an enriched job allows the employee to acquire new knowledge. The learning can stem from job experiences themselves or from training programmes associated with the job. To ensure the quality of nursing continuous updates with new technology are needed. Nurses who choose to make a career in peri-operative practice have had to supplement their nursing qualifications with further study devoted specifically to peri-operative practice (Williams, 2006: 371).

- **Lack of a proper orientation programme prevents employees from adapting more quickly to the new working environment**

Participants expressed their concern regarding the lack of an orientation programme that would orientate new employees to the OR environment and make them aware of what is expected of them, or where to find something. Lack of proper orientation causes the newcomers to be uncertain and confused. This means that it will take them longer to feel confident enough to perform well.

“All the nurses here are working through experience and most of them are assigned without interest as rotation is a must for everybody. With this loss of interest and shortage of experienced OR nurses it takes time to train the new staff effectively. This system created a burden to the rest of the staff as the work load rest upon them until the new ones get used to the work. They get tired of this routine system of rotation every year and as a result they leave the operating room whenever they get the chance. This is a biggest loss and challenge for the operating room to function optimally.”

Browne (2008:211-217) also mentioned that in order to keep the works going smoothly and effectively it is essential to have appropriate staffing with appropriate experience and sound knowledge for all levels of personnel. The side effects of work related problems and dissatisfiers include ineffective management, poor working relationships, lack of control over decisions affecting one's life, and overwork. Employees are expected to

assist in achieving the organisations' goals. For the employee to carry out this responsibility, good working conditions should be provided, which include the provision of adequate personnel, equipment and supplies, in addition to a safe and relatively stress free environment.

3.4.2.2 SUB-THEME 2: Many participants are feeling frustrated because they think that nursing education is not taken seriously in Ethiopia, which results in the public having a low opinion of nurses.

The participants expressed negative feelings towards their profession because they feel that the nursing profession is losing the respect of the public. The nurses are not getting respect because there is an over-production of nurses who graduate from the private sector training schools in addition to the government colleges and nursing schools at the universities every year. This means that there are no shortages of nurses and that management can easily replace experienced nurses who leave. If nurses are resigning, management immediately replaces them with new nurses from the labour market. Government does not recognise the status of nursing as a valuable profession so it does not encourage postgraduate training.

The participants are concerned about the quality of nursing as well. They stated that the curriculum and the recruitment criteria must be revised in order to ensure that nurses of a high quality are trained. The recruitment criteria of the state nursing schools are not the same as those of the private nursing schools. Students who are not accepted by the state nursing school can easily join the private nursing school as entrance requirements are not as strict as at the state nursing school. The private nursing schools function as a business which may sacrifice quality for quantity. However, some schools do a better job than others as some of the trainees of the private schools are exceptionally knowledgeable and skilled.

“The profession is noble but the quality may be deteriorating because the training given by the private nursing colleges is not up to the standard.”

Nursing is a profession where the practitioner needs to be knowledgeable and skilled to give appropriate care. Kotze's model describes nursing as a clinical health and human science that constitutes the body of knowledge of persons qualified to practice nursing, within the context of ethical and legal requirements. Within the parameters of nursing and midwifery philosophy and ethics, nursing science is concerned with the development of knowledge for diagnosing of health status, treatment and personalized health care of persons exposed to suffering or recovering from physical/mental/spiritual ill health. Kotze's model elaborates that a needy person is dependent on the help, care and guidance of a person with nursing skills. In Kotze's model description of nursing, she supports the interpretation of the nurse "as a substitute for what the patient lacks to make him 'complete', 'whole' or 'independent', by the lack of physical strength, will or knowledge. She/he is temporarily the consciousness of the unconscious, the love of life for the suicidal, the leg of the amputee, the eyes of the newly blind, a means of locomotion for the infant, knowledge and confidence for the young mother, a voice for those too weak or withdrawn to speak" (Kotze, 1998:8).

3.5 CONCLUSION

From the above analysis we can perceive the existence of good relationships among the nursing staff, in spite of the unfavorable work environment, lack of supplies, inadequate instruments and insufficient staff in the state hospital. However, the existence of long working hours in state hospitals may expose the nurses to work related health problems. Besides, lack of motivation and recognition may aggravate turn-over of nurses. The participants are also exposed to medico-legal risks by working beyond their scope. Furthermore, the nurses have a lack of training that may limit their knowledge.

The following chapter will describe the guidelines which have been developed to support the registered nurses working in the operating rooms of the state hospital in Addis Ababa, Ethiopia, in coping more positively with their work environment. The gathered data with the identified themes served as the necessary baseline for developing the guidelines.

CHAPTER FOUR: CONCLUSION, ORIENTATION GUIDELINES, RECOMMENDATIONS AND LIMITATIONS

4.1 INTRODUCTION

In Chapter Three a discussion of the findings was presented. The Identified themes reflected the experiences the operating room nurses had in their work environment. In this chapter these experiences will form a baseline for developing orientation guidelines. Guidelines for orientation, in-service training, conflict and stress management can be brought to the attention of management and used by the OR nurses which would help them to be able to experience their working environment more positively.

This chapter will include a summary of the findings, guidelines, limitations, and recommendations for nursing research, nursing education and the conclusion of the study.

4.2 OBJECTIVES

The researcher was guided by two objectives which formed the base for the research.

The primary objective

- The primary objective of the study was to explore and describe the experiences of operating room nurses in their work environment

The secondary objective

- The secondary objective was to develop guidelines which can be used to assist the operating room nurses in coping more effectively with their work environment.

The primary objective was met by obtaining information from the participants about their experience in the work environment, through audio taped interviews, observations and

field notes. The secondary objective was met by developing three guidelines based on the experience of the OR nurses to enable these nurses to cope more effectively with the work environment. Summarised diagram of the themes, discussion of the identified themes and the conclusion will follow.

4.3 DISCUSSION OF FINDINGS AND CONCLUSIONS

Undernease the diagrammatic representation is given and this will now be discussed. The conclusion to the study will also be discussed.

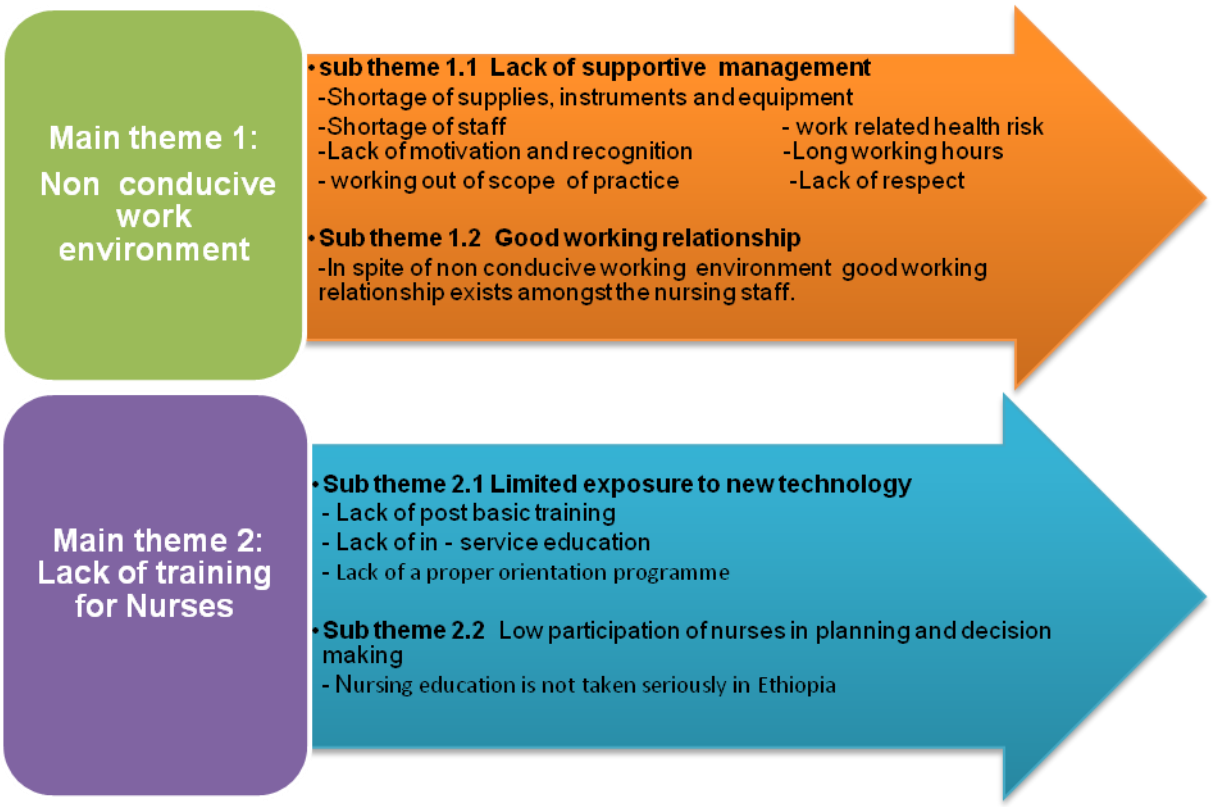

Figure 4.1 Diagrammatic summarized representations of the two main themes and the two sub-themes under each main theme.

The study originated from the researcher's own experience while working as a registered nurse in the OR, and also from conversations with OR nurses working in the state

hospital operating rooms. The researcher noted that nurses working in the OR were unhappy with their work environment.

Participants from the research population were interviewed and verbalized their experiences in their work environment. Information rich data were gathered by means of semi-structured interviews and two main themes with two sub-themes under each main theme were identified.

Nurses working in the operating room of the state hospital experienced their work environment as non-conducive to satisfaction with their work. Discussions held with the participants showed that the nurses working in the operating room were frustrated about the problems they were facing. The reason for the unhappiness included the shortage of supplies, instruments and equipment, shortage of staff, work related health risks, lack of motivation and recognition by management, long working hours, working outside their scope of practice and lack of respect by some surgeons. This situation was exacerbated by the high turnover of staff, absenteeism and stress. The stress the nurses experienced caused the unhappiness and made it difficult for them to experience the work in the OR as satisfying. The only positive experience was the support they received from peers.

The operating room nurses were struggling to give adequate service. They reported that they suffered with work related health problems due to standing for long periods of time. The nurses ended up developing varicose veins and back pain. Even though they were getting paid for the extra hours they spent on their feet, they felt tired, especially after a busy night and day spent in the theatre. This caused them to make mistakes and to harm themselves with needle prick injuries and by exposing themselves to blood splashes. They also reported that management did not show that they cared and did not take into consideration what these long sessions caused nurses to experience. Working in the operating room needs the nurse to be able to concentrate and to follow the flow of the surgery in order to avoid mistakes and ensure a high quality of the service by creating a pleasant working environment. These unsolved problems impacted negatively on the quality of service delivery where the experienced staff left for better pay and better positions. It was felt that management did not give attention to these issues.

The illegal use of nurses to work outside their scope of practice caused the nurses to experience high levels of stress. The nurses and management should take note that if a patient is harmed or dies, they will be held responsible, even if the doctors requested the OR nurse's help. As this issue is very serious, management should address the problem; if not, it should be reported to the medical society.

Positive features revealed in the study were the attitudes of the nurses and their willingness to keep on trying, the empathy they demonstrated towards their patients and the support they gave to their peers. The participants' good working relationship with each other in spite of the unfavourable working environment was a positive finding. Although the participants were unhappy, frustrated and stressed in the work environment, they still counted on the support of peers. Coping with a detrimental work environment was made easier by peer support.

The operating room nurses received on-the-job training but they reported that there was no formal OR nursing training in Ethiopia. This means that OR nurses were only exposed to information their training officer had received herself as part of in-service training. There was no measure of quality control on the information OR nurses have to ensure quality nursing care. It will be a benefit to consider such training to upgrade their knowledge in order to deliver a quality service and give the public a better opinion of nurses.

The operating room nurses experienced frustration and low self-esteem, since they had the impression that nursing education is not taken seriously in Ethiopia. The effect of the situation is that operating room nurses developed negative feelings toward their profession.

Researcher came to the following conclusion as will be discussed in the following paragraphs.

Nurses working in the operating room functioned in an unsafe environment and the researcher realised that from the information gathered during the data collection time and also from observation she made while working there as well as doing the data collection.

OR nurses were expected to deliver a quality service with limited and old instruments which were not functional this was the reality the researcher observed and all the participants' even doctors were complaining about it. If management will be able to address this issue it will contribute to the quality of service delivery in regard to, the time which they spend more while straggling with old instruments and the fight the nurses having because of the instruments.

Nurses working in OR were very unhappy with their working conditions as well as they manner in which management treated them and the researcher realised that this situation is putting them in stressful condition making them lose interest to the job and look for other opportunity. The researcher realised that most of the nurses are looking to grab any opportunity which comes on their way. If management understand keeping the old staff is a big advantage for the service delivery and giving the respect they deserve and try to motivate them in making the work environment more conducive will bring a lot of change in the OR.

OR nurses could benefit from receiving more in-service information or from being trained properly for their jobs. The researcher came into conclusion that this is the biggest issue which management should address. If they are given the chance surely it will make a big difference beside the above mentioned ones in the service delivery and in handling the stress and conflict between nurses and doctors as well as be confident and knowledgeable.

4.4 GUIDELINES

Based on the findings the researcher developed guidelines to help the OR nurses cope with the stress they are experiencing in the work environment. The aims of the guidelines are to assist the registered nurses working in the unfavourable environment of the operating room of the state hospital to cope better with working conditions. The guidelines should help the OR nurses to look into the problems and find solutions by trying to deal with the problems more positively, to be confident and to make an effort to discuss their problems with management.

The three main guidelines formulated to assist the registered nurses working in the operating rooms of the state hospital were:

Guideline 1: Orientation of new nurses to the OR environment
Guideline 2: In-service education of OR nurses on new information and new techniques
Guideline 3: Work place conflict and stress management

4.4.1 GUIDELINE ONE: Orientation of new nurses to the OR environment

Goal: To help the new nurse to be aware of and understand the OR environment so that she/he can join the team actively and effectively.

Table 4.1 Guideline one: Orientation of new nurses to the OR environment

Problem	Motivation/ rationale	Objective	Planned intervention	Outcome	Person responsible
A nurse who is working in the OR environment for the first time is unfamiliar with the environment and the techniques used in the work due to lack of proper orientation programme. Due to this lack	For the new staff coming to OR the environment can be very frustrating if not given proper orientation. An orientation programme will help the new nurse to be able to use the operating room environment optimally, join the	- To have knowledge of the OR environment - To be aware of the physical environment such as where to find supplies, equipment and instrument -To enable the new nurse to gain knowledge and develop skill on : - How to	- Introduce the new nurse to the OR staff including their responsibility. - Identify knowledge and skill needs of a newly appointed OR nurse. - Provide mentors with coaching skills in order to give proper orientation programme so that they can become more connected to the job quickly. - Assign mentors who are willing to teach and share information with positive attitude. - Encourage new employees to gain the knowledge and skills. On the first day, review job responsibilities, competencies and expectations. Let the new nurse know what is expected during	-The new nurse will express knowledge about the OR environment including the change room, OR setup and where supplies are kept. - The nurse will verbalize knowledge about what is happening in the OR environment.	-Head nurse -Training Officer

Problem	Motivation/ rationale	Objective	Planned intervention	Outcome	Person responsible
of orientation the staff is frustrated and some of the OR staff do not want to continue working there.	team effectively as soon as possible in order to be able to do the job she was appointed to do. New employees are often reluctant to ask older OR nurses too many questions. Literature suggests that enhancing job satisfaction and retention of new employees is an important focus for health care facilities. A unit specific orientation class was used to teach skills necessary for	communicate with surgeons and other team members to keep the flow of continual care throughout. -The different instruments, their function and how to count, set, handle, clean disinfect and sterilize them, how to count needle, swabs and packs. - Preoperative and postoperative care -How to secure and handle drains such as naso-gastric tube, chest tube, closed surgical drainage	the first week, first month, and first 90 days on the job. Then follow up and check in with her on a regular basis. - Orientate the new nurse on the following: o showing them the change room o Introduce the new OR nurse to the staff in the OR. o Explain the role and responsibility of each staff member. o Introduce them to the OR setup such as where to find sterile instruments, packs, and surgical supplies. - type and function of different instruments o how to handle the instruments o how to clean them o how to pack them o how to sterilise them and for how long according to the methods of different sterilisation systems o where to store them o which pack is used for which case	- The nurse will express knowledge about instruments how they function, what their purpose is, how to deal with the instruments and how to work in the OR as a scrub and instrument nurse and be able to act responsibly. - The new nurse will have reduced anxiety. - The new nurse will be productive as soon as possible if given the proper guidance.	

Problem	Motivation/ rationale	Objective	Planned intervention	Outcome	Person responsible
	successful practice on a surgical unit and enhance retention of employees (Cynthia, 2009:87). .	-Discussion of common procedures	- how to scrub, don and glove to work on sterile field - how to handle sterile instruments, how to set them according to the acceptable standard - how to pass them and what to give when to the surgeon - how to concentrate and be active to follow the flow of the surgery - how to dismantle instruments towards the end of the surgery step by step and count them - how to follow the swab, needles and packs counting with the circulate nurse and inform the anaesthetist to check the blood loss - The need to do instrument count before surgery and before the closure of the surgical site.		

4.4.2 GUIDELINE TWO: In-service education of OR nurses on new information and new techniques

Goal: To help the OR nurses to be knowledgeable and up-to-date with the new technology

Table 4.2 Guideline two: In-service education of OR nurses on new findings and new techniques

Problem	Motivation/rationale	Objectives	Planned intervention	Outcome	Person responsible
The development of new technology is taking place constantly and nurses working in the OR must be made aware of new information on OR nursing, new techniques and new devices in use.–since there is no library within the hospital they	OR nurses need to keep up-to-date with the latest trends in surgical technologies and procedures as a means of maintaining their competence levels to meet the demands of these ever-increasing changes (Gillespie, Chaboyer, Wallis, Chang and Werder, 2009:1022). They will be able to do their job better if their problems can be addressed.	-To ensure that nurses are up-to-date and aware of the new technology so that they won't get confused. - to ensure that the nurses are knowledgeable and skilful in order to increase the quality of the service delivery	-Appoint a training officer who may be one of the nurses working in the OR - Develop an in-service education programme - allocate a time slot in the weekly schedule of the OR department for in-service education to ensure continuous sessions	-The nurses will be knowledgeable and be aware of new technology. - By having the knowledge they will be able to perform their job competently. - by being competent they will increase the quality of the service delivery	• OR training officer • surgeons • nurses and management

Problem	Motivation/rationale	Objectives	Planned intervention	Outcome	Person responsible
do not have access to internet and books within the hospital - they are not making any effort to learn from different direction			- Invite speakers with specialist knowledge to address OR nurses - Encourage OR nurses to ask management to re-establish the library in the hospital so that they can use it in order to improve their knowledge.	- When the service delivery improves they will experience job satisfaction and feel confident in what they are doing.	

4.4.3 GUIDELINE THREE: Workplace conflict and stress management

Goal: To help the OR nurses to be able to manage conflict arising in their work environment which may lead to stress.

Table 4.3 guideline three: Workplace conflict and stress management

Problem	Motivation/rationale	Objectives	Planned intervention	Outcome	Person responsible
-The work environment is not favourable due to the limited support from management and the conflict with management and surgeons. -They are not working with management hand in hand	According to Teng Ong, Kerbau, Chin, Li-Charn, Bernard, and Jacobson (2010: 30) the OR can be considered to be one of the most complex, dynamic and technologically advanced working environments. It is an area in which situational factors may	-To give the nurses knowledge and skill on how to manage conflict and stress. - to help the nurses become assertive and resolve conflict when it occurs - To manage stress effectively.	- During in-service training sessions, guest lecturers can be invited to teach OR nurses conflict and stress management skills. - create opportunities for OR nurses and management to address areas of conflict - teach the nurses	-The nurses will verbalise knowledge and demonstrate skill in conflict and stress management - Nurses will verbalise that they are experiencing less stress and anxiety. - Issues of conflict will be addressed ensuring a more	• Training officer • Guest lecturers

Problem	Motivation/rationale	Objectives	Planned intervention	Outcome	Person responsible
-They are experiencing stress due to the lack of knowledge on how to cope. - High turnover due to the challenges they experience in their work environment.	predispose the OR personnel to verbal abuse because stressful patient care situations. Verbal abuse may lead to negative personal feelings and relationships between doctors and nurses, and to a certain extent it negatively affects patient care. This leads to low job satisfaction, low morale and commitment and to the worst extent, leading to intentions to quit. They have a high job turnover		assertiveness skills - Teach the nurses conflict management - Encourage relaxation exercise within the unit - Arrange for peer support groups to meet on alternate weeks with the training sessions to discuss and find solutions. - Teach the nurses stress management skills on alternate weeks with the support group sessions.	satisfactory working environment.	

Problem	Motivation/rationale	Objectives	Planned intervention	Outcome	Person responsible
	rate as well as decreased self-esteem when working in stressful, abusive and authoritative situations. It is therefore essential to conduct this study in order to address abusive behaviour and educate staff on handling abusive situations. However, the OR, which Is behind the close doors, has not been studied well particularly in local context.				

4.5 RECOMMENDATIONS

The outcome of the research can be used for researchers, academicians, nurses working in the private sector, nurses working in the non-governmental organizations, nurses working in the public sector as well as policy makers. Recommendations will be made on changes in clinical OR nursing, to nursing education and regarding possible research studies.

4.5.1 CLINICAL OR NURSING

The following recommendation is made for the clinical field:

Make the Operating Room of state hospitals a more attractive workplace for nurses by making improvements on the following major points, namely:

- Management have to give urgent attention and ensure adequate support to the OR nurses by equipping the operating rooms with standardised well-functioning equipment and instruments in order to offer quality service and make the environment more conducive to job satisfaction and optimal service delivery.
- Management should revise the policy on the working hours; nurses should not be expected to work shifts longer than 12 hours.
- Improve relationship between OR nurses, management and the surgeons by instituting conflict management sessions by inviting guest lecturers in the area.

4.5.2 OR NURSING EDUCATION

OR nurses' training should be considered in all institutions involved in the education and training of nurses.

- Develop and implement a programme in OR training in Ethiopia for professional nurses in order to render a quality service with adequate knowledge and skill.
- In-service education should be implemented as discussed in the guidelines.

4.5.3 FURTHER NURSING RESEARCH

This study was done in one of the state hospital operating rooms and a larger study with a bigger sample will be ideal if considered in the other hospitals. It will be of benefit if the study can be done on the following areas:

- Conflict management in the OR
- Evaluation of the guidelines after implementation to see if OR nurses are still experiencing high levels of stress.

4.6. LIMITATIONS

- Language was a problem as the interviews took place in Amharic and were translated into English which might lose the meaning of the information;
- The duty hour's interview for the night duty staff was problematic for the researcher, as the hospital is far from the researchers place.
- The duty room could have not been the best place due to disturbances of traffic.

4.7. CONCLUSION

The research study through the experience of the operating room nurses working in one of the state hospitals has exposed the situation that the registered nurses encountered while working in the operating room. The researcher realized the challenge that the operating room nurses were going through. The researcher thinks that challenge can bring strength and the nurses might adapt to the situation and make themselves strong to make a difference. Success of the nurses in this endeavour depends upon the ministry of health, the hospital management, the willingness and understanding and also ability of head nurse, OR nurses to stand together, open up and challenge to be involved in decision making and try to change the situation and make the management understand the situation they are going through courteously. The registered nurses should be able to develop personally and engage in learning and change as well as enrich themselves

through their experience. The researcher developed the proposed guidelines in the hope that they might assist them in coping more effectively with the situation.

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ANNEXURES A

REQUEST TO YEKATIT 12 HOSPITAL MEDICAL DIRECTOR

TO CONDUCT A RESEARCH STUDY

Request to conduct a research study Tel:+27(0)41504-2122

To Yekatit 12 Hospital medical director Date

08/09/09

Dear……

I am currently doing my master's degree in Advanced General Nursing Science: Operating room technique at the Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.

One of the requirements is to complete a study, with guidance from my supervisor Prof J. Strumpher and co-supervisor Dr H. de Mendonca at the above mentioned university. The provisional title of the research study is ''Experiences of operating room nurses in their work environment in a state hospital in Ethiopia''

The study will be conducted by making use of semi-structured interviews by the researcher with the operating room nurses working in your hospital. The research study will be confidential, which means the participants' identity and personal information will not be revealed at any stage during the study.

If permission is granted, a copy of the complete research report will be submitted to the library of the Hospital.

Yours truly

Sr. N. Woldehawariat

Researcher

Tell: 0027(0) 72 303 5563

ANNEXURES B

REQUEST TO YEKATIT 12 HOSPITAL MATRON TO CONDUCT A RESEARCH STUDY

Request to conduct a research study Tel:+27(0)41504-2122

To Yekatit 12 Hospital matron Date 08/09/09

Dear……

I am currently doing my master's degree in Advanced General Nursing Science: Operating room technique at the Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.

One of the requirements is to complete a study, with guidance from my supervisor Prof J. Strumpher and co-supervisor Dr H. de Mendonca at the above mentioned university. The provisional title of the research study is ''Experiences of operating room nurses in their work environment in a state hospital in Ethiopia''

The study will be conducted by making use of semi-structured interviews by the researcher with the operating room nurses working in your hospital. The research study will be confidential, which means the participants' identity and personal information will not be revealed at any stage during the study.

If permission is granted, a copy of the complete research report will be submitted to the library of the Hospital.

Yours truly

Sr. N. Woldehawariat

Researcher

Tell: 0027(0) 72 303 5563

ANNEXURES C

REQUEST TO YEKATIT 12 HOSPITAL OPERATING ROOM HEAD NURSE

TO CONDUCT A RESEARCH STUDY

Request to conduct a research study Tel:+27(0)41504-2122

To Yekatit 12 Hospital Operating Room Head Nurse Date 08/09/09

Dear ……

I am currently doing my master degree in Advanced General Nursing: Operating. Theatre technique at the Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.

One of the requirements is to complete a research study, with guidance from my supervisor Prof J. Strumpher and co-supervisor Dr H. de Mendonca at the above mentioned university. The provisional title of the research study is ‘’Experiences of operating room nurses in their work environment in a state hospital in Ethiopia’’

The study will be conducted by making use of semi-structured interviews by the researcher with the operating room nurses working in your hospital. The research study will be confidential, which means the participants’ identity and personal information will not be revealed at any stage during the study.

If permission is granted, a copy of the complete research report will be submitted to the library of the Hospital.

Yours truly

Sr. N. Woldehawariat

Researcher

Tell: 0027(0) 72 303 5563

ANNEXURE D

INFORMED CONSENT STATEMENT

Informed consent statement

Faculty of Health Sciences, NMMU

Contact person:

Supervisor Prof J. Strumpher and

Co-supervisor Dr H. de Mendonca **Tel:+27**(0)41504-2122

Date 08/09/09

Dear participant

You are being asked to participate in a research study. We will provide you with the necessary information to assist you to understand the study and explain what would be expected of you (participant). These guidelines would include the risk, benefits, and your right as a study subject. Please feel free to ask the researcher to clarify anything that is not clear to you.

To the participant: it will be required of you to provide a written consent form that will include your signature, date and initials to verify that you understand and agree to the conditions.

You have the right to query concerns regarding the study at any time. Immediately report any new problems during the study, to the researcher. Telephone numbers of the researcher are provided. Please feel free to call these numbers.

Furthermore, it is important that you are aware of the fact that the ethical integrity of the study has been approved by the Research Ethics Committee (Human) of the University. The REC-H consists of a group of independent experts that have the responsibility to ensure that the rights and welfare of participants in research are protected and that studies are conducted in an ethical manner. Studies cannot be conducted without the approval of REC-H. Queries with regard to your rights as a research subject can be directed to the Research Ethics Committee (Human), Department of Research Capacity

Development, PO Box 77000, Nelson Mandela Metropolitan University, Port Elizabeth, 6031, South Africa.

If no one could assist you may write to: The Chairperson of the Research, Technology and Innovation Committee, PO Box 77000, Nelson Mandela Metropolitan University, Port Elizabeth, 6031.

Participation in research is completely voluntary. You are not obliged to take part in any research. If you choose not to participate in medically related research, your present and/or future medical care will not be affected in any way and you will incur no penalty and/or loss of benefits to which you may otherwise be entitled.

If you do take part, you have the right to withdraw at any given time during the study without penalty or loss of benefits. However, if you do withdraw from the study, you should return for a final discussion or examination in order to terminate the research in an orderly manner.

If you fail to follow instructions, or if your medical condition changes in such a way that the researcher believes that it is not in your best interest to continue in this study, or for administrative reasons, your participation may be discontinued. The study may be terminated at any time by the researcher, the sponsor or the Research Ethics Committee (Human).

Although your identify will at all times remain confidential, the results of the research study may be presented at scientific conferences or in specialist publications.

This informed consent statement has been prepared in compliance with current statutory guidelines.

Yours sincerely

Sr. N. Woldehawariat

Researcher

Tell: 0027(0) 72 303 5563

ANNEXURE E

INFORMED CONSENT FOR PARTICIPANT

Informed consent for participant

I understand that I am being asked to participate in a study where I am going to talk to the researcher about my experience in my work environment.

I am allowing myself to participate in the study and nobody has forced me to give consent.

I know that I can stop at any time if I do not want to participate.

I understand that I might feel uncomfortable during the time of interview.

I understand that my name will not be revealed.

Place	Date	Confirmed Signed
Addis Ababa	December/2009	……

ANNEXURE F

STRUCTURED INTERVIEW GUIDE

Main question:

- Tell me about your experience of the work environment in the operating room.

Probing questions:

- Tell me about the challenges you are facing while working here.
- Is there any support you are getting from the management to cope with the problems?
- What do you suggest to help the operating room nurses to cope more effectively with the work environment?

ANNEXURE G

CERTIFICATE FROM THE EDITOR

Language Quality Assurance Practitioners

Mrs KA Goldstone

Dr PJS Goldstone

14 Erasmus Drive
Summerstrand
Port Elizabeth
6001
South Africa

Tel/ Fax: +27 41 583 2882

Cell: +27 73 006 6559

Email: kate@pemail.co.za

pat@pemail.co.za

27 January 2012

TO WHOM IT MAY CONCERN

We hereby certify that we have language edited the M Cur treatise/ dissertation prepared by Sr Negat Woldehawariat entitled: *Experiences of operating room nurses in their work environment at a state hospital in Ethiopia,*
and that we are satisfied that, provided the changes we have made are effected to the text, the language is of an acceptable standard, fit for publication.

Kate Goldstone

BA (Rhodes)

SATI No: 1000168

UPE Language Practitioner (1975-2004)

NMMU Language Practitioner (2005)

Patrick Goldstone

BSc (Stell)

DEd (UPE)

Language Quality Assurance – Certification Statement

ANNEXURE H

FACULTY OF HEALTH SCIENCE FINAL RESEARCH PROPOSAL EVALUATION

FACULTY OF HEALTH SCIENCES

FINAL RESEARCH PROPOSAL EVALUATION

This evaluation form must be completed by the promoter/supervisor and the Head of the Department. Nine copies of both this form and the final research proposal must be submitted to the Faculty Officer 9 working days in advance of the date of the scheduled meeting, for approval by the Faculty Research Committee.

CANDIDATE: Negat Woldehawariat **STUDENT NUMBER:** 204035961

DEGREE: M Cur

1. **RESEARCH TITLE:**

   Comment on research title:

   Title is appropriate and acceptable.

2. **RESEARCH PROBLEM/THEME:**
   (Please comment on the relevancy of the proposed research project/theme within the Department's/Faculty's research program; delineation of research field; problem formulation; formulation of and feasibility of research objectives; formulation of hypotheses/research questions where applicable.)

The research problems is described as it is experienced in the candidate's own country. The description is acceptable

3. **RESEARCH METHODOLOGY:**
   (Please comment on the identification of target population/sample; choice of and design of relevant measuring instruments; implementation of validity, reliability and ethical principles; data collecting methods; choice of methods for systematising, analysing and presenting data; manner in which research results will be disseminated.)

She is planning a qualitative study where professional nurses will be interviewed to determine their experiences. The description is acceptable.

4. **SUBMISSION TO UPE HUMAN ETHICS COMMITTEE:**
   (Please indicate whether your Department has recommended that the approval of the UPE Human Ethics Committee should be sought. If applicable please indicate the date of this submission.)

   The candidate describes the measures she will take to ensure that the study is done in an ethically acceptable manner. She will request permission, including ethical permission, from the Ethiopian authorities. As the population she is dealing with is not a particularly vulnerable group, and as she is not their colleague at the moment, it is suggested that the FRTI gives ethical permission.

5. **WORK AND TIME SCHEDULES:**
   (Please comment on the feasibility)

Acceptable

6. **BUDGET:**
   (Please comment on the feasibility)

Acceptable. It is quite high but one has to take into consideration that she has to travel to Ethiopia (hence the R10,000 for travelling), she will have to have language translations done and she will rely heavily on an editor as her English is not of a good quality. Writing is really a problem for her.

7. **RECOMMENDATION OF PROMOTER/SUPERVISOR:**
The final research proposal is:

Mark appropriate block

7.1	Accepted unconditionally	X
7.2	Provisionally accepted	
7.3	Not accepted	

Motivate in the case of 7.2 and 7.3.

8. **LANGUAGE EDITING**

Was the proposal language edited? YES: X NO:

If yes, please provide name of editor:

Name editor: Dr Pat Goldstone

..... 9/11/09

Signature Date
Promoter/supervisor

9. **RECOMMENDATION OF HEAD OF DEPARTMENT:**

..... 9:11:09

Signature Date
Head of Department

10 **COMMENTS AND RECOMMENDATIONS BY THE FACULTY RESEARCH COMMITTEE:**

.....

Signature Date
Chairperson