STUDY TO ASSESS THE RELATIONSHIP BETWEEN NURSE STAFFING LEVELS AND DELIVERY OF QUALITY NURSING CARE

This Research study is submitted to the Department of Post Basic Nursing, School of Medicine, University of Zambia in partial fulfilment of the requirements for the Degree of Bachelor of Science in Nursing

Supervisor: Patricia M. Ndele (Mrs)

NOVEMBER 1998
LUSAKA

KABOMBO SIKAMENA BEAUTY
A STUDY TO ASSESS THE RELATIONSHIP BETWEEN NURSES STAFFING LEVELS AND DELIVERY OF QUALITY NURSING CARE AT THE UTH

BY

Kabombo Sikamena Beauty

ZRN (LUSAKA 1989)

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October 1998

Lusaka
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LIST OF ABBREVIATIONS

CBOH  -  Central Board of Health
MOH   -  Ministry of Health
WHO   -  World Health Organization
UNZA  -  University of Zambia
UTH   -  University Teaching Hospital
ILO   -  International Labour Organization
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DECLARATION

I, Beauty Sikamena Kabombo, hereby declare that the work presented in this study for Bachelor of Science in Nursing has not been presented either partially or wholly for any other degree, and is not being currently submitted for any other degree.

Signed: ...
Candidate:

Signed: ...
Supervisor

Date: Apr. 29th 1999.
STATEMENT

I hereby certify that this study is the result of my own labour and independent investigation. The various sources to whom I am indebted, are clearly indicated throughout the text and bibliography.

Signed: ...Dr. ... Date: ...April 29th... 1999...
DEDICATION

To the memory of my father

Mr Benson Kabombo Mutongo

Whose values of decency
And dignity will always
Be an inspiration.

To my loving mother, my brothers and sisters
And my uncle for their support

To my son, Kakana Mwale Junior for his understanding, prayers
And encouragement.
ACKNOWLEDGEMENTS

I wish to express my gratitude to the Director of Human Resources Development for the scholarship, and the Ministry of Health for enabling me study for the Bachelor of Science in Nursing.

My thanks go to the respondents for their willingness to participate, without whose cooperation, this study would have been a flop.

I would like to sincerely thank Mrs P.M. Ndele, my supervising lecturer whose patience and direction, valuable advice and guidance throughout the research project made it possible for me.

I am indebted to Management of the University Teaching Hospital whose co-operation made it possible for me to collect data and valuable information within a supportive environment.

Thanks go to Mrs Banda of the General Nursing Council for providing me with the relevant information.
I would like to express my appreciation to my classmates for their encouragement and support.

It would be incomplete if I did not say thanks to my friends Dorothy Mwambazi, Lisa Yobe, Oscar Bwalya, Angellah Watuka and Emmanuel Kalindawalo for their untiring support and prayers.

I am especially grateful to Isabelle Silunyange, who typed the manuscript.
ABSTRACT

The study was to Assess the Relationship between Nurse Staffing levels and the Delivery of Quality Nursing Care at the UTH.

Literature review of relevant studies was done which revealed that inadequate nurse staffing levels coupled with irregular medical supplies has compromised quality nursing care.

A non experimental descriptive research design was conducted using a standard questionnaire.

The study was conducted at the UTH, in Lusaka. UTH is a 1800 plus bed Referral hospital for the entire country.

The study was conducted between August and September 1998 using a systematic random sample of 50 nurses from the UTH.

The study revealed that the majority of the respondents (92%) worked in understaffed wards which led to compromising the nursing care rendered. The study also revealed that
other than staffing, factors such as adequate resources and money are important for delivery of quality patient care.

In addition the study brought to light the fact that taking care of nurses is primary to their providing quality care to the patients. A nurse who is well looked after will in turn provide the best care.

It has been recommended that administrators should provide incentives for nurses as well as in-service training. More nurses are required in order to ease the workload and hence improve quality patient care.
CHAPTER 1

1.1 BACKGROUND INFORMATION

Zambia is a landlocked country found in Southern Africa. It shares borders with Angola, Namibia, Botswana, Zimbabwe, Mozambique, Malawi, Tanzania and the Democratic Republic of Congo. It has 752,612 square kilometres of land which is divided into nine provinces, with fifty three districts. Lusaka is the capital city. There are seventy three ethnic groups with seven major languages. The population of the country is about 7.8 million as reported by 1990 census. The growth rate is 3.2% (Health Reforms 1992).

The population is concentrated along the line of rail because major towns are along this route: hence the rural-urban drift in search of jobs. The rural population are mostly peasant farmers and fishermen. The rural area is underdeveloped, that is why the youths move to urban area in search of employment and livelihood.

The economy of the country largely depends on copper mining. Zambia is one of the world’s copper producers. The copper exports bring foreign exchange to the country and sustains the economy to a great extent. With the fall of copper prices on the world market, the economy has declined too.

Over the years, we have seen the economy deteriorate and with it the country’s health system. The population meanwhile has increased (Ministry of Health, 1994). The poor economy coupled with population increase has rendered social services such as health to be
inadequate. This has been attributed to reduction in budget allocation over the years. This has led to inadequate supply of drugs, medical equipment and other resources (Ministry of Health 1992). The poor economy has also meant that maintenance and repair services of Health structures could not be done which has led to dilapidation of infrastructures. It has become evident that substantial improvement in health services cannot be achieved without improvement of socio-economic condition. Poverty, lack of education, inadequate health facilities, lack of information and inability for communities to pay for health services are some of the problems affecting the quality of health services in Zambia today.

The Government has been concerned about the poor Health system of the country for some time. This was recognised early in the Second Republic. In the Third National Development Plan of 1974 to 1984, the Government emphasised on decentralisation of the Health Care System to encourage community participation in matters that affect the community’s health. It aimed at directing the scarce resources to needy areas. In 1973, the Government joined other countries in the resolve to have Health For All By the Year 2000, by adopting the Alma Ata Declaration of “Health for all through primary health care strategy”. (Ministry of Health 1983). Although the primary health care approach was adopted, it has not been fully implemented because the concept was not clearly understood. This necessitated the establishment of a Demonstration Zone at Mwachisompola to orient health personnel towards primary health care (Ng’ombe 1983). In order to prepare the nurses and equip them with knowledge and skills to enable them function effectively; the General Nursing Council of Zambia incooperated the primary health care concepts in the curricula of nurses and midwives (Msidi 1994).
In 1991, the Third Republic came up with the Health Reforms policies and strategies in delivering health care. The vision of the reforms has been to provide equity of access to cost effective, quality health care as close to the family as possible. To translate this vision into reality, the Ministry of Health needs the partnership of employees and users of the services. The Government needs the community support in order to succeed in implementation of the reforms. On the other hand, the people need to understand the reforms and the benefits to be gained for them to fully support the Government.

A significant change in the course of time is that people have to come to regard health not as a privilege but as a right to be expected and experienced. This kind of expectation requires a corresponding change in the nature of standards of delivering of nursing care.

In the hospital setting, the nurse is responsible for her patient’s welfare. However, sometimes nurses do not meet the expectation of patients. It is in these situations that the public’s dissatisfaction with the care given is being expressed at different levels. Meanwhile, the nation’s health needs are changing. The health resources are being subjected to severe stress by population growth, expanding technology and new demands from previously neglected groups in society.

Many forces have influenced the current sudden attention for quality nursing care delivery system. The voice of the consumer once a murmur, is growing stronger in expressing dissatisfaction with the nursing care offered. This situation makes it imperative that the methods of assessing the quality of care provided be identified. The health practitioners are
the most appropriate individuals to evaluate the quality of nursing care being provided to the patients. It should be noted that the factors of change itself may contribute to the falling standards i.e. change in social conditions, belief, skills and even meaning of words. "Nursing care means different things to different people." (Hafford 1976).

The working environment, the entire material and human resources made available to the profession for carrying out their duties, all have an effect on the delivery of nursing care. Adequate staffing, supervision and guidance all enable nurses to perform duties to the best of their ability. In their absence, they serve as contributing factors to unsatisfactory delivery of nursing care in Zambia because they make it difficult to achieve the goal of health for all and job satisfaction.

1.2 STATEMENT OF THE PROBLEM

The University Teaching Hospital (UTH) has likewise been affected by the decline in the economy. This has resulted into the falling standards of nursing care at the institution. For this reason, the Health Reforms have implemented the cost sharing approach in order to ease the problem (Tembo C, 1997). This has been met with mixed feelings because health facilities are still of unsatisfactory conditions, high medical fees and poorly understood pre-payment scheme (Times of Zambia 22.03.95)

The deterioration of infrastructure and lack of incentives to the workers has seen many health workers and nurses in particular leave for what is termed as "greener pastures". 
Government institutions have lost manpower leading to skeleton staff that are seen today in the clinical area.

Observations and consultation have revealed that each year a number of nurses leave the UTH to join other organisations or go to other countries where the working environment is conducive. Congestion in the wards complicated by lack of medical equipment and other resources has made the nurse "toothless" in as far as delivery of care is concerned.

The UTH, being the biggest hospital in the country acts as a referral centre for all other hospitals. In addition, it is a teaching hospital. Several groups of students from the School of Medicine, School of Nursing, Chainama Hills College, Evelyn Hone College etc need to be taught by the nurse working in this hospital. The patient attendance per day in the Out Patient Department is about 263 on average. The bed capacity for in-patients is 1,800 plus. The hospital has employed 914 nurses. This number is divided by four shifts, and is eventually reduced to 203 (UTH Data, 1998).

To contend the large patient population, a large number of nurses is required. At the nursing school, the nurse is taught that the Registered Nurse is to handle four patients where as the Enrolled Nurse will handle six patients. The situation as it is today is different. The nurse is expected to handle any number of patients.

According to the Nursing Services Manager at the UTH, the minimum recommended nurse patient ratio is one nurse to ten patients (1:10). This is subject to change because at times
the staffing level is so poor that one nurse serves thirty patients. The nurse in this context refers to Enrolled Nurse, Registered Nurse and Nurse Midwife.

The problem of staffing levels has affected all government institutions, this is due to poor conditions of service mostly. Observation has revealed that the UTH has lost a number of nurses through deaths, transfers and resignations. Transfers have been attributed to distance between residential area and the hospital coupled with lack of accommodation by the hospital. Most of the nurses who have left the hospital on transfer have gone to the Urban Clinics of Lusaka. This has led to overstaffing there. Are the overstaffed clinics rendering the much needed quality care? What about the UTH with the skeleton staff, is it providing quality nursing care? What, then, is the relationship between staffing levels and the care delivered?

The UTH has to attend to all referred patients in addition to the Lusaka population. Most people by pass the clinics and go straight to the UTH for medical care. This is so despite the strengthening of the clinics and the availability of a doctor there. The low staffing levels prevailing at the UTH have at times led to accumulation of patients in long queues before they can be attended to. This can be seen in the Out-Patient Departments.

As for the lying in wards, the low staffing levels have adversely affected the care being rendered. According to Tembo C (1997), delivery of quality care is hampered by exodus of nursing staff, shortage of staff and poor conditions of service coupled with lack of motivation. The above mentioned reasons have led to episodic priority care and not holistic
Priority care in this context means that the care given is that pertaining to life-threatening situations. Holistic care means looking at the patient as a whole, looking at potential problems in addition to existing ones. Low staffing levels in the congested wards compromises the nurse’s ability to provide holistic quality nursing care (Nsofu 1984).

There are several factors that may contribute to nurse staffing levels and delivery of care. These are discussed as follow.

To have quality nursing care there is need for adequate manpower. According to the international council for nurses, there is a standard nurse patient ratio which must be used. In general wards, nurse patient ratio for Registered Nurse is 6:1 and Enrolled Nurse 1:3, labour ward 1:2 and Intensive Care Unit 1:1. Despite these ratios being given the situation on the ground is different.

**TABLE 1: NURSE PATIENT RATIO IN SELECTED AREAS**

<table>
<thead>
<tr>
<th>WARD</th>
<th>NURSE PATIENT RATIO</th>
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<tbody>
<tr>
<td>I.C.U.</td>
<td>1:2</td>
</tr>
<tr>
<td>Labour Ward</td>
<td>1.4</td>
</tr>
<tr>
<td>Paediatric Admission</td>
<td>1:15+</td>
</tr>
<tr>
<td>Surgical Ward</td>
<td>1:15</td>
</tr>
<tr>
<td>Medical Admission Ward</td>
<td>1:15</td>
</tr>
</tbody>
</table>

(UTH Data, 1998)
Stress is a factor that may reduce manpower and hence compromise nursing care. Nurses suffer stress such as bereavement, and chronic illness in the family. The affected nurse most often may request for urgent leave in order to attend to these problems. Should there be more than one nurse with such a problem, the staffing level will be adversely affected. This in return will reduce the quality of care being given to patients.

For many other reasons, nurses may go on transfer or go for training, it has been observed that there has been a lot of deaths among nurses in recent years. This has created a vacuum in clinical areas which has not been easy to fill.

**TABLE 2: RECORD ON TRANSFER AND DEATHS IN RELATION TO THOSE EMPLOYED**

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</thead>
<tbody>
<tr>
<td>No. of nurses that died</td>
<td>26</td>
<td>21</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>No. of transferred</td>
<td>87</td>
<td>62</td>
<td>49</td>
<td>34</td>
</tr>
<tr>
<td>No. of nurses employed</td>
<td>42</td>
<td>39</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Difference</td>
<td>71</td>
<td>44</td>
<td>48</td>
<td>16</td>
</tr>
</tbody>
</table>

(UTH Data, 1998)

In her study Munjanja (1990) reported that the UTH cannot guarantee quality nursing care unless the problem of shortage of nursing staff is addressed.

Religious and traditional beliefs may also reduce staffing levels indirectly. For instance, a Seventh Day Adventist would not want to work on Saturday which is her day of prayer. In a
short staffed area, it may be difficult to bend forward so as to allow this nurse to go to church or in a situation where you have more than one nurse of the same Denomination, then it means Saturday will be short staffed. If these nurses are forced to work on this day, they may opt to be transferred to another department where nurses do not work on Saturday.

In the same way, for some personal and religious reasons, nurses may not want to carry out certain procedure such as abortion. They may not want to participate in the care if forced to work in this ward. The nurses may prefer to move to another ward. This creates artificial shortage which may be difficult to correct. And once there is staff shortage, then the nursing care delivery is compromised.

The country's population is growing at a very rapid rate. The population is too large to be accommodated by the health facilities available today. There are few nurses in relation to the number of patients. This leads to rendering of poor nursing care since there are too few nurses for too many patients. In a related study Munjanja (1992) reported that shortage of nurses coupled with congestion at the UTH has put patients in danger as they do not receive the expected nursing care.

Some service factors such as conditions of service and professional levels influence the relationship between the nurse staffing levels and delivering of nursing care. Poor remuneration and working environment are some of the factors that lead to retention of workers or their early retirement. Where these conditions are poor, the nurses leave the institution and thus reduce staffing levels which affect the quality of care delivered.
Generally, most nurses today possess Grade 12 certificates and have successfully completed nurse training at a recognised nursing school. After basic training, most nurses would like to advance in their profession. As a result, they go for further training, when these nurses graduate following specialisation courses, they may be misplaced in areas which are not of their interest and speciality. As discussed earlier on, these nurses were not replaced when they left for training and are misplaced upon their return. The nurses may leave the institution out of frustration. Nurses are responsible for the delivery of nursing care, where their number is reduced markedly, nursing care being offered is consequently affected.

The health of the nurse is another, important factor. A healthy nurse is an asset whereas the sick one is a liability. The sick nurse will be given sick leave very often creating shortage and inconveniencing others. The number of sick leave days she will be given, can be interpreted as a minus in staffing level. In cases, where more than two nurses have chronic illnesses, it may imply that there will be critical shortage of staff and delivery of nursing care will consequently suffer.

Some traditional beliefs and practices may impinge on staffing levels. An individual brought up believing that it is unclean to assist or handle aborted foetuses will want to uphold that belief. Such a nurse will not be happy in a gynaecology ward where abortions occur regularly. She may request to be moved to another ward. This may lead to nurse shortage leading to delivery of poor quality of nursing care.
Peer influence may cause very young nurses to influence one another to move from the institution in search of job satisfaction and a good pay. The old nurses who are about to retire should not be placed in the same area. If these nurses will retire almost at the same time just like young nurses leave at the same time, shortage of nursing staff will be experienced and this inevitably affects the nursing care.

Availability of resources is paramount to quality patient care. According to Tembo C. (1997) for the nurse to give quality care, she needs adequate resources such as material, money and manpower. All the threes should come into play and compliment each other.

The success of a nurse lies in the ability to assess a patient, provide the care and treatment that is required. McCourt (1994) said that quality nursing care plays a crucial role in recognising signs and facilitating a timely diagnostic evaluation. Persson, Hallberg and Ashlin (1993) in their study aimed at exploring factors contributing to nurse turnover. They saw that nurse turnover, may decrease the quality of nursing care due to loss of knowledge. From what these authors have written, it is possible to see that manpower may affect quality nursing care. Other writers feel that nurses need motivation in order to provide quality nursing care. Warfield and Manley (1990) pointed out that caring for staff is a pre-requisite to caring for patients. Staff satisfaction is indirectly linked to the quality of care that can be given to patients. All nurses should be helped to identify their personal and professional needs and to select appropriate methods to develop them (educational). Nursing is dynamic in that it is sensitive to changes in society, health needs and health beliefs in addition to changing technologies, priorities and information system.
1.3 ANALYSIS OF FACTORS SHOWING THE RELATIONSHIP BETWEEN NURSE STAFFING LEVELS AND DELIVERY OF QUALITY NURSING CARE
ANALYSIS OF FACTORS SHOWING THE RELATIONSHIP NURSE STAFFING LEVELS AND DELIVERY OF QUALITY NURSING CARE

Psycho-social-economic factors

- AGE
- TRADITIONAL BELIEFS AND PRACTICES
- RELIGION
- STRESS
- HEALTH STATUS
- POPULATION GROWTH

Factors affecting nurse staffing levels and delivery of quality nursing care:

- TRAINING
- CONDITIONS OF SERVICE
- MISPLACEMENT
- CONGESTION
- RESOURCES
1.4 HYPOTHESES

1. Placement of nurses in areas of their interest and specialty promotes stability of staffing levels and delivery of quality nursing care.

2. Poor conditions of services leads to exodus of nursing staff and thus compromises delivery of nursing care.

3. Availability of resources influences the retention of nursing staff and this improves quality of care rendered.

1.5 OBJECTIVES OF THE STUDY

1.5.1 General Objective

To determine the relationship between the nurse staffing levels and the delivery of quality nursing care.

1.5.2 Specific Objectives

1. To identify factors contributing to delivery nursing care in clinical area.

2. To establish the existing manpower level and its impact on delivery of quality nursing care.

3. To examine the relationship between availability of material resources and staffing levels.

4. To determine whether placement of nurses in areas of their interest and speciality promotes staff stability.

5. To establish the importance of optimum staffing levels.
1.6 PURPOSE OF STUDY

The purpose of this study is to determine the relationship between nurse staffing levels and the delivery of quality care. So much has been said about quality assurance without reflecting on issues pertaining to providers of the nursing care. The study intends to prove whether the number of nurses has any significance in the provision of nursing care. The study will provide information on the importance of proper placement of nurses according to expertise and specialty. The researcher seeks to determine the importance of optimum staffing levels if the much desired quality nursing care is to become a reality in our hospitals and bring out other factors that cause the decline of nurse staffing levels.

The information provided will be used by the Ministry of Health, Central Board of Health, the UTH and Non Governmental Organisations that seek to improve the quality of care being provided in our health Institutions.

1.7 OPERATIONAL DEFINITIONS

1. **Nursing Care**

   It is a process through which care is provided to individuals, families or community groups or primarily around circumstances and situations that arise from health related problems (Gladys Nite, 1978)

2. **Nursing Care Plan**

   A well written plan that promotes communication and co-ordination of care among personnel who are concerned with clients and various times of the day.
and among all agencies and allied personnel groups that become involved with the client (Barber, 1973).

3. **Registered Nurse**

Is an individual who has undergone three years of nurse training at a recognised school of nursing and is registered with the General Nursing Council of Zambia.

4. **Enrolled Nurse**

Is an individual who has undergone two years of nurse training at a recognised school of nursing and is enrolled with the General Nursing Council of Zambia.

5. **Data**

The pieces of information obtained in the course of a study (Polit and Hungler 1983).

6. **Staffing level**

This is the number of nurses delivering nursing care per shift.

7. **Professional Level**

This is whether the nurse is a Registered Nurse or Enrolled Nurse.

8. **Management support**

This is fair play and protection offered by management to employees. Whether management promotes on merit, places nurses in areas of specialty and interest, and promotes nurse education, this is adequate support. Where these activities are not practiced then the support is poor'
9. Nurse Motivation

The force of motivation is a dynamic one setting in a person in motion or act. Motives are directed towards goals and the needs and desires affect or changes the nurse’s behaviour which becomes goal oriented.

All those factors that cause, channel and sustain people’s behaviour are termed motivation (Stoner 1989)

10. Delivery of Care

This indicates the approach being used in looking after the patient which consequently affects the quality of nursing care being rendered.

1.8 CUT OFF POINTS

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>CATEGORY</th>
<th>CUT OFF POINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staffing levels</td>
<td>Number of nurses per shift</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5-6 Nurses</td>
<td>Adequate</td>
</tr>
<tr>
<td></td>
<td>3-4 Nurses</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>1-2 Nurses</td>
<td>Poor</td>
</tr>
<tr>
<td>Professional level</td>
<td>Attainment/qualification of the nurse</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Registered Nurses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 per shift</td>
<td>Adequate</td>
</tr>
<tr>
<td></td>
<td>1 per shift</td>
<td>0 per shift</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Management Support</td>
<td>Moderate</td>
<td>Poor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse motivation</td>
<td>High motivation</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Provides transport, accommodation and good salary.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pays part of rent and gives a living wage.</td>
<td></td>
</tr>
<tr>
<td>Delivery of care</td>
<td>Quality care</td>
<td>Moderate care</td>
</tr>
</tbody>
</table>
CHAPTER 2

2.0 LITERATURE REVIEW

The success of a nurse lies in the ability to study a patient, provide the care and treatment that is required. McCourt (1994) states that quality care plays a crucial role in recognising signs and symptoms and facilitating a timely diagnosis. This will reduce mortality rate. Nursing care involves a number of activities and for them to be implemented requires adequate nursing staff and adequate resources.

A number of countries in the world, especially developing countries have been hit by economic crisis. This has led to reduction in budget allocation to Health Services among other things. The 1980s were a period of economic hardships for developing countries. This was mainly due to mounting debt servicing costs, declining export earning and high population growth.

Economic adjustment policies that were a condition for future credit involved adjusting policies which involved considerable austerity for the people as well as reduction in public sector expenditure with disproportionate cuts in allocation for education, health and social services. For example, a survey carried out between 1973 and 1986 in twenty developing countries revealed that the health services share of the national budget decline from 5.5 to 4.2%. The devaluation of national currency worsened matters as this meant higher costs for imported drugs and medical supplies. These economic constraints and policies of
adjustment are deteriorating the health services. The principle of equity and universality of health care is under increasing pressure as more emphasis is being placed on self sustaining health services and cost recovery strategies which include partial or total user charges for medical care.

2.1 EXPERIENCE OF DEVELOPED COUNTRIES

London Health emergency's (LHEC) director predicted that at least two London teaching hospitals will close in 1992. The pressure group of LHEC was worried that the London Health System was understaffed and under resource. The provision that each patient will have a named nurse was unworkable in most big London hospitals.

In America, the hospitals had year of the new law intended to ease the United States Nursing shortage. The law may intentionally make it difficulty for foreign nurses to work there (Nursing Times 1990). The new law aimed at permitting thousands of foreign nurses working on temporal VISA in the United States to remain in the country permanently. And that hospitals have to meet conditions before being permitted to recruit nurses and provide evidence that services would suffer substantial disruption unless foreign nurses are employed. Hospital management said new rules are impossible and complicated because of many condition and paper work. Hardest hit are likely to be New York hospitals. Nearly half the nurses currently working on temporal VISAS work there. Eileen Rowland, Director of Nursing recruitment of New York's Berth Israel hospital said 24% of her qualified staff were foreign. "If we are to lose that source of recruitment, we would not be able to deliver the same amount of care and we might have to close beds".

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Person, Hallberg and Ashline (1993) in their study aimed at exploring factors contributing to nurse turnover, they saw that nurse turnover may decrease the quality of nursing care due to loss of knowledge. From their work, these authors have clearly indicated that manpower affects quality nursing care. Other writers feel that nurse need motivation in order to provide quality care. Warfield and Manley (1990) pointed out that caring for staff is a prerequisite to caring for patients. Staff satisfaction is indirectly linked to the quality of care that can be given to patients. All staff are helped to identify their personal and professional needs and to select appropriate methods to develop them (educational). They go on to say that nursing is dynamic in that it is sensitive to changes in society, health needs and health beliefs in addition to changing technologies, priorities and information system.

In the past, it was assumed that if a person met certain educational requirements to practice as a nurse, quality nursing care would naturally follow. Davicenti (1977) adds that today the profession considers environmental, organisational and educational factors and also focus attention on the impact of nursing care on the patient. This is why the nursing profession has allowed the formation of General Nursing Councils in many countries of the world. The aim of a Nursing Council is to ensure that nurse practitioners are fully and competently prepared to render quality nursing care (Muasa 1979).

2.2 EXPERIENCE OF AFRICAN COUNTRIES

Many African countries became independent in the 1960s. In reaction to colonial health services that effectively excluded most Africans and to fulfil political promises to provide
uniform access to health care, most newly independent nations provided public health care virtually free of charge.

Tylor (1988) indicated that sub-sahara Africa experienced rapid economic growth in 1960s. This was due to post World War II industrial growth which had enhanced consumer affluence. This created enormous demand for Africa’s chief exports i.e. agriculture products and minerals. The economies then grew. This pattern was the same in West Asian developing countries and Latin America. Unfortunately, trends have been persistently negative since the early 1970s and increasingly so in the 1980s.

Political instabilities and natural disasters have struck time and again in Africa creating a supra added pressure on the health systems. War victims, refugees, flood victims are but few of those requiring nursing care. With the shrinking economies, it has been increasingly difficult to look after the sick.

Nurses in particular have moved from their countries of origin to other countries where conditions of service and remuneration can afford them a living.

In Southern Africa, nurses move to Namibia, Botswana, Swaziland and South Africa. This is because the named countries did not have adequate trained nurses due to political situation that had previously prevailed there.

To counteract the already stated constraints of decline in economies, in the 1980s most countries of the Subsaharan Region undertook Structural Adjustment Programs (SAP) at the
urging of the International Monetary Fund (IMF), the World Bank and other donors.

SAP is a way in which a country tries to correct an economy that does not give sufficient foreign exchange in comparison to the needs of the nation. For any nation to implement SAP, it has to reduce Government expenditure, increase exports and encourage investment. Reducing government expenditure involves reducing the civil service and hence the experience of retrenchments. The civil servants and the nurse in particular has been subjected to very low income and so the ability of families to invest in nutrition and health care has reduced. Thus we see the nurse moving from one country to another in search of adequate income. Each time a nurse resigns from an organisation nursing care is adversely affected. Whenever political leaders require treatment, they often go to South Africa where there is quality health care.

2.3 THE SITUATION IN ZAMBIA

In 1994, the then Minister of Health honourable Sata likened Zambia to cadillac which was maintained by a relatively wealthy family for years. The family’s economic situation has been changed and can no longer afford to maintain this expensive vehicle without seeking assistance from cousins and relatives to help in fuel, repair and maintaining the gas-guzzling vehicle.
Over the years, Zambia has been offering health services and free of charge. With the decline in the economy Zambia now cannot afford to sustain the health sector and there's need to find ways to improve the situation (Nsofu 1984).

World Health Organisation (1993) revealed that most developing countries have experienced a stagnation of economic growth and development. This has been observed in Zambia where there is deterioration of urban environment and reduction of public services with negative effects on health, quality of life and productivity.

Human resource constitute the backbone of the development and implementation of Health for All strategies at all levels. General Nursing Council inspection report (1978) quotes the then UTH Senior Medical Superintendent Professor Khan “because of congestion, it is difficult to expect the staff to maintain their efficiency in the care of the sick.” This clearly indicates that the nurse staffing level was inadequate and as a result, it was unrealistic to expect standard care to be provided. The same report further states that plans were underway to build two blocks of flats that were to accommodation 64 families and this was envisaged to cater for doctors and medical technicians but did not take into account the nurses. How could the nurse staffing levels improve so that delivery of care could be improved, when their welfare is often not in the plans of Administrators such as Professor Khan?

Inspection of Army Health Institutions revealed that there was a shortage of qualified health workers and recommended that the Defence Force should employ more qualified health
personnel like nurses and midwives if the nursing care is to be of acceptable standards (GNC 1992).

WHO (1993) reported that human resource is influenced by many factors such as burden of disease, social and economic conditions, gender issues, organisation of health systems. All these factors have an impact on the number and type of health personnel and consequently affects the type of care delivered currently, there are many imbalances in the number and composition of health personnel, level of training and actual practice. However, there is growing recognition that human resource can be strengthened and imbalances reduced through the following strategies.

- Linking planning and decision making
- Continuous re-orienting education and training towards the needs of the population to improve care being delivered.
- Improvising management: deployment of personnel, incentives to enhance motivation, better career planning, improved supervisory and evaluation systems.
- Involving other groups outside the traditional health sector (Intersectoral collaboration).

Just like other aspects of health sector reforms, health workers are hearing more about the term ‘quality assurance’. Quality is about how resources are used in the most appropriate way. Quality assurance is in everybody’s interest when it can help to improve services. Quality care is often considered to be a luxury and irrelevant to the needs of hard pressed, public-funded health services in developing countries. Quality care is not about providing sophisticated technology or ‘the best that money can buy’, rather it is about the best that an
enthusiastic and motivated workforce can provide using resources available to them (Zulu A. 1995).

Standards can be improved by:

- Setting up continuing education systems including refresher courses.
- Improving effectiveness of basic training of health staff.
- Better communication between health staff and user.

The Human Resources Development Policy (1997) states that health reforms have necessitated radical changes in the way in which health services are now staffed and managed. Staff requirements have been redefined. The existing health care system has been heavily dependent on hospital care while health centres are equipped only to provide basic services, chronic shortage of staff and supplies have hampered care being given.

Under utilisation and overworking of staff as extremes have consequences. Issues of remuneration and other conditions of service have an impact on performance of personnel (Mumba 1996).

No comprehensive reviews of the numbers of staff has been done resulting into outdated staff establishment. Staff would have already left the institution but the central office would not have indicated the change. Unclarified career structures and lack of properly designated performance appraisal systems leave the nurse not knowing what to do next. There's
nothing to aspire for, because to be an in-charge one has to be a midwife. This is changing slowly (Tembo 1996). A nurse without aspiration quickly gets bored.

Misplacement is one of the core staffing problems and leads to frustration and demoralisation of staff. Economic problems and inadequate rationalisation of salaries and conditions of service have resulted into very poor retention of personnel across all categories (Chanda 1997). A frustrated nurse cannot give the accepted level of care.

Placement is the allocation of human resources to specific position in an organisation while utilisation is the efficient and effective use of the staff with the view of achieving organisational and individual goals (Stoner 1989).

Staffing standards for health facilities should reflect both services delivered and the level of technology available. The overall problem is inappropriate distribution of trained staff, low staff moral due to poor and unfavourable working and living condition. "Do you expect nurses to perform efficiently when they are hungry, depressed and frustrated? Are they exploited because of gender, as most are female?" (Bona, 1997)

There is staff shortage due to brain drain. Staff performance deteriorates due to lack of post graduate training and refresher courses for a long time.

Basically, if our health system could look after the nurses very well, the standards of care will improve. Nurses have all these identified problems so what do they do? Some leave
the institutions and join others in search of good conditions. Those who cannot quit, are engaged in part-time in order to make ends meet. Part time is addictive the more money you get, the more you want. After all a nurse doing part time gets more money than the one doing the official shift. So the nurses tend to do more part time and are very tired, as a result the nursing care is poor.

Education for nurses needs to be encouraged as Turrock (1990) stated the courses provided in continuing nurse and medical education tend to be of high tech variety. There is need to learn how to use equipment to facilitate quality nursing care as it is getting advanced everyday. The question one may ask is whether the equipment is available or old methods are still being practised despite technological changes.

Leino-kilsi (1991) said that the nurse patient relationship, its definition and evaluation are central to nursing care. An analysis of this relationship requires at least the following dimensions to be included:

(a) the health management strategies of the population which form the content of the client-nurse relationship.

(b) The dominance factors of the relationship, which form the structure of the relationship

The consumer of health care can participate in their care but only when they have the knowledge of their problem. They have to understand their condition to appreciate participation in nursing care. This can occur if a nurse explains to the patient reasons why
any procedure is being undertaken. This calls for personalised care which is almost impossible where staffing levels are inadequate.

A study carried out by Jackson, Porkony and Sincent (1993) reported that nurses and patients engage in an interactive process that is both supportive and educational. The ability of the nurse to communicate with the patient in a manner the patient perceive as acceptable will lead to transaction, goal attainment, effective nursing care and satisfaction to both.

Turnook (1990) feels distance education and continuing education will continue growing and is important for nurses, many of whom lack of the opportunity to use traditional education provision. He has identified some common needs which are: -

- to increase the number of graduate nurses
- to provide adequate continuing professional education and training
- to provide career tracks, routes and learning ladders

Motivation in education may be important. Smith (1991) in her article, strategy at work, said that nursing care should be competent and compassionate irrespective of the patient’s race, creed, economical or social standing. To contribute to practice professionally, nurses are expected to maintain their knowledge and skill based additional and appropriate education and training. Salvage (1990) stated that nurses need to realise that they owe a duty to patients to ensure that the care is effective and based on current knowledge. She urges nurses to look at what they are doing, determine what they should be doing and take action to close the gap between the real and the ideal.
Could this be all that is needed to provide quality nursing care? What about materials needed to carry out procedures, are they available? Do nurses know how to use them? Does shortage of staff affect quality nursing care? Are nurses able to continue with their professional education especially in line with specialty to provide career tracks?
3.0 RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

Research design refers to the plan or organisation of a scientific investigation. It involves the development of a plan or strategy that will guide the collection and analysis of data (Polit and Hungler 1983).

A descriptive approach was used for this research study. This approach involves the systematic collection and presentation of data to give a clear picture of a particular situation.

"The purpose of a descriptive research is to give an accurate account of the characteristics of a particular phenomenon, situation community or person". (Achola and Bless 1988).

3.2 RESEARCH SETTING

The study was done at the University Teaching Hospital (UTH). This is the biggest hospital in the country with a capacity of over 1,800 patient per day. It has 914 nurses out of which 99 are midwives, 262 are registered nurses and 507 are enrolled nurses (Administration Records 1997). The hospital has 55 wards and 16 clinics (Hosp. Adm. Records 1997).

3.3 STUDY POPULATION

The study population were the subjects who gave the researcher information relevant to the study topic. According to Achola (1988), the population is the entire set of objects and
events or group of people which is the object of research and about which the researcher
wants to determine some characteristics.

The population of this study were nurses. These are the people from whom data relevant for
this research was collected using the most appropriate tools.

3.4 SAMPLE SELECTION

There are 914 nurses employed by the UTH from whom 50 were selected using the
systematic sampling method. In systematic sampling, individuals are chosen at regular
intervals from the sampling frame, which in this case was the list of all nurses at the UTH.
Ideally, a number is randomly selected to establish where to start selecting the individuals
from the list (HRS 1988).

A systematic sample was selected from 914 nurses. The sample size selected was 50. The
sampling fraction is \[ \frac{50}{914} = \frac{1}{18} \]

The sampling interval is therefore 18.

The number of the first nurse was picked randomly by picking blindly one out of 18 pieces
of paper representing nurses numbered 1-18. If number 2 was picked then every 19th nurse
will be included in the sample.

Systematic Random sampling has been chosen because nurses are a stable and confined
population. Bias is avoided since every nurse is accorded a chance of being selected in the
sample.
3.5 SAMPLE SIZE

In order to ensure representativeness of the sample, fifty nurses were chosen as study subjects. All categories of nurses were represented i.e. enrolled nurses, registered nurses, and nurse midwives. The sample size was due to limitation of time and finances. This was to make it possible for the researcher to collect data within the time limit.

3.6 DATA COLLECTION TECHNIQUE

For the purpose of this study, a questionnaire was used.

“Questionnaire is a method of gathering self reporting information from respondents through self administration of questions in a paper and pencil format”. (Polit and Hungler 1983). In a single study, questionnaire may be used in conjunction with other instruments. According to Treece and Treece 1977, a questionnaire as a study instrument has several advantages.

1. Questionnaires are a relatively simple method of obtaining data. Items can be constructed rather easily by beginning researchers.
2. They are a rapid and efficient method of gathering information
3. The researcher is able to gather data from a widely scattered sample
4. They are inexpensive to distribute
5. Data from close ended items are relatively easy to tabulate, especially if there are check off responses
6. Respondents can remain anonymous
7. The questionnaire offers a simple procedure for exploring a new topic
8. It is one of the easiest tools to test for reliability and validity.
9. The subject has time to contemplate his responses to each question.
10. Measurement is enhanced because all subjects respond to the same questions.
11. Analysis and interpretation of data can be easily accomplished.

There are also several disadvantages in the use of a questionnaire:

1. The instrument is unable to probe a topic in depth without becoming lengthy
2. The sample is limited to those who are literate.
3. Respondent may omit any item without giving explanation
4. Some items may force the subject to select responses that are not his actual choice
5. Printing may be costly if the questionnaire is lengthy
6. Addressing outside and return envelopes and postage are time consuming
7. Some items may be misunderstood.
8. The researcher cannot observe the subject's non verbal ones.

3.7 PILOT STUDY

"A pilot study is a small version, or trial run, done in preparation for a major study" (Pilot and Hungler 1983) The pilot study, then, is a miniature trial run of the methodology planned for the major project. The purpose of the pilot study is to:

- make improvements in the research project
- to detect problems that must be solved before the major study is attempted.

All steps were carried through, because it is only by completing the full procedure that weaknesses were identified and corrected. Validity of the data collection tool was ascertained.
3.8 CULTURAL AND ETHICAL CONSIDERATION

A letter asking for permission to carry out the study at the UTH was written to the hospital Ethical Committee. This was so as to ensure protection to the subjects.

Anonymity and confidentiality was maintained. No names were used in the study. The respondents were informed on how they have been chosen as study subjects, and how the information that they were to give will be utilised.

Permission was granted by the UTH authorities. See letter on the appendix.

3.9 DISSEMINATION AND UTILISATION

This information can be dissemination at seminars, workshops, case presentations and clinical meetings. The UTH in-service department could be asked to take up the challenge of disseminating the information to the Human Resource Officers and other managers so that they are aware of the results of the study that was done within their setting.

3.10 LIMITATION OF THE STUDY

The size of the sample was small, meaning that the findings cannot be generalised. The size was chosen to accommodate the available funding and time provided for the study.
CHAPTER 4

4.0 DATA ANALYSIS

4.1 INTRODUCTION

The purpose of the study was to assess the relationship between nurse staffing levels and the delivery of quality nursing care at the UTH.

The data presented was analysed into frequency tables, cross tabulations and numerical description for each table. The data was analysed manually with the aid of a pocket calculator. This was done in order that the data collected may be easily understood.

The findings are presented according to the sequence of the questions in the questionnaire and many of them are grouped together to give an overall picture.
### 4.3 PRESENTATION OF FINDINGS

**TABLE 4**

**BIOGRAPHIC DATA**

<table>
<thead>
<tr>
<th>SEX</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>43</td>
<td>86</td>
</tr>
<tr>
<td>Male</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 - 26 years</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>27 - 30 years</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>31 - 34 years</td>
<td>18</td>
<td>36</td>
</tr>
<tr>
<td>35 - 38 years</td>
<td>11</td>
<td>22</td>
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<td>39 - 42 years</td>
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<td>4</td>
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<tr>
<td>43 - 46 years</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARITAL STATUS</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>21</td>
<td>42</td>
</tr>
<tr>
<td>Married</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td>Divorced</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Widowed</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 4 shows that 86% of respondents were female. The majority of the respondents 36% (18) are aged between 31 and 34 years, while 6% (3) belong to 43-46 years age group. 42% (21) of the respondents are single while 38% (19) are married and 12% (6) are widowed. The majority are catholics 30% (15) and 4% (2) are non believers.
Table 5

NUMBER OF CHILDREN THE NURSE HAS IN RELATION TO WHETHER THEIR JOB, GIVE THEM ENOUGH TIME: WITH THE FAMILY

<table>
<thead>
<tr>
<th>NUMBER OF CHILDREN</th>
<th>DOES YOUR JOB LEAVE ENOUGH TIME TO BE WITH THE FAMILY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
</tr>
<tr>
<td>None</td>
<td>3 (6%)</td>
</tr>
<tr>
<td>One child</td>
<td>8 (16%)</td>
</tr>
<tr>
<td>Two Children</td>
<td>7 (14%)</td>
</tr>
<tr>
<td>Three and above</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Total</td>
<td>19 (38%)</td>
</tr>
</tbody>
</table>

This table shows that majority of the respondents 62% (31) stated that their job leave them enough time to spend with the family. Out of these 32% (16) have three children and above.

Table 6

RELIGION IN RELATION TO HOW IT AFFECTS PRACTICE

<table>
<thead>
<tr>
<th>RELIGION</th>
<th>CANNOT TAKE PART IN FAMILY PLANNING AND ABORTION</th>
<th>ENCOURAGES GOOD NURSE/PATIENT RELATIONSHIP</th>
<th>DISCOURAGES BLOOD TRANSFUSION</th>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jehovah’s Witness</td>
<td>0</td>
<td>3 (6%)</td>
<td>2 (4%)</td>
<td>0</td>
</tr>
<tr>
<td>Pentecostal Church</td>
<td>5 (10%)</td>
<td>4 (8%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Roman Catholic</td>
<td>11 (22%)</td>
<td>5 (10%)</td>
<td>0</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Seventh Day Adventist</td>
<td>3 (6%)</td>
<td>2 (4%)</td>
<td>0</td>
<td>4 (8%)</td>
</tr>
<tr>
<td>United Church of Zambia</td>
<td>2 (4%)</td>
<td>5 (10%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Baptist Church</td>
<td>1 (2%)</td>
<td>1 (2%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Church of Christ</td>
<td>1 (2%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Non Believers</td>
<td>0</td>
<td>1 (2%)</td>
<td>0</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Total</td>
<td>23 (46%)</td>
<td>19 (38%)</td>
<td>2 (4%)</td>
<td>6 (12%)</td>
</tr>
</tbody>
</table>
Table 6 shows that majority of respondents 46% (23) indicated that they can not take part in artificial family planning and abortions. Out of these 22% (11) respondents were Catholics.

**TABLE 7**

**NUMBER OF PEOPLE IN EACH HOUSEHOLD IN RELATION TO THE NUMBER OF ROOMS THEY OCCUPY**

<table>
<thead>
<tr>
<th>NUMBER OF OCCUPANTS</th>
<th>NUMBER OF ROOMS PER HOUSE</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 (28%)</td>
<td>2 (6%)</td>
</tr>
<tr>
<td>1-2</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>3-4</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>14 (28%)</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 7 shows that a total of 66% (33) live in 2 and 3 rooms respectively with 3-4 occupants while 28% (14) live in single rooms with 1-2 occupants.

**TABLE 8**

**NURSES RESIDENCE IN RELATION TO PAYING RENT**

<table>
<thead>
<tr>
<th>NURSES' RESIDENCE</th>
<th>PAYING OF RENT</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Paying own rent</td>
<td>Rent paid partly by UTH</td>
<td>No paying rent</td>
</tr>
<tr>
<td>UTH Hostel</td>
<td>14 (23%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Outside UTH</td>
<td>15 (30%)</td>
<td>3 (6%)</td>
<td>0</td>
</tr>
<tr>
<td>Personal house</td>
<td>0</td>
<td>0</td>
<td>7 (14%)</td>
</tr>
<tr>
<td>House rented by husband/relative</td>
<td>0</td>
<td>0</td>
<td>11 (22%)</td>
</tr>
<tr>
<td>Total</td>
<td>29 (58%)</td>
<td>3 (6%)</td>
<td>18 (36%)</td>
</tr>
</tbody>
</table>

The table indicates that majority of respondents 30% (15) live outside the UTH and pay their own rent. 14% (7) live in personal houses.
### TABLE 9

**Motivation in Relation to Paying Rent**

<table>
<thead>
<tr>
<th>Paying Rent</th>
<th>Motivated</th>
<th>Demoralised</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paying own rent</td>
<td>0</td>
<td>29 (58%)</td>
<td>29 (58%)</td>
</tr>
<tr>
<td>Rent paid partly by UTH</td>
<td>3 (6%)</td>
<td>0</td>
<td>3 (6%)</td>
</tr>
<tr>
<td>Not paying rent</td>
<td>7 (14%)</td>
<td>11 (22%)</td>
<td>18 (36%)</td>
</tr>
<tr>
<td>Total</td>
<td>10 (20%)</td>
<td>40 (80%)</td>
<td>50 (100%)</td>
</tr>
</tbody>
</table>

Table 9 reveals that majority of respondents 80% (40) are demoralised out of these 58% (29) are paying their own rent. 7 (14%) are motivated and living in personal houses.

### TABLE 10

**Mode of Transport in Relation to Residential Areas**

<table>
<thead>
<tr>
<th>Mode of Transport</th>
<th>UTH Hostels</th>
<th>Low Density</th>
<th>High Density</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public transport</td>
<td>0</td>
<td>8 (16%)</td>
<td>15 (30%)</td>
<td>23 (46%)</td>
</tr>
<tr>
<td>Personal Care</td>
<td>0</td>
<td>4 (8%)</td>
<td>0</td>
<td>4 (8%)</td>
</tr>
<tr>
<td>Cycling</td>
<td>0</td>
<td>0</td>
<td>1 (2%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Walking</td>
<td>12 (24%)</td>
<td>12 (24%)</td>
<td>10 (20%)</td>
<td>22 (44%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>12 (24%)</td>
<td>12 (24%)</td>
<td>26 (52%)</td>
<td>50 (100%)</td>
</tr>
</tbody>
</table>

The table reveals that 52% (26) of the respondents live in high density areas, out of which 30% (15) use public transport while 20% (10)
TABLE 11
MODE OF TRANSPORT USED BY NURSES AND HOW IT AFFECT DELIVERY OF CARE

<table>
<thead>
<tr>
<th>MODE OF TRANSPORT</th>
<th>EFFECT ON DELIVERY OF CARE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Good</td>
</tr>
<tr>
<td>Public transport</td>
<td></td>
</tr>
<tr>
<td>6 (12%)</td>
<td>17 (34%)</td>
</tr>
<tr>
<td>Personal car</td>
<td>3 (6%)</td>
</tr>
<tr>
<td>Cycling</td>
<td>0</td>
</tr>
<tr>
<td>Walking</td>
<td>12 (24%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>21 (42%)</td>
</tr>
</tbody>
</table>

Majority of the respondents 58% stated that poor nursing care was delivered to patients. Out of these 34% (17) walk.

TABLE 12
ARE NURSES HAPPY WORKING IN THE RESPECTIVE WARDS AND THE REASONS WHY

<table>
<thead>
<tr>
<th>REASONS WHY</th>
<th>ARE YOU HAPPY WORKING ON YOUR WARD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Well placed</td>
<td>21 (42%)</td>
</tr>
<tr>
<td>Misplaced</td>
<td>10 (20%)</td>
</tr>
<tr>
<td>Total</td>
<td>31 (62%)</td>
</tr>
</tbody>
</table>
The table shows that majority of respondents 52% (26) are misplaced while 42% (21) are well placed and are happy working on their wards and 6% (3) respondents are not happy on their wards and are well placed.

**TABLE 13**

**NURSES DURATION ON THE WARD IN RELATION TO SPECIAL TRAINING**

<table>
<thead>
<tr>
<th>DURATION ON THE WARD</th>
<th>SPECIAL TRAINING</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Midwifery</td>
<td>Theatre Nursing</td>
<td>Family health</td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>4 (8%)</td>
<td>4 (8%)</td>
<td>0</td>
</tr>
<tr>
<td>1 - 2 years</td>
<td>5 (10%)</td>
<td>2 (4%)</td>
<td>0</td>
</tr>
<tr>
<td>3 - 4 years</td>
<td>0</td>
<td>0</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>5 - 6 years</td>
<td>0</td>
<td>1 (2%)</td>
<td>0</td>
</tr>
<tr>
<td>Above 6 years</td>
<td>1 (2%)</td>
<td>1 (2%)</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>10 (20%)</td>
<td>8 (16%)</td>
<td>2 (4%)</td>
</tr>
</tbody>
</table>

This table shows that majority of respondents 64% (32) have not done any special training. Of these 30% (15) have 1-2 years while 18% (9) have 3-4 years duration on their respective wards.

**TABLE 14**

**NUMBER OF PATIENTS ON THE WARD PER DAY**

<table>
<thead>
<tr>
<th>Number of patients</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>21-30</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>31-40</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>41-50</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>Above 50</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 14 shows that the majority of respondents 34% (17) stated that there are between 41-50 patients on their respective wards, while 8% (4) stated that there are above 50 patients in their wards per day.

**TABLE 15**

**TYPE OF NURSING CARE IN RELATION TO FREQUENCY OF FLOOR BEDS**

<table>
<thead>
<tr>
<th>FREQUENCY OF FLOOR BEDS</th>
<th>Task allocation</th>
<th>Patient allocation</th>
<th>Priority Nursing</th>
<th>Team Nursing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>3 (6%)</td>
<td>0</td>
<td>1 (2%)</td>
<td>0</td>
<td>4 (8%)</td>
</tr>
<tr>
<td>Weekly</td>
<td>0</td>
<td>0</td>
<td>5 (10%)</td>
<td>0</td>
<td>5 (10%)</td>
</tr>
<tr>
<td>Once a while</td>
<td>4 (8%)</td>
<td>3 (6%)</td>
<td>8 (16%)</td>
<td>1 (2%)</td>
<td>16 (32%)</td>
</tr>
<tr>
<td>None</td>
<td>10 (20%)</td>
<td>4 (8%)</td>
<td>4 (8%)</td>
<td>7 (14%)</td>
<td>25 (50%)</td>
</tr>
<tr>
<td>Total</td>
<td>17 (34%)</td>
<td>7 (14%)</td>
<td>18 (36%)</td>
<td>8 (16%)</td>
<td>50 (100%)</td>
</tr>
</tbody>
</table>

This table indicates that 20% (10) of the respondents work in wards where there are no floor beds. Majority of the respondents 36% (18) use priority nursing care while 14% (7) use patient allocation.
### TABLE 16
**TYPE OF NURSING CARE APPROACH IN RELATION TO PROFESSIONAL LEVEL**

<table>
<thead>
<tr>
<th>NURSING CARE APPROACH</th>
<th>PROFESSIONAL LEVEL</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Registered Nurse</td>
<td>Enrolled Nurse</td>
</tr>
<tr>
<td>Task Allocation</td>
<td>2 (4%)</td>
<td>15 (30%)</td>
</tr>
<tr>
<td>Patient Allocation</td>
<td>5 (10%)</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>Priority Nursing</td>
<td>11 (22%)</td>
<td>7 (14%)</td>
</tr>
<tr>
<td>Team Nursing</td>
<td>5 (10%)</td>
<td>3 (6%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>23 (46%)</td>
<td>27 (54%)</td>
</tr>
</tbody>
</table>

Table 16 shows that majority of respondents 36% (18) use priority nursing care. Out of these 22% (11) are registered nurses. Patient allocation is used by 14% (7), out of whom 10% (5) are registered nurses.

### TABLE 17
**USE OF THE NURSING PROCESS AS A METHOD FOR DELIVERY OF CARE**

<table>
<thead>
<tr>
<th>USE OF NURSING PROCESS</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td>NO</td>
<td>37</td>
<td>74%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50</td>
<td>100%</td>
</tr>
</tbody>
</table>
Table 17 shows that the majority of the respondents 74% (34) do not use the nursing process.

**TABLE 18**

**USE OF NURSING PROCESS IN RELATION TO PROFESSIONAL LEVEL**

<table>
<thead>
<tr>
<th>USE OF THE NURSING PROCESS</th>
<th>PROFESSIONAL LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Registered Nurse</td>
</tr>
<tr>
<td>YES</td>
<td>9 (18%)</td>
</tr>
<tr>
<td>NO</td>
<td>14 (28%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23 (46%)</td>
</tr>
</tbody>
</table>

This table shows that the majority of respondents 18% (9) who indicated that they use the nursing process are registered nurses.

**TABLE 19**

**WHY THE NURSING PROCESS IS NOT USED AS A TOOL FOR NURSING CARE DELIVERY**

<table>
<thead>
<tr>
<th>REASONS FOR NOT USING THE NURSING PROCESS</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is not fully understood</td>
<td>2</td>
<td>5.5</td>
</tr>
<tr>
<td>The ward is understaffed</td>
<td>35</td>
<td>94.5</td>
</tr>
<tr>
<td>Nurses just avoid using the nursing process</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>100</td>
</tr>
</tbody>
</table>

This table reveals that majority of respondents 94.5% (35) do not use the nursing process because of short staffing.
Table 20 shows that majority of respondents 86% (43) have inadequate staffing and are also rendering poor care.

Table 21 shows that the majority of respondents 36% (18) stated that poor conditions of service can influence provision of care to be inadequate.
TABLE 22

NUMBER OF NURSES ON TRANSFER IN RELATION TO REPLACEMENT

<table>
<thead>
<tr>
<th>NURSE ON TRANSFER</th>
<th>FREQUENCY</th>
<th>REPLACE</th>
<th>NOT REPLACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>6 (12%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1 - 3</td>
<td>21 (42%)</td>
<td>2 (4%)</td>
<td>19 (38%)</td>
</tr>
<tr>
<td>4 - 6</td>
<td>11 (22%)</td>
<td>0</td>
<td>11 (22%)</td>
</tr>
<tr>
<td>Above 6</td>
<td>12 (24%)</td>
<td>0</td>
<td>12 (24%)</td>
</tr>
<tr>
<td>Total</td>
<td>50 (100%)</td>
<td>2 (4%)</td>
<td>42 (84%)</td>
</tr>
</tbody>
</table>

This table shows that majority of respondents 84% (42) indicated that nurses transferred from their wards have not been replaced. Only 4% (2) stated that transferred nurses were replaced.

TABLE 23

HOW NON REPLACEMENT OF NURSES AFFECTS PATIENT CARE

<table>
<thead>
<tr>
<th>HOW NURSES COVER THE VACUUM</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overstretched and care is poor</td>
<td>26</td>
<td>61.9</td>
</tr>
<tr>
<td>Make use of relatives</td>
<td>16</td>
<td>38.1</td>
</tr>
<tr>
<td>We do what we can</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 23 shows that the majority of respondents 61.9% (26) are over stretched and provide poor nursing care.

**TABLE 24**

**NUMBER OF PATIENTS PER DAY IN RELATION TO WHAT NURSES DO WHEN THERE IS NO MATERIAL TO USE WHILE RENDERING CARE.**

<table>
<thead>
<tr>
<th>WHAT NURSES DO</th>
<th>NUMBER OF PATIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than 20</td>
</tr>
<tr>
<td>Ask relatives to buy</td>
<td>3 (6%)</td>
</tr>
<tr>
<td>Improvise</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Omit procedure</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>4 (8%)</td>
</tr>
</tbody>
</table>

Table 24 shows that majority of respondents 70% (35) ask relatives to buy when there is no material to use. Out of those 18% (14) are from wards with 41-50 patients.

**TABLE 25**

**BATHING PATIENTS DAILY IN RELATION TO NURSING CARE APPROACH**

<table>
<thead>
<tr>
<th>NURSING CARE</th>
<th>BATHING PATIENTS DAILY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
</tr>
<tr>
<td>APPROACH</td>
<td></td>
</tr>
<tr>
<td>Task Allocation</td>
<td>5 (10%)</td>
</tr>
<tr>
<td>Patient Allocation</td>
<td>3 (6%)</td>
</tr>
<tr>
<td>Priority Nursing</td>
<td>8 (16%)</td>
</tr>
<tr>
<td>Team Nursing</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>15 (30%)</td>
</tr>
</tbody>
</table>
This table shows the majority of respondents 16% (8) using priority care give patients daily baths whereas the majority of those using task allocation 24% (12) do not give patients daily baths.

**TABLE 26**

**AVAILABILITY OF DRUGS AND EQUIPMENT IN RELATION TO PROVISION OF CARE**

<table>
<thead>
<tr>
<th>PROVISION OF NURSING CARE</th>
<th>AVAILABILITY OF DRUGS AND EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
</tr>
<tr>
<td>Adequate</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Inadequate</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1 (2%)</td>
</tr>
</tbody>
</table>

This table shows that 90% (45) of the respondents do not have adequate drugs and medical equipment and indicated that they provide inadequate care.
TABLE 27

ATTENDANCE OF INSERVICE TRAINING IN RELATION TO PROFESSIONAL LEVEL

<table>
<thead>
<tr>
<th>PROFESSIONAL LEVEL</th>
<th>IN-SERVICE TRAINING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
</tr>
<tr>
<td>Enrolled Nurse</td>
<td>9 (18%)</td>
</tr>
<tr>
<td>Registered Nurse</td>
<td>16 (32%)</td>
</tr>
<tr>
<td>Total</td>
<td>25 (50%)</td>
</tr>
</tbody>
</table>

This table shows that more registered nurses 32% (16) have attended in-service

TABLE 28.

WHETHER IN-SERVICE SHOULD BE MANDATORY IN RELATION TO REASONS WHY

<table>
<thead>
<tr>
<th>WHY SHOULD IN-SERVICE BE MANDATORY</th>
<th>SHOULD IN-SERVICE BE MANDATORY</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES (20%)</td>
<td>11 (22%)</td>
</tr>
<tr>
<td>Motivating</td>
<td>1 (2%)</td>
<td></td>
</tr>
<tr>
<td>Broadens Nursing Scope</td>
<td>16 (32%)</td>
<td>17 (34%)</td>
</tr>
<tr>
<td>Keeps Nurses abreast</td>
<td>2 (4%)</td>
<td>22 (44%)</td>
</tr>
<tr>
<td>Total</td>
<td>48 (48%)</td>
<td>50 (100%)</td>
</tr>
</tbody>
</table>

Table 28 reveals that majority of respondents stated that in-service should be mandatory 96% (48). Out of these 44% (22) said that it keeps nurse abreast.
TABLE 29

KNOWLEDGE OF THE USE OF PERFORMANCE APPRAISAL AT UYH IN RELATION TO PROFESSIONAL LEVEL

<table>
<thead>
<tr>
<th>PROFESSIONAL LEVEL</th>
<th>KNOWLEDGE OF THE USE OF PERFORMANCE APPRAISAL AT UTH</th>
<th>YES</th>
<th>NO</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Nurse</td>
<td></td>
<td>21 (42%)</td>
<td>2 (4%)</td>
<td>23 (46%)</td>
</tr>
<tr>
<td>Enrolled Nurse</td>
<td></td>
<td>17 (34%)</td>
<td>10 (20%)</td>
<td>27 (54%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>38 (76%)</td>
<td>12 (24%)</td>
<td>50 (100%)</td>
</tr>
</tbody>
</table>

This table shows that majority of respondents 76% (38) know that performance appraisal is used at UTH. Out of these 42% (21) are registered nurses.

TABLE 30

USE OF PERFORMANCE APPRAISAL AT UTH IN RELATION TO INDIVIDUAL OPINION.

<table>
<thead>
<tr>
<th>INDIVIDUAL OPINION</th>
<th>KNOWLEDGE OF PERFORMANCE APPRAISAL</th>
<th>YES</th>
<th>NO</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotes on merit</td>
<td></td>
<td>9 (18%)</td>
<td>0</td>
<td>9 (18%)</td>
</tr>
<tr>
<td>Biased</td>
<td></td>
<td>9 (18%)</td>
<td>4 (8%)</td>
<td>13 (26%)</td>
</tr>
<tr>
<td>Time wasting</td>
<td></td>
<td>20 (40%)</td>
<td>8 (16%)</td>
<td>28 (56%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>38 (76%)</td>
<td>12 (24%)</td>
<td>50 (100%)</td>
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</table>
Table 30 indicates that majority of respondents 40% (20) who know of the use of performance appraisal in UTH say it is time wasting.
CHAPTER 5

5.0 DISCUSSION OF FINDINGS

The purpose of the study is to determine the relationship between nurse staffing levels and the delivery of nursing care at the UTH. The study aimed at identifying factors contributing to retention of nurses in clinical areas, establishing the existing manpower level and its impact on delivery of quality care, examining the relationship between availability of resources and staffing levels and determining whether placement has any effect on staff stability.

The timely provision of care is very important because as Finer (1952) states, that when a hospital admits a patient and accepts the responsibility for his treatment, it has to furnish him with adequate care, and the most important aspect of this arrangement is the quality and quantity of the nursing service to be rendered to that patient.

The study targeted qualified nurses working at the UTH. The sample consisted of fifty nurses, out of whom 86% (43) were female and 14% (7) were male. This proves that nursing is still predominantly a feminine profession. The male cadre is gradually getting into the profession in order to promote gender equality.

The respondents were aged between 23 and 46 years. The youngest respondent was 23 years old while the oldest was 46 years. Most of the respondents were 32 years old (model). The mean age was 33 years. Most of the respondents 36% (18) were aged between 31 and 34 years. Only 6% (3) of the respondents were aged between 43 and 46 years. It shows that
the very young are few just like the old ones who are near retirement age. The majority are in their middle age (Table 4). The old experienced nurses are few and it contributes to lack of supervision of the young nurses. The fairly inexperienced nurses are left to deliver care to patients. This could serve as a contributing factor to poor nursing care.

Table 4 further indicates the marital status of the respondents. The single nurses were 42% (21). 38% (19) are married while 12% (6) are widowed. This shows that a good number of nurses are on their own widows and single parents face varied problems. On the other hand married women also have their own problems. Many would get pregnant at the same time and go on maternity leave leaving acute shortage of staff on the wards. Sometimes married nurses get transferred at short notice to follow their husbands. At times, married nurses fail to turn up on duty because a child is sick. All these factors drastically affect the staffing levels and contribute to rendering of poor quality care.

Most nurses belong to one religion or another with an exception of 4% (2) that are non believers. A Christian nurse is generally preferred because of the good values and morals as opposed to a none believer. There is a good number of Jehova's Witness 10% (5). Majority are Catholics 30% (15), followed by Pentecostals and Seventh Day Adventists both at 18% (9).

Out of the total number of respondents 46% (23) are Registered Nurses while 54% (27) are enrolled nurses. This shows that there are more Enrolled Nurses than Registered Nurses at the UTH. This could be due to the fact that we have more Enrolled Nursing Schools in the
country and that these schools offload graduates every 2 years as opposed to four registered nursing schools and nurses graduates after 3 years. It could also be due to the fact that Registered nurses are appointed to run wards and others are taken to carry out administrative functions. This means that the senior nurses are in least contact with the patient. International Labour Organisation (ILO) report (1976), stated that the position of staff nurses is generally the lowest on occupational ladder of the Registered nurse; and nurses holding this position aim at other functions, if they have to progress in their career. If they want promotion, they must leave the wards. This move causes shortage of nurses on the ward. The inexperienced nurses are left to render the nursing care while the senior nurses are moved to managerial positions. This contributes to poor nursing care.

Most nurses have children and dependants to look after. Majority of the respondents 32% (16) have three children and above yet they do not have ample time to spend with their families. Nurses need time to themselves where they can rest adequately and take their children out or just check their school work. A total of 62% (31) stated that the job did not leave them enough time to look after their family while 38% (19) stated that their job left them enough time. A nurse who does not have adequate rest and play with the family feel exhausted and cannot give his all when on duty. This affects the quality of care he is going to render to the patients (Table 5).

The nurses belong to different denominations, and have different views towards their nursing practice (table 6). The Catholics do not involve themselves in issues of abortion and artificial family planning (22%) (11) while the Jehovah's Witness would not be involved in
blood transfusion and the Seventh Day Adventist would not want to work on Saturdays. Though there are these obvious beliefs and virtues the Christian nurses have a lot of other things in common like their good approach to patients and their relatives. A good nurse-patient relationship promotes the patient's confidence in the nurse and creates mutual respect and understanding between the two. This also provides a friendly environment and improves the care rendered to the patients.

Accommodation for nurses ranges from the single room in the hostels to renting in shanty compounds. As stated earlier on nurse have families, a total of 28% (14) respondents live in single rooms with their families while 48% (24) live in houses with 3 rooms or more (see table 7). Those in single rooms are obviously congested and then one wonders as for the ventilation of the rooms. Bearing in mind that nurses are exposed to the risk of infection while on duty, congestion of the rooms may cause easy spread of infection to family members. Poor ventilation explains re-infection. This causes the nurses to be ill every so often and hence reduces staffing level in clinical areas. Once the staffing level is low, delivery of care becomes compromised.

Since families are now allowed to stay in the hostels, the noise made by the children disturbs the nurse's rest and as a result the nurse may report back on duty while still tired especially if she is on night duty.

The majority of the respondents 30% (15) live outside the UTH premises and pay their own rent. While 28% (14) live in the UTH hostels and pay their own rent. Only 6% (3) of
respondents acknowledged that UTH was paying part of their rentals. Another 14% (7) live in personal houses (table 8). The UTH nurses do not get housing allowance, it means from their salaries nurses have to part with substantial amount of money to pay rent. Bearing in mind that nurses get meagre salaries, they are most of the time evicted since landlords now want 6 months to 1 year advance of payment. Where can a nurse get that type of money? This forces nurses to rent in shanty compounds where rent is a bit realistic.

In this era of home ownership, very few nurses have bought houses. This is because the institution was not helping the nurses with loans to buy houses. At the moment most nurses talked to feel that management does not care where they stay all they are interested in is the service that the nurse renders. This is very frustrating to nurses. A frustrated nurse will always do as he pleases. This nurse may or may not report on duty at the right time. This nurse may give all sorts of excuses meanwhile the patient suffers.

Paying of rent if done by the employer directly or indirectly through paying housing allowance is a motivating factor. Only 20% (10) of the respondents are motivated. Out of these 14% (7) have personal houses and are not paying rent and 6% (3) pay part of the rent while the UTH pay the rest. Majority 80% (40) respondents are demoralised, most of whom are paying their own rent 58% (29) and 22% (11) are staying with their relatives or friends. (Table 9). Vroom (1966) in his study “what really motivates employees” came up with the conclusion that people dislike work, but can be made to work effectively out of a feeling of gratitude for indirect rewards such as accommodation and transport, free medical care. Demoralised workers will not give the best care to the patients. They may even start
influencing their colleagues through the informal groups. Informal groups are present in almost all institutions. These are very influential and all members identified with a particular group follow what the majority in that group say. A hospital is no exception.

As earlier own stated, nurses are incapable of paying rent in low density areas and opt to live in high density shanty compounds. Findings show that 52% (26) of the respondents live in high density areas and 30% (15) use public transport while 20% (10) walk (table 13). Public transport is not time consuming. This means, that the bus cannot start off until it is full and for a nurse, that may mean arriving late for work. The pushing and pulling, squeezing and long waiting periods on the bus usually erodes the nurses’ enthusiasm. The walking nurse will be very tired and sweating by the time she arrives at work. Most of the time the nurses are late and dirty. A dirty nurse loses confidence in herself because she is not presentable to his clients. The nurse may choose to be rude or aggressive to cover for his loss of self confidence. This creates a barrier between the nurse and the patients.

On the other hand both public transport and walking are not good for afternoon shift especially when knocking off. The nurse will not concentrate on the job, he will even want to knock off early because of the crime rate in high density areas. This affect staffing levels and reduces quality of care given to the patients.

In connection with mode of transport used by nurses and how it affects delivery of care, findings show that 58% (29) of respondents stated that their mode of transport led them to providing poor care. A nurse who arrives late does not know the patients very well since he
was not there when the other nurse were handing over. This nurse will do a haphazard job. This reduces the quality of care rendered. Furthermore, no patient would want to be attended to by a dirty, unpresentable nurse. This leads patients and their relatives to follow some particular nurses who are clean and composed. They easily have confidence in a clean nurse. This consequently leads to delivery of poor quality patient care.

In addition, when a nurse is late, he would want to do a lot of work meanwhile use shortcuts instead of doing the proper procedures. He will do this, so that he attends to a lot of patients. ‘Shortcuts’ reduces quality of care.

Nurses are also allocated to wards where they stay for a long or short time. This should be done in relation to their special training. Table 12 shows how nurses are placed in relation to their specialty. It is interesting to note that 64% (32) of the respondents have no special training, out of these 30% (15) have worked on their wards for 1-2 years. This could mean that they have just graduated or may be it could be due to lack of sponsorship for further training. The other reason could be due to lack of support by management. Some nurses talked to revealed bad recommendation letters written by their supervisors or nursing officers. Out of those with special training, the majority were midwives 20% (10) followed by Theatre nursing 16% (8). This is because the two are readily available and they run for a year each. Furthermore, it will be right to say sponsorship is not a problem because nurses cannot afford to sponsor themselves. Only 6% (3) have worked for more than 6 years on their respective wards.
Asked whether nurses are happy on their respective wards, a total of 52% (26) stated that they are misplaced. Out of the misplaced nurses 20% (10) are happy because of the team spirit and friendliness of fellow staff coupled by encouragement from the supervisor while 32% (16) are not happy because the wards are dirty and the supervisor does not let them use their initiative. A misplaced nurse is not free to explore his abilities and may not develop. This nurse will forever be asking other nurses what he can do. This affects manpower levels and because he is working in fear of making mistakes, his work will be below par.

A well placed nurse does not require a lot of supervision as a result, he gives the supervisor enough time to do other duties such as planning. This type of nurse is alert and reads every so often. He can even advise a doctor and hence renders quality care to the patients and is an asset to the ward. The study revealed that majority of nurses 34% (17) work on wards with a patient total of between 41 and 50. Only 8% work on ward where there are above 50 patients and another 8% (4) work on wards with less than 20 patients (table 11). This could be due to the following reasons:- the hospital’s patient turn over is higher than the bed capacity, patients stay longer in the wards due to terminal illnesses and that broken equipment is not repaired.

The high patient turn over explains why floor beds are present. Findings show that 50% (25) of the respondents work on wards where there are no floor beds. The other 50% (25) acknowledged the presence of floor beds. Out of these, 32% (16) of the respondents said that floor beds occur once in a while on their wards and they also said they use priority nursing care. This is due to the fact that the nurses give maximum attention to the critical
patients. Only 8% (4) stated that floor beds were a daily event. Out of these 6% (3) use task
allocation. This was attributed to lack of manpower to take care of the patients holistically.
The nurses stated that the major needs/procedures are done though one nurse confessed that
it is done at the expense of the patient.

Several approaches of nursing care are being used in delivery of nursing care to the patients.
The most popular is priority nursing care used by 36% (18) of the respondents. Out of these,
22% are Registered Nurses while 14% (7) are Enrolled Nurses because they feel it helps in
saving life. This approach is closely followed by task allocation which is used by 34% (17),
out of which 30% (15) are Enrolled Nurses and only 4% (2) are Registered Nurses. This is
used for convenience only (table 13). Only 14% (7) of the respondents use patient
allocation.

It is interesting to find out that although nurses practice all these different approaches, they
recognise patient allocation as a better method of nursing care. This is because it provides
individualised care, it improves nurse-patient relationship and it was taught more in schools
of nursing than any other method. The nurses attributed the non utilisation of this method to
shortage of staff and medical equipment and supplies. Depending on the hospital set
standards, this contributes to poor quality care being rendered to the patients.

Majority of nurses 74% (37) do not use the nursing process as a tool of nursing care
delivery. Only 26% (13) of the respondents acknowledged the use of the nursing process.
Out of those who use the nursing process 18% (9) are registered nurses while 4% (2) are
Enrolled Nurses. The reasons given for not using the nursing process indicate that it mostly due to staff shortage 94.5% (35). Only 5.5% (2) respondents said that it was not fully understood.

Only 8% (4) of respondents indicated that they had adequate staffing. Out of which 4% (2) had both adequate staffing and delivered adequate care to the patients. The other 4% (2) had adequate staff but delivered inadequate care for various other reasons as will be discovered later on. The majority of the respondents 92% (46) stated that they had inadequate staffing. Out of these 86% (43) said that they could as a result not deliver the necessary adequate care while 6% (3) indicated that despite the manpower shortage, they were providing adequate care. One can say that there is need for adequate staffing if adequate care is to be given to the patients.

The majority of the respondents 26% (18) cited the conditions of service as influencing the nurse performance in providing poor quality care because the nurse is not cared for. A total of 12% (6) of the respondents stated that despite all other factors care is still adequate. The other factors mentioned were staffing and availability of resources (table 21). In an institution as big as the UTH manpower should match the needs of the organisation. An irregular supply of necessary material reduces the quality of care being provided to the clients.

The reduction in staffing levels can be attributed to transfers. When a nurse is transferred, a replacement has to be made as soon as possible if staffing levels have to be maintained. When staffing levels are adequate, care is expected to be adequate if the resources are
available. Majority of respondents 84% (42) stated that nurses transferred from their wards have not been replaced. Only 4% (2) stated that nurses transferred were replaced. These were from High Cost wards. If transferred nurses are mostly not replaced, how then do nurses cover the void created? Table 23 shows that in most cases 61.9% (26) the nurses are overstretched and as a result provide poor quality care. A tired nurse cannot be expected to give the best care. The nurse literally pulls herself through the ward and will use ‘short cuts’ in order for her to care for more patients, meanwhile she will have no time at all to know her patients and as a result will not take care of each patient’s needs adequately. Her work will be incomplete and shoddy. The other respondents 38.1% (16) indicated that they use the patient’s relatives in order to cover for the vacuum of staff shortage. At this time, it is good to note that relatives are not nurses and as a result cannot replace nurses. This literally means that if adequate nursing care is to be rendered to the patients then adequate staffing is paramount.

After establishing the existence of staff shortage, findings further reveals the number of patients taken care of in relation to what nurses do when there is no material to use while rendering care. The majority of the respondents 70% (35) ask relatives to buy. Out of these 28% (14) are from wards with 41-50 patients. While 2% (1) are from wards with more than 50 patients. Some respondents improvise whatever is missing 28% (14) while 2% (1) will omit the procedure. It is very frustrating for nurses to wait for relatives when they come visiting to ask for a tablet of soap and a bottle of vaseline for instance. This means the patient is not bathed until at least a tablet of soap is available. The majority of the respondents 34% (17) work in wards with a high patient total number of 41-50 per day.
Simple procedures like a bath is only made possible where resources and personnel are available. Majority 70% (35) do not give their patients a daily bath. The majority of nurses practising priority nursing care approach 16% (8) give daily baths to their patients. While only 6% (3) of those practising patient allocation give the patients daily baths. This can be attributed to other factors like inavailability of resources such as soap, lack of a bathroom, lack of warm water, patients being uncooperative and reduced staffing levels. Even if resources are available and yet manpower is low, care is still compromised because it is the human resource that can put the other material resource to use in order to produce/deliver adequate quality care.

Availability of drugs and other medical equipment also influence the provision of nursing care. Findings show that 90% (45) of the respondents do not have adequate drugs and medical equipment and as a result provide inadequate care. As earlier on discussed, the necessary material and drugs should be available at all times for the nurse to use. Where these are not available or are irregularly supplied, it keeps the nurse trotting between her ward and the supplies department instead of her providing nursing and spending time with the patients. This obviously reduces the quality of care rendered.

In-service training keeps nurses up to date with current trends in nursing and improves nursing standards. Table 24 shows that 50% (25) of the respondents have attended in-service and the other 50% (25) have not. Out of those who have attended in-service the majority 32% (16) are registered nurses and 18% (9) are enrolled nurses. This disparity
could be due to the fact that registered nurses are holding managerial posts and are at an advantage. If in-service improves the nursing standards why then are the nursing standards so low at the UTH? Austin (1978) states that the present situation with regard to the condition of work and life of nursing personnel is sufficiently serious as concerns both the conditions themselves and the consequences arising from them, to warrant the adoption of quality care.

When the respondents were asked as to whether in-service training should be made mandatory, the majority 96% (48) agreed and gave reasons like, it is motivating, it broadens the nursing scope and keeps nurses abreast. Only 4% (2) of the respondents indicated that it should not be mandatory (table 28).

The evaluation of the performance of employee is a key part of the function of staffing, as the evaluation serves as a basis for judging contributions and weaknesses of employees so that continuing efforts can be made to build a stronger and more effective organisation. Chandan (1989) states that performance appraisal is a systematic way of evaluating a workers performance and his potential development. This continuing monitoring of performance and periodic evaluation help in retaining promotional and retraining policies.

The relationship between respondent's knowledge of the use of performance appraisal at the UTH and their professional level. A total of 76% (38) respondents know that performance appraisal is being used at UTH. Out of these 42% (21) are Registered Nurses and 34% (17) are Enrolled Nurses. The surprising thing is 24% (12) are not aware of the fact that performance appraisal is in use at UTH. This could be attributed to lack of publicity and
sensitisation and could also mean that they have not been appraised since the introduction of performance appraisal in 1994.

As previously indicated, the formal performance appraisal plans are designed to meet three needs, one of the organisation and the other two of the individual. These are:

- they provide systematic judgement to back up promotions, transfers and salary increment.

- they let the subordinate know where he stands and whether any changes are required in his behaviour, attitudes, skill or job knowledge.

- They are used as a base for coaching and counselling of the subordinates.

The findings on the use of performance appraisal at the UTH reveal the following. Out of the 76% who know that performance appraisal is being used at the UTH 40% (20) say it is time wasting. This could be attributed to the size of the organisation, so the process is very slow. 18% (9) say that it promotes on merit while another 18% (9) say it is biased. It could be due to the fact that some individual who are hard working (according to the respondent) are not promoted because they may have failed to express themselves.

The study clearly demonstrated that placement of nurses in their area of specialty is very important and promotes nurse stability and provision of quality care. It has also proved that poor conditions of service leads to exodus of nurses thereby compromising nursing care. Furthermore, availability of resources has been found to improve nurses morale and consequently improve nursing care. Therefore, all my hypotheses have been met.
5.1 IMPLICATIONS ON HEALTH

Nurse staffing levels play a vital role in health. The nurses form the majority of employees in the Ministry of Health. This implies that most of the Rural Health Centres are run by nurses. In view of this fact, it is therefore important for the employers to ensure that nurses are accommodated well and sent to areas where they can get the basic necessities of life e.g. groceries, schools for their children and other social amenities for recreation.

Knowledge of the nurses' field of interest will help the administrators to place the nurse according to specialty. This reduces the rate of transfer and promotes retention of the labour force.

Nurses should also be given some incentives to motivate them. Other things like improvement on conditions of service will improve the nurses' health. This will improve staffing levels by reducing the rate of illnesses among nurses.

Misinformed managers always frustrate the staff and they retaliate by absentism and unnecessary sick-off or even by being uncooperative. This reduces the number of nurses and adversely affects delivery of care. It is therefore important to orient managers to managerial skills.
CHAPTER 6

6.0 CONCLUSION AND RECOMMENDATION

6.1 CONCLUSION

From the discussion, it can be seen that most of the respondents in the study outline the nursing care being given to the patients on the wards as inadequate. The contributing factors are:

- a high patient turn over
- congestion in the wards
- lack of hospital equipment
- irregular hospital supplies
- high nurse-patient ratio
- nursing patients on the floor

In addition the nurses indicated that poor job prospects, lack of accommodation, lack of decent transport, poor salaries also contribute to inadequate nursing care on the wards. It would not be out of place to state that all nursing personnel involved in patient care should be motivated on the importance of maintaining good standards of nursing care for the effective deliverance of quality care.

There are a number of factors that contribute towards quality of patient care. These factors include: capital, equipment and manpower. While all these factors are important, the human resource is the most significant one, since it is the people who have to use all other
resources. Without, the productive efforts of its workers, the materials and other resources will be of no use.

6.2 RECOMMENDATIONS

1. In identifying the set standards of nursing, it is vital to determine the signs, results, and references which make it distinguishable, while permitting it to be understood and on what basis nursing services can change and evolve. Therefore:

1. The nursing administrators should place nurses in their areas of interest and/or specialty.

2. The nursing administrators should provide opportunities for promotion in the basis of special qualification or skills in practical nursing in order to prevent staff shortages in the wards created by promotion of nurses.

3. Nurses who have been transferred should be replaced quickly in order to promote continuity and maintenance of high standards of care.

4. Ward managers should have clearly written guidelines on the nursing care approach adopted on the ward in order to ensure uniformity and promote quality care.

5. Provision and availability of medical equipment, material and drugs should be regular to ensure continuity of quality care. Where these are not available let the public know through the established channels instead of putting the blame on nurses.

6. Since workers work efficiently when motivated. The hospital authority should concern itself with improving nurses' conditions.
7. The professional nurse should be effectively and efficiently used. Non nursing personnel should be appropriately utilised for time consuming tasks that do not require clinical judgement.

8. Nurses should utilise every available opportunity to carry out information, education and communication to individual patients and their families as a whole since the concept of participation in all aspects of care is the in thing.

9. Nurses should be accorded decent accommodation and mode of transport for them to look fresh and presentable on duty.

10. Nurses should be evaluated periodically and sent for further training or in-service in order to maintain a high standard of care.

11. Nurses should be sensitised thoroughly and gradually introduced to change for them to grasp and appreciate the concept of change.

12. Further research should be done on a larger scale in order to determine why nurses have bad attitude towards patients. This will allow for generalisation to be made.
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8th July, 1998

Dear Sir/Madam,

This is to introduce................., a Fourth Year BSC (Nursing) Student in the Department of Post Basic Nursing, School of Medicine, University of Zambia. The student is undertaking a Research Study in partial fulfilment of the above mentioned degree.

The Research Program for study is.............

We shall be most grateful if you could access the student to information on the subject or clients and any other assistance the student may require.

Yours faithfully

Lydia Jumbe
COURSE CO-ORDINATOR
DEPARTMENT OF POST BASIC NURSING
9th July, 1998

Mrs Lydia Jumbe
Course Co-ordinator
Department of Post Basic Nursing
School of Medicine
LUSAKA.

Dear Madam,

Re: - KABOMBO SIKAMENA, FOURTH YEAR BSC (NURSING) STUDENT

I acknowledge with thanks receipt of a letter about the above mentioned student seeking permission to carry out a research.

I am pleased to advise that authority has been granted.

Yours faithfully,

M. M. Mbewe (Mrs)
DIRECTOR OF NURSING
QUESTIONNAIRE

INSTRUCTION

The study seeks to determine the relationship between nurse staffing levels and delivering of nursing care at the University Teaching Hospital (UTH). The information that you will give will be treated with strict confidence.

Do not write your name on the questionnaire.

Please tick ( ) only one appropriate answer or write your comment in the space provided.
1. What is your sex?
   (a) Female
   (b) Male

2. How old are you? ________________________

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

4. How many children do you have?
   (a) None
   (b) One child
   (c) Two children
   (d) Three children and above

5. Does your job give you enough time to spend with Your family?
   (a) Yes
   (b) No
12. Who owns the house you live in?
   (a) Personal
   (b) Rented
   (c) UTH

13. If it is a rented house, who pays rent?
   (a) Your employer pays all the rent
   (b) Your employer pays part of the rent
       And you pay the rest
   (c) You pay all the rent
   (d) Your husband’s employer pays all the rent.

14. How do you feel about your answer to number 13?
   (a) Motivated
   (b) Demoralised

15. Does your employer provide you with transport/
    Transport allowance?
   (a) Yes
   (b) No

16. If your answer to number 15 is No, what type of
    Transport do you use?
   (a) Public transport
   (b) Personal care
   (c) Cycling
   (d) Walking
17. Does your mode of transport affect the care you give to patients? Please explain

18. Where did you do your nurse training? (State the name of the institution)

19. Which Ward are you currently working in?

20. How long have worked in this Ward?
   (a) 1 – 2 years
   (b) 3 – 4 years
   (c) 5 – 6 years
   (d) Over 6 years

21. Are you happy working in this Ward?
   (a) Yes
   (b) No

22. Give reasons for your answer to Number 21.

23. Have you done any special training?
   (a) Yes
24. If your answer to number 23 is Yes, What was this training?

(a) Midwifery
(b) Theatre Nursing
(c) Primary Health Care
(d) Family Health Nursing

25. What is the average patient turn over per day in Your Ward?

(a) Less than 20
(b) Between 20 and 30
(c) Between 31 and 40
(d) Between 41 and 50

26. Do you have patients sleeping on the floor?

(a) Yes
(b) No

27. If your answer to number 26 is Yes, how often Does this happen?

(a) Every day
(b) Every week
(c) Once in a while
28. What type of nursing care approach is used on your Ward?
   (a) Task allocation
   (b) Patient allocation
   (c) Priority Nursing
   (d) Team Nursing

29. Please explain how you find this method.

30. Do you use the nursing process as a method of delivery of nursing care to your patients?
   (a) Yes
   (b) No

31. If your answer to number 30 is Yes, how do you use it?

32. If your answer to number 30 is No, what is the problem?
   (a) The nursing process is not fully understood
   (b) The Ward is understaffed
   (c) Nurses just avoid using the nursing process
33. How would you describe the present delivery of Nursing care on your Ward?
   (a) Adequate
   (b) Inadequate

34. Please give reasons for your answer to number 33

35. What do you consider as factors that affect nurse’s Performance on your Ward?

36. Do you have adequate nursing staff on your Ward?
   (a) Yes
   (b) No

37. If your answer to number 36 is No, how does this Affect delivery of nursing care?

38. Have some nurses gone on transfer from the time you Came to this Ward?
   (a) Yes
   (b) No
39. If the answer to number 38 is Yes, how many have gone on transfer?

(a) 1 – 3
(b) 4 – 6
(c) above 6

40. Has there been any replacement to all those that have leave the Ward?

(a) Yes
(b) No

41. If the answer to number 41 is No, how have you covered the vacuum created?

(a) We are over stretched and nursing care is poor
(b) We make use of the relatives
(c) We do what we want

42. Do you have adequate medical equipment and drugs?

(a) Yes
(b) No

43. What do you do when material resources are not available while rendering patient care?

(a) Ask relatives to buy
(b) Improvise whatever is missing
(c) Omit the procedure
44. Do you give patient daily baths?
   (a) Yes
   (b) No

45. If your answer to number 44 is No, give reasons

   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

46. Have you attended In-service Training?
   (a) Yes
   (b) No

47. Do you think In-service should be mandatory?
   (a) Yes
   (c) No

48. State reasons for your answer

   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

49. Is performance appraisal used at UTH?
   (a) Yes
   (b) No
50. In your opinion, how is performance appraisal?

(a) Promote on merit
(b) Biased
(c) Time wasting

THANK YOU FOR ANSWERING THE QUESTIONNAIRE