IMPACT OF THE ATTRITION OF HEALTHCARE PROFESSIONALS ON ZAMBIA'S HEALTHCARE DELIVERY SYSTEM: THE CASE OF THE UNIVERSITY TEACHING HOSPITAL (UTH).

By

Phineas Bbaala

A dissertation submitted in partial fulfillment of the requirements for the degree of the Master of Public Administration (MPA).

The University of Zambia
July, 2007

DECLARATION

I hereby declare that this dissertation represents my own work, and that it has not previously been submitted for a degree or other qualification at this or any other university.

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Phineas Bbaala

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CERTIFICATE OF APPROVAL

This dissertation of Phineas Bbaala has been approved as partial fulfillment of the requirements for the award of the degree of Master of Public Administration (MPA).

Signature---------- **Date** 9/7/2007.

Supervisor

Signature---------- **Date** 9/7/2007

Internal examiner

Signature Mafuleka **Date** 9/7/2007.

Internal examiner

ABSTRACT

Despite the availability of data and information on the severity of attrition, the problem was the absence of satisfactory researched material on how the attrition of the healthcare professionals had impacted on the delivery of Zambia's public healthcare system. The general objective of the study was to assess the impact of the attrition of the healthcare professionals on the delivery of the public healthcare system in Zambia.

The research targeted healthcare professionals, management officials, and the patients at the University Teaching Hospital (UTH). Convenience Sampling was used in the selecting the sample of respondents. The research findings show that attrition of the healthcare professionals has had a negative impact on the delivery of the public healthcare system in Zambia.

Due to attrition, the efficiency, and effectiveness of the public healthcare system in Zambia, has reduced. The reduction in the efficiency of the delivery of the public healthcare has been measured through the existence at the UTH of factors that tend to prevent quality inputs into healthcare delivery. These include the increased use of inappropriate healthcare professionals, inadequate time spent on patients by the healthcare professionals due to work overload, and the closure of some important units and subunits at the institution. Effectiveness has been measured in terms of the quality of health outputs the UTH supplies to the patients. The reduction in the effectiveness of the healthcare system at the institution has been hall-marked by the poor response to treatment among the majority of the patients, reduced access to appropriate treatment owing to the closure of some units and subunits where healthcare professionals had left, poor attitude of healthcare professionals towards patients, and the increased death rate among the patients seeking treatment from the institution.

In line with the general objective of the study, the general conclusion is that the high attrition rate of the healthcare professionals has resulted in poor healthcare delivery of the public healthcare system in Zambia.

DEDICATION

To Roy Bbaala

ACKNOWLEDGEMENTS

I sincerely thank many individuals and organizations that contributed in varied ways to this research. Without them, this document would not have been possible.

I am indebted to my supervisor Dr. M.C. Bwalya whose intelligent and invaluable critiques ensured a logical and chronological presentation of this material. At the University Teaching Hospital (UTH), I reserve special thanks for the entire staff in the public relations office, and Mr. Kennedy Makukula in particular for the goodwill and mutual understanding that he created between the researcher and the internal publics of the UTH! You made my job easier.

The University of Zambia (UNZA) deserves my heartfelt appreciation for awarding me a staff development fellowship and for financing my research.

I generally thank all the members of staff in the Department of Political and Administrative Studies of The University of Zambia for their direct, and indirect contribution to this research. Mr. Njekwa Mate and Mr. Clever Madimutsa, thank you for sharing your vast experiences with me. I also thank everybody in the Department of Political and Administrative Studies for supporting me in different ways.

All those whose names have not been mentioned, please, accept my sincere appreciation.

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LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ART	Anti-Retroviral Therapy
ARVs	Anti-Retroviral
CBoH	Central Board of Health
CNAC	Canadian Nursing Advisory Committee
DHOs	District Health Officers
GDP	Gross Domestic Product
HIV	Human Immune Virus
ICU	Intensive Care Unit
JCTR	Jesuit Centre for Theoretical Reflection
MHCW	Ministry of Health and Child Welfare
MoH	Ministry of Health
PHP	Public Health Practitioners
PSRP	Public Service Reform Programme
SADC	Southern Africa Development Community
SAMP	Southern Africa Migration Project
U.K	United Kingdom
U.S	United States
UTH	University Teaching Hospital
USDHHS	United States Department of Health and Human Sciences
VCT	Voluntary Counseling and Testing
WHO	World Health Organization
ZDHS	Zambia Demographic and Health Survey
ZNA	Zambia Nurses Association

CHAPTER ONE

INTRODUCTION

BACKGROUND

A successful healthcare system is one that employs the right number of healthcare professionals of the right competencies and attitudes. The kind and number of healthcare professionals available will affect the efficiency and effectiveness of the healthcare system. In Zambia, the public healthcare system has been hit by a high attrition of healthcare professionals. In the conceptual sense of the term, *attrition* is the rate of depletion of the staffing levels in an organization. In the realm of this study, attrition refers to the rate of depletion of healthcare professionals in the public healthcare system in Zambia due to natural and artificial causes.

The major natural causes of attrition are deaths and prolonged illnesses among healthcare professionals. These natural causes make some healthcare professionals unable to continue rendering healthcare. Artificial causes of attrition include dismissal, retrenchment, retirement and migration. The major form of artificial attrition is the migration of healthcare professionals. Migration is both internal and external. Internal migration is mainly where healthcare professionals move from jobs in the public healthcare system to jobs outside the public healthcare system within Zambia. External migration involves the movement of healthcare professionals from the jobs in the public healthcare system in Zambia to jobs inside or outside the public healthcare system in other countries.

High attrition of healthcare professionals can be detrimental to the delivery of efficient and effective healthcare to the people of Zambia. In order to properly assess the impact of the attrition of healthcare professionals on the delivery of the public healthcare system in Zambia, chapter one of this dissertation gives the background of attrition in the Zambian

public health sector. To give the reader a chronological understanding of the main issues and events, this chapter takes off with the forms and history of attrition before coming to the course of attrition in the Zambia public healthcare system. Then the chapter proceeds to the statement of the problem, objectives of the study, conceptual framework, literature review and the rationale of the study. The chapter closes with information on the limitations of the study.

Of the two major causes of attrition mentioned in the second paragraph of this chapter, the high death rate among the healthcare professionals is the single major cause of attrition. This is followed by the external migration of healthcare professionals. For this reason, the background of this dissertation focuses on the two forms of attrition.

According to a study by the Zambia Ministry of Health (2004), entitled *Health Systems Services Programme* (HSSP) "between January, 2003 and June, 2004, Zambia lost as many as 790 health workers". The same study reveals that death of healthcare professionals accounted for the biggest proportion of attrition (314) while 271 were lost due to migration. Death took its toll on the public healthcare sector in Zambia in the period between 2003-2004 when the country witnessed the demise of up to 314 healthcare professionals. The University Teaching Hospital (UTH) has suffered a high death rate among its healthcare professionals. What is even more worrying is that death rate at the UTH is more frequent in the lower age groups of the healthcare professionals. The professionals in this age group are supposed to replace the aging and retiring professionals. Table 1.1 below, shows the death rate in each professional category at the UTH and the average age of the professionals at the time of death in the period 2000-2003.

Table 1.1 Number of deaths per category of healthcare professionals occurring at the UTH in the period 2000-2003

Professional category	Number of deaths	Average age at death in years
Doctor	7	38.4
Clinical officer	8	40.8
Nurse	15	36.6
Others	30	38.1

Source: Feeley et.al(2004); Cost of AIDS among Public Healthcare Professionals; Final Report.

In the table above, *others* refers to such healthcare professionals as laboratory technicians and pharmacists who do not provide direct physical healthcare to patients. In the above table, we see that in the period 2000-2003 alone, the UTH lost, due to death, a total of 60 healthcare professionals. In the same period, from the table above, computation reveals that the average age at which a healthcare professional at the UTH died is 38.5 years.

As already stated above, the second major cause of attrition is external migration. The major push factor for external migration is the poor conditions of service for the healthcare professionals. At the time of research, the basic monthly salary for a Zambian doctor stood at 425 U.S. dollars compared to 10,554 U.S.dollars in the United States and 2,836 U.S. dollars in the neighbouring South Africa. For a Zambian nurse, the average monthly wage stood at 106 U.S dollars compared to 3,056 U.S. dollars in the United States and 1,486 U.S. dollars in South Africa (Op cit). According to a study by a team comprising Kombe.G, Galanty.D, Mtonga.V, and Banda.P (2005) entitled *Human resources Crisis in the Zambian health System*, due to poor conditions of service, in the period 1999-2003 alone, Zambia lost 461 nurses to the United Kingdom (UK). These nurses represent an aggregate loss over a period of four years. The trend is similar for other categories of healthcare professionals.

According to (Kombe.G; 2005) the period 1998-2003 saw Zambia suffer a more severe attrition of healthcare professionals. During this period, the attrition rate stood at 9.8 percent for medical doctors, 5.3 percent for nurses, 4.2 percent for pharmacists and 3.5

percent for laboratory technicians. From the above figures, we get a mean attrition rate of 5.7 percent for the four categories of healthcare professionals.

A related study conducted by the Zambia Ministry of Health (2004), entitled *Health Systems Services Programme* (HSSP), due to attrition, "of the required establishment of 1,266 doctors in Zambia, only 646 are available, meaning that the system is operating at half-mast. Zambia needs 16,732 nurses but only 8,706 are available". In the period (1998-2003), the World Health Organization Country Health System Fact Sheet for Zambia (2006) shows that the number of healthcare professionals per 1,000 population in Zambia severely declined. This reduced the density of healthcare professionals in Zambia. The density of healthcare professionals shows the number of healthcare professionals per 1,000 population of citizens. The internationally recommended minimum density is 2.5 healthcare professionals per 1,000 population. By the year 2004, the density in Zambia was just about 2.0 healthcare professionals per 1,000 population (Ibid). The situation has not changed much because by the year 2006, Zambia had only about 23000 healthcare professionals out of the required establishment of 45000 (http://english.people.comcn/200602/eng20060220_244180.html). As a result, the current establishment was far below the internationally agreed minimum density of 2.5 health staff per 1,000 inhabitants.

The country's referral hospitals have not been spared by the low staffing levels resulting from attrition. The University Teaching Hospital (UTH), the country's largest hospital with a bed capacity of 1,800 lost more than 50 percent of its medical personnel to Europe and neighboring countries, leaving it with a skeleton staff of 1,015 out of the planned establishment of 2,023. Due to fiscal challenges, the (UTH) has not been able to fill most of the vacancies left behind (Ibid).

The information above clearly shows that the public healthcare system in Zambia has lost a substantial number of its healthcare professionals. What is not known, however, is the impact of the attrition on the delivery of the country's public healthcare system.

STATEMENT OF THE PROBLEM

The information in the background of this study shows that the healthcare system in Zambia is on its knees due to the chronic shortage of healthcare professionals brought about by attrition. Further, the information in the background of this study shows that Zambia in general and the UTH in particular, has a 51 percent shortage of healthcare professionals. Since the human resource for health constitutes a key input into healthcare delivery, ideally, its shortage should impact negatively on the delivery of a healthcare system. In the recent past, stakeholders in the public healthcare system in Zambia have cried foul. The main concern is the possible impact of the continued high attrition of the healthcare professionals. Although a lot of arguments have been raised as to the possible effects of attrition, until this study, there were no formally researched arguments as to the impact of the attrition on the efficiency and effectiveness of public healthcare delivery. Since empirical data can invalidate assumptions about the ideal world or state of affairs, the researcher was curious to establish the empirical relationship between the shortage of healthcare professionals and the efficiency and effectiveness of the delivery of the public healthcare system.

GENERAL OBJECTIVE

To assess the impact of the attrition of public healthcare professionals on the efficiency and effectiveness of the delivery of the public health sector in Zambia.

SPECIFIC OBJECTIVES

1. To assess the impact of the attrition of healthcare professionals on the efficiency of healthcare delivery at the UTH.

2. To assess the impact of the attrition of healthcare professionals on the effectiveness of healthcare delivery at the UTH.

3. To assess the perception of healthcare stakeholders at the UTH regarding government interventions on attrition.

CONCEPTUAL FRAMEWORK

An impact assessment of the attrition of healthcare professionals on the delivery of the public healthcare system can be understood more easily by modeling it on the Systems Theory. The Systems Theory was born as a response to some weaknesses observed in the classical approaches to management, such as Frederick Taylor's Scientific Management, which ignored the relationship between the organization and its external environment. The emphasis of the classical thinkers was on the relationship between the organization and the elements in its internal environment such as the individuals and the subunits, otherwise called subsystems. The classical organizations were mainly emphasizing on efficiency in the interaction among its various subsystems. In the 1950s, social science scholars such as Ludwig Bertalanffy and Chester Barnard began to conceptualize organizations based on the Systems Theory (Bateman and Zeithaml; 1990; p. 64).

According to the Systems Theory, organizations consist of patterned activities that are complementary or interdependent with respect to some common output or outcome. When viewed from the systems theory, an organization is a set of interdependent elements, which is, in turn dependent on its environment. The organization obtains inputs from the external environment in terms of human, material and financial resources, and demands in the form of goods and services. The inputs are aggregated into goods and services that are supplied to the external environment as outputs to meet its demands. Once the outputs have been supplied to the external environment, there will be need for feedback aimed at the assessment of the extent to which the organization is efficient in the processing of the various inputs into outputs. Feedback will also help the organization to assess the extent to which it was effective in the delivery of the final product or service to the elements in the external environment such as clients, regulators, government among others. The operations of a healthcare institution can be analyzed within the context of the systems theory. The institution obtains inputs from the environment in terms of healthcare professionals, medical supplies, funds from the government and donors, and demands for effective healthcare from the health seekers. Any disturbance in one part of the system will disturb the functioning of the rest of the other components of

the system, and interrupt the organizational processes. For example, the shortage of healthcare professionals in a healthcare institution is apt to reduce its timeliness of healthcare delivery and its technical competence to provide quality healthcare. The technical competence may be reduced if, for example, the institution loses its most skilled healthcare professionals.

An organization may be divided into subsystems. A subsystem is a competence jurisdiction that serves to achieve a given set of the organization's objectives. Bateman and Zeithaml (1990; p.64) correctly identify three types of subsystems namely the operational, tactical, and strategic subsystems. We are, however, only concerned with the operational subsystem due to its relevance to this study.

An operational subsystem is the core subsystem of the organization as it is responsible for converting inputs into outputs. It constitutes those employees who perform the core activities of the organization. In a healthcare institution, the core subsystems would include the admission wards and operation theatres. In this subsystem, one is to find the core workers of the institution namely the medical doctors, nurses, midwives, pharmacists, dentists, laboratory technicians among other categories of healthcare professionals.

Since the workers in this subsystem are core, their shortage will affect both the efficiency and the effectiveness of the healthcare delivery at the institution. Within the supersystem (which is the composite of all subsystems) of a public health institution, there are subsystems in the form of wards, specialized clinics and theatres, departments among others that are supposed to deliberately pattern up to convert inputs into the goods and services in the form of quality healthcare delivery desired by the external environment in general and the healthcare seekers in particular.

The delivery of any system is measured by its efficiency and effectiveness. The term *efficiency* has been defined and applied differently in different types of organizations. Although the term has a wide application, it is usually defined in relation to profit making

organizations. For example, (Katz and Kahn; 1966) defines it as "the ratio of output to inputs or costs" Their definition implies that efficiency has to do with how much resources an organization has to utilize in order to produce a certain quantity of goods or services. The efficiency of a healthcare institution can be measured by studying all the processes of the institution. However, this study did not seek to measure the efficiency of all the processes of a healthcare institution, but was solely concerned with the efficiency of the hospital with regard to healthcare system delivery only. For this reason, in this study, efficiency is seen as the degree to which the healthcare institution has the right number of healthcare professionals with the capacity to deliver both ample and appropriate healthcare to the patients. The number and skills of the available healthcare professionals affect the degree of efficiency in the healthcare system delivery of an institution.

In cases where a healthcare system is losing its skilled healthcare professionals, due to attrition, it is expected that its capacity to deliver efficient healthcare will reduce. There are many ways in which the loss of healthcare professionals can reduce the efficiency of the healthcare system. For instance, the reduced number of the available healthcare professionals may make the healthcare system fail to deliver healthcare in time. This means that the healthcare system will attend to fewer patients than it should attend to in a given duration of time. We earlier on saw that a disturbance in one part of the system causes disturbances in other parts of the system and indeed on the supersystem itself.

Another factor that could affect the efficiency of a healthcare institution is work overload among healthcare professionals. Work overload means that the healthcare professionals are attending to more patients than they require to remain efficient. Although someone may argue that if healthcare professionals are overloaded, then they are efficient, it is important not to equate overload to mass production. The truth is that work overload reduces mass production because it could slow down the pace of doing work. Further, it is important to know that when healthcare professionals are overloaded, they tend to reduce their services to the organization. In turn the organization is deprived of the continuous flow of technical know-how needed for efficient delivery of the organization.

Further, work overload reduces the ability of the healthcare system to properly digest the inputs into the required outputs. Work overload can increase wastage due to the possibility of reduced attention by the workers. This will reduce the intended outputs while increasing the by-products.

Another factor considered as affecting the efficiency of a healthcare system is employee motivation. In a situation where the work load of the healthcare professionals has tremendously increased, while conditions of service have remained relatively unchanged, the motivation of the healthcare professionals is reduced. Reduced motivation may also make employees reduce their technical contribution to the healthcare institution, thereby slowing down the production process and finally reducing efficiency.

The efficiency of the healthcare system can also be compromised if one of its wards, clinics or theatres is non-operational. The break-down of one subsystem tends to eventually break-down the whole supersystem. The closure of a highly technical subsystem could reduce the energy of the healthcare institution to convert inputs into outputs. It can also slow down the entire process of healthcare delivery. This may result in the healthcare system being unable to attend to many patients within a given unit of time. This will signal low efficiency.

The efficiency of the healthcare system can also be measured through the degree to which it uses appropriate healthcare professionals in terms of skills and numbers, it has motivated healthcare professionals, it has smoothly running sub-organizational units, and ensures that the healthcare professionals have the right workload that is neither too little nor too much.

Another way of assessing the delivery of a healthcare system is by measuring its degree of effectiveness. In this study, the term *effectiveness* is used to refer to the degree to which the patients are satisfied with the healthcare they receive.

As Fry (1989; p.84) correctly puts it, "effectiveness is the degree to which the purposes of the organization are fulfilled" This definition, correctly, argues that the effectiveness of the organization can only be known after the performance of an organizational activity. If the patients are satisfied with the services, then there is effectiveness. With regard to our study, and in relation to healthcare systems, effectiveness is a measure of the extent to which the services of a healthcare system are deemed satisfactory to the patients. Effectiveness occurs at the point of output of the healthcare system. It is the rating of whether or not the healthcare delivered has adequately fulfilled the needs of the patients.

In the delivery of a healthcare system, effectiveness can be measured using various indicators. Note that this study measures effectiveness by using a set of variables identified by the researcher, and contained in the research instruments that were administered on the respondents during field research.

One way of assessing the effectiveness of a healthcare system is by examining the degree to which patients have access to different types of treatment. Patients are more likely to be satisfied with healthcare delivery if they are able to access treatment for most of their illnesses. In cases where the healthcare system is unable to treat certain illnesses, then the output of the healthcare system has also failed to achieve its objective of providing healthcare. When the healthcare system is operating below the required human resource capacity due to attrition, it is expected that it will not be able to treat certain illnesses or parts of illnesses. In the absence of timely restaffing, attrition may take away healthcare professionals of rare skills, causing lack of capacity for a healthcare system to handle certain illnesses satisfactorily. Also certain illnesses are interconnected, and their treatment is interdependent. The ability to treat one illness may require prior treatment of another illness. For example, a patient seeking treatment for HIV/AIDS will first be diagnosed for certain opportunistic infections. It is only after the treatment of the opportunistic infections that the patient can proceed to HIV/AIDS treatment. Assume that most of the healthcare professionals who have left are those specialized in the treatment of the opportunistic infections, then the healthcare system will either completely be unable to treat HIV/AIDS or will now take longer to treat HIV/AIDS. This is due to

scarcity of relevant skills and reduced density of healthcare professionals, both resulting from attrition. If this happens, then efficiency would have reduced. This is partly because the healthcare institution will not be able to produce many treated patients per unit of time. Further, those healthcare professionals specialized in treating HIV/AIDS will be under utilized as they may have to incur prolonged periods of waiting before a patient can be treated for opportunistic infections so that they are ready for HIV/AIDS treatment. For this reason, the use of appropriate healthcare professionals is key in ensuring high efficiency in the delivery of a healthcare system.

Where the attrition of healthcare professionals exceeds the rate of replacement, the healthcare system will have a deficit of healthcare professionals. This means that the demand for healthcare services among the patients will exceed supply. When this happens, the healthcare system may become ineffective because patients will have difficulties in accessing healthcare. In cases where a key healthcare professional has left, some patients may not access healthcare services at all.

The shortage of healthcare professionals may also reduce the amount of time that the healthcare professionals will be able to spend on the patients. This is so because in cases where only very few specialists have been retained, the contact time between healthcare professionals and patients will reduce. As a result, some patients will have to be discharged prematurely in order to relieve healthcare professionals from the daunting workload. This may slow down the response of patients to treatment due to reduced contact with healthcare professionals. At its worst, the result will be an increase in the death rate of patients. When this happens, not only will the patients be dissatisfied with the healthcare services, but it will also be connotation that the healthcare system has lost its purpose.

Finally, it must be observed that efficiency and effectiveness are actually two points along the same plane. Where as efficiency occurs at the point of production, effectiveness occurs at the point of consumption of the healthcare services. For this reason, by

measuring the levels of efficiency and effectiveness one is able to come up with a more holistic assessment of the delivery of a healthcare system.

LITERATURE REVIEW

As will be seen in the succeeding paragraphs, an extensive review of the various literature on the impact of the attrition of healthcare professionals on healthcare delivery points to an acute shortage of data and information on how the attrition has particularly affected the efficiency and effectiveness of public healthcare delivery in Zambia. This research was born out of the desire to find answers to some unanswered questions raised by their literature and to fill the information void that their arguments leave.

A study conducted by Scherecker and Labonte (2005; p.410), entitled *Taming the Brain Drain: A Challenge for Public Health Systems in Southern Africa*, argues that "the cost of health professionals' emigration... include the reduced ability of the health systems in the country of origin to deliver services and reduction in training and research capacity". Although Scherecker and Labonte (2005) provided the initial information which provoked the researcher to read further, their arguments were incomplete because they do not mention how the attrition of healthcare professionals can result in reduced ability of the healthcare system to deliver services. Their argument is made ambiguous by the term '*ability*'. They do not state the areas of ability that can be negatively affected by the attrition of healthcare professionals. For example, is it the ability to provide timely care, is it the ability to treat certain ailments or is it the ability to prevent certain deaths? Although they argue that attrition has reduced the capacity of the healthcare system to train healthcare professionals and to carry out research, they do not show how reduced capacity to train healthcare professionals and to undertake medical research can affect the delivery of the healthcare system. Furthermore, their arguments do not relate healthcare delivery to effectiveness and efficiency. Their study was also conducted in the entire Southern Africa meaning that it did not give any special attention to the Zambian situation. The desire to provide more specific information on how attrition can affect the delivery of the public healthcare system persuaded the researcher to undertake a further investigation into the subject.

A study by Martineau (2002; p. 45) entitled, *Briefing Note on the Migration of Health Professionals* reveals that attrition and the subsequent shortage of healthcare professionals can lead to increased absenteeism and salary argumentation among the remaining healthcare professionals. However, he is only concerned with absenteeism and salary augmentation without showing how these two factors can affect the efficiency and effectiveness of healthcare delivery. His arguments do not relate absenteeism and salary augmentation to efficiency and effectiveness. Further, he does not show the exact elements of efficiency and effectiveness that can be affected by the attrition of healthcare professionals. As much as it is true that absenteeism and salary augmentation constitute counter-productive behaviour, it is important to relate them to the efficiency and effectiveness of the delivery of a healthcare system. The researcher sought to move a step further to show how some counter-productive behaviour caused by attrition could affect the efficiency and effectiveness of the healthcare system.

Another related study was done by Mutizwa-Mangiza (1998; p, 11) in Zimbabwe. He researched into *The Impact of Health Sector Reform on Public Sector Health Worker Motivation in Zimbabwe.* He argues that the migration of healthcare workers from Zimbabwe had "adversely affected the quality of healthcare offered in the health institutions. He reports of falling standards of care which include uncaring and abusive attitude towards patients by the healthcare professionals. He attributes this situation to the falling morale among the healthcare professionals resulting from excessive workload associated with the stress of dealing with so many dying patients" (Ibid; p.13). He further reports that of much concern... are reports of patients being turned away from busy public clinics so that staff can carry on with their private practices. This has an obvious effect on equity of access to care for the poorest and needs to be investigated further" (Ibid; p.13-14).

Most of the findings by Mutizwa-Mangiza (1998) left the question of how attrition particularly affects the effectiveness and efficiency of the healthcare system unanswered. As Mutizwa-Mangiza (1998) himself observes, there was need for a further investigation into the subject matter, hence our research.

Worthy examining too are the arguments by the *Southern African Migration Project (SAMP)* (2006; p.1). SAMP (2006) indicates that "at least 1.3 billion people world wide lack access to the most basic healthcare, often because of lacking a healthcare professional. It further argues that the shortages were most severe in Sub-Sahara Africa which had 11 percent of the world's population 24 percent of the global burden of disease but only three percent of the world's health workers. A serious shortage of healthcare professionals in 57 countries is impairing the provision of essential, life-serving interventions such as childhood immunization, safe pregnancy and delivery services for mothers, and access to treatment for HIV/AIDS, malaria and tuberculosis" (Ibid; p.1). It argues further that "this shortage combined with a lack of training and knowledge, is also a major obstacle for health systems as they attempt to respond effectively to chronic diseases, avian influenza and other health challenges" (Ibid; p.1).

The arguments by SAMP (2006) were found very useful because they gave detailed information on the impact of attrition on the effective delivery of the healthcare system. It identifies how attrition has affected different categories of patients in accessing different types of healthcare i.e. how the treatment of various diseases in Sub-Saharan countries has been affected by attrition. The literature is solely concerned with the output of the healthcare systems. The output of the healthcare systems is an issue of effectiveness of delivery, which the researcher was keen to investigate further.

The arguments by SAMP (2006) were, however, found to be one-sided in the sense that they were preoccupied with how attrition had affected the effectiveness of the healthcare systems in Sub-Sahara Africa. It does not say anything on how attrition has affected efficiency in the delivery of the healthcare system. Our research sought to bridge the gap by investigating how attrition had affected both the effectiveness and the efficiency of the healthcare system in Zambia. The research by SAMP (2006) was done in the entire Sub-Sahara Africa, making its findings highly generic. This made the researcher interested in investigating the effects of attrition in an isolated case, Zambia. It was hoped that our research would help measure the degree to which the findings by SAMP (2006) could be generalized on the entire Sub-Saharan Africa.

The *Zambia Demographic and Health Survey (ZDHS) (2001-2002; p.22), Calverton Maryland; Central Statistical Office; Central Board of Health* reveals that among "other reasons for increasing maternal mortality ratio (MMR) include ...shortage of trained staff, attitude of some health staff; and poor quality of care (untrained staff...)". Maternal mortality ratio refers to the number of women who die during labour per one thousand live births. The unique contribution provided by the ZDHS (2001-2002) is that the attrition of the healthcare professionals has led to increased maternal mortality in Zambia. The ZDHS (2001-2002), is categorical about the nature of death that may occur; maternal mortality. For this reason, the ZDHS (2001-2002) provided us with highly specific information relating to one of the possible effects of attrition on healthcare delivery.

The information by the ZDHS (2001-2002) was, however, found incomplete by the researcher because it did not show how increased mortality rate was related to the effectiveness and efficiency of the healthcare system in Zambia. Further, the literature takes a pegionhole approach to the impact of attrition on the delivery of the healthcare system because it only shows the impact in relation to maternal mortality, leaving out the larger context within which the subject could be studied. For example, the information does not discuss the casual–effect relationship between attrition and increased maternal mortality. In explaining casual–effect relationships a healthcare institution, one should show how some variables act on each other to produce a certain effect. The absence of this information made the researcher develop curiosity that culminated in this study.

Diallo.D. (2004; p. 2) in *Data on the Migration of Healthcare Workers: Sources, Uses and* Challenges, asserts that "the impact of migration on service provision in countries that are losing workers and are already suffering from shortages is more severe because migration of highly skilled workers limits access to healthcare". First and foremost, his argument is quite educative because it shows that the attrition of healthcare professionals erodes the quality of healthcare and limits access to healthcare. However, Diallo (2004) does not explain how the attrition of healthcare professionals can reduce access to healthcare and erode quality of healthcare. Realizing that the relationship between attrition and healthcare delivery is a complex one, Diallo (2004) was supposed to first

draw a relationship between variables that measure the quality of healthcare delivery on one hand and those that measure access to healthcare, on the other. This was going to assist him to measure the impact of attrition in terms of efficiency and effectiveness of healthcare delivery. For this reason, his argument remains highly vulnerable, inadequate and rather subjective, thereby evoking further inquiry.

Another related study into the subject matter is the one that was conducted by Ofosu (2001) for the Ministry of Health in Ghana. The study is entitled *Brain Circulation and its Effects on Health Sector Service Provision, Especially with Regard to HIV/AIDS.*
Ofosu (2001; p.13) argues that "due to staff shortage, and the increased demand for services, nurses have had to work longer hours to provide needed care. Additional strain on the already overstretched health systems adversely affects the quality of care offered in health institutions". He further argues that reduced stock of highly-trained and experienced healthcare professionals has led to weakened staff morale and motivation, and the erosion of public confidence in the healthcare system delivery (Ibid; p.14-15).

Generally, the arguments by Ofosu (2001) do not show the impact of attrition in terms of efficiency and effectiveness of healthcare delivery. This is because he gives the final effects of scarcity of healthcare professionals without accounting for various variables that interact to increase work hours for healthcare professionals, and that affect the quality of healthcare delivery. He seemingly ignores the fact that the delivery of healthcare services can only be measured by assessing the performance of certain variables that are determinants of efficiency and effectiveness. Additionally, the study was conducted in Ghana, not in Zambia. This research was aimed at investigating whether or not some of the impacts of attrition on healthcare delivery discovered by Ofosu (2001) in Ghana, was representative of the situation Zambia.
A Discussion Paper by Woodward (2000; p.3-4) entitled *Issues in Healthcare Delivery: Improving Provider Skills*, propagates a view that the quality of a healthcare system is measured through the extent to which it embraces efficiency, efficacy, effectiveness, equity, accessibility, comprehensiveness, acceptability, timeliness, appropriateness, continuity, ... patient satisfaction, workplace safety, reduced patients' mortality and

morbidity and improved quality of life and functional health status of the patient. He goes further to assert that the quality of healthcare is affected by the skill mix of the available healthcare professionals. He argues that the healthcare professionals are key because they know what treatments are efficacious and effective given a particular patient's condition and circumstances. He goes further to argue that the timeliness with which healthcare professionals provide healthcare affects the quality of healthcare. He is implicitly suggesting that quality healthcare can only be offered where there is an adequate number of healthcare professionals of the appropriate skills.

Although the arguments by Woodward (2000) helped the researcher to have an insight into the various variants of quality healthcare system delivery, they ignited a desire in the researcher to investigate further. This was due to the fact that the arguments that were raised in the discussion paper contained ideas and positions based on assumptions rather than scientific research findings. Since human intuitions about the plausible interaction of social phenomena can be disputed by the findings of scientific research, the researcher was keen to verify whether or not the assumptions advanced by Woodward (2000) could stand the test of a scientific investigation.

Despite recognizing the relationship between the availability of the right number of appropriate healthcare professionals, and efficiency and effectiveness, Woodward (2000) does not relate his assumptions to the attrition of healthcare professionals. Additionally and highly problematic too, was the fact that Woodward (2000) merely mentions efficiency and effectiveness without identifying the variants of either of the two concepts.

The research by Woodward (2000) was done in Switzerland. Since the healthcare needs in Switzerland are different from the healthcare needs in Zambia, the researcher got interested in assessing the impact of attrition on some identifiable variants of efficiency and effectiveness in the delivery of a healthcare system in Zambia.

There is also the argument by Munoz (2006; p.3-4) in his research, "*Addressing the Health Workforce Crisis*" that although 25 percent of the global disease burden is on

Africa, due to attrition, the continent only retains 1.3 percent of the world's healthcare professionals, a phenomenon that has among other problems led to reduced quality of healthcare, low motivation and high absenteeism among healthcare professionals.

Just like Woodward (2000), Munoz (2006) does not relate the impact of attrition to efficiency and effectiveness in the delivery of a healthcare system. In fact, he makes no attempts to identify efficiency and effectiveness as important indicators of good healthcare system delivery. In addition, although he argues that attrition reduces the quality of healthcare and the levels of motivation of healthcare professionals, the variants of *quality* and *motivation* are not identified. The research was also not particularly undertaken in Zambia, and it solely relied on secondary data. Since methodology is an important determinant of research findings and the reliability of those findings, the researcher was interested in verifying the validity of the findings using primary research. For this reason, his publication has a lot of unanswered questions. It was envisaged that this research would provide some answers to some of the pertinent questions emanating from the research conducted by Woodward (2000).

Asis (2007; p.3) in the *Health Worker Migration: The Case of the Philippines* discusses a host of views relating to the impact of the migration of healthcare professionals to other countries on the delivery of public healthcare. One outstanding view that he holds is that healthcare is a basic social service such that the departure of healthcare professionals can affect the delivery of the healthcare system. However, he does not say anything about how the departure of the healthcare professionals can affect the delivery of a healthcare system. The desire to understand how the migration of the healthcare professionals, among the other forms of attrition, can affect the delivery of the healthcare system, generated research interest in the researcher.

In *The State of the Health Workforce in Sub-Saharan Africa: Evidence of Crisis and Analysis of Contributing Factors*, a study conducted by Liese (2004; p.17), it is learnt that in Malawi, a country whose staffing levels of healthcare professionals are not very different from those of Zambia, many district hospitals did not have physicians and that

lower-level staff were performing higher-skill functions, and that even in tertiary facilities, patients were rarely seen by a physician.

The research findings presented by Liese (2004) were very useful to the researcher because they showed the impact of attrition on a country that is not only a neighbour to Zambia, but is just like Zambia, operating on half its required establishment of healthcare professionals due to the problem attrition. However, the information from this source does not provide statistical figures as to the percentage of the inappropriate healthcare professionals who were performing healthcare services or the lower-level professionals who were performing higher-level healthcare functions. Also, no information is given about the category of lower-level professionals who were most engaged in providing which category of higher-level healthcare functions. This information would have been very helpful in showing the most affected categories of healthcare professionals and hence the most affected aspects of healthcare.

Further, the report by Liese (2004) does not provide any information about how many times a patient was seen by a physician in a day or in a week. Also, the research does not relate the impact of attrition to the efficiency and effectiveness of healthcare delivery. Furthermore, although the attrition levels in Malawi may be similar to those in Zambia, they are not the same. Similarly, even if the attrition levels in the two countries were the same, the impacts could be different due to the different healthcare needs in Malawi and Zambia, hence the decision by the researcher to undertake an impact assessment focusing specifically on Zambia.

Generally, the literature presented and discussed above gave the researcher some insights into the impact of attrition on the delivery of a healthcare system. However, the arguments advanced by the various writers and researchers did not provide any information on how the attrition of the healthcare professionals had specifically affected the efficiency and effectiveness of the public healthcare system delivery in Zambia. Since the researcher had a strong belief that the best way to assess the delivery of a public

healthcare system was through investigating the levels of efficiency and effectiveness of healthcare delivery, he could not resist the urge to undertake this research.

SIGNIFICANCE OF THE STUDY

As our literature review indicates, though many researchers have investigated the impact of the attrition of healthcare professionals on healthcare delivery no available literature on the subject provides statistical evidence on the impact of attrition on the efficiency and effectiveness of healthcare delivery. Although some literature has attempted to give the impact of attrition on the delivery of public healthcare, it does not particularly examine the impact on efficiency and effectiveness of healthcare delivery. The study would specifically provide the missing information on how the attrition of healthcare professionals can affect the efficiency and effectiveness of the delivery of the public healthcare system.

On a non academic frontier, it was also the desire of the researcher to provide valuable information to the players in the public health sector that would assist them in rethinking the formulation and implementation of the national health policies and strategies.

The findings of this study would also present to researchers and students a paradigm shift in viewing brain drain in the healthcare sector (i.e. to start assessing the impact of attrition in terms of efficiency and effectiveness of healthcare delivery). The information in this document would hopefully ignite further research into the subject matter.

RESEARCH METHODOLOGY

Sample size

A sample of 100 was drawn from the University Teaching Hospital (UTH). The sample captured healthcare professionals, management officials and patients. The healthcare professionals included pathologists, registered nurses, pharmacists, mid-wives,

immunologists, surgeons, dental technologists, microbiologists, biomedical scientists, diagnostic radiographers, orthopaedists, critical care nurses, physiotherapists, gynaecologists and paediatrists.

The sample size of 100 respondents was selected due to financial constraints. Due to the small universe of healthcare professionals at the UTH, the sample was large enough to allow for the generalization of the results.

Method of sampling

The survey selected both the wards and the respondents using convenience sampling. The wards were chosen on the basis of permission by the authorities at the UTH. Upon reaching a ward, further permission was obtained from the Sister-in-Charge (SIC) to interview some patients and healthcare professionals. In the case of patients, the SIC was requested to identify patients who were feeling well enough to respond to the questionnaire administered by the researcher. Patients who were not feeling too well were not engaged. The survey restricted itself to patients that had been admitted to wards and had been seeking treatment for a minimum of two days. The assumption was that such patients had better knowledge of the healthcare delivery at the institution.

Convenience sampling proved to be the most reliable even for the selection of the sample of healthcare professionals as most of them were very busy due to the shortages of staff caused by attrition. Quite often they had to be chanced or requested to delay going for lunch.

Some wards were left out because they either did not have patients that had been admitted for a minimum of two days, or because the patients were too ill to responded to the questions. For this reason, in the Intensive Care Unit (ICU), only healthcare professionals were interviewed. No patients were interviewed at the Children's Wing because they were all below the required minimum age of 18 years.

It must be emphasized that even in wards and other units where no patients were interviewed, some healthcare professionals were interviewed.

Management officials at the UTH were also selected using convenience sampling. This was due to the discovery that most of the management officials were very busy and some were rarely found in offices.

Methods of data collection

Data was collected using questionnaires, personal interviews and relevant documents.

Primary data

Both qualitative and quantitative data were collected directly from the respondents. Qualitative data was obtained through personal interviews while quantitative data was obtained through self-administered questionnaires.

Secondary data

This was collected from policy documents and other relevant materials at the UTH, the Ministry of Health, the internet, the Central Board of Health and other sources. Most of the secondary data was found more useful in the introductory chapter.

Data analysis

The data was analyzed using both manual methods and the computer. The computer-based Statistical Package for the Social Sciences (SPSS) was used in the preparation of data templates and frequency tables and some of the graphs in the introductory chapter. SPSS was found advantageous due to its ability to easily analyze huge quantities of data within a short period of time. Microsoft Excel was used in drawing most of the graphs and tables.

Rationale for choosing the UTH

The University Teaching Hospital (UTH) is Zambia's largest hospital with approximately 1,800 beds. The UTH is the major primary, secondary and tertiary referral health institution for all of Zambia. It has become the final destination of the unsolved medical problems for the whole of Zambia. Health and medical problems not treated at the general and district hospitals and in residential clinics around Zambia are eventually referred to the UTH for diagnosis and treatment.

Its size and national character makes it a better case study than any other public health institution in the land. This is because it employs more healthcare professionals than any other healthcare institution in Zambia. Its healthcare professionals are also more heterogeneous in terms of specializations than any other healthcare institution in Zambia. The results would, therefore, reflect a wider cross-section of healthcare professionals. A study into the health services delivery of the UTH would also provide a more accurate indicator of the magnitude of the problem at the national level.

The institution's character as a public healthcare centre made it highly relevant to our study. This is because our study was concerned with assessing the impact of the attrition of healthcare professionals on the delivery of the 'public' healthcare in Zambia.

Limitations of the study

Though the results of the survey remain highly valid and reliable, the researcher suffered certain challenges before, during and after data collection. The limitations are given below.

The researcher had some difficulties in getting permission to commence the research from the management of the UTH. This delayed the research.

There was also a financial setback. Even at the time of writing the first draft of this report, the researcher's sponsor, the University of Zambia (UNZA) had not yet released the money for field work. As a result, progress had been slow due to financial constraints.

Other challenges were, however, met during data collection. Though many management officials were willing to respond to the questionnaire, some were not able to do so for some reasons. There seemed to exist a high degree of fear among the management officials at the institution preventing some of them from either giving information or to freely do so. The lack of cooperation was reported more among the most senior management officials at the UTH, some of whom said that they did not want to entangle themselves in an election year. This was despite the assurance that the research was for academic purpose only.

The researcher also found some difficulties during collection of data from the healthcare professionals and patients. Most healthcare professionals were too busy to attend to the researcher. In some cases, the researcher only found one healthcare professional in a ward against many patients, leading to prolonged hours of waiting before accessing the respondents. There were also some cases where personal interviews had to be prematurely terminated because the healthcare professional had to respond to a sudden emergency in the ward. This was a major problem at the Operation Theatre Phase Five, the maternity wards and the Intensive Care Unit (ICU). In certain cases, the interviewer could not hold personal interviews with some of the healthcare professionals due to their busy schedules. Of those healthcare professionals who filled in questionnaires, many could not do so on time due to their busy schedules. In fact, a number of the healthcare professionals had to sacrifice their lunch in order to find time to respond to the questionnaires.

STRUCTURE OF THE DISSERTATION

Chapter one gives background information, statement of the problem, objectives of the study, conceptual framework, literature review, rationale of the study and the methodology used in the study which includes the key characteristics of the healthcare professionals who were sampled.

Chapter two presents and discusses the impact of the attrition of healthcare professionals on the efficiency of healthcare delivery.

Chapter three presents and discusses the impact of the attrition of healthcare professionals on the effectiveness of healthcare delivery.

Chapter four presents and discusses the perceptions of the respondents on the various interventions on attrition.

Chapter five presents the conclusion and recommendations.

CHAPTER TWO

IMPACT OF ATTRITION ON THE EFFICIENCY OF HEALTHCARE DELIVERY

INTRODUCTION

This chapter presents and discusses research findings on the impact of the attrition of healthcare professionals on the efficiency of healthcare delivery. In accordance with the understanding established in the conceptual framework, the efficiency of a healthcare system is measured by the degree to which the healthcare professionals have the right workload per unit of time, are motivated, spend adequate time on patients, handle most of the diseases and possess appropriate skills. This chapter presents and discusses research findings on how the attrition of healthcare professionals has affected the efficiency in the delivery of healthcare at the UTH as measured by the attributes of efficiency above and as discussed in the conceptual framework discussed in chapter one of this dissertation. The presentation and discussion of the findings follow the order in which the measures have been mentioned earlier. The chapter closes with a conclusion.

On each measure of efficiency, presentation and discussion of the findings will consist of the responses of the healthcare professionals, management officials and patients. Only on some measures are the responses of all the three sets of respondents are presented and discussed. This is because some questions did not apply to some of the classes of respondents.

FINDINGS

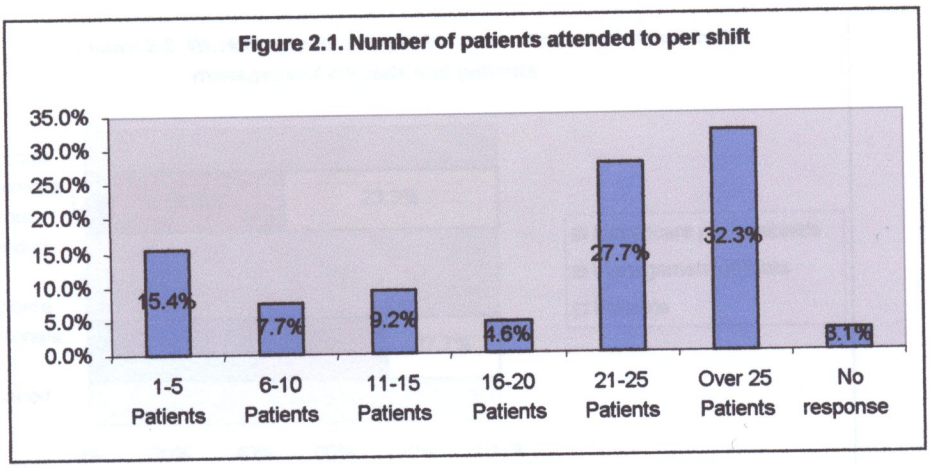
Patients handled per shift

As already stated above, the number of patients that a single healthcare professional handles per shift is an efficiency factor. A shift is a normal work unit of time for a healthcare professional. The World Health Organization (WHO) recommends six hours as the normal shift for a healthcare professional. The delivery of a healthcare system is likely to be efficient if the healthcare professionals handle a number of patients that does not make them feel 'burnt-out' i.e. feel overloaded with work. The WHO recommends, on average, a maximum number of 15 patients per shift. The assumption is that beyond this number, the healthcare professional is not likely to remain efficient.

The healthcare professionals were asked to state how many patients they were supposed to handle per shift in order to remain efficient (the ideal workload per shift).

Number of patients attended to per shift as reported by healthcare professionals

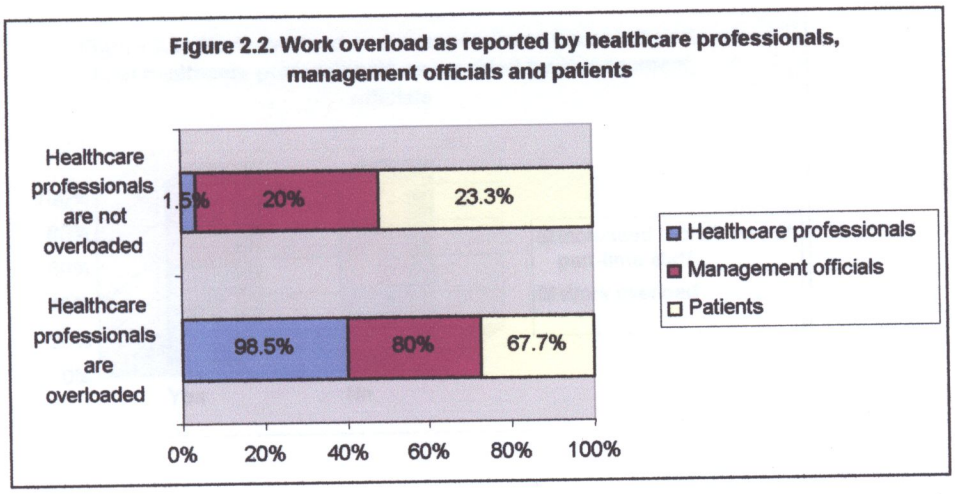
The research findings in figure 2.1 below show that 32.3 percent of the healthcare professionals at the UTH handled over 25 patients per shift while 27.7 percent were handling between 21 and 25 patients per shift. Only 15.4 percent of the healthcare professionals were handling between one and five patients per shift. There were nine percent professionals who handled six to ten patients per shift. About eight percent of the healthcare professionals were attending to six to ten patients per shift. The others (about five percent) handled six to ten patients per shift. About three percent of healthcare professionals did not respond. The above figures mean that 64.6 percent of the healthcare professionals at the UTH were handling more than 15 patients per shift.



What this means is that the majority of the healthcare professionals were handling more patients than the WHO recommended number of 15 patients per shift. This implies that the majority of the healthcare professionals at the UTH were overloaded. Work overload is related to the number of patients that a healthcare professional attends to in a shift. It occurs when a healthcare professional is made to attend to more patients than he should normally attend to. Work overload could also occur as a result of a healthcare professional working for a prolonged period of time going beyond the recommended shift duration. Healthcare professionals who said that they handled more than 15 patients per shift were asked as to whether or not they felt overloaded. In addition management officials and patients at the UTH were asked as to whether or not they perceived the healthcare professionals overloaded. The rationale for extending this question to the management officials and patients was to verify the responses of the healthcare professionals.

Workload as perceived the by healthcare professionals .

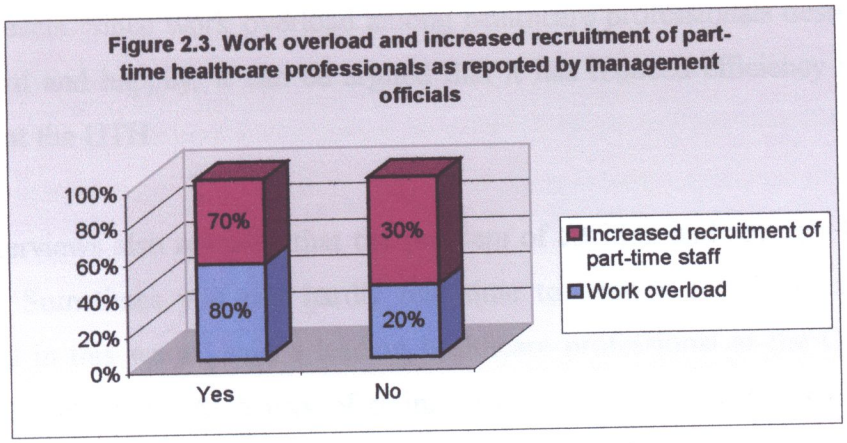
The majority (98.5 percent) of the healthcare professionals felt overloaded with work due to the shortages of staff at the institution. They felt that they were attending to more patients than they needed to remain efficient. As seen in *figure 2.2* below, only about two percent of healthcare professionals thought that they were not overloaded.



Perception of the management officials about the workload of the healthcare professionals

As illustrated in *Figure 2.3* below, the major problem reported by the majority of the management officials (80 percent) was that the healthcare professionals were overloaded. This was against 20 percent who thought that the healthcare professionals were not overloaded.

The management officials also reported that in order to try and reduce the excessive work load, they had increased the recruitment of part-time healthcare professionals. The majority (70 percent) of the management officials said that the engagement of part-time staff had increased. There were 30 percent of healthcare professionals who reported that the increased work load had not led to any increase in the recruitment of part-time staff. See *Figure 3.4* below. Part-time staff constitutes those healthcare professionals who may be working on full-time elsewhere and in their free time, they are willing to render their services to the UTH in order to get additional remuneration.



Perception of the patients about the workload of the healthcare professionals

Patients at the UTH were asked to state whether or not they thought that the healthcare professionals at the institution were overloaded. The majority (67.7 percent) of the patients thought that the healthcare professionals at the institution were overloaded. This was against 33.3 percent responses of those who did not think so.

Personal interviews held with some healthcare professionals revealed that on a busy day, a single nurse in such wards as maternity block C and D, and at Operation Theater Phase 5 would attend up to about 150 patients. In the radiography department, due vacancies caused by attrition, the number of patients attended to by a single healthcare professional had increased by over 300 percent over the past two years. At the filter clinic, a facility that is supposed to have 17 full –time nurses, there were only three nurses on full-time, and all of them said that they were overloaded.

Discussion

The above findings have shown that there is a strong similarity in the responses obtained from the three groups of respondents regarding work overload among the healthcare professionals. On the average, 82.1 percent of the three categories of respondents feel that the attrition of healthcare professionals has resulted in work overload among those who have remained at the institution. The high mean response that attrition has led to wok overload among the healthcare professionals shows that the problem has reached very

serious levels. Since work overload among healthcare professionals destroys their will to work hard and happily, it can be argued that it has reduced efficiency in the healthcare delivery at the UTH.

Field interviews also revealed that the problem of attrition had severely hit the operation theatre. 'Sometimes you can hardly find time to answer a call of nature due to the workload in this ward!' said a leading healthcare professional at the Operation Theatre during the interview. As a way of trying to cope with the shortages of staff, the UTH management is no longer granting vacation leave to healthcare professionals. 'Right now, we are not allowed to go on leave. We are so stressed, we need a rest at least!' complained a healthcare professional who sought anonymity at ward A04, Children's Wing.

In a related phenomenon, interviews with management officials at the UTH revealed that most of the units at the institution had more part-time staff than full-time ones. It was also learnt that at filter clinic (low cost), out of the six nurses that were available, only one was full-time while the other five were part-time.

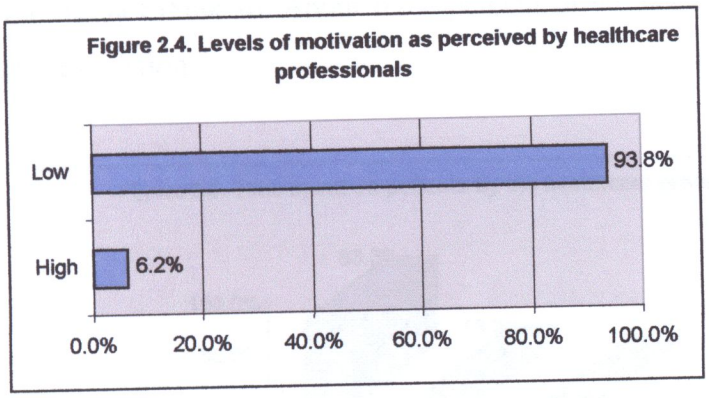
These healthcare professionals have a fixed number of hours per week which they are willing to spend on part-time service. Most of the times, the few full-time staff have to stand-in for the part-time staff who are held up at their regular place of work. This tends to exacerbate the problem of work overload, especially among the full-time staff.

The increased use of part-time staff at the UTH can also compromise the efficiency of healthcare delivery at the institution in many ways. The UTH management has no control over them when they are at their regular place of work. This means that a healthcare institution cannot depend on them for efficient healthcare delivery. The over-reliance of the institution on part-time staff also meant that the institution was unable to operate efficiently during the times when the part-time staff was not available. It was also reported that patients who sought specialized operations were made to wait for months because most of the highly specialized healthcare professionals available at the UTH were those working on part-time basis.

In order to capture the wider impact of work overload on the delivery of the UTH, the survey asked the respondents who thought that there was work overload to state whether or not the work overload had resulted in reduced levels of motivation among healthcare professionals, closure of some units and use of some wrongly qualified persons.

Levels of motivation as reported by healthcare professionals

Motivation refers to the increased commitment among healthcare professionals. In the case where the remaining few healthcare professionals are overloaded without improved conditions of service, their commitment is likely to reduce. Healthcare professionals were asked to rate their levels of motivation. As *Figure 2.4* below indicates, the majority of the healthcare professionals (93.8 percent) reported feeling lowly motivated while the remaining 6.2 percent felt highly motivated. For instance, interviews with ten nurses in the wards G11 and G21 revealed that eight of them were highly motivated. However, it must be noted that wards G11 and G21 are small wards with a maximum of about forty patients on busiest days.



Discussion

From the above findings, it is clear that the majority of the healthcare professionals at the UTH had low levels of motivation to healthcare provision. A healthcare professional with low motivation is less committed to the provision of healthcare. Reduced commitment makes healthcare professionals engage in such vices as absenteeism and moonlighting

which cause delays and disruptions in the delivery of the healthcare system and culminate in reduced efficiency of healthcare delivery. It also makes the healthcare system operate below its potential.

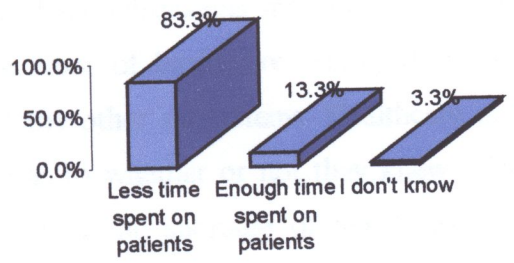
Perceived adequacy of time spent on patients

When a healthcare system is experiencing a shortage of healthcare professionals due to attrition, it is likely that it will not spend adequate time on patients. When inadequate time is spent on a patient, the efficiency of healthcare delivery is compromised because the healthcare professional reduces the level of concentration on each patient. Healthcare professionals were asked as to whether or not they thought that enough time was being spent on patients at the UTH.

Responses by healthcare professionals

As seen in *Figure 2.5* below, most of the healthcare professionals (83.3 percent) reported that the healthcare professionals were spending less time on them. This was against 13.3 percent who did not think so. About three percent of the healthcare professionals did not respond to the question

Figure 2.5. Time spent on patients by the healthcare professionals



Discussion

When healthcare professionals are not able to take time to adequately attend to the patient in order to give other patients time to be attended to, then they are 'spending less time' on patients. Due to work overload, the healthcare professionals may have huge numbers of patients to attend. In order to attend to many patients, it is possible that the healthcare professionals may resort to spending less time (inadequate time) on each patient, thereby reducing healthcare provision to a mere fulfillment of a shift fixture.

From the statistics presented above, we see a huge number of healthcare professionals saying that healthcare professionals were spending less time on them.. This finding could have very high validity because there is a possible relationship between work overload among the healthcare professionals and the time that they can spend on a single patient. Work overload among healthcare professionals will reduce the length of time that they will spend on each patient in order to attend to more patients in a given shift or healthcare period. When this happens, it means that the efficiency of healthcare delivery has seriously been compromised.

Closure of some units

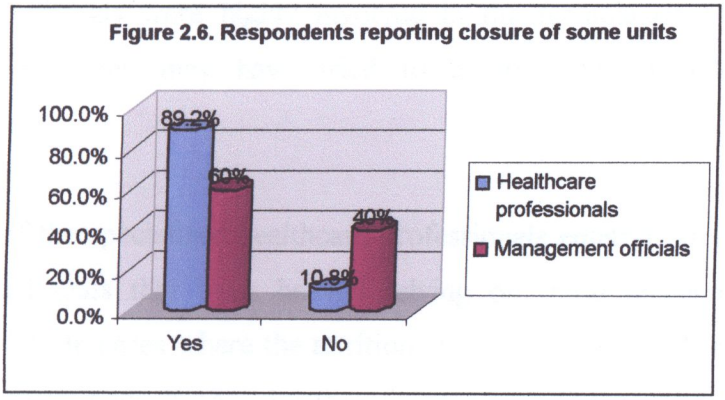
When the healthcare system has been hit by a high shortage of healthcare professionals due to attrition, some of its subsystems may become paralyzed due to lack of certain skills to provide some types of healthcare. Paralysis in one subsystem will negatively affect the efficiency of the other subsystems. Healthcare professionals and management officials were asked to as to whether or not they knew of any healthcare units that had closed down as a result of the shortage of healthcare professionals due to attrition. Responses of the two classes of respondents were sought because they are closer to the healthcare units at the institution. The researcher also wanted to compare to test the reliability of the responses.

Responses by healthcare professionals

Responding to the question as to whether or not they knew of any departments or other units that had closed down due to the attrition of healthcare professionals, the majority (89.2 percent) of the healthcare professionals responded 'Yes' while 10.8 percent responded 'No'. The findings are illustrated in *Figure 2.6* below. This means that most healthcare professionals knew of some healthcare units at the UTH that had closed due to shortages of staff.

Responses by management officials

The majority (60 percent) of the management officials at the UTH stated that the attrition of the healthcare professionals had resulted in the closure of certain specialized units at the institution. However, 40 percent of the management officials thought that the attrition of healthcare professionals had not led to closure of any units at the institution.



To verify the responses of the healthcare professionals and management officials, the researcher conducted visits to various wards and theatres within the UTH. The visits revealed that wards B02 and C11, both of the maternity wing had been closed due to the shortage of healthcare professionals caused by attrition. Clinic 4 under Maxi Facial and over three theatres had closed down. This had led to congestion at Phase 5 Theatre, which was the only fully operational theatre at the moment. The Oral Therapy Clinic for

children with speech disabilities had also closed down due to shortages of healthcare professionals. Wards B11 and C11 had been merged due to the shortages of staff. Also merged were wards B01 and B03. All the cases that should have been attended to in wards B01 and C11 had been transferred to ward B11. As a result of merging the responsibilities of the three wards into one ward, ward B11 had to take up more patients, thereby overloading the healthcare professionals. As a result of the congestion, on the average, a nurse in ward B11 attends to over 25 patients in one shift contrary to the World Health Organization recommended number of 15 patients per shift per healthcare professional.

Discussion

From the above findings, there is no doubt that some healthcare units at the UTH have closed down due to shortages of healthcare professionals caused by attrition. The lower percentage of management officials reporting closure of some units (compared to the responses by healthcare professionals) may be due to the fact that some of the management officials were highly involved in the formulation and implementation of health policies. They may have tried to avoid signaling policy failure and self-condemnation.

When most of the specialized healthcare professionals emigrate from a health institution, the specialized units that were heavily relying on those professionals face a serious shortage of skill. In cases where the attrition is of large scale, and replacement is slow the immediate consequence is the closure of some specialized units. This means that the UTH does not have some of the healthcare professionals and units that it needs to deliver efficient healthcare. The closure of some technical units means that the UTH is no longer able to handle certain ailments efficiently. For example, the closure of some wards and other units at the UTH has led to other wards and units to be congested. This is because the number of patients has continued to increase despite the closure of some of the units at the institution.. For this reason, it is correct to say that the closure of some specialized units at the UTH has reduced its efficiency in healthcare delivery.

Perception about the competence of the healthcare professionals

In the era of acute shortage of healthcare professionals, a healthcare system is likely to engage substitute staff. These are healthcare professionals skilled in related or different areas or those who are still undergoing training. Healthcare professionals, management officials and patients were asked as to whether or not they knew of any wrongly qualified healthcare professionals providing healthcare.

Responses by healthcare professionals

The research revealed that there were some cases of inappropriately qualified persons handling patients. The healthcare professionals (71 percent) new of some wrongly qualified persons handling patients. As seen in *Figure 2.7* below, this was against 28 percent who did not know of any such cases, and two percent who did not respond.

Responses by management officials

The management officials at the UTH also reported cases of some wrongly qualified healthcare professionals handling patients. Some management officials (40 percent) reported cases of inappropriate staff handling patients. However, the majority (60 percent) of them did not report any cases of use of inappropriate staff by the institution.

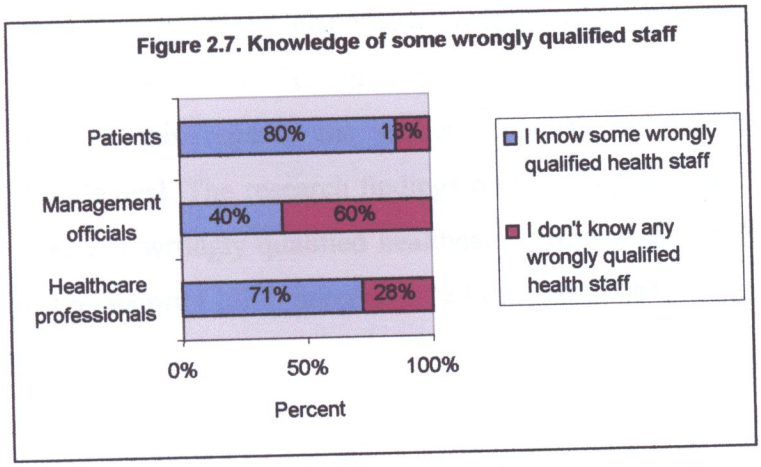
Another related problem reported by the management officials was that of the use of inexperienced healthcare professionals at the institution. The survey findings, as depicted in *Figure 2.7* below show that the majority (60 percent) of the management officials reported had knowledge of inexperienced healthcare professionals rendering care. The remaining 40 percent did not think that there were any cases where inexperienced healthcare professionals were providing healthcare.

Responses by the patients

Most of the patients (80 percent) reported that there were cases of wrongly qualified healthcare professionals providing healthcare. This was against 13.3 percent who did not think so. As seen in *Figure 2.7* below, others (seven percent) did not respond to the question.

Another related problem reported by the patients had to do with the use of inexperienced healthcare professionals at the institution. The majority (60 percent) of the patients reported use of inexperienced healthcare professionals at the UTH. The other 40 percent of the patients did not report any cases where inexperienced healthcare professionals were providing healthcare to patients. What came out was that students, who were only supposed to be observant when professionals were conducting certain specialized operations, had become a core cadre in the provision of healthcare services.

During interviews with some of the patients at the UTH, it was learnt that most patients were attended to by students who were on medical practice. Interviews with some healthcare professionals revealed some cases of some semi-literate ward attendants and porters reading temperature, putting and removing drips and bandages. It was also heard that the problem of wrong healthcare professionals handling patients was rampant at night when there were fewer qualified professionals. This is notwithstanding the fact that ward attendants and porters are not actually supposed to provide healthcare because they have no appropriate training.



Discussion

When certain units of a healthcare institution are closed down due to attrition it leads to the use of wrongly qualified healthcare professionals by a health institution. Wrongly qualified healthcare professionals are those who are rendering services they are not trained for. A healthcare institution may resort to the use of wrongly qualified or inappropriate healthcare professionals in order to maintain some minimum levels of healthcare in circumstances of acute shortage of the right personnel.

The above statistics show that the problem of the use of wrongly qualified healthcare professionals was reported more by the patients (80 percent), followed by the healthcare professionals (71 percent). It was least reported among the management officials (40 percent). This gives an average rating of 75.5 percent of the problem by the healthcare professionals and the patients only. When the responses of the management officials are included, the average rating of the problem reduces to 63.6 percent. The rating of the problem by the management officials is strangely too low compared to the ratings of the healthcare professionals and patients. A possible explanation is that most of the management officials did not tell the truth. Probably they sought to protect the image of the institution which they are charged with the responsibility of managing efficiently. What is interesting is that though the majority of the healthcare professionals did not report any use of wrongly qualified healthcare professionals, the majority (60 percent)

reported use of inexperienced healthcare professionals. Since students are not certified medical practitioners, they fall in the category of 'wrongly qualified healthcare professionals'. In this regard, the earlier response by the management officials is therefore, paradoxical. The research findings on this subject show that there is a very high perceived usage of wrongly qualified healthcare professionals at the UTH. Recall that on the average, the majority (63.6 percent) of all the respondents report use of some wrongly qualified staff.

Where wrongly qualified healthcare professionals are used, the healthcare system cannot operate efficiently. This is because the healthcare system will be using wrong inputs to produce healthcare services. The wrong inputs into the healthcare system will equally produce wrong outputs, which will be discussed in the next chapter. In terms of efficiency, wrongly qualified healthcare professionals are likely to operate with reduced accuracy, increased accidents leading to increased financial and monetary costs. All these will combine to reduce the efficiency of the healthcare system. For this reason, it can be argued that the high usage of wrongly qualified healthcare professionals has reduced the efficiency of healthcare delivery at the UTH.

Conclusion

From the survey findings and discussions in this chapter, it can be said that the shortage of healthcare professionals due to attrition has led to work overload and demoralization among healthcare professionals, closure of some healthcare units, and use of some wrongly qualified staff including inexperienced staff. These factors are very important indicators of inefficiency in the delivery of a healthcare system. Since the findings of this survey show that most of the above indicators are negative at the UTH, then it can be concluded that efficiency in the delivery of the UTH has been reduced.

CHAPTER THREE

IMPACT OF ATTRITION ON THE EFFECTIVENESS OF HEALTHCARE DELIVERY

INTRODUCTION

This chapter presents and discusses the research findings on the impact of attrition of the healthcare professionals on the effectiveness healthcare delivery. As established in the conceptual framework discussed in chapter one of this dissertation, the impact of attrition of the healthcare professionals on the effectiveness of delivery of a healthcare system is assessed through the extent to which patients have timely access to appropriate and adequate healthcare, and by the extent to which the UTH is able to deliver satisfactory healthcare. The chapter presents the findings on each measure of effectiveness followed by a discussion, and ending with a conclusion.

FINDINGS

Perceived impact of attrition on the capacity to handle various illnesses

One of the objectives of every healthcare system is to possess the human resource capacity to handle various illnesses among the patient. The shortage of healthcare professionals can reduce this capacity in the healthcare system. Healthcare professionals, management officials and patients were asked about whether or not they thought that the shortage of healthcare professionals due to attrition had reduced the capacity of the UTH to handle various illnesses.

Responses by healthcare professionals

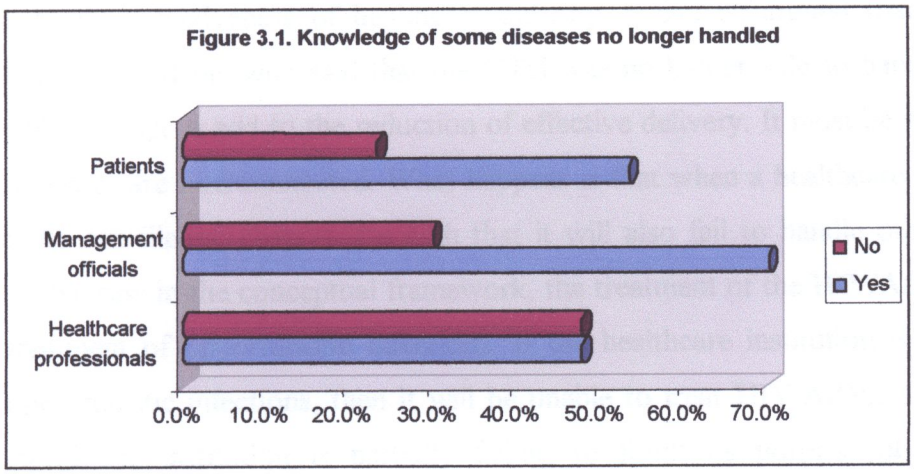
Responses by the healthcare professionals indicate that 47.7 percent of the healthcare professionals had knowledge of some diseases that were no longer handled by the institution. An equal number (47.7 percent) of the healthcare professionals did not have knowledge of any diseases that were no longer handled by the UTH. This is depicted in *Figure 3.1.*

Responses by management officials

Most of the management officials (70 percent) had no knowledge of any diseases that were no longer offered by the institution due to attrition. Only 30 percent of the officials had knowledge of some diseases that were no longer offered. *See Figure 3.1.*

Responses by patients

A majority of the patients (53.3 percent) had knowledge of some diseases that were no longer handled by the institution. There were 23.3 percent of patients who did not have knowledge of any diseases that were no longer handled by the institution. As seen in *Figure 3.1*, the other 23.3 percent of the patients did not respond.



It was learnt during personal interviews with some nurses that the UTH was no longer able to handle Speech Therapy in children with speech problems because attrition had resulted in the closure of Clinic 4 under the Maxi Facial Department. During interviews some healthcare professionals also said that for some specialist treatments, there were no healthcare professionals locally and that patients who had the money were being advised to seek treatment abroad in countries where the Zambian professionals had gone.

Discussion

One of the possible effects of attrition is the incapacitation of a healthcare system to offer certain healthcare services. This culminates in the healthcare system not being able to treat certain ailments that it was previously able to.

On the average, the majority (47 percent) of the respondents in all categories had no knowledge of any diseases that were no longer handled by the UTH. This was against 43.6 percent of respondents in all categories who reported cases of some no longer handled disease due to the attrition of healthcare professionals. An average of about nine percent of the respondents did not respond. The meaning is that the attrition of healthcare professionals has not very seriously affected the ability of the UTH to handle most of the ailments.

In relation to the effectiveness of healthcare delivery, it can be argued that the 43.6 percent of the respondents who said that the UTH was no longer able to handle certain diseases is big enough to add to the reduction of effective delivery. It must be stated here that most illnesses are interconnected. What happens is that when a healthcare institution fails to handle one illness, chances are high that it will also fail to handle other related illnesses. As we saw in the conceptual framework, the treatment of the HIV/AIDS begins with the treatment of opportunistic infections. If the healthcare institution is unable to treat the opportunistic infections, then it will be unable to treat HIV/AIDS. This means that the healthcare institution is partially failing to fulfill its purpose of providing healthcare. It also means that the healthcare system will be unable to satisfy the health requirements of the patients. In our understanding, consistent with the arguments in our theoretical framework, such a healthcare system is ineffective.

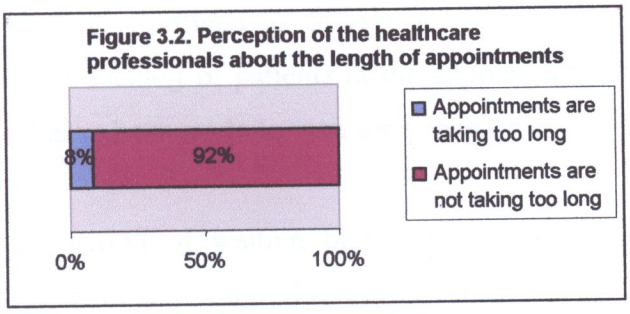
Further, it is correct to say that the inability of the UTH to treat certain illnesses has compromised its effectiveness, though not very seriously.

Perception of respondents about the length of appointments for specialized treatment

In cases where a healthcare system is experiencing a shortage of healthcare professionals, there is a high likelihood that patients will not be attended to at the right time. In healthcare delivery, any delay in the provision of the service means that someone has been denied healthcare. This is because illnesses that are not treated at the right time may claim the lives of the victims before they access the healthcare. Healthcare professionals, management officials and patients were asked as to whether or not they thought that the shortage of healthcare professionals due to attrition had reduced the timely access to healthcare.

Responses by healthcare professionals

As seen in *Figure 3.2* below, most of the healthcare professionals (92 percent) said that patients had to wait for too long before a patient could be granted permission to meet a specialist. Eight percent of the healthcare professionals thought that there was no problem with the timeliness of access to specialist healthcare professionals at the institution.



Personal interviews with healthcare professionals revealed that for specialized operations, it took an average of 2 to 3 months before a patient could see the healthcare professional. This was mainly attributed to the long queues of patients in the appointment list against few healthcare professionals. It was also learnt that there were incidents of some patients dying before their day of appointment was due because of prolonged period of waiting. It was also learnt that there were cases where patients would not honour the appointments due to frustration arising from prolonged waiting. They said that the few remaining specialist professionals were also working in the private health sector, and that they were only available at the UTH when their schedules elsewhere had reduced. It was also learnt that most of the senior medical professionals available were also engaged in lecturing at the University of Zambia, School of Medicine. This was taking away most of the hours that they should have spent on healthcare to patients.

Discussion

In the context of this study, the term 'long appointments' is used to refer to a prolonged period of waiting by a patient before meeting a healthcare professional for specialized

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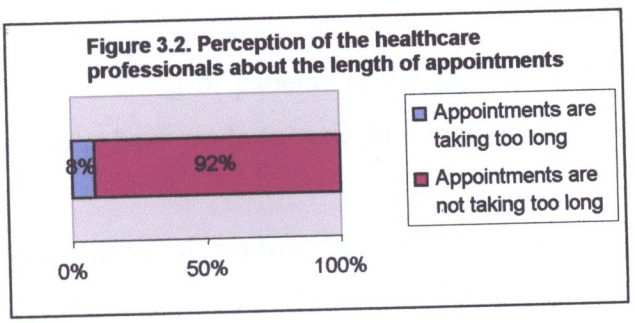

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Discussion

In the context of this study, the term 'long appointments' is used to refer to a prolonged period of waiting by a patient before meeting a healthcare professional for specialized

consultancy. Delayed appointments are highly related to the shortage of healthcare professionals and the attendant work overload that has already been seriously reported in chapter two of this dissertation.

The large number of healthcare professionals who reported that appointments took too long, points to a serious problem at the UTH. This can be attributed to the shortage of healthcare professionals at the institution. It means that the few available healthcare professionals have to attend to an ever increasing number of patients at the institution hence having a backlog of patients in the appointments list. By the time one is attended to, he would have been made to wait for a long time.

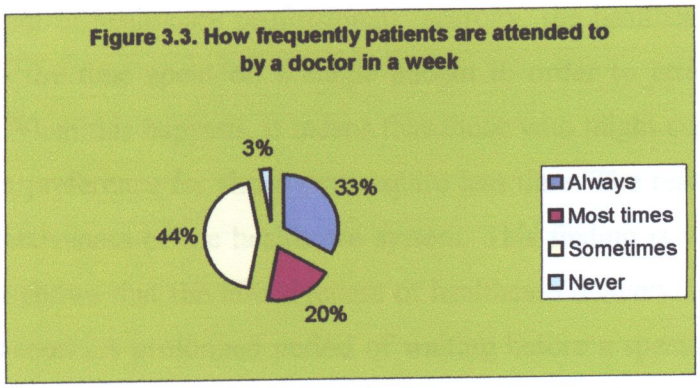
A prolonged period of waiting before a patient can be attended to by a specialist healthcare professional has reduced the effectiveness in the delivery of a healthcare system. This is because the prolonged period of waiting reduces the patients' access to healthcare. Some patients whose conditions require urgent attention are directly affected. Such patients are not satisfied with healthcare delivery.

How frequently patients are attended to by a doctor in a week

The World Health Organization (WHO) recommends that a patient admitted to a hospital ward should be attended to by a healthcare professional on a daily basis. This allows a healthcare system to continuously monitor changes in the condition of the patient. Patients were asked as to how often they were attended to by a healthcare professional in a week. Responses sought were "always", "most times", "some times" and "never".

Responses by patients

Some patients at the UTH were asked to state how frequently they were attended to by a medical doctor. The majority (44 percent) of the patients responded 'Sometimes', 33 percent 'most times', 20 percent 'always' and three percent, 'never' (*Figure 3.3*)



Discussion

By 'frequency' we refer to how repeatedly a healthcare professional attends to a patient within a defined time duration which may be measured in terms of hours or days for the patients in admission or weeks or even months for the patients on review. Long appointments with specialized healthcare professionals can reduce the frequency with which a patient can be attended to by a doctor. The effectiveness of delivery of a healthcare system can be affected by the frequency of access to medical doctors by patients. In a healthcare system where patients are rarely attended to by a medical doctor, patients are denied timely access to healthcare. Delayed response to an ailment in itself tends to reduce the quality of healthcare delivery.

From the above statistics, 47 percent of the patients were either attended to 'sometimes' or 'rarely' while 53 percent were attended to either 'always' or 'most times'. This means that the majority of the patients were being attended to frequently by doctors. This response shows a weak relationship between long appointments and the frequency with which patients are attended to by healthcare professionals. Where as an overwhelming number of patients (92 percent) reported long appointments for specialized treatment, only an aggregate of 47 percent of the patients had difficulties in accessing doctors. This finding means that patients who need specialized diagnosis and treatment such as complicated operations are the most affected by the shortage of healthcare professionals resulting from attrition. The patients who need ordinary diagnosis and treatment in the wards have access to healthcare professionals 'always' or 'most times'. In an

environment of healthcare professionals' scarcity, the healthcare system may adjust itself to reduce the time spent on a single patient in order to attend to as many patients as possible. When this happens, it means that those who might consume more time are made to hang in preference for those that require less time. The result is a serious compromise in the effectiveness of the healthcare system. This finding is very important to our study because it shows that the effectiveness of healthcare delivery at the UTH is lowest where it matters most. A prolonged period of waiting before a specialist healthcare professional can attend to a patient can reduce effectiveness in the delivery of a healthcare system in the sense that it reduces the patients' access to healthcare. Some patients whose conditions require urgent attention may be the hardest hit.

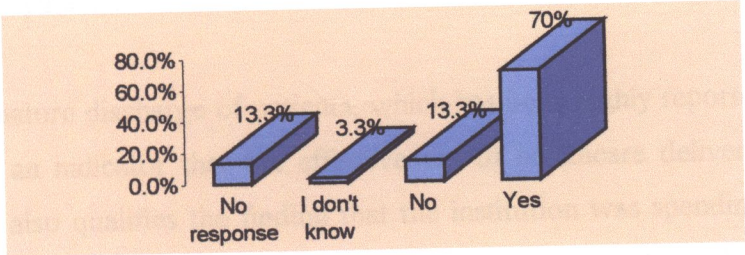
Perception about whether or not patients were being prematurely discharged

Highly related to the time spent on patients by healthcare professionals is the issue of premature discharge of patients. Premature discharge means that a patient who still requires close healthcare is separated from the facility.

Responses by the patients

The majority (70 percent) of the patients at the institution reported cases of patients being prematurely discharged. There were 13.3 percent patients who did not report any case of patients being prematurely discharged. Another 13.3 percent of patients did not respond to the question (*Figure 3.4.*).

Figure 3.4. Patients being prematurely discharged



Interviews with some of the patients revealed that many patients were being discharged when they still needed close attention with the healthcare professionals. A visit to ward G 12 revealed that a patient suffering from severe gun wounds was scheduled for a discharge on the same day. He complained of being prematurely discharged. 'I am a game ranger. I was short by poachers in the Kafue Game Park. My leg is broken and still painful but I am being discharged today', claimed a male patient admitted to ward G 12. An 'examination' by the researcher revealed that his wounds had just been stitched and were still looking fresh.

Some patients were asked to explain the possible reasons why some of them were discharged prematurely. Although some patients cited the shortage of medical supplies as the reason for premature discharge, most of them attributed premature discharge on the shortage of healthcare professionals. Those attributing the premature discharge on the shortage of healthcare professionals said that the few remaining healthcare professionals had resorted to prematurely discharging patients in order to cope with the increased workload.

Discussion

The assertions that the premature discharge of patients is caused by the shortage of healthcare professionals makes a lot sense because as a way of reducing the workload, the healthcare professionals may resort to discharging those patients who have shown some degree of recovery (however mould it might be), and those with slow recovery progress. Those with low recovery progress may be encouraged to seek home-based care. Through this practice, it seems the UTH is able to somewhat cope with the increased number of patients.

The premature discharge of patients, which has been highly reported by the patients at the UTH, is an indicator that the effectiveness of healthcare delivery at the institution has fallen. It also qualifies the finding that the institution was spending less time on patients. When the majority of the patients are prematurely discharged, it directly reduces the

duration of their access to healthcare. Access to healthcare is a very serious indicator of how effective a healthcare system is. Reduced access means that there is a shortfall of healthcare output in the external environment of the healthcare system. As we have already stated in the conceptual framework, the effectiveness of the delivery of a healthcare system is measured at the point of consumption of the healthcare services that it produces.

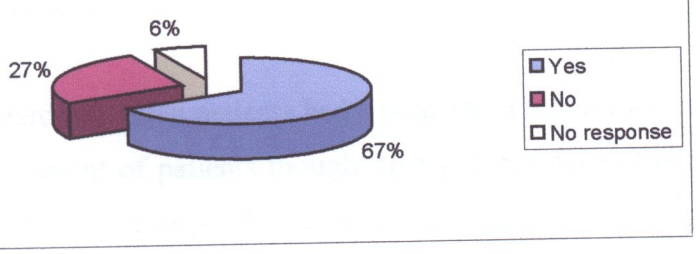
Perceived attitude of healthcare professionals towards patients

Another way of gauging the effectiveness of the healthcare system is by investigating the perceived attitude of the healthcare professionals towards the patients. Where there is a shortage of healthcare professionals, poor attitude among healthcare professionals may result. This may be due to work overload and fatigue and reduced motivation among the healthcare professionals.

Responses by patients

Patients at the UTH were asked to state whether or not there were cases of healthcare professionals showing uncaring attitude. Most (73.3 percent) of the patients reported that healthcare professionals had uncaring attitude towards patients. Another 20 percent thought that the attitude of the healthcare professionals towards the patients was just fine. The other 20 percent of the patients did not respond to the question (*Figure 3.5.*).

Figure 3.5. Uncaring attitude among the healthcare professionals as reported by the patients



During personal interviews 17 out of 20 patients in various wards claimed that some healthcare professionals were rude. They reported that the problem was more severe at night. They cited cases where some patients who vomited on the floor were being forced to work up and mop.

Discussion

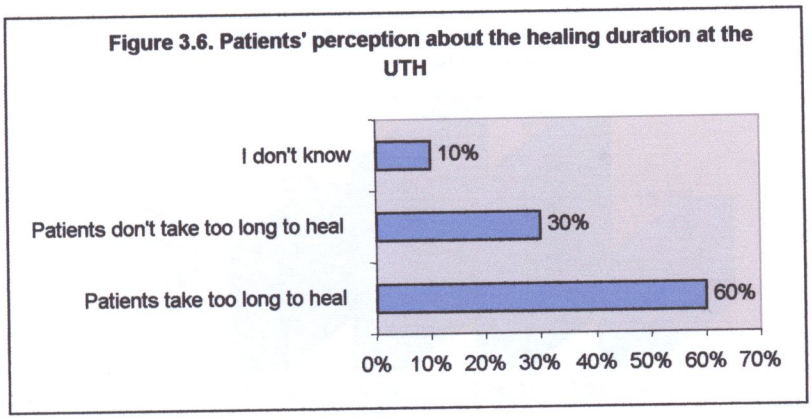
An effective healthcare system is supposed to have a cadre of healthcare professionals to attend to the various healthcare demands of the patients. In cases where there is a shortage of healthcare professionals due to attrition and the remaining healthcare professionals are overloaded and lowly motivated, they are likely to develop uncaring attitude towards patients. Work overload in the wards may reduce the morale of healthcare professionals thereby leading to uncaring attitude towards patients. To cope with the overload, the time spent on a patient will be reduced. All these factors will interact to compromise effectiveness in the delivery of a healthcare system. Based on the above statistics, and discussion, it is clear that there is a problem with the attitude of healthcare professionals at the UTH. Poor attitude towards patients is one of the signals of reduced effectiveness in healthcare delivery.

Perception of the patients about the impact of attrition on the healing duration at the UTH

Patients at the UTH were asked to rate the period it took for the majority of patients to heal at the institution.

Responses by the patients

The majority (60 percent) of the patients had a perception that it took too long for patients to heal. Some 30 percent of patients thought that patients did not take too long to heal. The other 10 percent did not respond (*Figure 3.6.*).



Patients' response to treatment since admission

By 'response to treatment since admission' we refer to the rating of the patient's own recovery progress from the time of admission to the time of our investigation.

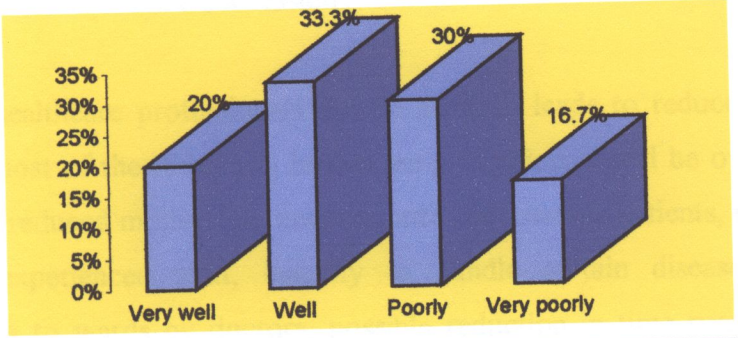
Another way in which the attrition of healthcare professionals can affect the effectiveness of the delivery of healthcare system is by making patients respond poorly response to treatment. Poor response to treatment may result from the inability of a healthcare system to use appropriate healthcare professionals, closure of some care units, non- handling of certain ailments, among others. Effectiveness will be affected because these factors will interact to reduce the access to quality healthcare among the patients.

Patients at the UTH were asked to state how they were responding to treatment since their admission.

Responses by the patients

As seen in *Figure 3.8* below the majority (33.3 percent) of the respondents reported that they were responding 'well' to treatment since they were admitted to the hospital. Others (20 percent) were responding 'very well'. However, 30 percent said that they were responding 'poorly' to treatment since admission, and 16.7 percent were responding 'very poorly'.

Figure 3.7. Patients' response to treatment since admission



The patients who responded either 'poorly' or 'very poorly' to treatment were asked to state the factor they thought was mainly responsible for their condition. The majority (50 percent) attributed their 'poor' or 'very poor' response to treatment to the scarcity of healthcare professionals. Another 30 percent of the respondents thought that the major problem was rather the shortage of medical supplies. The other 20 percent were not sure of the major factor responsible for their condition.

Personal interviews with some patients at the institution revealed that there were cases of patients waiting to heal from certain minor illnesses before they could be operated on for major illnesses. In cases where there were few or no specialists to attend to the minor illnesses, some patients had to wait for many months. That might explain why there were many patients who reported that at the UTH patients were taking too long to heal (*Figure 3.7* above).

Discussion

A healing duration is a period of time that a patient takes from the time they are admitted to the time they start feeling better. By 'patients' perception about the healing duration at the UTH' is meant the rating of the time that the general populace of patients takes from the time they are admitted to the time they start feeling better. It is not a rating of one's own recovery duration. This measure was important to our investigation because it sought to identify the correlation or disparity between patients' rating of the general

recovery duration at the UTH and responses on the individual recovery of patients since admission, which is discussed in a succession.

The shortage of healthcare professionals due to attrition leads to reduced attention on patients because most of the remaining healthcare professionals will be overloaded. Due to work overload, reduced motivation, uncaring attitude towards patients, use of wrongly qualified, and inexperienced staff, inability to handle certain disease components, irregular visitations to wards by doctors, possible reduction in time spent on a patient among other factors, the healing process of patients can be delayed or even curtailed. When some of these factors occur and interact, the effectiveness of healthcare delivery is tremendously reduced.

From the statistics in *Figure 3.7* above, the majority (53.3 percent) of the patients who responded to the question were either feeling 'well' or 'very well' compared to 46.7 percent who felt either 'poorly' or 'very poorly'. It is paradoxical for a majority of patients to respond positively to treatment when the majority of them (60 percent) earlier on perceived the recovery duration at the UTH as too long. However, as stated in the research methodology, the convenience sampling that was used in the selection of the patients, on ethical grounds, avoided getting responses from patients who were said to be in a 'bad shape'. If a randomized method of sampling was used, the findings would probably be different. The other possible explanation for the higher percent of patients who were responding positively to treatment is that they probably had been seeking treatment for a longer time. These findings suggest that though the majority of the patients thought that the recovery duration at the UTH was too long, most of them had responded positively to treatment since their admission to the institution. The finding means that most patients had a wrong perception about the duration of treatment at the UTH i.e. they thought that the duration of treatment was too long, but most of them had actually responded positively since admission. Note that all the patients who responded to the questionnaire had been admitted for a period not shorter than two days and not longer than six months.

Notwithstanding the fact that the findings show a weak relationship between the perceived duration of recovery and the actual duration of recovery, the 46.7 percent who actually reported 'poor 'or 'very poor' response to treatment since admission is a big figure that shows a remarkably low level of effectiveness of healthcare delivery at the UTH. The large number (50 percent) of patients who attributed their 'poor' or 'very poor' response to treatment to the shortage of healthcare professionals indicates that there is a link between the attrition of healthcare professionals and poor, and delayed response to treatment among patients. Note that patients whose response to treatment was either 'very well' or 'well' were not asked to account for their responses. This was because the researcher was only interested in finding out how the shortages of healthcare staff might have particularly contributed to 'poor' or 'very poor' response to treatment, and the consequent impact on the effective delivery of the healthcare system.

Increased death rate among patients

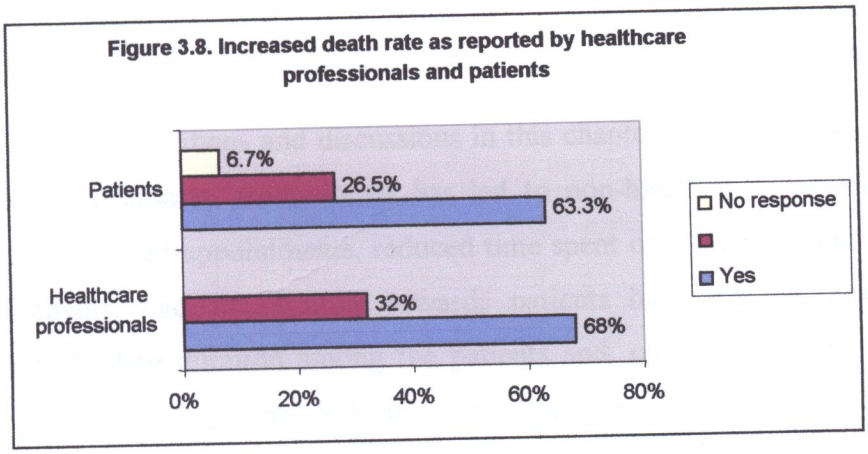
When the effectiveness of the of the healthcare system has been seriously compromised due to the interaction among some unfavourable factors, there is a question about whether or not the death rate among patients could increase.

Responses by healthcare professionals

Patients at the UTH were asked as to whether or not the attrition of healthcare professionals had culminated in increased death rate among patients. The majority (68 percent) of the healthcare professionals reported an increase in the death rate of patients due to the high rate of medical staff attrition. However, 32 percent of the healthcare professionals thought that the high rate of attrition had not increased the death rate of patients at the institution.

Responses by patients

The majority 63.3 percent of the patients reported knowledge of some patients who were dying from treatable diseases. However, 26.5 percent of the patients had no knowledge of patients dying from treatable diseases. Another 6.7 percent did not respond and the other four percent were not sure (*Figure 3.8.*).



Discussion

The findings above point to a problem in the healthcare system delivery at the UTH. When the majority of the healthcare professionals are overloaded, lowly motivated, wrongly qualified, poorly behaved towards patients, and when most of the patients are reporting inadequate access to healthcare, non-handling of some ailments, prolonged healing process for patients, premature discharge of patients, among other unfavourable factors, the consequence is an increased mortality rate among those who seek the healthcare services. When this happens, the effectiveness of the healthcare system could be said to be poor.

Although it is difficult to measure exactly how attrition can lead to high mortality rate, the findings presented and discussed in chapters two and four, raise strong arguments to the effect that the attrition of healthcare professionals must have increased the death rate among the patients at the UTH. The big number of healthcare professionals reporting

increased death rate among patients must be taken very seriously. This is because the healthcare professionals are closer to the patients and are competent authorities in knowing the lives of patients that may have been lost due to the challenges caused by the attrition of healthcare professionals. Since the main objective of a healthcare institution is to save lives, it can be said that the healthcare delivery of the UTH has been negatively affected in terms of effectiveness.

CONCLUSION

From the survey findings and discussions in this chapter, it can be generally said that the attrition of healthcare professionals has led to non-handling of certain diseases at the institution, delayed appointments, reduced time spent on patients, premature discharge of some patients, uncaring attitude towards patients by some healthcare professionals, prolonged healing duration among the patients and, consequently, increased death rate. These factors are important indicators of effectiveness in the delivery of a healthcare system. Since the survey findings have shown that these indicators are negative, we can summarize by saying that the effectiveness of healthcare delivered by the UTH has declined, and that the attrition of healthcare professionals has negatively impacted on the delivery of the UTH.

CHAPTER FOUR

ASSESSMENT OF GOVERNMENT INTERVENTIONS ON THE ATTRITION OF HEALTHCARE PROFESSIONALS

INTRODUCTION

As attrition takes its toll on the efficiency and effectiveness of healthcare system delivery, it is important to assess the interventions or measures that have been put in place by either the University Teaching Hospital (UTH) or the government to reduce the attrition rate of the healthcare professionals. The chapter assesses the extent to which the three categories of respondents have knowledge of the interventions. It also discusses the ratings of the interventions as made by the healthcare professionals, management officials and patients

FINDINGS

Knowledge of government interventions by the healthcare professionals

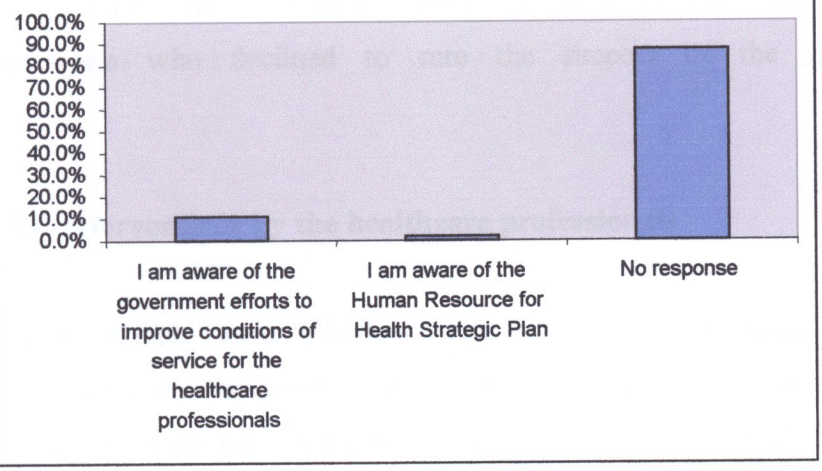
Healthcare professionals were asked about whether they knew any interventions that the UTH, and government had put in place to reduce the attrition of healthcare professionals. They were later asked to rate the interventions. After rating the interventions, they were asked to state whether or not the UTH, and the government had the will to solve the problem of high attrition of healthcare professionals.

The healthcare professionals reported knowledge of two government interventions namely:

1. The efforts to improve conditions of service
2. The Human Resource for Health Strategic Plan (2006-2010).

The most reported intervention by the healthcare professionals was that of the government efforts to improve the conditions of service for the health professionals (10.8 percent). Only two percent of the healthcare professionals reported knowledge of the Human Resource for Health Strategic Plan (2006-2011). The majority (87.7 percent) of the healthcare professionals did not answer the question. They therefore, did not report knowledge of any government intervention aimed at curving the high rate (*Figure 4.1.*)

Figure 4.1. Knowledge of government interventions by the healthcare professionals



Rating of the government interventions by the healthcare professionals

Healthcare professionals, who had knowledge of government interventions, were asked to rate them (interventions). The majority (78.5 percent) of the respondents declined to rate the government interventions. Of those who rated the government interventions, the majority, 10.8 percent thought that the interventions had helped to solve the problem 'to a low' (nine percent). The other two percent thought that the interventions had helped reduce the problem 'to a very high extent'.

The high percent of healthcare professionals who refused to rate the government interventions might mean that they were not sure whether or not the interventions had helped reduce the problem of attrition.

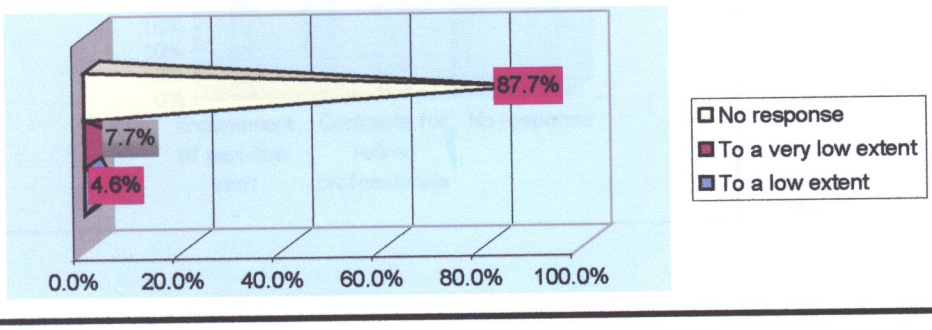
Interviews with some healthcare professionals revealed that some healthcare professionals found it difficult to rate the interventions because most of them (the interventions) were at their initial stages of implementation. This explains why there was a high percentage of healthcare professionals who declined to rate the success of the government interventions

Interviews with some healthcare professionals revealed that some healthcare professionals found it difficult to rate the interventions because most of the interventions had just been implemented. This might be a possible explanation for the high percent of healthcare professionals who declined to rate the success of the government interventions.

Rating of the UTH interventions by the healthcare professionals

The healthcare professionals were asked to rate the extent to which the UTH interventions had helped solve the problem of high attrition. The majority (87.7 percent) of the respondents did not respond to the question. Of those who responded, the majority (8 percent) reported that the interventions had helped to solve the problem of attrition 'to a very low extent'. Others (five percent) said that the interventions by the UTH had helped to solve the problem 'to a low extent' (Figure 4.2.).

Figure 4.2. Rating of the UTH interventions by the healthcare professionals



Discussion

On the overall, 12.3 percent of the healthcare professionals rated the UTH interventions negatively. During interviews, some of the healthcare professionals said that they were not able to rate the interventions buy the UTH because they knew none while others said that the interventions they knew had not yet been implemented.

Knowledge of government interventions by the management officials

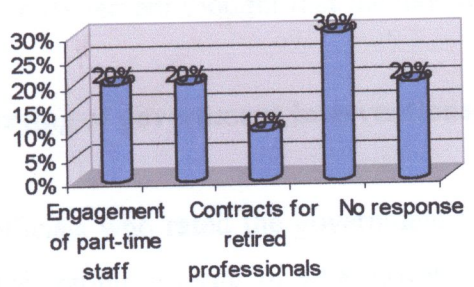
The management officials were asked to state the interventions they knew that the government had put in place to reduce the problem of attrition.

Responses by the management officials

The management officials revealed the following interventions:

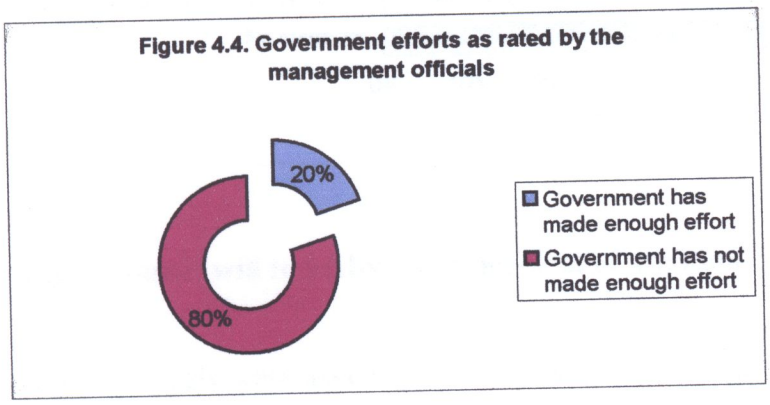
Engagement of part-time staff (20 percent), car loans (20 percent), retention of retired healthcare professionals on contract (10 percent), "I don't know" (30 percent), and "No response" (20 percent). The responses are illustrated in *Figure 4.3.* below.

Figure 4.3. The government interventions known to the management officials



Rating of the government interventions by the government officials

Management officials at the UTH were asked to state whether or not the Zambia government had made enough towards reducing the problem of attrition. The majority (80 percent) of the respondents reported that the government had not made enough effort in the direction of addressing the problem of attrition of healthcare professionals. However, 20 percent of the respondents thought that the government had made enough effort to address the problem of attrition (*Figure 4.4.).*



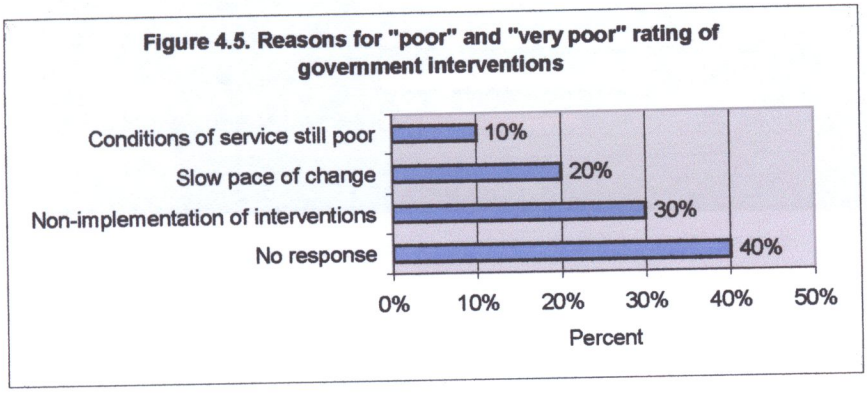
The healthcare professionals were also asked to rate the government interventions as 'poor' or 'very' poor'. The rating was on how far they thought the government interventions had helped in addressing the problem of attrition. Although 20 percent of the respondents did not respond, the majority (70 percent) rated the interventions as 'poor' while the other 10 percent thought that the interventions were 'very poor'.

Reasons for poor rating of government interventions

The management officials who rated the government interventions poorly were asked to state reasons for their rating in terms of what government interventions they knew. The majority (40 percent) of the officials did not respond to the question. This might imply among other things, that they had no knowledge of any government interventions. Of those who rated the interventions 'poor' or 'very poor', 30 percent cited 'non-implementation of interventions' as the basis for their rating. These thought that the

government, despite having come up with certain interventions, had not done enough in terms of implementation. Some of the management officials (20 percent) cited 'slow pace of change' as the reason for their rating. Others (10 percent) revealed that 'conditions of service were still poor'.

Figure 4.5. Reasons for "poor" and "very poor" rating of government interventions



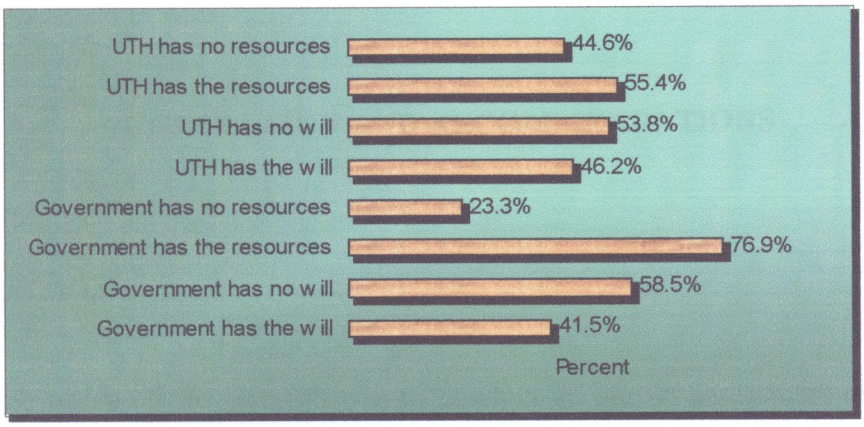
Perceived government will to address the problem of attrition

Healthcare professionals were asked as to whether or not the government and the UTH had the will and the resources to solve the problem of attrition. The majority (58.5 percent) of the healthcare professionals felt that the government did not have the will to address. The other 41.5 percent thought that the government had the will to address the problem. On the issue of the resources, 76.9 percent of the healthcare professionals felt that the government had the resources needed to address the problem. This was against 23.3 percent who felt that the government did not have the necessary resources.

About the UTH, the majority 53.8 percent of the healthcare professionals felt that the institution did not have the will to solve the problem. This was against the 46.2 percent who thought that the UTH had the will.

On the resources, 55.4 percent of the healthcare professionals felt that the UTH had the resources to solve the problem of attrition. This was against 44.6 percent who felt that the institution did not have the required resources to solve the problem. See *Figure 4.6.*

Figure 4.6. Perceived government will to address the problem



Discussion

From the survey findings, we see that the large number of officials who did not think that government was making enough effort (80 percent) is almost the same as that of the healthcare professionals who did not know any government intervention (76.6 percent). Remembering that the majority (58 .5 percent) of the healthcare professionals also felt that the government did not have the will, but had the resources (76.9 percent), it means that the government was generally perceived as not doing enough to end the problem of high attrition of the healthcare professionals.

The consistence in the responses of the two different respondents on the subject tends to indicate some degree of validity in the finding. The final interpretation of the findings is that the healthcare professionals and management officials at the UTH felt that the government lacked the necessary resolve to addressing the problem of high attrition of healthcare professionals at the institution. Most of the respondents are, however, convinced that the government had the necessary resources for addressing the problem.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

INTRODUCTION

The main objective of the research was to conduct an impact assessment of the attrition of healthcare professionals on the delivery of the public healthcare sector in Zambia: The case of the University Teaching Hospital (UTH). The research particularly assessed the impact of the attrition of healthcare professionals on the efficiency and effectiveness of the delivery of UTH. Generally, the research indicators show that the attrition of the healthcare professionals has reduced the efficiency and effectiveness of healthcare delivery of the UTH. The main findings are presented and discusses below.

CONCLUSION

Work overload as reported by the healthcare professionals, management officials and patients

The findings show that the biggest problem caused by the attrition of the healthcare professionals is the increased workload among the few remaining healthcare professionals at the institution. Most healthcare professionals are made to work longer hours, and have to attend to more patients than they should under the normal situation. This reduces their efficiency. There is also a high feeling among the healthcare professionals at the institution that they cannot remain efficient in an atmosphere where they are almost always required to be in the wards. There is also a feeling among many healthcare professionals that they are not being appreciated by the government because they claim that their conditions of service have not increased to motivate them as they handle an increased number of patients. This has led to high prevalence of job

augmentation, a practice where the healthcare professionals have to work for two or more employers in order to supplement their meager income. This will lead to a reduction of the time they spend on patients. Eventually there is a reduction in the effectiveness of healthcare care delivery at the institution.

Levels of motivation as reported by healthcare professionals

The second biggest problem reported was that of low motivation among the healthcare professionals at the institution. Most healthcare professions were demoralized due to work overload and unsatisfactory conditions of service. Low motivation among the healthcare professionals at the institution has, without doubt, compromised the levels of efficiency in the delivery of healthcare services. The levels of motivation are likely to drop even further as the workload among the healthcare professionals continues to increase due to the low rate of replacement after attrition.

Closure of some units as reported by healthcare professionals, management officials and patients

The findings show that the third biggest problem at the institution was that some specialized units of healthcare had closed down as attrition continues to make its toll. The closure of these units has been caused by the emigration of some highly qualified healthcare professionals from the institution. The closure means that the institution is no longer able to competently handle certain diseases or aspects of some diseases, thereby reducing the efficiency and reliability of the hospital which is supposed to be the final destination for the many unsolved health problems around the country. It also means that those without enough money to seek specialized healthcare abroad will be the hardest hit. For this reason, it can be argued that the efficiency of healthcare delivery of the UTH has been reduced.

Long appointments for specialized treatment

The fourth biggest problem presented in the survey findings is that of the long waiting period before a patient can access a specialist healthcare professional. This is a result of the increased workload among the healthcare professionals as well the closure of some other units that were involved in providing the healthcare. The closure of some operation theatres at the institution has undoubtedly meant that patients who require highly specialized operations have to wait for a prolonged number of weeks or even months. Under such circumstances, the ailments of the patients are exacerbated. This is a serious indicator of reduction in the effectiveness of healthcare delivery.

Use of wrongly qualified staff as reported by the respondents

The fifth biggest problem reported by the respondents was that of the use of inappropriate healthcare professionals. These are healthcare professionals or other members of staff who are not fully competent in handling certain aspects of healthcare. Most healthcare professionals at the UTH feel that there are cases where practitioners are redeployed to units that are incongruent to their spheres of competence. This is done by the management at the institution as a way of trying to cope with the increased demand for healthcare amid the shortage of healthcare professionals (trying to live with the problem).

Patients being prematurely discharged

Sixth in the ranks is the finding that some patients at the institution were being discharged prematurely. This means that their access to healthcare services has been reduced. Given the big number of respondents who reported work overload among the healthcare professionals, it is not surprising that the majority of respondents are also reporting premature discharge of patients. A possible explanation is that the premature discharge of patients is caused by the shortage of healthcare professionals coupled with work overload and the closure of certain specialized units.

Summary

Based on the findings of the study at the UTH it can be argued that the attrition of healthcare professionals has increased the work load and reduced the motivation among the remaining healthcare professionals, reduced the access to healthcare services among the patients, has led to closure of certain units, use of some inappropriate staff and premature discharge of some patients.

RECOMMENDATION

Although the main cause of high attrition among healthcare professionals are poor conditions of service for the healthcare professionals, there is an urgent need by the stakeholders to also increase the training of healthcare professionals, employ healthcare professionals on pensionable basis, improve medical supplies and commission more researches on the subject matter.

Conditions of service

As a long term measure, the healthcare professionals must be afforded conditions of service equivalent to those offered in neighboring countries such as Botswana, Namibia and South Africa. These are countries that are now heavily relying on healthcare professionals trained and developed in Zambia. Attention must be paid to allowances such as on-call, housing, educational, transport, retention and uniform allowances. Gratuity for those who have already served their contracts must be paid promptly to give them an opportunity venture in capital projects which they may not be willing to leave behind. This will not only reduce the incidence of emigration, but could also help attract back some of the highly technical healthcare professionals who have emigrated.

Training

The stakeholders are also advised to prevent a total stagnation of the public health sector in the country by expanding the enrolment base in healthcare training institutions in the country.

Further, the government as a key player is advised to build more healthcare training institutions in the country to increase the number of healthcare cadres of all categories. There is also an urgent need by the stakeholders to consider an affirmative policy in healthcare training that will reasonably relax the prerequisites for admission into healthcare related educational programmes. This will attract more Zambians to enter the sector. It is paradoxical for the Zambian learning institutions to remain dogmatic about the entry requirements into healthcare related programmes when there are many young men and women willing to serve their country's healthcare system which is cracking down.

The issue of contracts

There is also an urgent need to review the human resource strategies and practices at the UTH particularly. The study led to a discovery that most of the healthcare professionals at the UTH were employed on contract. It was further learnt that at the end of the two year contract, most healthcare professionals were not interested in seeking renewal. As a result, they see the expiry of the contracts as relief and an opportunity for them to seek greener pastures in the diaspora.

Healthcare supplies

The stakeholders must urgently address the problem of the shortage of healthcare professionals at the UTH in particular and in the rest of the public healthcare institutions in general. The lack of adequate and appropriate healthcare supplies has been one of the push factors in the migration of healthcare professionals.

Research

Bearing in mind that this research was a case study of the UTH only, and was conducted strictly for academic purposes, the stakeholders are advised to commission a nationwide survey aimed at capturing the impact of the attrition of healthcare professionals on the delivery of the public health sector, covering a cross-section of healthcare institutions around the country. Currently, in Zambia, this study is the first one that has been conducted on the subject matter.

Summary

Players in the healthcare system need to engage in improved decision-making and implementation, and should show an increased resolve to combating both attrition and its impacts.

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APPENDICES

Figure A 1 Responses by healthcare professionals

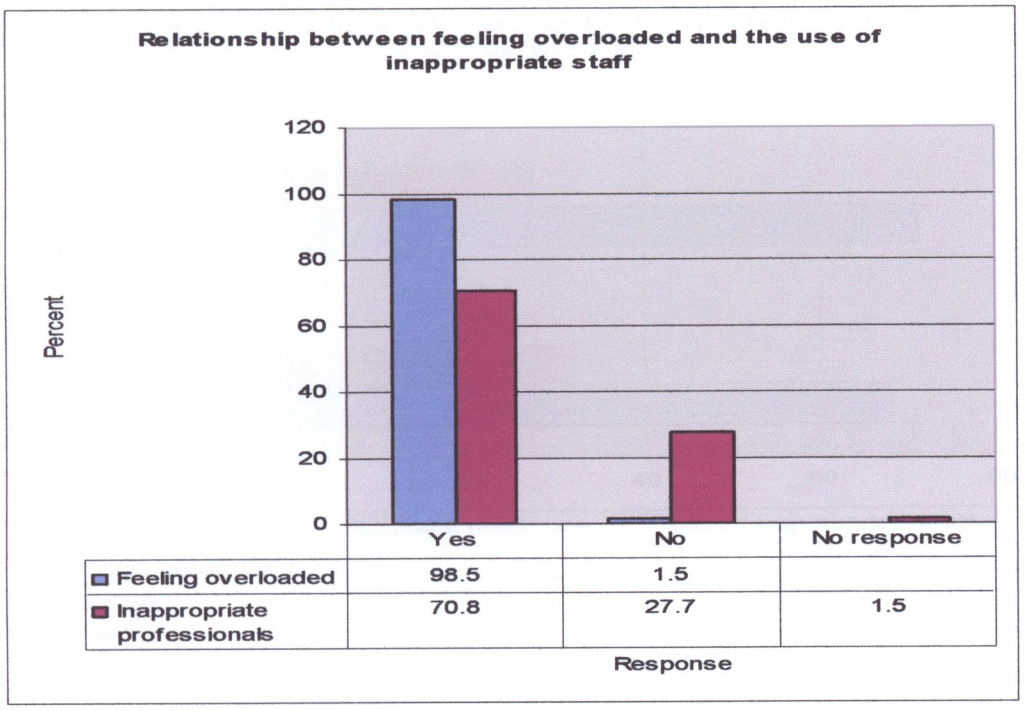


Figure A 2 Responses by healthcare professionals

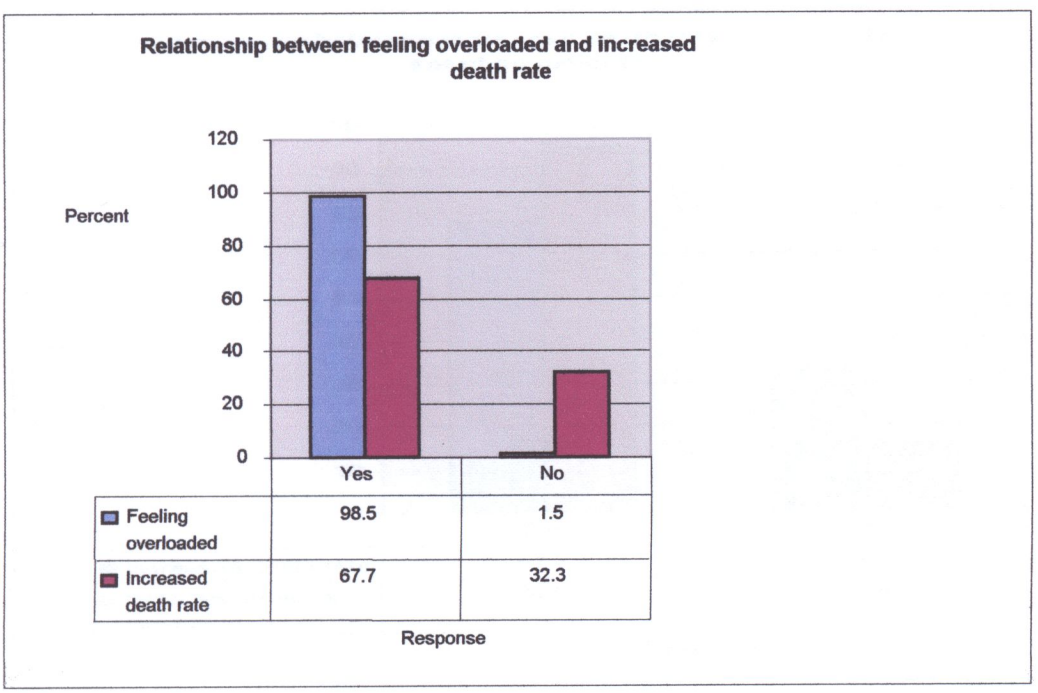
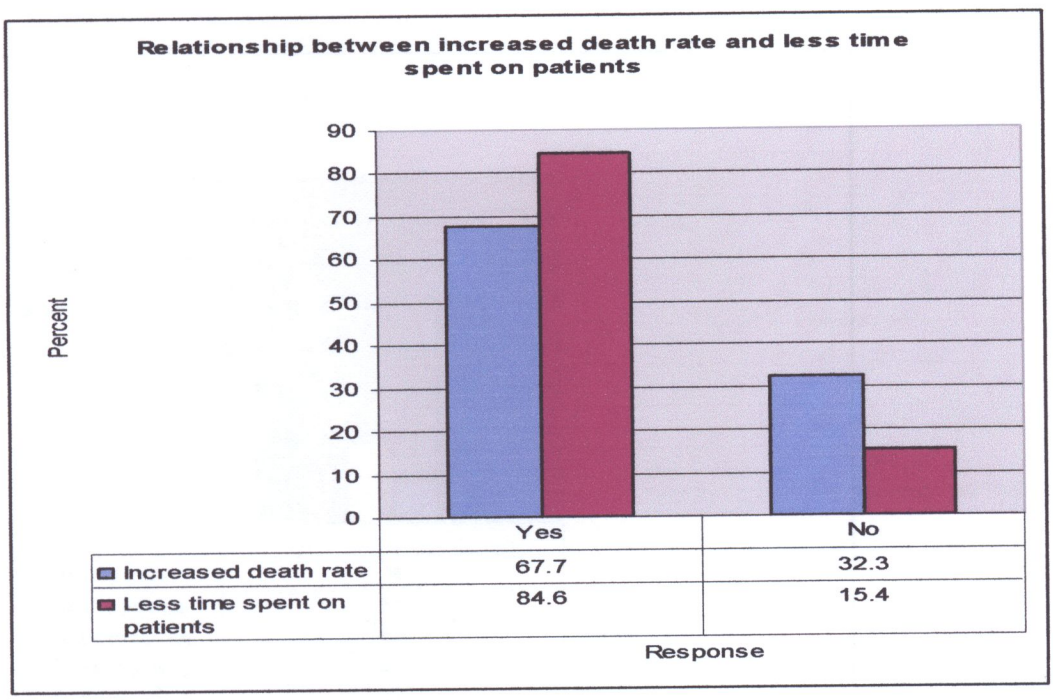


Figure A 3 Responses by healthcare professionals and patients

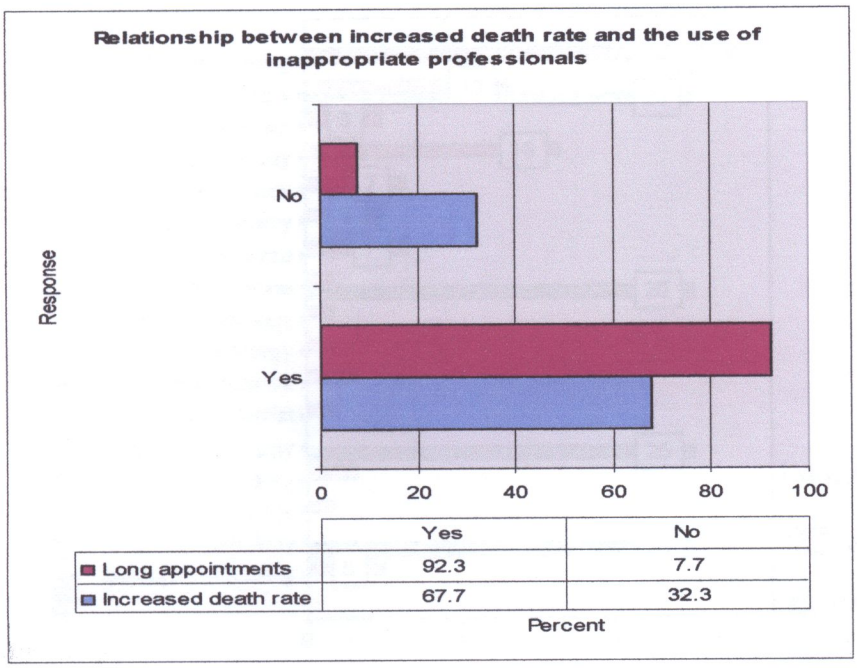
	Increased death rate	Use of inappropriate staff
No response		1.5
No	32.3	27.7
Yes	67.7	70.8

Figure A 4 Responses by healthcare professionals and the patients



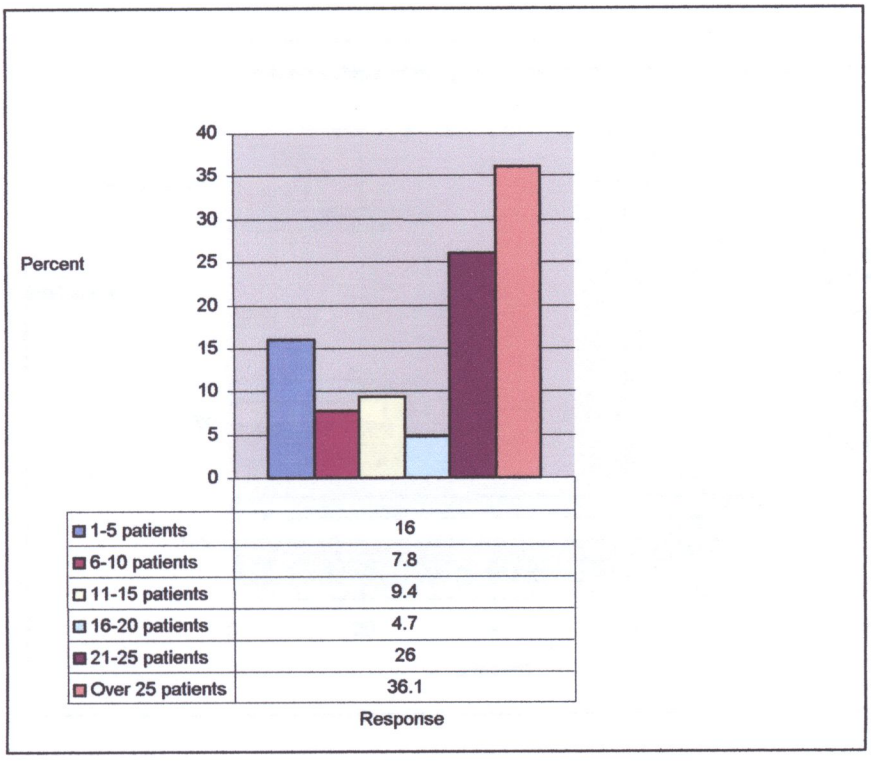
	Yes	No
Increased death rate	67.7	32.3
Less time spent on patients	84.6	15.4

Figure A 5 Responses by healthcare professionals and the patients



	Yes	No
Long appointments	92.3	7.7
Increased death rate	67.7	32.3

Figure A 6 Relationship between feeling overloaded and the number of patients handled –Responses by healthcare professionals and the patients



1-5 patients	16
6-10 patients	7.8
11-15 patients	9.4
16-20 patients	4.7
21-25 patients	26
Over 25 patients	36.1

Figure A 7 Professionals feeling demotivated-Responses by professionals' category

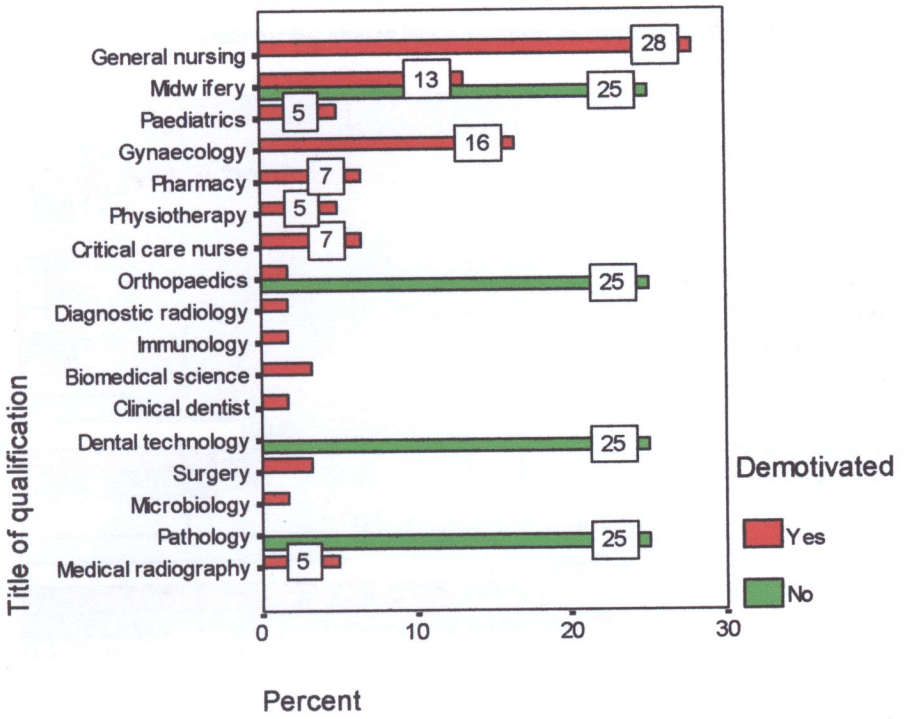


Figure A 8

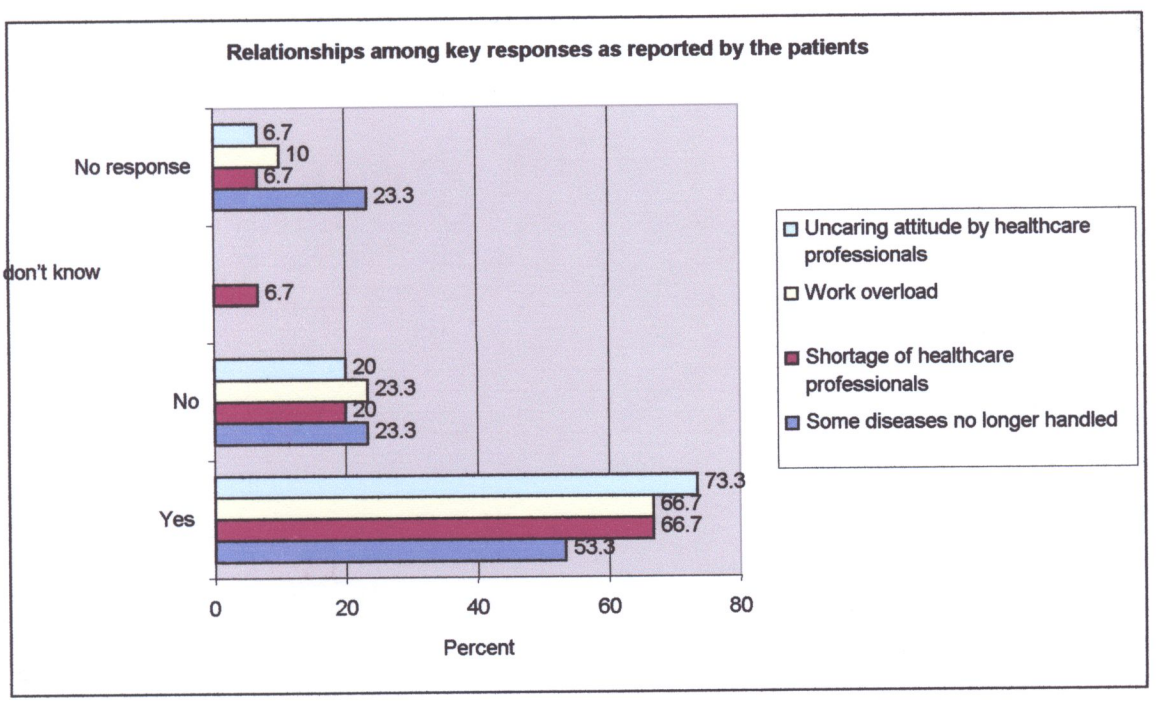


Figure A 9

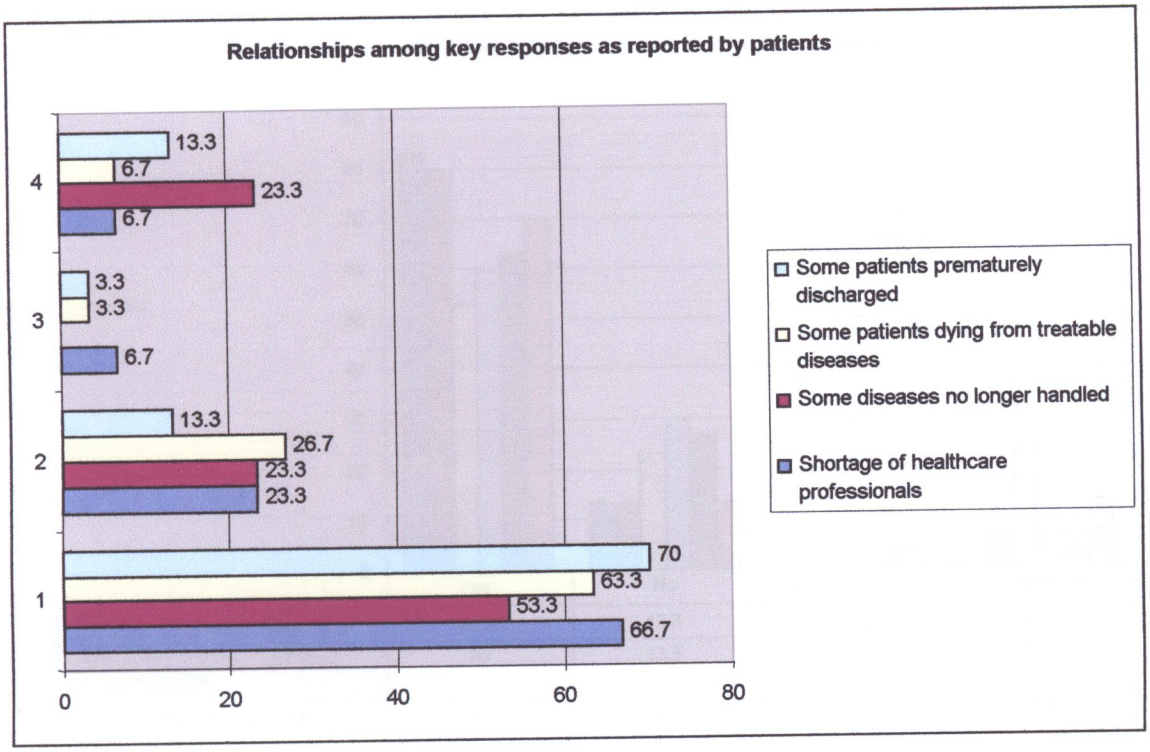
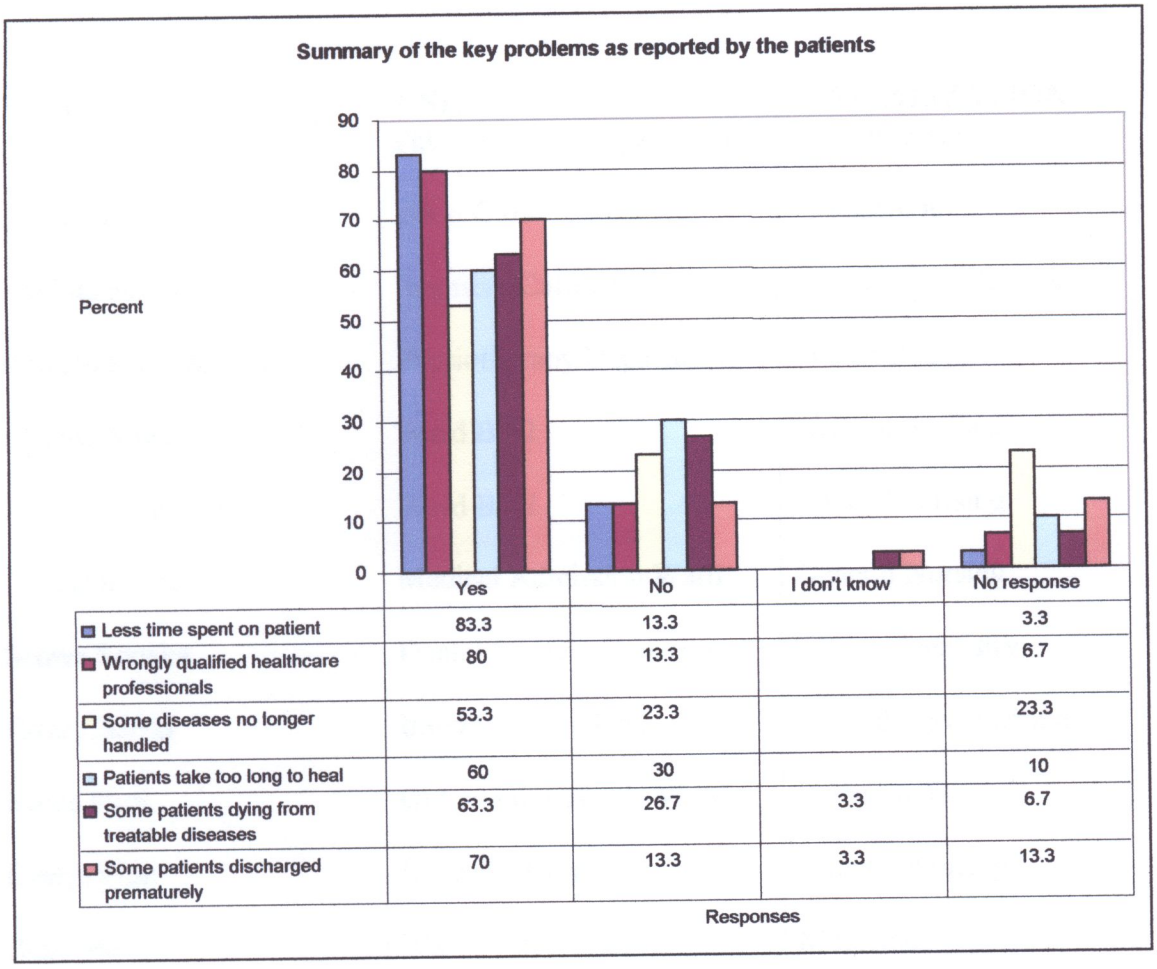

Relationships among key responses as reported by patients
4
3
2
1
13.3
6.7
23.3
6.7
3.3
3.3
6.7
13.3
26.7
23.3
23.3
70
63.3
53.3
66.7
0
20
40
60
80
Some patients prematurely discharged
Some patients dying from treatable diseases
Some diseases no longer handled
Shortage of healthcare professionals

Figure A 10



	Yes	No	I don't know	No response
Less time spent on patient	83.3	13.3		3.3
Wrongly qualified healthcare professionals	80	13.3		6.7
Some diseases no longer handled	53.3	23.3		23.3
Patients take too long to heal	60	30		10
Some patients dying from treatable diseases	63.3	26.7	3.3	6.7
Some patients discharged prematurely	70	13.3	3.3	13.3

Appendix B: Table of the names of some of the healthcare professionals interviewed.

NAME	UNIT	SPECIALIZATION
Philip Phiri	Physiotherapy Department	Physiotherapy
J. Nankala	Ward C 02	Gynaecology
Mutinta Mweemba	Intensive Care Unit	Critical Care Nursing
Braiden Kapunkanya	Physiotherapy Department	Immunology
Chanda Mwansa	Ward B 02	General Nursing
Florence Mweemba	Ward B 02	General Nursing
Catheline Phiri	Medical Admission Ward	General Nursing
Senwa Soneka	Dental Surgery Department	Clinical Dentistry
Ester Chanda	Intensive Care Unit	Critical Care Nursing
Rofus Phiri	Outpatient casualty Ward	Orthopaedics
Evelyn Phiri	Intensive Care Unit	General Nursing
Rose Mooya	Ward A 02	Medicine
Enock Chikatula	Pharmacy Department	Pharmacy
Rhoda Sakala	Ward E 01	Medicine
M. Kangwa	Pharmacy Department	Pharmacy
Emely Zungu	Intensive Care Unit	Critical Care Nursing
Peter Phiri	Physiotherapy Department	Physiotherapy
Florence Banda	Ward G 21	General Nursing
Nakanyika Ndubwa	Ward A 02	Paediatrics
Chomba Musonda	Filter Clinic	Biomedical Sciences
Ms Mubita	Pathology and	Microbiology

	Microbiology Department	
Tembo Dominic	Dental Surgery Department	Dental Technology
Devy Nsama	Pathology and Microbiology Department	Biomedical Sciences
Ms Nchimunya	Ward B 02	Mid-Wifery
Ms Chisanga	Ward B 02	Mid-Wifery
Vuniwe Mwanza	Physiotherapy Department	Physiotherapy
Akowa Imasiku	Pathology and Microbiology Department	Microbiology
Namomba Chimuka	Medical Admission Ward	General Nursing
Chansa Mulenga	Intensive Care Unit	Critical Care Nursing

Appendix C: Wards and clinics covered

The survey captured the following wards and clinics:

1. Ward A 01 (Children's wing)
2. Ward A 04 (Children's wing)
3. Ward C 01 (Female ward)
4. Ward C 02 (Female ward)
5. Ward C 13 (Fee paying)
6. Ward E 01 (Male ward)
7. Ward E 02 (Female ward)
8. Ward G11
9. Ward G 21
10. Ward G22
11. Ward B 01
12. Ward B02 (Antenatal – Postnatal – Out – patient ward)
13. Ward B 11 (Maternity ward)
14. Ward B 12 (Labour ward)
15. Ward 13 (Maternity ward)
16. Operations Theatre (Block D)
17. Medical Admission ward
18. Filter clinic (High cost)
19. Intensive Care Unit (ICU)
20. Radiography department
21. Phase 5 (Admission ward)
22. Physiotherapy department
23. Male surgical ward
24. Out – patient casualty ward
25. Pharmacy department
26. Dental Surgery department
27. Pathology and micro-biology department

28. Filter department.

Appendix D1: Questionnaire for the healthcare professionals

SECTION ONE: PERSONAL INFORMATION

1. Name.....

2. Sex: (a) Male ☐ (b) Female ☐

3. Age.....

4. Marital Status: (a) Married ☐ (b) Unmarried ☐

5. What is your highest medical qualification?
   (a) Certificate ☐
   (b) Diploma ☐
   (c) Bachelor's degree ☐
   (d) Master's degree ☐
   (e) Ph.D ☐

6. Where did you obtain your highest medical qualification?.....
7. What is your area of specialization?.....
8. When did you obtain your first medical qualification?.....

SECTION TWO: INFORMATION ABOUT THE IMPACT OF ATTRITION ON THE EFFICIENCY AND EFFECTIVENESS OF HEALTHCARE DELIVERY

9. Do you think that the number of the available healthcare professionals has affected the delivery of the UTH? Yes ☐ No ☐

10. If 'Yes' in question 9 above, does it affect it you:
    Positively ☐ Negatively ☐ I do not know ☐

11. Due to the attrition of healthcare professionals, have the following arisen?

Healthcare professionals over-loaded	YES ☐	NO ☐
Healthcare professionals spending less time on patients	YES ☐	NO ☐
Long appointments with patients	YES ☐	NO ☐
Wrong healthcare professionals handling patients	YES ☐	NO ☐
Remaining healthcare professionals demotivated	YES ☐	NO ☐
Reduced coordination among healthcare professionals	YES ☐	NO ☐
Increased operational accidents during healthcare	YES ☐	NO ☐
Do you think that UTH offers efficient healthcare?	YES ☐	NO ☐

12. As a result of the departure of some healthcare professionals, have witnessed the the following at your institution:

Increased death rate of patients	Yes ☐	No ☐
Fewer patients attended to in a day	Yes ☐	No ☐
Closure of some department (s)	Yes ☐	No ☐
Some diseases no longer handled	Yes ☐	No ☐
Reduced quality of healthcare delivery	Yes ☐	No ☐
Increased complaints from patients about healthcare	Yes ☐	No ☐

13. Do you think that UTH offers effective healthcare? Yes ☐ No ☐

14. If 'Yes' in question 13 above, is it mainly due to:

The resignations of some members of staff ☐

Death of some members of staff ☐

Long service retirement of some members of staff ☐

Any other reason, please state.....

15. How many patients do you handle in a day?

1-5 ☐

6-10 □

11-15 □

16-20 □

21-25 □

Any other, please specify.....

16. Between the period, 1998-2006, has the number of patients you attend to increased?

Yes □ No □

17. If 'Yes' in question 16 above, by how many?

1-5 patients □

6-10 patients □

11-15 patients □

16-20 patients □

Any other, please specify.....

SECTION THREE: INFORMATION ABOUT INTERVENTIONS

18. Do you know any intervention that government has put in place to address the issues raised above?

Yes □ No □

19. If 'Yes' in question 18 above, mention some of the interventions

.....

20. To what extent have these interventions addressed the problems?

To a very high extent □

To a low extent □

To a very low extent □

21. Do you know any interventions that the UTH has put in place to address the issues raised above? Yes ☐ No ☐

22. If 'Yes' in question 21 above, mentioned some of the interventions

.....

23. To what extent have these interventions addressed the problems?

To a very high extent ☐

To a low extent ☐

To a very low extent ☐

24. Explain why you think so.....

25. Are you confident that the government or the UTH has the will or resources to solve the problems?

Government Will:	Yes	☐	No	☐
Government Resources	Yes	☐	No	☐
UTH will	Yes	☐	No	☐
UTH Resources	Yes	☐	No	☐

26. What do you think must be done to reduce the attrition rate of health professionals at the UTH?.....

Appendix D 2: Questionnaire for the senior staff at the University Teaching Hospital

SECTION ONE: PERSONAL INFORMANTION

1. Name.....
2. Sex: Male ☐ Female ☐
3. Age.....years old
4. What is your highest level of education?

   Secondary school certificate ☐

   College Diploma ☐

   University degree ☐

   Any other, please, state.....

5. Title of your qualification.....
6. Position held at the UTH.....

SECTION TWO: INFORMATION ABOUT THE IMPACT OF ATTRITION ON THE EFFICIENCY AND EFFECTIVENESS OF HEALTHCARE DELIVERY

7. Do you think that the attrition of healthcare professionals has any effect on the the delivery of the public health sector? Yes ☐ No ☐

8. If 'Yes' in question 7 above, has the attrition of healthcare professionals led to:

   Shortage of healthcare professionals at the institution ☐
   One healthcare professional attending to too many patients ☐
   Increased recruitment of part-time healthcare professionals ☐
   Loss of institutional memory for providing quality healthcare ☐
   Use of some inexperienced healthcare professionals ☐

Use of wrongly qualified healthcare professionals ☐

Reduced quality of healthcare ☐

Some diseases no longer handled ☐

Reduced quality of healthcare ☐

Some specialist units closing down ☐

SECTION THREE: INFORMATION ABOUT GOVERNMENT INTERVENTIONS

9. Do you think that enough effort has been made to improve the conditions of the health professionals? Yes ☐ No ☐

10. Give reasons for your answer.....

10. Do you think that the national health strategic plan 2001-2005 had put serious measures to improve conditions of service of the health professionals?

Yes ☐ No ☐

11. Give reasons for your answer.....

12. Do you think that the public service reforms have seriously addressed the problem of poor conditions of service for the health professionals?

Yes ☐ No ☐

13. Give reasons for your answer.....

14. What other interventions has the government put in place to reduce the departure of professional health workers from the UTH?.....

15. How do you rate these interventions?

Very successful □

Successful □

Poor □

Very poor □

16. If 'poor' or 'very poor' in question 15 above, give reasons.....

Appendix D 3: Questionnaire for the patients at the University Teaching Hospital

SECTION ONE: PERSONAL INFORMATION

1. Name.....

2. Sex: Male ☐ Female ☐

3. Age.....

4. Where do you come from?.....

5. For how long have you been seeking treatment from the UTH?

   Less than 6 months ☐

   Between 6 months and 1 year ☐

   Between 1 year and 1 year 6 months ☐

   Between 1 year 6 months and 2 years ☐

   More than 2 years ☐

6. How have you so far responded to treatment? ☐

   Very well ☐

   Well ☐

   Badly ☐

   Very badly ☐

SECTION TWO: INFORMATION ABOUT THE IMPACT OF ATTRITION ON THE EFFICIENCY AND EFFECTIVENESS OF HEALTHCARE DELIVERY

7. If your response to question 6 above is 'badly' or 'very badly', is it due to:

   Scarcity of enough medical supplies ☐

   Scarcity of appropriate medical supplies ☐

8. How often are you attended to by a doctor?

Always ☐

Most times ☐

Sometimes ☐

Never ☐

9. Do you think that the number of the available healthcare professionals has affected the quality of healthcare you receive as a patient? Yes ☐ Yes ☐

10. Due to the scarcity of healthcare professionals, has the following happened?

Healthcare professionals overloaded ☐

Uncaring attitude among healthcare professionals ☐

Healthcare professionals spending less time on patients ☐

Wrong healthcare professionals handling patients ☐

Some diseases no longer handled ☐

Some patients taking too long to heal ☐

Some patients dying from treatable diseases ☐

Some patients being discharged prematurely ☐

11. Do you think that the healthcare professionals at the UTH are well qualified?

Some ☐

Most ☐

None ☐

Don't know ☐