A STUDY TO ASSESS UTILIZATION OF THE NURSING PROCESS BY REGISTERED STUDENT NURSES AT LIVINGSTONE SCHOOL OF NURSING

BY

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A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF POST BASIC NURSING, SCHOOL OF MEDICINE, UNIVERSITY OF ZAMBIA IN PARTIAL FULFILMENT FOR THE AWARD OF A BACHELOR OF SCIENCE IN NURSING DEGREE.

UNZA, LUSAKA

FEBRUARY 2006
ACKNOWLEDGEMENTS

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<td>Central Board of Health</td>
</tr>
<tr>
<td>CCZ</td>
<td>Christian Council of Zambia</td>
</tr>
<tr>
<td>CHAZ</td>
<td>Churches Association of Zambia</td>
</tr>
<tr>
<td>CSO</td>
<td>Central statistics Office</td>
</tr>
<tr>
<td>GNC</td>
<td>General Nursing Council of Zambia</td>
</tr>
<tr>
<td>PBN</td>
<td>Post Basic Nursing</td>
</tr>
<tr>
<td>RN</td>
<td>Registered nurse</td>
</tr>
<tr>
<td>UNZA</td>
<td>University of Zambia</td>
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<tr>
<td>UTH</td>
<td>University Teaching Hospital</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children Fund</td>
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<td>WHO</td>
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<td>Zambia Demographic and Health Survey</td>
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DECLARATION

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

SIGNED

DATE 29 - 03 - 06

APPROVED

DATE 23 MAR 06

UNIVERSITY OF ZAMBIA
DEPT. OF POST
BASIC NURSING
SCHOOL OF MEDICINE
I hereby certify that this study is entirely the result of my own independent investigation. The various persons and sources to which I am indebted are clearly indicated.

Signed

[Signature]
DEDICATION

This study is dedicated to my dear and adorable daughter Nabowa Masoko for doing without her mother during her critical development stage.
ABSTRACT

The main purpose of this study was to assess the utilization of the nursing process by registered nursing students.

A descriptive cross section was used to assess the utilization of the nursing process by RN students. Both qualitative and quantitative methods were used.

The study was conducted at Livingstone Registered Nursing School situated at Livingstone General hospital in Livingstone city. Livingstone city is situated 480 km south of Lusaka.

Fifty respondents were selected from the second and third year students using a quota sampling method.

Data was collected through the use of a self-administered questionnaire. Quantitative data was analyzed manually using a data master sheet and a scientific calculator while the qualitative data was analyzed using the content analysis. The quantitative data were presented in the form of frequency tables and pie charts. Cross tabulations were used to identify special relationships between variables.

The study revealed that (49, 98%) of the respondents had heard about the nursing process from the classroom lectures while only (25, 50%) had utilized the nursing process.

Participants had an overwhelming positive attitude towards utilization of the nursing process if constraints in the environment were removed. Among the constraints cited leading to non-utilization of the nursing process were inadequate resources (40, 80%), inadequate guidance and supervision from the clinical instructors (40,80%) and from ward staff (34,68%). If students received encouragement and supervision from both clinical instructors and qualified staff on the wards, they would certainly develop confidence to enable them participate actively in using the nursing process.
The study also revealed that (21.42%) of those participants who used the nursing had problems with the implementation phase of the nursing process. This was attributed to inadequate resources.

The study recommends that Livingstone School of Nursing should ensure that adequate clinical instructors are available on the clinical area to enhance supervision of students on the nursing process, hospital management together with school management should ensure availability of resources for students to use and that management through the in-service department should plan and conduct in-service for qualified staff on importance of using the nursing process. It is also highly recommended to replicate the study on a larger scale to cover all schools of nursing in Zambia.
CHAPTER ONE

1.1 BACKGROUND
Zambia is a landlocked country found in Southern Africa. It has 752, 612 square km, which is divided into 9 provinces with 72 districts. Lusaka is the capital city and Livingstone is the tourist capital of Zambia. There are 73 ethnic tribes with seven major languages. The population is 10.4 million as reported by 2002 census. The growth rate is 2.9 (CSO, 2002). The population of Zambia is concentrated along the line of rail because major towns are along this route hence the rural to urban drift in search of jobs, which they do not usually find. This has brought about the mushrooming of shanty compounds, overcrowding in homes and an increase in communicable diseases.

The Zambian government has put in place a national health care system to service its population with a vision of providing all Zambians with “equity of access to cost effective quality health care as close to the family as possible” (CBoH 1998). The main health providers in Zambia are Ministry of Health and the church through the Churches Health Association of Zambia (CHAZ). Other providers are the private sector such as the Mine Hospitals, Zambia Flying Doctors’ service and the Traditional Healers and Practitioners.

The human resources in the Ministry of health mainly comprises of nurses, medical doctors and paramedical. Nurses comprise about 75% of all the health professionals in Zambia (GNC, 2004 ). Thus nurses who are the majority in the health care delivery system implement most of the health care programmes.

In Zambia there are basically two types of nurses, the registered and enrolled nurses. The registered nurses train for three years and are awarded a diploma at the end of the training while the enrolled nurses train for two years and get a certificate at the end of the training.

The General Nursing Council of Zambia is a statutory body responsible for regulating nursing practice in the country. In order to monitor the quality of
nursing care being rendered effectively in the country, the council adopted the nursing process as a tool to providing individualized nursing care. It incorporated the nursing process into the curriculum of the registered nurses and enrolled nurses in 1983. The council emphasized that nurses must be able to use the nursing process and account for the nursing care they offer to patients.

The nursing process is a framework used by the nurse to organize thinking about the health care needs of the individuals, families and communities and organize and deliver nursing care.

The nursing process therefore is a method of organizing thought processes for clinical decision-making and problem solving. In the recent past, nursing practice has undergone an evolutionary process. There is a growing emphasis on a holistic approach to patient care as opposed to task accomplishment. The use of nursing process as a standard tool to provide individualized quality nursing care and evaluate all activities relating to nursing has currently become a primary focus in the nursing process (Kozier et al, 2004).

The benefits of the nursing process are that it improves the client as it is meant to meet unique needs of the individual, family and community. It also ensures continuity of care through a written care plan accessible to all care providers. Job satisfaction is achieved through the use of the nursing process.

Utilization of the nursing process prevents legal implications of negligence through care documentation. Well documented nursing care is the foundation of the development of nursing profession for it promotes professional growth through effectiveness of nursing intervention through shared knowledge and experience that is gained (Kozier et al. 2004)

It is for this reason that the General Nursing Council, which is responsible for regulating nursing, adopted and integrated the nursing process in nursing curriculum in 1983 (GNC 2004). Ever since then, the component of the nursing process has been taught at various levels of nursing training in Zambia. The programs implementing nursing process include Zambia enrolled nursing, registered nursing, operating theatre nursing, mental health nursing, Bachelor of
Science and the recently introduced Masters Degree in nursing. It is now over two decades since the nursing process was implemented in the nursing curricula in all schools of nursing in Zambia, Livingstone inclusive. It is for this reason that one would expect registered nursing students to be applying the nursing process when providing care.

1.2 STATEMENT OF THE PROBLEM
A closer analysis of the curriculum for Registered Nurses revealed that emphasis and details on the nursing process is taught during the lecture blocks. The nursing process is taught in the first year in blocks 1 and 2. A total of 16 hours is dedicated to the nursing process. Thus the registered nursing students have knowledge on the nursing process. However, when students go to the practicum area they rarely apply the nursing process.

Through observation and some informal discussions with some registered nursing students done at Livingstone School of Nursing, it was revealed that they rarely use the nursing process in caring for their clients though they learn about the nursing process.

1.2 FACTORS CONTRIBUTING/INFLUENCING PROBLEM
Several factors could contribute to the underutilization of the nursing process by registered nursing students. These include:

1.3.1 Service Related Factors

- Inadequate supervision and encouragement - Nursing students receive inadequate supervision and encouragement from the clinical instructor, tutors and qualified staff. If use of nursing process by students has to be enhanced, qualified staffs on the wards, tutors and clinical instructors need to take an upper hand to ensure that students use the nursing process and document their practice. At the time of the study Livingstone School of Nursing had no clinical instructors.
• **Inadequate Staffing levels** - staffing levels may affect utilization of the nursing process in that where staffing levels are adequate, student nurses may have the time to apply nursing process in individualized care. Inadequate staffing on the other hand means that there will be overload and student nurses may not provide the holistic and individualized care through the nursing process.

**1.3.2 Training Related Factors**

• **Level of knowledge and skill on nursing process** – this affects its use. If students have adequate knowledge and skill, they are likely to use the nursing process than when they have inadequate knowledge and skill.

**1.3.3 Psychosocio-economic factors**

• **Motivation**: when students are demotivated, they become apathetic and can abandon the utilization of nursing process. This affects the quality of care they give to patients.

• **Interest**: when students are interested in nursing process, they may be stimulated to utilize it as a tool for provision of care. Those without interest may shun the use of it.

• **Attitude**: students with a positive attitude towards the nursing process may be motivated and encouraged to utilize it.

• **Inadequate resources especially stationary**: inadequate stationery may make the usage of nursing process impossible to implement as it requires paper. Student nurses may have to improvise in order to use the nursing process. This makes the students to ignore the use of nursing care plans as a central source of information about the client because it demands a lot of stationery.
1.4 **FIGURE 1: PROBLEM ANALYSIS**

UNDERUTILIZATION OF NURSING PROCESS BY REGISTERED NURSING STUDENTS AT L/STONE SCHOOL

- Inadequate theoretical training
- Level of knowledge and skill
- Erratic government grant
- Inadequate stationery/improvising paper
- Lack of motivation
- Negative attitude
- Few clinical instructors
- Inadequate supervision
- Lack of mentorship
- Interest
- Inadequate staffing
1.5 JUSTIFICATION OF THE STUDY
It has been observed that RN students at Livingstone school of nursing rarely use the nursing process in their practicum. Studies have been done on factors contributing to underutilization of the nursing process amongst qualified nurses without reflecting on how much they are exposed to it during training (Kajinga, 1992 and Makoleka 2005). Interestingly both studies revealed that nurses were not adequately exposed to use of the nursing process during training.
In this study the investigator sets out to assess the utilization of nursing process by trainee nurses at Livingstone school of nursing. The use of the nursing process during training will make students develop skills in problem-solving and critical thinking and ultimately provide quality individualized care to patients.
The investigator hopes to bring forth the facts that contribute to underutilization of the nursing by registered nurse students. The study is relevant in that the information from this study shall be useful to the Ministry of Health, General Nursing Council of Zambia and other schools especially Livingstone School of Nursing to develop interventions to strengthen the use of the nursing process by students.

1.6 RESEARCH OBJECTIVES
1.6.1 General objective
To determine the factors influencing the utilization of the nursing process by registered nursing students.

1.6.2 Specific objectives
1. To assess student nurses level of knowledge on the nursing process.
2. To determine whether student nurses utilize the nursing process on the wards.
3. To evaluate the level of supervision, mentorship and guidance the students get from the clinical instructors and qualified staff on the utilization nursing process.
4. To make recommendations to management of Livingstone school of nursing on the benefit of the nursing process and how it can improve the quality of care.

1.7 HYPOTHESES

As stated by Treece & Treece (1986), “a hypothesis is a statement of relationship between two variables”.

The following hypotheses are a prediction of variables under study;

1. RN students who are training after the inclusion of the nursing process in the curriculum in 1983 are more likely to utilize the nursing process than those who were trained before.

2. Inadequate supervision, guidance and mentorship from the clinical instructors and qualified nurses contribute to underutilization of the nursing process by student nurses.

3. Inadequate resources on the wards (stationery, human) contribute to underutilization of the nursing process.

1.8 OPERATIONAL DEFINITIONS OF TERMS

For the purpose of this study, the following terms are operationally defined as;

**Attitude** – the manner in which the students look at the nursing process in relation to its use.

**Clinical instructor** – a registered nurse /midwife responsible for supervising student nurses on the clinical area

**Encouragement** – this refer to the praises RN students get whenever they use the nursing process.

**Hospital policy** - this is a written guideline that provides guidance on the use of the nursing process.

**Interest** – this entails making an attempt and efforts to implement the nursing process.
**Knowledge** – being able to define, describe the steps of the nursing process, list the uses and benefits of the nursing process.

**Mentorship** – refers to the support and encouragement students get from both clinical instructors and qualified staff when using the nursing process.

**Motivation** – anything that drives or stimulates and sustains the RN students’ behavior towards the use of nursing process.

**Nursing Care** – the care that nurses and students give to the patients.

**Nursing Care Plan** – this is a written document on the stages of the nursing process prepared by students or qualified staff.

**Nursing Process** – systematic scientific problem solving method used by nurses and student nurses and clients to identify problems, plan solutions, implement care and evaluate its outcome.

**Patient/client** – an individual on whom the nursing process is centered.

**Qualified nurse** – person who completed a programme of basic nursing education at a recognized school of nursing and is qualified, licensed and authorized by the government through the General Nursing council to provide nursing care.

**Registered Nurse** – an individual who has undergone three years of nurse training at a recognized school of nursing and registered and licensed by the General Nursing Council of Zambia.

**Resources** – stationery, staff and the time necessary in the utilization of the nursing process.

**RN student** – an individual undergoing a three years training in basic nursing education at a Livingstone school of nursing.

**Supervision** – the support RN students get from qualified staff, tutors and clinical instructors when using the nursing process.

**Skill** – physical ability to carry out the nursing process.

**Underutilization** – refers to students not utilizing the nursing process every time they are on duty.
1.9 VARIABLES AND CUT OFF POINTS

In this study the following variables shall be used.

Independent variable is the utilization of the nursing process.

Dependent variables will include:
- Knowledge
- Interest
- Availability of resources
- Supervision and mentorship
- Staffing levels
- Classroom preparations/theory
<table>
<thead>
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<th>VARIABLE</th>
<th>INDICATOR</th>
<th>CUT OFF POINT</th>
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<tr>
<td>1</td>
<td>Knowledge</td>
<td>Highly knowledgeable</td>
<td>Able to define, describe the 4 steps of the nursing process and list the benefits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderately knowledgeable</td>
<td>Able to either define or mention 4 steps of the nursing process</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not knowledgeable</td>
<td>Unable to neither define nor describe the 4 steps of the nursing process.</td>
</tr>
<tr>
<td>2</td>
<td>Resources</td>
<td>Adequate</td>
<td>Always available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate</td>
<td>Occasionally available</td>
</tr>
<tr>
<td>3</td>
<td>Supervision and mentorship</td>
<td>Adequate</td>
<td>Always given support by clinical instructors and encouraged by qualified nurses on the wards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate</td>
<td>Occasionally supervised and encouraged by clinical instructors and qualified nurses.</td>
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CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

The nursing process is the foundation for professional nursing practice. It is within this framework of the nursing process that the professional nurse applies the unique combination of knowledge; skill and caring that constitute the art and science of nursing. It is therefore imperative that student nurses are exposed as much as possible to the usage of the nursing process during their training so that they continue using it when they qualify.

Literature has shown little empirical and theoretical evidence on the nursing process and its implementation. Kajinga (1992) reports that a few studies have been conducted in some Zambian hospitals and have revealed a number of factors that affect the utilization of the nursing process. These factors include shortage of staff, lack of stationery and inadequate exposure of nurses to the nursing process during training. It is for this reason that the investigator would like to determine how much the RN students are exposed to the use of the nursing process.

2.2 THE NURSING PROCESS

A lot of documentation has been done on the nursing process. Many authors have described the nursing process in numerous ways. Various authors have varied opinions of the nursing process. While some are of the opinion that nursing process is a core of nursing and a problem solving approach that promotes nurse accountability, others are of the opinion that the nursing process promotes nurse client interaction in decision making and carrying out nursing based on assessment needs (Kajinga, 1992). Still others emphasize the fact that the nursing process is not static but instead it is ongoing, dynamic interpersonal process dependent on the changing behaviour of the nurse and the patient.
2.3 Global perspective

Literatures reviewed indicate that a lot of documentation has been done on the nursing process globally. The literature has shown that while some writers have supported and advocated for the use of the nursing process as a way of providing individualized quality nursing care, others have criticized it. Those who support the nursing process view it as a logical, systematic, problem solving approach to nursing problems. They are of the opinion that the nursing process is a core of nursing and a problem solving approach that promotes accountability and nurse client interaction in decision making (Kratz 1985). However, the acceptance and implementation of nursing process and its passage into the nursing profession has not been smooth and without criticism. The nursing process concept is criticized by qualified nurses who complain of the length of time required for assessment and writing care plans. The process is poorly understood and is viewed by some nurses as a mere paper exercise (Kajinga 1992).

However, despite the fact that a lot has been documented about the nursing, very little literature is available concerning the utilization of the written nursing process by student nurses. Holloway (1999), points out that students have difficulties with the whole concept of the written nursing process and wondered if it is valid to continue the process. As a nurse educator, she marked many student care plans of variable standard, which demonstrate difficulties with the whole concept. There is also a chance that students will, in an attempt to accommodate faculty, adapt their assessments to support specific nursing diagnoses (Condell et al 2001).

Literature has also shown that there is a link between knowledge and skill. Kershaw (1985), in her study entitled “Nursing in action among student nurses in America” confirmed the link between skills and knowledge. She concluded that apart from student nurses being familiar with the theoretical aspects, they should be assisted to adopt their implementation of the nursing process in the practicum.
2.4 Regional perspective

In Africa research in nursing has not taken a priority especially the sub-Saharan region. Literature reviewed indicates that not much has been written about the utilization of the nursing process per se (Makoleka, 2005). However, literature shows that the region is facing a lot of problems that has affected the quality of nursing care provided by nurses.

The problems that the region is experiencing include shortage of nurses and other health care professionals. This means that the health service is largely depending on the skeleton nursing services. Nurses have to be utilized effectively in maintaining health services (Malama, 2004).

It has also been documented that in Africa the overall ratio of nurse to patient is very large. The intensity of the nurse workload reduces the chances of nurses utilizing the nursing process. This subsequently compromises the delivery of quality care (Makoleka 2005).

Other factors that affect the delivery of quality care in the region are political instability, war victims, refugees, all require quality care with the shrinking economies, exodus of nurses from Southern Africa to developed countries where conditions of service and enumerations can afford them a living (WHO 1993, World Bank 1989 and UNICEF 1990).

2.5 National perspective

Zambia is one of the developing countries in the world that has adopted and implementing the nursing process. For any country in the world to successfully implement the nursing process, it requires adequate human and material resources. Zambia is currently facing a critical shortage of nurses in most of its health institutions. However, the country’s population is growing at a fast rate making it difficult for the current skeleton nursing manpower to provide quality care. This results into delivery of poor nursing care since there are few nurses for too many patients. Shortage of nurses coupled with congestion has put patients
in danger, as they do not receive the expected nursing care.
Three studies on the implementation of the nursing process have been done at some hospitals in Zambia (Chisengantumbu, 1989, Kajinga 1992 and Makoleka, 2005). These studies revealed that the nursing process was underutilized and that implementation and success of the nursing process was constrained by shortage of staff, stationery and nursing equipment. Other factors that contribute to underutilization of the nursing process according to the studies include less exposure to the nursing process during the nursing training, non availability of hospital policy on nursing process and lack of commitment to the application of the nursing process in the clinical area.

CONCLUSION

It can be concluded that through introduction of the nursing process, the nursing profession can strive to gain its professional autonomy and an identity that is independent of medicine. Use of the nursing process makes the nurse to be a critical thinker as she carries out her nursing care; she is able to make nursing orders and not merely following doctor’s orders. This knowledge and skill of utilizing the nursing process must be inculcated into the student nurses so that they value the nursing process a tool to providing quality individualized nursing care. However, the utilization of the nursing process especially in developing countries is hampered by shortage of nurses and inadequate material resources.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY
This chapter describes the research methodology that was used in this study. The purpose of the study was to assess the knowledge and utilization of nursing process by registered nursing students at Livingstone school of nursing. This was with an aim of coming up with recommendations, which were presented to the relevant authorities for implementation.

3.1 Research design
According to Polit & Hungler (2001) a research design refers to the researcher’s overall plan or strategy for answering research questions or testing hypotheses. The purpose of this study was to assess the utilization of the nursing process by registered nursing students at Livingstone school of nursing. To achieve this, a descriptive cross sectional non-interventional design was used.

The study was descriptive in that the investigator systematically collected and presented data giving a clear picture of the situation. A cross sectional type was chosen because it is less expensive and it’s conducted within a short period of time. Some components of the study were quantitative in that answers to the study were categorized and quantified in numeric form.

3.2 Research setting.
Research setting as described by Polit & Hungler (2001) is the physical location and conditions in which data collection takes place in a study. The study was conducted at Livingstone School of nursing in Livingstone city in southern province of Zambia. Livingstone school of nursing trains registered nurses for three years. It is situated at Livingstone General Hospital. The study was conducted at Livingstone school of nursing for easy access by the investigator.
Population
The term population refers to entire number of units understudy or the whole or all the inhabitants (Treece & Treece 1986). The study units comprised of second and third year male and female students. These groups were selected because they had already learnt the nursing process and were doing their practical at the clinical area where they were supposed to use the nursing process.

3.3 Sampling method
Sampling is the process of selecting a portion of the population to represent the entire population (Polit & Hungler 2001). In this study, the investigator used quota sampling. Quota sampling is a nonprobability sampling method in which the researcher uses knowledge about the population to build some representativeness into the sampling plan (Polit & Hungler 2001). The subjects were stratified on the basis of their level of training comprising of 25 second and 25 third year nursing students. The subjects were a convenience sample from each stratum of the population.

3.4 Sample size
A sample is the number of study participants in a sample (Polit & Hungler 2001). It is the subset of a population.
The study population was the second and third year student nurses at Livingstone school of nursing. Twenty-five respondents were sampled from each class. Numbers from one to twenty-five were written and put in a box from which the students from each class were asked to pick. Those who picked the numbered papers were chosen to participate. The sample size therefore was fifty respondents. This sample size is the standard requirement for Post Basic Nursing department. It was also feasible in terms of time within which the research was to be completed and submitted and the available resources.
3.5 Data collection tool

Data collection is gathering of information needed to address a research problem. Data collection tool is a device that is used to collect data (Treece & Treece 1986). The investigator used a self-administered questionnaire with both open and closed ended questions to collect data.

Polit & Hungler (2001), refers to the scheduled self-administered questionnaire as the formal instrument that specifies the wording of all questions to be asked of the respondents. Open ended questions permit free responses and therefore information provided is likely to be more valid than answered provided in options from which the informants must choose. Closed ended questions allow the answers to be recorded quickly and are not time consuming. Questionnaires are advantageous in that they are a rapid and efficient method of gathering data and are inexpensive to distribute.

3.7 Data collection Technique

Data collection technique is a description of how data shall be collected. Polit & Hungler (2001), define data collection technique as a procedure of collection of data needed to address a research problem.

Before distribution to the respondents, the questionnaires were checked and tested for reliability, validity and completeness to ensure collection of proper data. In this study, the questionnaires were administered to the respondents by the investigator.

The procedure was as follows;

- Introduction of self to the respondents was done in order to make the respondents feel at ease.
- Instructions and purpose of the study were explained to the respondents so that they were fully aware of their participation.
- Confidentiality and anonymity was assured to the respondents by using serial numbers on the questionnaires and not their names. This enabled them to participate in the study without fear.
• The questionnaires were then administered and collected within one week by the investigator.

3.8 Pilot study
According to Polit & Hungler (2001), a pilot study is a small study or trial run, done in preparation for the major study. The purpose of the pilot study was to find out how feasible the study was, how valid the data collection tool was and how possible it was to process and analyze the data collected. This helped the investigator to amend the data collection tool after administering it. It also helped to determine the reactions of the respondents to the research procedure. The pilot study was conducted at Lusaka school of nursing in the month of July 2005. Lusaka school of nursing trains registered nurses for three years and therefore has the same characteristics to those in the actual study. Five second or third year respondents were conveniently selected and interviewed using the structured self-administered questionnaire, as these constitute 10% of the sample, which are 50. On the whole, the respondents understood the questions. On demographic data one question on tribe was removed while some open-ended questions were rephrased. The sequence of the questions was readjusted.

3.9 Validity
Validity is the degree to which an instrument measures what is supposed to measure (Polit & Hungler, 2001).
To ensure validity, non-probability quota sampling was used to select subjects to be included in the study. Data was collected from the second and third year students.
Internal validity is the interpretation of the findings within the study or data collected. It seeks to find out if the effect on the dependent variable observed was actually due to the action of the independent variable. Internal validity was upheld by focusing the questions on the utilization of the nursing process by RN student nurses at Livingstone School of Nursing.
3.10 Reliability
Polit & Hungler (2001) state that reliability is the degree of consistency or accuracy with which an instrument measures the attribute it is designed to measure.

Two basic sources of inaccuracy may be present and these are;
- Deficiency in the instrument
- Inconsistency in the taking readings from the instrument

Reliability of the self-administered questionnaire was achieved by carrying out a pilot study in order to test the degree of accuracy with which the tool measured the student's level of utilization of the nursing process. Making corrections to the instrument accordingly after the pilot rectified the inaccuracies found.

3.11 Ethical considerations
The development and implementation of research should be ethically and culturally acceptable.

Ethics is defined as a system of moral values that is concerned with the degree to which research procedure adheres to the professional, legal and social obligations to the study participants (Polit & Hungler 2001).

Treece & Treece (1986), further state that the ethical acceptability of the research should apply first of all to the people directly involved in it, and also to the people involved in carrying out the research.

A letter was written to the Executive Director of University Teaching Hospital asking for permission to conduct a pilot study at Lusaka Scholl of nursing. Another letter was written to Principal Tutor of Livingstone School of Nursing to carry out the actual study. Verbal permission from the respondents to participate in the study was sought. The purpose of the study was explained to all the respondents involved so that they understand the nature of the study to which they were consenting to as well as enable them participate in the study willingly. They were not forced to participate in the study.
CHAPTER FOUR

4.0 DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 INTRODUCTION

The main aim of the study was to assess the utilization of the nursing process by registered nursing students at Livingstone School of Nursing. Data was collected from fifty respondents from the second and third year students.

4.1.1 DATA ANALYSIS

Data analysis is the process of categorizing, scrutinizing and crosschecking the research data (Treece & Treece). The purpose of data analysis, regardless of the type or the underlying research tradition, is to organize, provide structure to, and elicit meaning from the research data (Polit & Hungler 2001). The data analysis methods used was quantitative for the closed ended questions and qualitative for the open-ended questions.

Sorting out of data was done immediately the questionnaires were collected. The questionnaires were sorted out according to questions. The quantitative data was analyzed by creating codes, which were entered on the manual data master sheet. The responses were counted which were then aggregated and percentages were calculated using a calculator. Frequency tables, cross tabulations and numerical descriptions were prepared to show the relationship of variables.

The qualitative data was analyzed using content analysis, which is the process of organizing and integrating narrative qualitative information according to emerging themes and concepts, (Polit & Hungler 2001)

Responses to each open-ended question were transcribed and themes made for further analysis. This entailed reading, rereading and vigorous study of each
question in order to come up with concepts in the responses through the process of open coding. The concepts were then systematically classified into major themes. All the similar ideas and impressions were written down according to themes. A cut and paste method was used to select, compare all answers under each question.

The themes formulated were related to definition of the nursing process, listing and describing the steps involved in the nursing process, benefits of the nursing process to both the nurse and the patient, solutions to problematic nursing step, reasons why the nursing process is or is not a waste of time and resources and whether the theory preparation was adequate to enable the students use the nursing process on the practicum. The themes formulated were represented in the form of excerpts from the respondents or as the participants said them.

4.1.2 PRESENTATION OF FINDINGS

The results from the open-ended questions show that the participants were knowledgeable about the nursing process.

4.1.3 DEFINITION

When participants were asked the definition of the nursing process, the responses were varied.

Some participants defined the nursing process as an individualized problem solving approach, systematic approach and method of organizing thought processes.

One participant said: “it is an individualized problem solving approach to nursing care which involves the patient and relatives in the plan of nursing care using the scientific method of assessment, planning, implementation and evaluation”, while others still defined the nursing process as “a systematic process used to assess, judge, plan, implement and evaluate the care given” and still others said “it is simply the application of problem solving approach to nursing practice and a
method of organizing thought process”.

4.1.4 DESCRIPTION OF STEPS INVOLVED IN NURSING PROCESS

Assessment
Some of the participants described assessment as a stage where the nurse gathers information from the patient as illustrated by this response;

"It is a phase of history taking, data collection and reviewing of patient’s situation and database in order to come up with or know patient’s illness”.

Others described assessment as “gathering information and physical examination”.

Nursing diagnosis
The participants said that the nursing diagnosis is the phase when the nurse comes up with nursing diagnosis after analyzing the information generated from the assessment phase as illustrated in the following response;

"It is a step where the nurse comes up with a clinical judgment about an individual, family or community response to actual or potential health problems”.

Other participants described the nursing diagnosis as “identification of essential problems and finding out the needs of clients in need of nursing interventions”.

Planning
The participants described the planning phase as a phase when the nurse makes a plan of nursing interventions to meet the needs of the patient.
They said, "It is prioritizing patient’s problems, setting goals and objectives for each problem and then writing a care plan on how to solve the problems”.
Still others described planning as "coming up with a plan on how to meet the identified problems”.

Implementation
Some participants described implementation as the phase of “putting the plan into action” while others said "it is carrying out the planned interventions”.
Evaluation
The participants said that in this phase the nurse reviews the nursing actions implemented.
They said it is the review of an action to see if it has been successful”. Others said evaluation was “ongoing measurement of the process”.

4.1.5 BENEFITS TO THE PATIENT
The participants said the nursing process was beneficial to the patients in that it “encourages the client family to participate through self-care in all the phases of the patient”. Still others cited continuity of care, individualized and holistic care as some of the benefits of the nursing process to the patient. One participant said;

"Client’s needs are met holistically, it ensures individualized care’.

4.1.6 BENEFITS TO THE NURSE
The participants said that the nursing process promotes autonomy and accountability. It helps the nurse to account for the professional practice. Others said it promotes job satisfaction; “gives nurse sense of satisfaction if the goals are achieved, while still others said “it helps the nurse to give systematic nursing care, promotes nurse- patient relationship and improves documentation and professional growth. There is good record keeping and reporting of data”.

4.1.7 SOLUTION TO PROBLEMATIC STEP OF THE NURSING PROCESS
The participants who said they had some problems with some nursing steps suggested that these could be corrected by providing more resources, enhancing supervision by both clinical instructors and qualified staff on the wards.

4.1.8 VIEWS ON WHETHER THE NURSING PROCESS IS A WASTE OF RESOURCES
Concerning this issue the participants had varied views. On one hand some
participants felt it was not a waste of time and resources while on the other hand others felt it was a sheer waste of time and resources. Those participants who felt that the nursing process was not a waste of time or resources said “human life is more valuable than the cost of resources and it promotes quick recovery and reduces mortality rate”.

One participant argued that “The cost of resources will never equal the cost of human life... because of this, in my opinion its better to spend resources on quality health services through the nursing process, after all life is more precious than any resources, and that is why we cry when we lose one.”

Those who felt it was a waste of resources said it time consuming and that resources were not there. They said;

"It’s a waste of time and resources because you spend more time one patient when all the patients need your attention...when one nurse is manning a ward with 40 patients... hospitals do not have enough staff and resources, so for one to make the nursing care plan needs time and resources which are not there”.

4.1.9 VIEWS ON WHETHER THEORY PREPARATION WAS ADEQUATE

Some participants agreed that the theory preparation was adequate to enable them carry out the nursing process on the practicum while others felt that the theory preparation was inadequate.

Those in agreement stated that the concept of the nursing process was clearly explained as illustrated in this response, "I got it right, we are taught in details".

Those who disagreed lamented that they found it difficult to carry out the nursing process on the wards because they had few demonstrations if any as illustrated in the response;

"We have inadequate demonstrations despite learning them theoretically in class, so it is hard to practice things that were not demonstrated to us....theory was not followed by adequate demonstrations thus there is lack of linkage between theory and practical".

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Others still felt that theory was inadequate because the concept was not taught in details. One participant lamented "I feel inadequate because not much in taught on the process but much emphasis or concentration is put on the care plan....., too many a group to receive individual guidance as tutors are few compared to the number of students".

4.2 QUANTITATIVE RESULTS
The findings of the study from the quantitative data are presented using tables and pie charts. These were found to be more appropriate because they are easy to interpret and they accord one with a rough idea and picture about the findings even before they read the findings. They are also useful in drawing meaningful inferences. Cross tabulation of tables is useful as it combines information on two or more variables in order to arrive at a positive explanation of the problem.
### SECTION A: DEMOGRAPHIC DATA

#### TABLE 2: RESPONDENTS’ DEMOGRAPHIC DATA

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>29</td>
<td>58</td>
</tr>
<tr>
<td>Male</td>
<td>21</td>
<td>42</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td><strong>Age group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 – 20</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>21 – 25</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>26 – 30</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>31 - 35</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roman catholic</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>U.C.Z</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Pentecostal</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Jehovah’s Witness</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Others</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>Married</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Divorced</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Widowed</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
The table above shows that 58% of the respondents were female while 42% were males. The majority of the respondents (60%) were aged between 21 and 25 years. The great majority of the respondents (80%) were single and only 20% were married. No respondents were widowed or divorced. The table also shows that 40% of the respondents belonged to other religions other than Pentecostal 30%, Roman Catholic 22% and Jehovah’s Witness 2%.

SECTION B: KNOWLEDGE

TABLE 3: RESPONDENTS’ KNOWLEDGE ON NURSING PROCESS

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heard of nursing process (n-50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>49</td>
<td>98</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unanswered</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Totals</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

*Source of information (n –50)

<table>
<thead>
<tr>
<th>Source</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom lecture</td>
<td>49</td>
<td>98</td>
</tr>
<tr>
<td>Books and internet</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Qualified staff</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Friends</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Unanswered</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Totals</td>
<td>76</td>
<td>152</td>
</tr>
</tbody>
</table>

*Additions are above 50 due to multiple responses

The table shows that the great majority of the respondents (98%) heard of the nursing process before. The table also reveals that 98% of the respondents got
the information about the nursing process from the classroom lectures, 18% from reading books and internet, 16% from qualified staff while only 12% got the information from friends.

SECTION C: UTILIZATION OF THE NURSING PROCESS

**TABLE 4: WHETHER HAS USED NURSING PROCESS BEFORE**

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n –50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>No</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>Totals</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

The table shows that 50% of the respondents had used the nursing process before and 50% had not used the nursing process before.

**TABLE 5: WHEN STARTED USING NURSING PROCESS ON A PATIENT**

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>*(n –25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On admission</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>After 2 days of admission</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>On discharge</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Whenever necessary</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Totals</td>
<td>25</td>
<td>50</td>
</tr>
</tbody>
</table>

*Those that had not used the nursing process before are excluded*

All the respondents (50%) started using the nursing process on admission.
<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n − 50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unconscious patients only</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Acute bay patients only</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Post – operative patients</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>All patients</td>
<td>49</td>
<td>98</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Almost all the respondents (98%) said that the nursing process should be used on all types of patients.

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(n − 25)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>21</td>
<td>42</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>25</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

*Those that had not used the nursing process are excluded.*

The majority of the respondents (42%) who had used the nursing process had some difficulties with some steps of the nursing process while only 8% had no difficulties with any step of the nursing process.
TABLE 8: RESOURCES

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n – 50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Inadequate resources</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>No resources at all</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The majority of the respondents (80%) said that the resources were inadequate.

TABLE 9: GUIDANCE AND SUPERVISION FROM CLINICAL INSTRUCTORS ON NURSING PROCESS

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n – 50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>No</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

80% of the respondents said that they did not receive guidance and supervision from the clinical instructors on the utilization of the nursing process and only 20% had received guidance and supervision from the clinical instructors.
### TABLE 10: AMOUNT OF SUPERVISION

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(n – 10)</em></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Adequate</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Inadequate</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>10</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

*only represents those that received guidance and supervision.*

The table shows that 18% of the respondents received inadequate support and supervision.

### Figure 2: Support from ward staff

The figure shows that the majority of the respondents (68%) said they were supported by ward staff on utilization of nursing process while only 28% said they were not supported.
TABLE 11: AMOUNT OF SUPPORT FROM WARD STAFF

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n – 14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Inadequate</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Totals</td>
<td>14</td>
<td>28</td>
</tr>
</tbody>
</table>

The majority of the respondents (24%) said that the support from the ward staff was inadequate. However, only 4% said the support was adequate.

TABLE 12: FREQUENCY OF STAFF USING NURSING PROCESS ON THE WARD.

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n- 50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Always</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rarely</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>Not at all</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>Totals</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

The table shows the staffs do not always use the nursing process on the wards. 50% of the respondents said staffs rarely use the nursing process and another 50% said staffs do not use the nursing process at all.
TABLE 13: WHETHER NURSING PROCESS IS A WASTE OF RESOURCES

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n-50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>No</td>
<td>45</td>
<td>90</td>
</tr>
<tr>
<td>Totals</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

The great majority of the respondents (90%) felt that the nursing process was not a waste of resources while only 10% said it was a waste of resources.

TABLE 14: WHETHER CLASSROOM PREPARATION WAS ADEQUATE

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n- 50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>28</td>
<td>56</td>
</tr>
<tr>
<td>No</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td>Totals</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

The majority of the respondents (56%) said that the classroom preparation was adequate and 44% said it was inadequate.
### TABLE 15: RELATIONSHIP BETWEEN LEVEL OF KNOWLEDGE AND SEX

<table>
<thead>
<tr>
<th>LEVEL OF KNOWLEDGE</th>
<th>MALE</th>
<th>FEMALE</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>18 (36%)</td>
<td>18 (36%)</td>
<td>36 (72%)</td>
</tr>
<tr>
<td>Moderate</td>
<td>3 (6%)</td>
<td>11 (22%)</td>
<td>14 (28%)</td>
</tr>
<tr>
<td>Low</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>21 (42%)</strong></td>
<td><strong>29 (58%)</strong></td>
<td><strong>50 (100%)</strong></td>
</tr>
</tbody>
</table>

The table reveals that 36% of both males and female respondents were highly knowledgeable about the nursing process, while 22% of female and 6% of the male respondents were moderately knowledgeable.

### TABLE 16: RELATIONSHIP BETWEEN KNOWLEDGE AND AGE

<table>
<thead>
<tr>
<th>Level of knowledge</th>
<th>15 - 20</th>
<th>21 - 25</th>
<th>26 - 31</th>
<th>Above 31</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>5 (10%)</td>
<td>20 (40%)</td>
<td>10 (20%)</td>
<td>2 (4%)</td>
<td>37 (74%)</td>
</tr>
<tr>
<td>Medium</td>
<td>0</td>
<td>9 (18%)</td>
<td>4 (8%)</td>
<td>0</td>
<td>13 (26%)</td>
</tr>
<tr>
<td>Low</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6 (12%)</strong></td>
<td><strong>29 (58%)</strong></td>
<td><strong>14 (28%)</strong></td>
<td><strong>2 (4%)</strong></td>
<td><strong>50 (100%)</strong></td>
</tr>
</tbody>
</table>

40% of the respondents aged between 21 – 25 years and 20% between 26 – 31 years were highly knowledgeable about the nursing process.
TABLE 17: RELATIONSHIP BETWEEN KNOWLEDGE AND LEVEL OF TRAINING

<table>
<thead>
<tr>
<th>Level of knowledge</th>
<th>2nd yr</th>
<th>3rd yr</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>18 (36%)</td>
<td>18 (36%)</td>
<td>36 (72%)</td>
</tr>
<tr>
<td>Moderate</td>
<td>7 (14%)</td>
<td>7 (14%)</td>
<td>14 (28%)</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>25 (50%)</strong></td>
<td><strong>25 (50%)</strong></td>
<td><strong>50 (100%)</strong></td>
</tr>
</tbody>
</table>

Both second and third years (36%) were highly knowledgeable and 14% for both groups were moderately knowledgeable.

TABLE 18: RELATIONSHIP BETWEEN KNOWLEDGE AND UTILIZATION

<table>
<thead>
<tr>
<th>Level of knowledge</th>
<th>Utilization</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Good</td>
<td>Poor</td>
<td>Totals</td>
</tr>
<tr>
<td>High</td>
<td>19 (38%)</td>
<td>17 (34%)</td>
<td>36 (72%)</td>
</tr>
<tr>
<td>Moderate</td>
<td>6 (12%)</td>
<td>8 (16%)</td>
<td>14 (28%)</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>25 (50%)</strong></td>
<td><strong>25 (50%)</strong></td>
<td><strong>50 (100%)</strong></td>
</tr>
</tbody>
</table>

Of those respondents who were highly knowledgeable, 38% have used the nursing process before and 34% have not used it before. For those who were moderately knowledgeable only 12% have carried out the nursing process while 16% have not done so.
### TABLE 19: RELATIONSHIP BETWEEN UTILIZATION AND SEX

<table>
<thead>
<tr>
<th>Utilization</th>
<th>Sex</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Totals</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>11 (2%)</td>
<td>14 (28%)</td>
<td>25 (50%)</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>10 (20%)</td>
<td>15 (30%)</td>
<td>25 (50%)</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>21 (42%)</td>
<td>29 (58%)</td>
<td>50 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

28% of the female respondents have used the nursing process before and 30% of the male respondents have not used the nursing process before.

### TABLE 20: RELATIONSHIP BETWEEN UTILIZATION AND AGE

<table>
<thead>
<tr>
<th>Utilization</th>
<th>Age</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15 - 20</td>
<td>21- 25</td>
<td>26 - 31</td>
<td>Above 31</td>
</tr>
<tr>
<td>Good</td>
<td>1(2%)</td>
<td>13 (26%)</td>
<td>10 (20%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Poor</td>
<td>5 (10%)</td>
<td>16 (32%)</td>
<td>3 (6%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Totals</td>
<td>6 (12%)</td>
<td>29 (58%)</td>
<td>13 (26%)</td>
<td>2 (4%)</td>
</tr>
</tbody>
</table>

The majority (32%) of the respondents in the age group of 21 to 25 years have not used the nursing process before while only 26% of the same age group has used the process before.
<table>
<thead>
<tr>
<th>Utilization</th>
<th>Level of training</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2(^{nd}) yr</td>
</tr>
<tr>
<td>Good</td>
<td>7 (14%)</td>
</tr>
<tr>
<td>Poor</td>
<td>18 (36%)</td>
</tr>
<tr>
<td>Totals</td>
<td>25 (50%)</td>
</tr>
</tbody>
</table>

The majority of the 3\(^{rd}\) year respondents (36\%) had used the nursing process before while only 14\% of the 2\(^{nd}\) years have done so. Utilization of the nursing process was poor among 2\(^{nd}\) year respondents standing at 36\%.
CHAPTER FIVE.

5.0 DISCUSSION OF FINDINGS
This section discusses the findings of the study which was assessing the knowledge and utilization of the nursing process by trainee nurses at Livingstone school of nursing.

5.1 CHARACTERISTICS OF THE STUDY POPULATION
The population sample constituted of 2\textsuperscript{nd} years and 3\textsuperscript{rd} year students. Out of the fifty respondents questioned using a structured interview schedule, more than half were females. This could probably be due to the fact that nursing profession predominantly consists of female (GNC, 2004 b). The other reason could be that at the moment Livingstone School of Nursing is enrolling student at a ratio of 1:6, that is one male student to six female students. Enrollment of male students also depends on the availability of accommodation. At Livingstone School of Nursing there is only one block comprising twelve rooms for the male students.

The age ranged from 16 to 31 years with the mean age of 24 years. The highest frequency of more than two thirds was found to be between 21 and 26 years. This could be attributed to the fact those who participated were second and third years who could have been above eighteen years. All the respondents were Christians and this could be related to the fact that the former Republican President Fredrick Chiluba declared Zambia a Christian nation in 1991 (CCZ, 2005).

5.2 KNOWLEDGE
In accordance with the Zambian Health and Demographic Survey conducted between 2001 and 2002, it was established that knowledge is a precondition of proper or higher utilization of any given service (CSO &
MOH, 2002).
The study revealed that almost all the respondents have heard about the nursing process and got the information from the classroom lecture (Table 3 page 27). Knowledge regarding definition and benefits of the nursing process was generally good. The participants correctly defined nursing process as a systematic and individualized problem solving approach to delivering nursing care involving the steps of assessment, nursing diagnosis, planning, implementation and evaluation. This concurs with Kratz (1985) who said that the nursing process is basically a problem-solving approach to nursing and Lefevre (2002) who stated that the nursing process is systematic, dynamic way of giving nursing care. The study also reflects that the respondents know what the nursing process involves and alluded that it is beneficial to both the client and the nurse. Some of the benefits to the patient cited by participants include client's participation through self-care in all the phases of the nursing process, continuity of care and holistic care. Lefevre (2002) said that patient participation is increased, as the patient is involved at each stage of the nursing process. Kajinga (1992) also reports that the clients feel important and part of the health team through their full participation. The participants further alluded that use of the nursing process gives the nurse a sense of satisfaction.

Furthermore, the study revealed that about two thirds of both males and females were highly knowledgeable. This finding entails that sex has no influence on actual knowledge respondents have. Another notable finding is that the majority of the respondents aged between 21 and 26 years were highly knowledgeable. This could be attributed to the fact that this age group constituted sixty percent of respondents as illustrated in table 2 (page 26).
5.3 ENCOURAGEMENT

In this study, questions were designed to establish the level of encouragement; guidance, supervision and mentorship student nurses receive from both the qualified staff and clinical instructors on the utilization of the nursing process.

When a strong foundation is built, it follows that the outcome is also strong. Makoleka (2005) reports that the nursing profession in Zambia has a poor foundation on nursing process. This could be attributed to the inadequate coverage of the nursing process in the nursing school curriculum in the past. It therefore follows that nurses who qualified then have less knowledge and skill on the usage of the nursing process and thus cannot encourage the students to use the nursing process. Little wonder then that the majority of the respondents did not receive support, guidance and encouragement from the clinical instructors and qualified staff as illustrated in table 9 (page 30) and figure 2 (page 38) respectively. Only very few received support which was inadequate. Kajinga (1992), reports that the nursing process concept is criticized by qualified nurse who complain of the length of time required for assessment and writing care plans. The nurses view it as mere paper exercise, thus they shun its usage.

However, Condell et al (2001) found that nurses who were friendly and helpful towards student nurses had a positive impact and contributed to student’s confidence level in carrying out the nursing process and other nursing procedures. It is therefore, vital that qualified staff and clinical instructors have interest in ensuring that students participate actively in utilizing the nursing process. To enable the students gain confidence to participate actively in using the nursing process, the clinical instructors and qualified staff should demonstrate sufficiently to students how to use the nursing process. This concurs with the findings of Morgan (2002) in a study entitled "Giving students the confidence to take part", who said
student nurses became more confident once the technique has been demonstrated sufficiently by nurses and clinical instructors.

Another contributing factor to staff underutilization of the nursing process could be that the staff trained at a time when the nursing process was not yet introduced in the nursing curriculum hence they have no capacity to utilize the nursing process on the wards.

5.4 UTILIZATION

Utilization refers to making use available materials or information (Iyer et al 1991).

The reasons for not utilizing the nursing process varied with most students believing that inadequate guidance and supervision from qualified staffs made them not to use the process.

Some of the respondents who used the nursing process had difficulties with the implementation phase. This could be attributed to the fact that the students received inadequate support and guidance on utilization of the nursing process from the qualified staff and clinical instructors and lack of availability of resources.

The majority of the respondents in the study said that the resources were inadequate while one fifth said there were no resources at all. This concurs with the findings of two studies conducted by Kajinga (1992) and Makoleka (2005) that looked at factors contributing to underutilization of nursing process by nurses at Mine Hospitals and Kasama General Hospital respectively. Both studies revealed that non-availability of resources (human, material and finances) was one the factors contributing to nurses underutilizing the nursing process. The study also revealed that about two third of the respondents who were highly knowledgeable utilized the nursing process. This finding entails that knowledge has an effect on use of the nursing process. According to a study by Korpor (1999), the breadth and depth of knowledge possessed by nurses (in this case
student nurses) determines their proficiency in performance and skill. Adequate knowledge helps the student to understand fully the concepts of the nursing process.

The study further revealed that about two thirds of those respondents who used the nursing process were third year students. This could be attributed to the fact that by third year students would have gained competence and confidence to enable them carry out the nursing process while second years are not yet confident enough to utilize the nursing process. This finding entails that level of training has a bearing on utilization of the nursing process.

Findings in table 20 show that the majority of the respondents who used the nursing process are females. This is related to the fact that Livingstone School of Nursing enrolls few male students than females at a ratio of 1:6.

Another reason is that nursing as a profession used to enroll females only and it was only recently that the male counterparts started to be enrolled. This concurs with Sorensen & Luckmann (1986) who said that “nursing has traditionally been a woman’s occupation”, that is why many females have joined nursing compared to men.

5.5 NURSING IMPLICATIONS

Implications exist for nurse educators and qualified nurses mentoring students in either case.

Nurse educators must find room to address the issue of the nursing process thoroughly and device creative means of conveying the importance and relevance of the usage of the nursing process to students. This calls for schools of nursing to ensure that clinical instructors are available on the clinical area to supervise the students.

Qualified nurses, as role models for the student nurses, must demonstrate in practice the usage of the nursing process. Qualified staff on the wards
should also take interest and supervise the students on the wards. The study revealed that the nursing process is underutilized by student nurses due to various constraints like inadequate supervision and encouragement from both clinical instructors and qualified staff. Indeed, effective utilization of the nursing process dependents on the ability and competence of the student nurses. Student nurses need to be encouraged on the use of the nursing process and be appraised for using the tool. This will boost their morale and build the needed competence and confidence, which is a pre-requisite to utilizing the nursing process. The other implication is that since nursing is striving to gain professional autonomy and identity independent of medicine, it therefore follows that nurses should be responsible for prescribing nursing through the effective use of the nursing process. This is possible if the capacity and skill is built during the training period. Finally, the study findings indicate that there is potential for students to effectively utilize the nursing process if identified constraints are removed from their learning environment.

5.6 IMPLICATION TO NURSING RESEARCH

The literature review on the nursing process indicates that very little has been done in Zambia on this cardinal tool in delivering quality care to patients. This should therefore act as a stimulation to nurse researchers and students in nursing field at various levels to engage in research on the nursing process so that knowledge is generated on the tool.

5.7 CONCLUSION

Although the results of this study show that most respondents were knowledgeable about the nursing process, they also raise the concern that student nurses seldom use the nursing process during their training. This in itself is an issue worth of exploration.
Underutilization of the nursing process by students is attributed to factors like inadequate supervision and encouragement from the qualified staff and clinical instructors coupled with erratic and inadequate supply of resources like stationery.

In order to achieve effective and full utilization of the nursing process by student nurses, the nursing education program must place ample emphasis on the importance of the nursing process and provide students with meaningful opportunities for mentored participation in the utilization of the nursing process.

There is need for qualified staffs and clinical instructors to show keen interest in the students to encourage and support them on the utilization of the nursing process.

5.8 RECOMMENDATIONS

1. The results of this study suggest the need for a bigger study to cover all schools of nursing in Zambia.

2. Hospital policy on nursing process needs to be formulated and discussed so that the schools of Nursing have guidelines to follow in order to improve and enhance the utilization of nursing process by qualified staff and student nurses.

3. Livingstone School of Nursing should ensure that adequate clinical instructors are available on the clinical area to enhance supervision of students on the nursing process. The school should also ensure that the process is adequately revised in third year to enhance the knowledge of students on the process.

4. Hospital management together with school management should ensure that resources are available on the clinical area for students to use.

5. Hospital management through the in-service department should plan and conduct in-service training programmes on the nursing process to
acquaint nurses on the importance of the nursing process in the delivery quality nursing care. These in turn enable the staff to encourage and support the student nurses on utilization of the tool.

5.9 DISSEMINATION OF FINDINGS
Dissemination of findings entails the measures that would be undertaken to make known to the relevant authorities and study subjects what the study has measured.

The results of the study will be disseminated by sending an executive summary to the research site, which is Livingstone School of Nursing for implementation of the recommendations. The results will enable the institution to monitor the usage of the nursing process by students.

A research report will be submitted to the department of Post Basic Nursing in the school of medicine to serve as reference to other researchers.

Findings of the study will also be sent to interested parties such as Ministry of Health and General Nursing Council of Zambia as the findings can be used to come up with some strategies to promote utilization of nursing process in schools of nursing.

5.10 LIMITATIONS OF THE STUDY
- It was not possible to conduct the study on a large scale with a large sample size due to limited resources and time in which the study was to be completed and submitted to the University of Zambia, School of Medicine. This means that the study findings cannot be generalized to a larger population.

- Lack of published literature nationally was another limitation and no study has been conducted on utilization of nursing process by student nurses within the country.
6.0 REFERENCES


## 7.0 LIST OF APPENDICES

### 7.1 RESEARCH BUDGET

<table>
<thead>
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<th>BUDGET CATEGORY</th>
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<th>PRICE</th>
<th>QUANTITY</th>
<th>TOTAL (ZMK)</th>
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<td></td>
<td>1,408,000.00</td>
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<td></td>
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<td><strong>Grand Total</strong></td>
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<td>1,548,000.00</td>
</tr>
</tbody>
</table>
JUSTIFICATION FOR THE BUDGET

In order for the investigator to successfully carry out the research study, she will need stationery and secretarial services.

Stationery

The reams of paper shall be used for the research proposal, research report and the questionnaire. Additionally, the questionnaire shall require to be photocopied to make 55 copies and 4 copies to be included in the final report. The box file shall be required for filling research documents. Other accessories shall be required for the routine collection of data, for example pens, pencils, rubber, tippex, markers, flip chart etc.

Secretarial Services.

The funds shall assist the investigator type, print and photocopy the questionnaire, research proposal, research report and letters of permission. The funds shall also be required for the binding of the proposal and research reports.
7.2 RESEARCH QUESTIONNAIRE

Questionnaire No -----

STRUCTURED INTERVIEW SCHEDULE ON UTILIZATION OF NURSING PROCESS BY REGISTERED STUDENT NURSES AT LIVINGSTONE SCHOOL OF NURSING.

INSTRUCTIONS.
1. Do not write your name on the questionnaire.
2. Answer all questions
3. For questions provided with alternatives, indicate the letter bearing the response by ticking in the appropriate box against it.
4. For questions without alternatives, write down the response in the space provided.
5. All information will be held in confidence

Section A: Demographic data.

1. Sex
   Male
   Female

2. Age
   a) 16 - 20 years
   b) 21 - 25 years
   c) 26 - 30 years
   d) 31 - 35 years

For official use
3. What is your marital status?
   a) Single
   b) Married
   c) Divorced
   d) Widowed

4. What is your religious denomination?
   a) Roman Catholic
   b) United Church of Zambia
   c) Pentecostal
   d) Jehovah’s Witness
   e) Others, specify __________________________

5. Level of training
   a) Second year
   b) Third year

Section B: Knowledge

6. Have you heard about the nursing process?
   a) Yes
   b) No

7. If yes, mention where you got the information?
   a) Class lecture
   b) Reading from books and internet
   c) From qualified staff on the wards
   d) From friends

8. What is nursing process?
   _______________________________________
   _______________________________________
   _______________________________________
9 List the steps of the nursing process?

---------------------------

---------------------------

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---------------------------

10 Describe the steps involved in a nursing process

---------------------------

---------------------------

---------------------------

---------------------------

11 What are the benefits of the nursing process to the patient?

---------------------------

---------------------------

---------------------------

---------------------------

12 What are the benefits of the nursing process to the nurse?

---------------------------

---------------------------

---------------------------

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Section C: Utilization

13 Have you used the nursing process before?
   a) Yes
   b) No

14 If yes, when did you last use a nursing process on a patient?
   ________________________________________________________________
   ________________________________________________________________

15 When did you start using the nursing process on a patient?
   a) On admission
   a) After two days of admission
   b) On discharge
   c) Whenever necessary

16 On which patients should the nursing process be used?
   a) Unconscious patients only
   b) Acute bay patients only
   c) Post-operative patients only
   d) All patients

17 Do you have any difficulties with the steps of the nursing process?
   a) Yes
   b) No

18 If yes, which step is problematic?
   ________________________________________________________________

19 What do you think should be done to ease the problem you mentioned in question 18?
   ________________________________________________________________
20. Do you have enough resources for utilizing the nursing process?
   a) Adequate
   b) Inadequate
   c) No resources at all

21. Do you get guidance and supervision from your clinical instructors on nursing process?
   a) Yes
   b) No

22. If your answer in question 21 is yes, is the supervision
   a) Adequate
   b) Inadequate

23. Do qualified staffs on the wards support you on the utilization of the nursing process?
   a) Yes
   b) No

24. If your answer in question 23 is yes, is the support:
   a) Adequate
   b) Inadequate

25. How often do qualified staffs on the wards use the nursing process?
   a) Always
   b) Rarely
   c) Not at all
26 Do you think the nursing process is a waste of resources?
   a) Yes
   b) No

27 Support your answer in question 26
   -----------------------------------------------------
   -----------------------------------------------------
   -----------------------------------------------------
   -----------------------------------------------------

28 Is your classroom preparation (theory) adequate to enable you use the nursing process on your practicum?
   a) Yes
   b) No

29 Give reasons to your response in question 28?
   -----------------------------------------------------
   -----------------------------------------------------

Thank you for your participation
<table>
<thead>
<tr>
<th>Activity</th>
<th>Responsible person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finalize research proposal</td>
<td>Investigator</td>
</tr>
<tr>
<td>Clearance from relevant authorities</td>
<td>Investigator</td>
</tr>
<tr>
<td>Data collection tool (pilot study)</td>
<td>Investigator</td>
</tr>
<tr>
<td>Data Collection</td>
<td>Investigator</td>
</tr>
<tr>
<td>Data analysis</td>
<td>Investigator</td>
</tr>
<tr>
<td>Report writing</td>
<td>Investigator</td>
</tr>
<tr>
<td>Draft report to PBN</td>
<td>Investigator</td>
</tr>
<tr>
<td>Finalizing report and binding</td>
<td>Investigator</td>
</tr>
<tr>
<td>Dissemination of report</td>
<td>Investigator</td>
</tr>
<tr>
<td>Monitoring and evaluation</td>
<td>Investigator</td>
</tr>
</tbody>
</table>
## APPENDIX 4

### RESEARCH WORK SCHEDULE

<table>
<thead>
<tr>
<th>NO</th>
<th>TASK TO PERFORMED</th>
<th>DATES</th>
<th>RESPONSIBLE PERSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Literature review</td>
<td>Continuous</td>
<td>Investigator</td>
</tr>
<tr>
<td>2</td>
<td>Finalize proposal</td>
<td>By June 28</td>
<td>Investigator</td>
</tr>
<tr>
<td>3</td>
<td>Data collection tool</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; week of August</td>
<td>Investigator</td>
</tr>
<tr>
<td>4</td>
<td>Clearance from relevant authorities</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; week of August</td>
<td>Investigator, PBN supervisor, Livingstone School of Nursing</td>
</tr>
<tr>
<td>5</td>
<td>Pilot study</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; week of September</td>
<td>Investigator</td>
</tr>
<tr>
<td>6</td>
<td>Data collection</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; week of September</td>
<td>Investigator</td>
</tr>
<tr>
<td>7</td>
<td>Data analysis</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; week of September to end of October</td>
<td>Investigator</td>
</tr>
<tr>
<td>8</td>
<td>Report writing</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; week of November</td>
<td>Investigator</td>
</tr>
<tr>
<td>9</td>
<td>Submission of draft research to PBN</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; week of January 2006</td>
<td>Investigator</td>
</tr>
<tr>
<td>10</td>
<td>Finalise report writing</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; week of January</td>
<td>Investigator</td>
</tr>
<tr>
<td>11</td>
<td>Dissemination of report</td>
<td>End of January</td>
<td>Investigator</td>
</tr>
<tr>
<td>12</td>
<td>Monitoring and evaluation</td>
<td>Continuous</td>
<td>Investigator</td>
</tr>
</tbody>
</table>
The Principal Tutor  
Livingstone School of Nursing  
Box 60091  
Livingstone.

UFS: The Head of Department  
Post Basic Nursing  
Box 50110  
Lusaka.

Dear Madam,

**RE: PERMISSION TO CONDUCT A RESEARCH**

Reference is made to the above captioned subject.

I am a 4th year student pursuing a BSc degree in nursing at the University of Zambia, school of medicine. As part of the fulfillment of a degree programme, I am required to carry out a research. The topic of my study is “Utilization of the nursing process by RN students”.

I would like therefore to ask for permission to conduct this study at your institution. Data collection will be done in the month of September. I will be very grateful if my request is considered.

Yours faithfully,

Loveness Moonde  
4th year BSc Nursing student.
29th July 2005

The Principal Tutor
Lusaka School of Nursing
Box RW 50366
Lusaka

UFS: The Head of Department
Post Basic Nursing
Box 50110
Lusaka.

Dear Madam,

RE: PERMISSION TO CONDUCT A PILOT STUDY

Reference is made to the above captioned subject.

I am a 4th year student pursuing a BSc degree in Nursing at the University of Zambia, School of Medicine. As part of the fulfillment of a degree programme, I am required to carry out a research. The topic of my study is “Utilization of the nursing process by RN students”.

I would like therefore to ask for permission to conduct a pilot study at your institution. Data collection will be done in the first week of August 2005.

I will be very grateful if my request is considered.

Yours faithfully,

Loveness Moonde
4th year BSc Nursing student