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SCHOOL OF MEDICINE

DEPARTMENT OF NURSING SCIENCES

**PATIENT SATISFACTION WITH CANCER CARE
AT CANCER DISEASES HOSPITAL, LUSAKA.**

BY

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**A RESEARCH STUDY SUBMITTED IN PARTIAL FULFILMENT FOR THE
AWARD OF BACHELOR OF SCIENCE IN NURSING DEGREE AT THE
UNIVERSITY OF ZAMBIA**

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LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
CDH	Cancer Diseases Hospital
CSO	Central Statistics Office
CT	Computed Tomography
ECG	Electrocardiogram
HIV	Human Immune deficiency Virus
IEC	Information, Education and Communication
JCTR	Jesuit Centre for Theological Reflection
MNH	Muhimbili National Hospital
MOH	Ministry of Health
MRI	Magnetic Resonance Imaging
OPD	Outpatient Department
SPSS	Statistical Package for Social Scientists
THET	Tropical Health Education Trust
UNFPA	United Nations Population Fund

DECLARATION

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

SIGNED.....*Durkupa*.....DATE: *14-06-13*

.....*[Signature]*.....

.....*Bi*.....

.....*[Signature]*.....

CANDIDATES

APPROVED BY.....*[Signature]*.....

DATE.....*14/6/2013*.....

SUPERVISOR

STATEMENT

We hereby certify that this study is entirely the result of our own independent investigations. The various sources to which we are indebted are clearly indicated in the text and references.

SIGNED *Quirino*.....

DATE: *14-06-13*.....

[Signature].....

[Signature].....

[Signature].....

DEDICATION

This research is dedicated to the people of Zambia and neighboring countries who are the consumers of cancer care services at Cancer Diseases Hospitals and the management and staff of Cancer Diseases Hospital as they strive to render quality cancer care.

ABSTRACT

Patient satisfaction with cancer care is considered one of the important quality indicators in cancer care. Although it may seem impossible to keep all clients satisfied, a high level of satisfaction can be achieved by working on related indicators such as short waiting time and trying on improve them. Patient satisfaction with cancer care still remains a big challenge at Cancer Diseases Hospital (CDH).

The main objective of the study was to determine patient satisfaction with cancer care at Cancer Diseases Hospital in Lusaka Zambia.It was hypothesized that there was no association between patient satisfaction and waiting time, availability of Electro-medical equipment and infrastructure, Information Education and Communication (IEC) and Attitude of health workers.

A descriptive non-intervention case study design was used. The study was done at Cancer Diseases Hospital, a specialist referral hospital. The study population comprised clients aged 18 and above, both male and female who were on treatment and those coming for follow- up. A non-probability purposive sampling method was used and the sample size was 200. A semi-structured interview schedule was used to collect data. The data was analyzed using SPSS Software version 16.0.

All the independent variables in this study were significantly related to satisfaction; waiting time (P value 0.001), availability of electro-medical equipment and infrastructure (P value 0.000) Information, Education and communication (P value 0.000) and attitude of health workers (P value 0.000). Majority 76% (152) of the respondents were just satisfied,14.5% (29) were very satisfied and 9.5% (19) were dissatisfied while none was very dissatisfied. Among the respondents who waited for a short time, 69.4% (34) were just satisfied, 28.6% (14) were very satisfied while only 2% (1) were dissatisfied and none was very dissatisfied. All the respondents 100% (4) who indicated that electro-medical equipment and infrastructure was adequate were satisfied. In addition, majority 80.3% (122) of the respondents who indicated that IEC was adequate were satisfied. Among respondents who indicated that attitude of health workers was positive, majority 78.6% (151) were satisfied.

Waiting time, availability of electro-medical equipment and infrastructure, Information Education and Communication and attitude of health workers have significant association with satisfaction. In order for patients to be very satisfied, all these associated factors should be addressed.

Based on our findings, one major recommendation made to Ministry of Health and Cancer Diseases Hospital was to purchase more electro-medical equipment in order to reduce on congestion and waiting time.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

Satisfaction is a feeling one get when his / her desires, needs or expectations have been fulfilled (Wong, 2009). Patient satisfaction indicates the extent to which patient health care experiences match their expectations (Bredart et al, 2001). Evaluating to what extent patients are satisfied with health services is clinically relevant, as satisfied patients are more likely to comply with treatment, take an active role in their own care, continue using medical care services and stay with the same health care provider (where there are some choices) and maintain with a specific system(Guldvog, 1999).

Modern medicine is slowly beginning to recognize the importance of the perspective of the patient in health care as such modern approach to health care seeks to engage the attention of both patients and the public in developing healthcare services and equity of access. However, engaging patients and the public is not easy to achieve as it requires time, commitment, political support and cultural change (Aharony, 1993). Von Essen (2002) recommended a 'bottom up' assessment of patient satisfaction as a means to achieving improvement that translate into outcomes meaningful to patients, especially improved quality of life. Von Essen further recommends that investigations be undertaken in order to understand the importance of the inter-relationships among health needs, satisfaction, and quality of life.

True patient satisfaction comes from a healthy hospital environment where patients receive treatment faster, better understand the steps involved in the treatment they receive and recover faster (Guldvog, 1999). Cancer patients usually undergo extensive and debilitating treatments which make quality of life and patient satisfaction important (Von Essen, 2002).

Cancer is a popular generic term for malignant neoplasm, a great group of diseases occurring in all human and animal populations and arising in all tissues composed of potentially dividing cells (Osse, 2000). There are over 100 different types of cancer affecting various parts of the

body and each type of cancer is unique with its own causes, symptoms and methods of treatment (Osse, 2000).

The Cancer burden Worldwide is expected to increase from 11 million cases in the year 2002 to 22 million cases by the year 2020(CDH Action Plan, 2012-2014). Every year more people die from cancer than from HIV and AIDS, Malaria and Tuberculosis combined (CDH Action Plan, 2012-2014). According to World Health Organization (WHO Globocan, 2008), it was estimated that 70% of cancer cases will occur in Africa. With regard to increased cancer burden, Zambia is no exception. The total number of new patients seen at Cancer Diseases Hospital (CDH) has been increasing with 37 new cases seen in 2006 when the hospital was opened, 719 in 2007, 1204 in 2008, 1291 in 2009 and 1282 in 2010. By 30th June 2011, 654 new patients had been seen giving a total of 5,187new patients (CDH Action Plan, 2012-2014). There has been an increase in all types of cancers however; the ones mentioned below were the top five from 2008 to 2011.

Table 1.1: Top Five cancer cases seen at Cancer Diseases Hospital

TYPE OF CANCER	2008	%	2009	%	2010	%	2011	%
Cervical	304	25.23	429	33	485	38	436	33
Breast	205	17.02	105	8.1	135	11	107	8
Kaposi sarcoma	51	4.24	82	6.4	67	5	68	5
Head and neck	70	5.81	79	6.1	81	6	58	4
Prostate	34	2.82	54	4.2	55	4	51	4

Source: CDH Database 2011

The increase in the burden calls for high quality, palliative, radiotherapy and chemotherapy treatments. The only Cancer Disease Hospital in Zambia was established in 2006 and since then over 5000 new cancer patients have been seen and treated some of whom come from the neighbouring countries such as Angola, Democratic Republic of Congo, Malawi, South Africa and Zimbabwe. Besides offering radiotherapy and chemotherapy treatments, the Hospital has a

Computed Tomography scanner (CT scan), Magnetic Resonance Imaging (MRI) machine and 4D ultrasound machine which has greatly enhanced the diagnostic capacity of the Hospital.

Despite great efforts put across with regard to radiotherapy and chemotherapy treatment in ensuring that patients receive quality care, certain challenges still remain and these include; lack of in-patient facilities leading to cancer patients being attended to as out-patients regardless of their condition and where they are coming from. Patients from outside Lusaka are made to lodge in the University Teaching Hospital (UTH) wards which are already congested and hence their progress may not be monitored consistently, while those from within Lusaka come on daily basis which is very costly and stressing. Patients who commute on daily basis might end up dissatisfied due to the high cost of transport. In addition, limited electro-medical equipment may result in long waiting time and queues for patients and this may affect their satisfaction. CDH has only one Computed Tomography scanner (CT scan), Magnetic Resonance Imaging Machine (MRI), 4D Ultrasound Machine to mention a few (CDH Action Plan, 2011 – 2014). Furthermore, the over worked machines are prone to constant wear and tear which may result in compromised services as patients will be sent back home due to malfunctioning machines.

1.2 PROBLEM STATEMENT

Patient satisfaction with care represents an outcome measure for health care in general and cancer care in particular (Bredart et al, 2001). Although it may seem impossible to keep all clients satisfied, a high level of satisfaction can be achieved by working on related indicators such as short waiting time and adequate equipment.

At present, CDH is still experiencing problems with related indicators to patient satisfaction with cancer care for example; it takes long for the patients to be attended to by the health worker. In normal situations a patient is not supposed to wait for more than an hour without being attended to (CDH Action Plan, 2012-2014). In addition, there is inadequate equipment (diagnostic and treatment machinery) in comparison to the number of patient seen on daily basis. For example on cobalt 60Machine, more than 60 patients are seen within a day which is not ideal. Ideally, one machine should only attend to three hundred patients per year (CDH action plan, 2012-2014).

Because of an increase in cancer burden, demand for cancer services has equally increased resulting in a rise in the number of patients requiring treatment whilst infrastructure has remained the same, equipment has been reducing due to wear and tear and staffing levels have remained inadequate. This may affect the provision of cancer care to all patients and consequently patient satisfaction.

In order to provide quality effective care and achieve patient satisfaction in an environment where there is an increasingly demand against limited resources, understanding of views, needs and demands of clients is essential. To improve the quality of care at Cancer Disease Hospital, there is need to conduct a patient satisfaction survey to clearly explore the factors affecting the satisfaction levels and possible causes of dissatisfaction, as dissatisfied patients are more likely; not to comply with treatment, not participate in their own care, discontinue using medical care services and this may result in disease progression. In addition, health professionals may benefit from satisfaction surveys that identify potential areas for service improvement and health expenditure may be optimized through patient-guided planning and evaluation.

It is therefore, recommended that the study be conducted to establish patient satisfaction with the care given at Cancer Disease Hospital.

**1.3 ANALYSIS OF FACTORS INFLUENCING PATIENT SATISFACTION WITH
CANCER CARE AT CANCER DISEASE HOSPITAL**

1.3.1 SERVICE RELATED FACTORS

1.3.1.1 Waiting Time

Waiting time has an influence on how patients perceive care rendered to them. An improvement in waiting time may lead to greater treatment compliance and ultimately to better patient outcomes, while longer waiting time may lead to patient dissatisfaction with care given (Canadian Cancer Society, 2004).

1.3.1.2 Infrastructure

Infrastructure at Cancer Disease Hospital has an influence on delivery of cancer care and patient satisfaction. Adequate infrastructure reduces waiting time whereas limited infrastructure results in long waiting time. For example, the Chemotherapy suite is small with limited number of beds (5) and adjustable chairs (20) resulting in patients pending treatment to wait for long hours. Cancer Disease Hospital has no admission wards and this may affect patients care and satisfaction. Patients from outside Lusaka are made to lodge in UTH wards which are already congested and their progress might not be monitored while those from within Lusaka come on daily basis which is costly and these might end up defaulting thereby affecting their satisfaction (CDH Action Plan, 2012-2014).

1.3.1.3 Electro-Medical Equipment

Availability of electro medical equipment has an influence on delivery of cancer care and patient satisfaction. Adequate electro-medical equipment will result in quality delivery of care and patient satisfaction as it reduces on waiting time because more patients are attended to within a short period of time. Inadequate electro-medical equipment will result into poor delivery of care and patient dissatisfaction as the machine is prone to wear and tear due to over working thereby increasing on the waiting time.

In addition, availability of electro-medical equipment influences how the health care personnel handle patients under their care. When electro medical equipment is available, the health care personnel are more likely to be motivated to work to their expectations. On the other hand, inadequate electro-medical equipment will result in reduced work morale

1.3.1.4 Attitude of health workers

Health worker's attitude has an influence on patient satisfaction with cancer care. The courtesy and reception of patients with cancer by health workers influences how the patients perceive care provided. Health workers attitude also has an influence on communication which is very important in cancer care. Negative attitude results in poor communication which leads to poor delivery of care where as good communication results in quality delivery of care (Mandokhail, 2007).

1.3.1.5 Supply of Medical and Surgical materials including drugs

The supply of medical and surgical materials and drugs have an influence on quality delivery of cancer care and patient satisfaction in that, without these materials it is impossible to adequately handle cancer cases. For example, chemotherapy can only be offered when the cytotoxic drugs are available in order to control the growth of cancer cells. The availability of Medical and Surgical materials including drugs result in good quality of care rendered hence patients will be satisfied (Srivastava and Gupta, 2011, Kano, 2000).

1.3.1.6 Health Workers Knowledge on Cancer

Knowledge of Cancer has an influence on how health workers handle cancer cases. One cannot handle a condition which he/she is not knowledgeable. Inadequate knowledge of cancer results in mismanagement of cancer cases where as adequate knowledge enhances good management (Lindwall, 2003). Patients are satisfied when handled by one who is competent and skilful because they have the confidence that the staff knows what he or she is doing and get dissatisfied when handled by one who is incompetent and skilful (Jennings et al, 2005). In addition, availability of treatment protocols improves practice and efficiency on how to handle cancer cases while lack of treatment protocols does not as these protocols provide guidelines on the steps to follow when handling special cases.

1.3.1.7 Information Education and Communication (IEC)

Information Education and Communication (IEC) is of paramount importance in the care of oncology patients because cancer is not a single disease with a single cause; rather it is a group of distinct diseases with different causes, manifestations, treatments and prognoses (Smeltzer et al, 2008). People with chronic illness need IEC in order to participate actively and assume responsibility for their care. Moreover, IEC is important to prepare patients and their families through a wide range of physical, emotional, socio-cultural and spiritual crises that they may face (Smeltzer et al, 2008). IEC remains crucial in the cancer setting as patients have to deal with stress, uncertainty, complex information and life altering medical decisions (Epstein and Street, 2010). IEC can influence patient satisfaction with cancer care in that, if adequately provided can lead to satisfaction and if inadequate can result in dissatisfaction.

1.3.2 DISEASE RELATED FACTORS

1.3.2.1 Stage of Cancer

The Stage of cancer has an influence on the care given and patient satisfaction. Cancer is curable in the early stages and so patients are more likely to get satisfied while cancer in the late stage is incurable and patients are more likely to be unsatisfied with the care given. In other words, patients with metastatic cancers may feel less supported by physician than those with less advanced cancers (Baiter et al, 2004).

1.3.3 SOCIAL ECONOMIC RELATED FACTORS

1.3.3.1 Social Economic Status

Higher income has been associated with greater satisfaction with doctor's interpersonal communication skill while people with low income report more problems in the hospital because they get lower health care, have less continuous relations with the doctors, have difficulties in getting appointments and are treated differently from privately insured patients to some degree (Tran,2002).

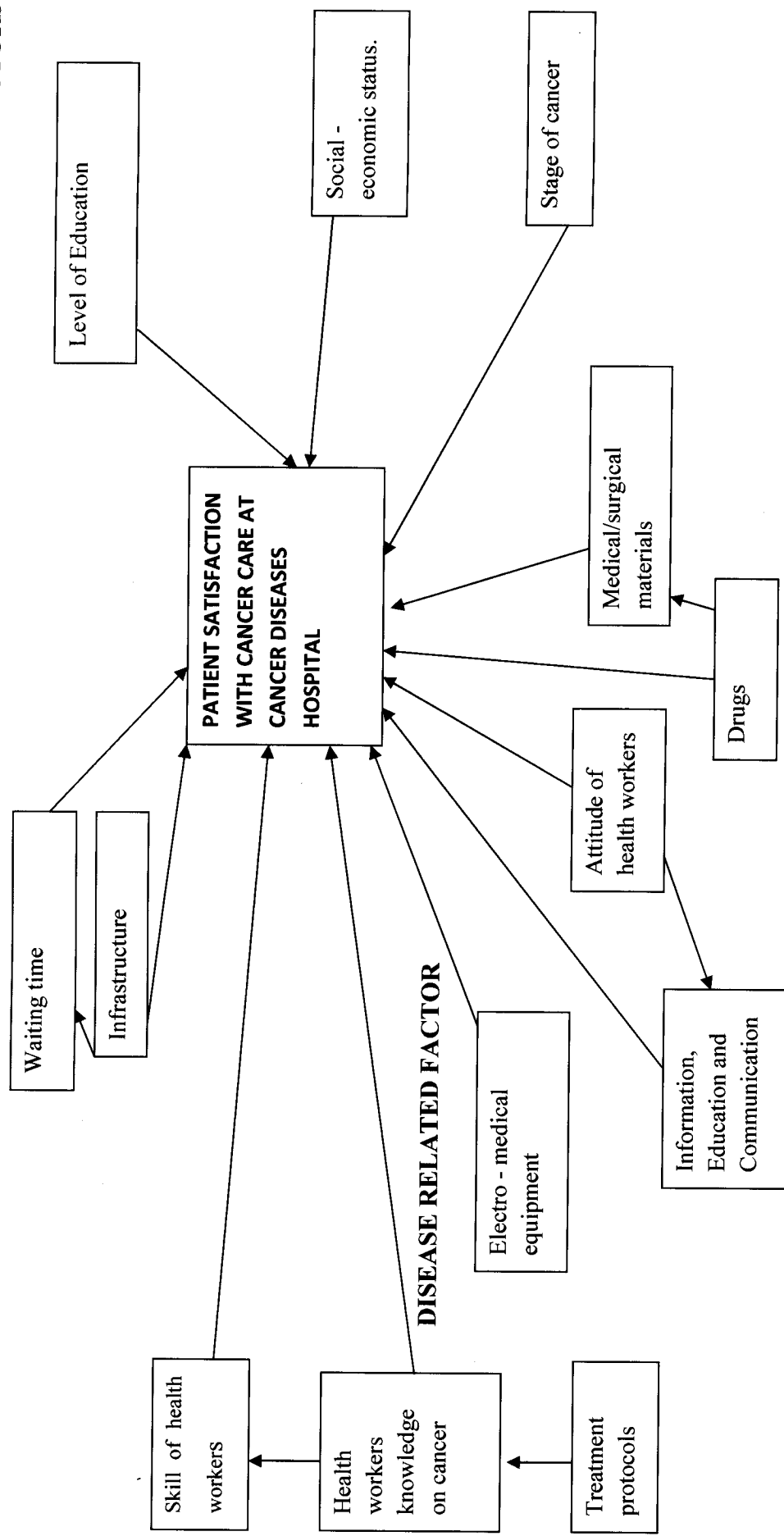
1.3.3.2 Level of Education

High level of education improves one's understanding of the nature of the disease and so participates in treatment decisions which can have positive effect on patient satisfaction, compliance and health outcomes. On the other hand, low level of education leads to poor understanding of nature of the disease and less participation in treatment decisions which can have negative effects on patient satisfaction (Omdavari et al, 2008).

FIGURE 1.1 PROBLEM ANALYSIS DIAGRAM

SERVICE RELATED FACTORS

SOCIO-ECONOMIC RELATED FACTORS



1.4 THEORETICAL / CONCEPTUAL FRAMEWORK

1.4.1 DESCRIPTION OF THEORETICAL FRAMEWORK - KANO SATISFACTION MODEL

The Kano model is a theory of product development and customer satisfaction developed in the 80s by Professor Noriaki Kano. The point of the Kano Satisfaction Model is that organizations (hospital) need a profound understanding of their customers' (patients) requirements to increase satisfaction and secure loyalty. Patient-oriented service is the core value of health care business. Hospitals not only provide medical care but also need to pay attention towards the issues of increasing customer satisfaction. For example, patients may be satisfied with surgical procedures but they may not be confident as the communication and friendliness of the care service is poor. If physicians can pay more attention to the voice of the patients then misunderstanding of patients would be eliminated. The managers need to find out causes and remedial solution for customer satisfaction in spite of good medical services given to their patients. Therefore, to better understand patient's needs and increase their satisfaction, managers need to think from customer's point of view (listening to the voice of patients). Many researchers have applied the useful diagram of Kano's model for identifying customer's needs and how a given service feature or attribute affects customer satisfaction. In this case Kano model is applied to identify customer needs and calculate customer satisfaction coefficient that helps to prioritize the importance of service qualities that can increase customer satisfaction in health service (Srivastava and Gupta, 2011, Kano, 2000).

Not all patient requirements are equal therefore, according to Kano, patient satisfaction can be grouped into three categories as basic, performance and excitement services. Kano's model is hierarchical: You must provide the basic services before you can offer differentiable services and you must do both before you can excite your customers. Furthermore, before you can do any of these, you must be absolutely certain that you understand who your customers are and what each customer group requires.

1.4.1.1 Basic Services

The basic or expected services (lower curve in the model) are attributes, which patients take for granted and are so obvious that they are not worth mentioning. These attributes do little to improve satisfaction unless they fail, in which case they can cause serious dissatisfaction (Kano, 2000). For example when patients come to CDH, they expect to be given Information Education and Communication on the disease process and treatment modalities. If these needs are not met, patients may be dissatisfied. Also when patients come for review, they expect files to be available and if told that these files are missing from the records /registry department, they may be dissatisfied. Patients may also be dissatisfied if they are sent by the physicians for laboratory investigations such as Full Blood Count only to find that there are no reagents for the test.

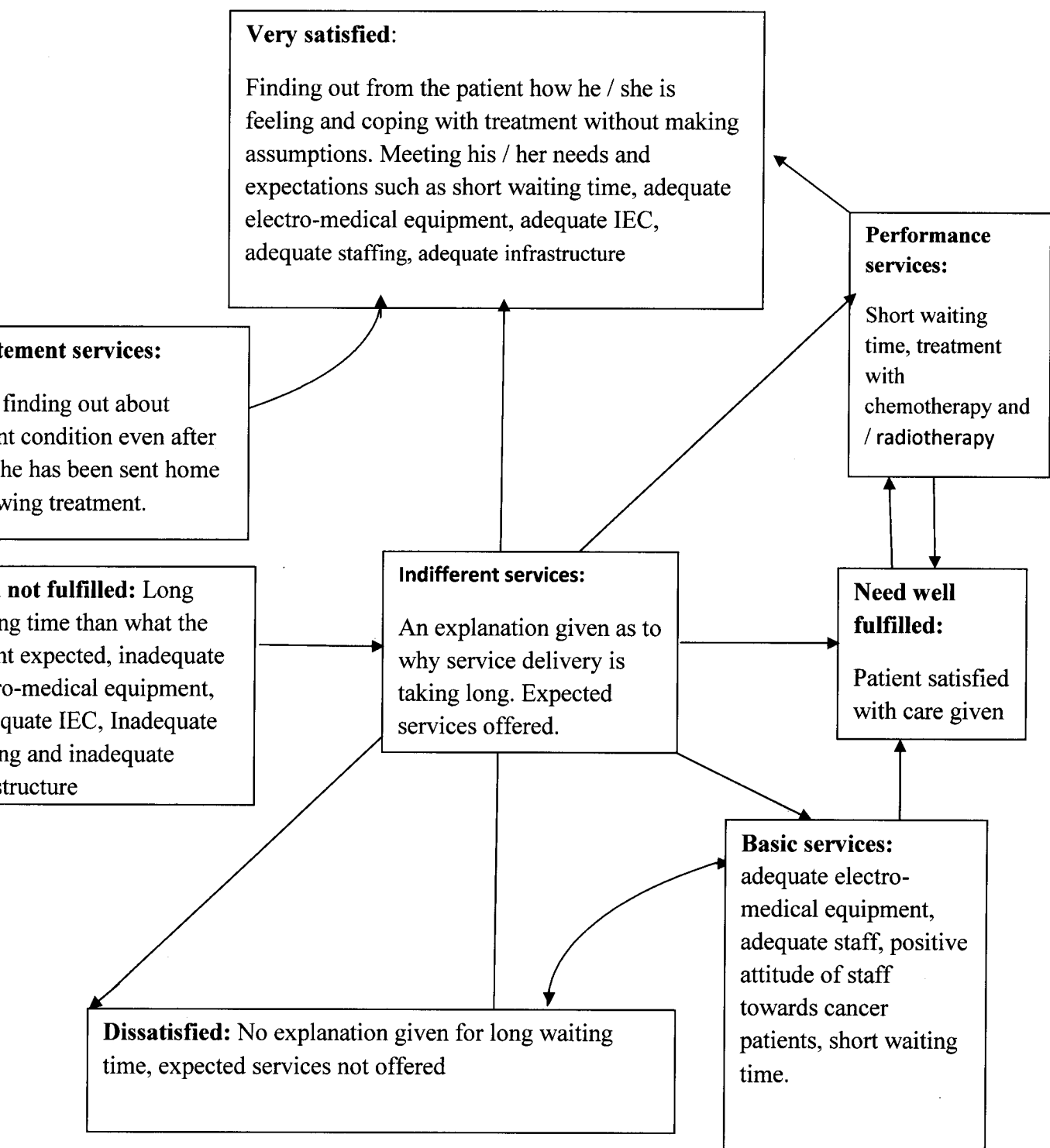
1.4.1.2 Performance or differential Services (the central line of the model)

Performance services are those expressed by patients when asked what they want from the service. Depending on the level of their fulfillment by a service these requirements can satisfy or dissatisfy patients (Kano, 2000). For example short waiting time of less than an hour will promote patient satisfaction as this will be viewed as a positive experience while long waiting time of more than an hour will promote patient dissatisfaction as it will be viewed as a negative experience. Likewise, patients with cancer expect to be given the best treatment available. If the treatment needs are not properly addressed, they will be dissatisfied. Most patients will be satisfied if the oncologist asks them about the treatment option they would prefer and makes a follow up by asking how they are coping with the treatment.

1.4.1.3 Excitement or Extraordinary Services

Excitement attributes (upper curve in the model) lay beyond patient's expectations. If these services are present they will excite the patient, but their absence does not dissatisfy patients, as they do not expect them in the first place (Kano, 2000). For example phoning a patient finding out how they are doing whilst at home before review dates or calling a patient inviting them to attend a meeting as cancer survivors in order to encourage others.

FIGURE 1.2 DIAGRAM OF THEORETICAL FRAME WORK OF PATIENT SATISFACTION WITH CANCER CARE



Source: Jacobs, Randy (1999), Evaluating satisfaction with media products and services

1.5 PROBLEM JUSTIFICATION

Patient satisfaction is cardinal in the provision of health care services. A satisfied patient is more likely to adhere to the treatment plan, keep appointment dates, shows improvement in the quality of life and results in good prognosis (Guldvog, 1999). On the other hand a dissatisfied patient is more likely not to comply with treatment plans, miss appointment dates and this may lead to rapid disease progression and end up with a rise in mortality rate(Guldvog, 1999). Measurement of patient satisfaction plays an important role in the growing push towards accountability among health care providers. According to Cancer Disease Hospital, health management information system, 2011, there has been an increase in the number of Cancer patients seen in the out-patient clinic, yet infrastructure has remained the same, equipment has been reducing due to wear and tear and staffing levels have remained inadequate. This has placed considerable strain on the hospital with the increasing demand for services. Inadequate infrastructure, equipment, and shortage of staff do not meet the increasing demand for care which may lead to poor delivery of health services which may also result in rapid disease progression and a rise in mortality rates. Therefore, understanding factors affecting patient satisfaction with cancer care at Cancer Disease Hospital is essential as this will help in identifying areas of improvement in service delivery.

In addition, although several studies have been done on satisfaction of patients with cancer care rendered, none has been done in Zambia in particular at Cancer Disease Hospital. The findings from the study will therefore be used by the hospital in planning and implementation of quality care in cancer diseases.

1.6 RESEARCH OBJECTIVES

Research objectives are clear concise declarative statements which are expressed in present tense. An objective usually focuses on one or two variables or concepts and indicates whether they are to be identified or described (Burns and Grove, 2005).

1.6.1 Main Objective

To determine patient satisfaction with cancer care at Cancer Disease Hospital (CDH).

1.6.2 Specific Objectives

1.6.2.1 To determine the level of patient satisfaction with cancer care at cancer disease hospital.

1.6.2.2 To determine the effect of waiting time on patient satisfaction with cancer care at CDH.

1.6.2.3 To determine the availability of electro- medical equipment and infrastructure required for management of cancer diseases and their effect on patient satisfaction at Cancer Disease Hospital (CDH).

1.6.2.4 To assess the effect of IEC on patient satisfaction with cancer care.

1.6.2.5 To assess the effect of health workers attitude on patient satisfaction with cancer care.

1.7 RESEARCH QUESTION

It is a clear, concise interrogative statement that is expressed in present tense (Burns and Grove, 2005).

- 1.7.1 What are the levels of patient satisfaction with cancer care at Cancer Diseases Hospital?
- 1.7.2 How does waiting time affect patient satisfaction with cancer care at CDH?
- 1.7.3 How does availability of electro- medical equipment and infrastructure required for management of cancer diseases affect patient satisfaction at Cancer Diseases Hospital?
- 1.7.4 What effect does IEC have on patient satisfaction with cancer care at Cancer Disease Hospital?
- 1.7.5 How do health workers' attitudes affect patient satisfaction with cancer care at Cancer Disease Hospital?

1.8 RESEARCH HYPOTHESIS

Research hypothesis is a statement about the expected relationship between the variables; also known as scientific hypothesis (Lobiondo-Wood, 2006).

- 1.8.1 There is no association between patient satisfaction with cancer care and the following factors:
 - 1.8.1.1.Waiting time
 - 1.8.1.2.Availability of electro-medical equipment and infrastructure
 - 1.8.1.3.IEC on patient satisfaction with cancer care
 - 1.8.1.4.Attitude of health workers

1.9 CONCEPTUAL AND OPERATIONAL DEFINITION OF TERMS

1.9.1 CONCEPTUAL DEFINITION OF TERMS

A conceptual definition is much like a dictionary, conveying the general meaning of a concept. However, the conceptual definition goes beyond the general language meaning found in the dictionary by defining the concept rooted in the theoretical literature (Lobiondo-Wood and Haber, 2006).

1.9.1.1 Satisfaction is a feeling one gets when his / her desires, needs or expectations have been fulfilled (Oliver, 2010).

1.9.1.2 Patient satisfaction is the extent to which patient health care experiences match their expectations (Bredart et al, 2001).

1.9.1.3 Cancer care is meeting psychosocial health needs of cancer clients, which enables health care providers identify the emotional and social needs, refer patients to necessary services, support patients in managing their illness, coordinate psychosocial and medical care and follow-up on the effectiveness of these interventions (Institute of Medical Report, 2000).

1.9.1.4 Waiting time is the period to see the specialist and to receive hospital-based services (Hanning, 1996).

1.9.1.5 Electro-medical equipment is an electrical device, provided with not more than one connection to particular supply mains and intended to diagnose, treat or monitor the patient under medical supervision and which makes physical or electrical contacts with the patient and transfers energy to or from the patient, and detects such energy transfer to or from the patient (Institute of Medical Report, 2000).

1.9.1.6 Information, Education and Communication (IEC) are strategies, approaches and methods that enable individuals, families, groups, organisations and communities to play an active role in achieving, protecting and sustaining their own health (UNFPA, 1999).

1.9.1.7 Attitude of Health Workers is a set of relatively stable and consistent beliefs underlining the behaviours of personnel providing care during interaction in a medical situation (Haidet et al, 2001).

1.9.2 OPERATIONAL DEFINITION OF TERMS

- 1.9.2.1 Satisfaction is an individual's state of being content or pleased with the cancer care received.
- 1.9.2.2 Patient satisfaction is a feeling and contentment a person with cancer gets when his/her desire, needs (short waiting time, adequate electro medical equipment, adequate staffing, adequate IEC and positive staff attitude) or expectations have been fulfilled.
- 1.9.2.3 Cancer care is a range of services received by a patient with cancer and includes diagnosis, treatment, monitoring, Information, Education and Communication and follow-up.
- 1.9.2.4 Waiting time is the time spent before a client is seen by a health worker at Cancer Diseases Hospital from the time they arrive and is rated as short (less than 60 minutes), long (more than 60 minutes).
- 1.9.2.5 Electro-medical equipment is machinery that uses electrical power to diagnose, treat and monitor patient with cancer. It includes Magnetic Resonance Imaging (MRI), CT scan, and cobalt 60.
- 1.9.2.6 Information, Education and Communication (IEC) is the information given about patient's condition and how they were going to be managed including follow-up care.
- 1.9.2.7 Attitude of Health Workers is a settled way of thinking or feeling, typically reflected in the behaviour of the health care provider towards a patient.

1.10 STUDY VARIABLES AND CUT OFF POINTS

1.10.1 VARIABLES

A variable is a characteristic or attribute of a person or object that varies within the population under study (Polit and Hungler, 2001)

1.10.1.1 Independent variable

The variable used to describe or measure the factors that are assumed to cause or at least to influence the problem (Varkevisser, 2003). The following were the independent variables for the study:

- I. Waiting time
- II. Availability of electro-medical equipment and infrastructure
- III. Information Education and Communication (IEC)
- IV. Attitude of health workers

1.10.2 Dependent Variable

Dependent variable is the presumed effect of the independent or experimental variable on the outcome (Lobiondo-Wood and Haber, 2006).

Dependent variable

- I. Satisfaction with cancer care.

TABLE 1.2: VARIABLE, INDICATORS AND CUT-OFF POINTS

VARIABLES	INDICATORS	SCORE	CUT-OFF POINTS	QUESTION NUMBERS
Independent Variables				
Waiting time	short	2-4	Less than what the client expected (less than 60 minutes)	13-14
	long	0-1	More than what the client expected.(more than 60minutes)	
Availability of Electro-medical equipment and infrastructure	Adequate	7-10	Sufficient Equipment and in good working condition	15-19
	Inadequate	0-6	Shortage of equipment and faulty equipment	
Information, Education and Communication (IEC)	Adequate	7-10	Patient has an understanding of his/her condition and how he/she is going to be managed. Patient given information about medication side effects, and follow up care.	20-24
	Inadequate	0-6	Patient has no understanding of her condition and how he or she is going to be managed. Patient not given information about his/her medication and information about follow up care.	

Attitude of health workers	Positive	10-16	Courteous health workers Information given to the patient about his or her condition, involvement in decision making and attention to patient queries.	25-28
	Negative	0-9	Unfriendly health workers No information given to patient about his or her condition.	
Dependent Variable				
Patient satisfaction with cancer care	Satisfied	32-58	Need fulfilled that is, (short waiting time, adequate electro-medical equipment, friendly staff attitude and medical/surgical materials and information education and communication given during care).	6-28
	Dissatisfied	0-31	Need unfulfilled that is, (Long waiting time, Negative attitude of health workers, Inadequate equipment and surgical/medical materials and information education and communication not given during care).	

CHAPTER TWO

2.0 LITERATURE REVIEW

Literature review is an account of what has been published on a topic by accredited scholars and researchers (Kombo and Tromp, 2010). It involves examining documents such as books, magazines, journals and dissertations that have a bearing on the study being conducted (Kombo and Tromp, 2010).

This chapter presents a critique of existing literature on patient satisfaction on cancer care. A number of Researchers and Academicians have taken time to write on various aspects related to patient satisfaction with cancer care and satisfaction in general.

The literature review focused on published information such as books, articles and journals that were conducted globally, regionally and locally. Also the information on data bases accessed electronically included PubMed, Google Scholar and Hinari. Only articles written in English language are included. The review was organized as follows; patient satisfaction with cancer care and factors influencing it (waiting time, availability of electro-medical equipment and infrastructure, number of oncology trained staff, Information Education and Communication and attitude of health workers).

2.1 PATIENT SATISFACTION WITH CANCER CARE

Patient satisfaction in this study referred to a feeling and contentment a patient with cancer gets when his/her desire, needs (short waiting time, adequate electro medical equipment, adequate staffing, adequate IEC and positive staff attitude) or expectations have been fulfilled. The articles below highlight some of the studies which were conducted on patient satisfaction and some of the factors influencing it.

According to a research conducted by Hoberg (2011) to examine patient satisfaction in a single institution outpatient oncology centre in Australia, the study reviewed a high level of satisfaction with the centre in all dimensions of care. Mean satisfaction scores for all aspects of care were above 85 with median scores at ceiling for ten of the fourteen care dimensions. The two lowest areas of satisfaction reported were waiting time and the availability of the nursing staff and provision of information from the nurses. Treatment route did not affect satisfaction scores in

any care dimensions other than nursing which had been expected since patients receiving only oral therapy rarely if ever see the nursing staff. Therefore, the study concluded that there was a correlation between patient satisfaction and waiting time, availability of nursing staff and provision of Information Education and Communication.

According to the research conducted by Omdavari et al (2008) on patient satisfaction at five large hospitals of Tehran University of Medical Sciences, the results showed that 85.5% of clients were satisfied above average and 41.8% of clients showed very good satisfaction. Clients with high educational level and those who waited longer were less satisfied. Key factors in patient satisfaction with care given were educational level and waiting time. High level of education improved one's understanding of the nature of the disease and so participated in treatment decision which could have positive effects on patient satisfaction, compliance and health outcomes. On the other hand low level of education led to poor understanding of the nature of disease and less participation in treatment decisions which could have negative effects on patient satisfaction. Short waiting time could have led to greater treatment compliance and ultimately to better patient outcome while longer waiting time could have led to patient dissatisfaction with care given. In conclusion, the findings of this study showed that patient satisfaction was influenced by both level of education and waiting time.

Another study on patient satisfaction was conducted at Muhimbili National Hospital (MNH) in Dar-Es-laam, Tanzania by Muhondwa et al (2008). The purpose of the study was to examine the extent to which patients were satisfied with the services they received at this hospital. The findings indicated that most patients were satisfied with the services and care they received. This high level of satisfaction was viewed within the context of a hierarchical public health care delivery system, with Muhimbili National Hospital (MNH) at the apex. The services and care Muhimbili National Hospital (MNH) provided could only be excellent compared to that provided by lower level health facilities. Patients covered by this study perceived the services provided by MNH as superior, and this was reflected in the high level of satisfaction they reported. Some patients expressed dissatisfaction with specific aspects of the services that they received. They were particularly dissatisfied with long waiting times before receiving services, the high cost of treatment and Investigations charged at MNH, poor levels of hygiene in the wards and negative attitude of staff towards patients. From this study it was therefore concluded that even though

only a small proportion of patients expressed dissatisfaction with those aspects of the services provided, they were significant in that they constituted a call for action by the MNH Management to encourage the health personnel to embrace a new staff- patient relationship belief, in which patient was viewed as a customer.

2.2 WAITING TIME

Waiting time in this study referred to the time spent before a client was seen by a health worker at Cancer Diseases Hospital from the time they arrived. Waiting time is believed to have great impact on patient satisfaction. The articles below highlight some of the studies conducted on waiting time and how it influences patient satisfaction.

In a study conducted by Anderson et al (2007), in the United States to examine the relationship between patient waiting time and willingness to return for care and patient satisfaction ratings with primary care physicians, the findings indicated that longer waiting times were associated with lower patient satisfaction ($p < 0.05$), however, time spent with the physician was the strongest predictor of patient satisfaction. The decrement in satisfaction associated with long waiting times is substantially reduced with increased time spent with the physician (5 minutes or more). Importantly, the combination of long waiting time to see the doctor and having a short doctor visit was associated with very low overall patient satisfaction. The study concluded that the time spent with the physician was a strong predictor of patient satisfaction than the time spent in the waiting room. It was then concluded that patients are satisfied with spending longer time with the physician than being in the waiting room.

In contrast to the study by Anderson et al (2007), another study was conducted by Thompson et al (1996) in the Emergency Department at MacNeal Hospital; Berwyn, Illinois, United States of America entitled 'Effects of actual waiting time, perceived waiting time, information delivery, and expressive quality on patient satisfaction in the emergency department'. The findings of this study were as follows: The perception that waiting times were less than expected was associated with a positive overall satisfaction rating for the Emergency Department encounter ($P < .001$); Satisfaction with information delivery and with staff expressive quality were also positively associated with overall satisfaction during the Emergency Department encounter ($P < .001$); Actual waiting times were not predictive of overall patient satisfaction ($P = NS$).

From these findings, it can therefore be concluded that perceptions regarding waiting time, information delivery, and expressive quality predict overall patient satisfaction, but actual waiting times do not. Providing information, projecting expressive quality, and managing waiting time perceptions and expectations may be a more effective strategy to achieve improved patient satisfaction in the Emergency Department than decreasing actual waiting time.

Another study was conducted by Westaway, et al (2003) on Interpersonal and organizational Dimensions of Patient satisfaction in South Africa. From this study, it was reported that irrespective of a country setting (developed or not developed), the highest levels of dissatisfaction were with long waiting time. Patients do not like to be left alone for a long time and he pointed out that long lines and waiting times for services and care are a waste of time and have detrimental effects on health. Patients also express dissatisfaction with inflexible administrations that leave them not knowing who to contact. Therefore it was concluded that accurate wait time measurement is essential to understanding system performance. Knowing where waiting occurs and its effects on patients is necessary to shape interventions that reduce waiting time and evaluate when interventions are effective.

2.3 ELECTRO-MEDICAL EQUIPMENT AND INFRASTRUCTURE

Electro-medical equipment in this study referred to machinery that uses electrical power to diagnose, treat and monitor patient with cancer. It includes Magnetic Resonance Imaging (MRI), CT scan, and cobalt 60. The studybelow highlight how availability of electro-medical equipment (diagnostic facilities) and infrastructure influence patient satisfaction.

Similar to the situation at Cancer Diseases Hospital are the findings of the study conducted by Sharma (2005) on patient satisfaction at Zonal Hospital in Mandi. In this study, it was reported that patient satisfaction regarding the diagnostic facilities like ECG, X-ray and laboratory services available with the hospital is far from being satisfactory. As the trends indicate 82%, 78% and 80% of the respondents were not satisfied with the ECG, X-ray and laboratory services respectively. The levels of patient satisfaction of Out Patient Department (OPD) indicated that about half (54%) of the patients were not satisfied with building arrangements for OPD and the responses of the patients regarding the waiting room facility also reveals that most of them were not satisfied (70%). Therefore in conclusion, inadequate electro-medical equipment and infrastructure were associated with low levels of patient satisfaction.

2.4 INFORMATION EDUCATION AND COMMUNICATION (IEC)

Information Education and Communication (IEC) in this study implied the information given about the patient's condition and how they were going to be managed including follow up care. The studies below highlight how IEC influences service delivery and patient satisfaction with care.

A study conducted on patient satisfaction with out-patient cancer care in Ontario, Canada by Clancy and Eisenberg, 2007 showed that 83% of patients received information on managing radiation side effects while 78% said they were instructed on how to manage the chemotherapy side effect. The lower scores reported by patients in relation to getting information about coping with their cancer treatment and experience, 39% of patients said that they were not given enough information about emotional changes resulting from cancer, while 44% reported not being educated adequately about potential changes in sexual activity. Similarly, 44% said they were not referred to professionals who could help them work through the anxiety and fear. The study suggested that patients were satisfied with education on treatment side effects while emotional support remains a weak point.

In conclusion, the findings of this study showed that health care providers are good at managing the patient's treatment and side effects but ignore inquiring what is important from the patient's perspective. Therefore identifying patients' needs would be of importance when providing information Education and Communication because knowledge can lead to good health outcomes and high patient satisfaction.

Another study was conducted by Anderson, Barbara and Feldman (2007) entitled 'what patients want: a content analysis of key qualities that influence patient satisfaction'. The findings of this study concluded that patient satisfaction ratings were highly influenced by communication and follow-up care. The core qualities acting to be the most important are; communication, access, interpersonal skills, care coordination and follow-up. The practical use of their findings could be to put more emphasis in physician training on developing skills in clearer communication, empathetic expression and the support for patient information.

A study was conducted in Netherlands by Kruijver et al (2001), on communication skills of nurses during interactions with simulated cancer patients. This paper reported a direct observational study using video tapes. The study focused on the balance of affective and instrumental communication employed by ward nurses during the admission interview with recently diagnosed cancer patients, including nonverbal communication. The results revealed that more than 60% of nurses' utterances were of an instrumental nature. Affective communication occurred, but was more related to global affect ratings like giving agreements and paraphrases than to discussing and exploring actively patient's feelings by showing empathy, showing concern and optimism.

Looking at this study nurses should be systematically provided with (continuing) training programmes, in which they learn how to communicate effectively in relation to patients' emotions and feelings and how to integrate emotional care with practical and medical tasks.

2.5 ATTITUDE OF HEALTH WORKERS

Attitude in this study is referred to as a settled way of thinking or feeling typically reflected in the behavior of the health care provider towards a patient. The studies below highlight attitude of health workers influence service delivery and patient satisfaction.

Attree (2001) studied the perception of Doctors, Nurses, Managers, Patients and their relatives in the United Kingdom. The results indicated that five of the seven dimensions were important; encouraging close, sociable relationships (courtesy and emotional support), patient focus (patient-centred care), open communication and information flow (communication and information), availability of accessibility to patient (access) and holistic care (technical quality). It was then concluded that health workers' courtesy and emotional support to patients are among the important dimensions of care.

A study conducted by Mandokhail (2007), reported client perspective that client centered care required health providers to respect the client's point of view, encourage clients to discuss their needs, provide the appropriate medical information to the client and assist them in making decisions rather than telling them what to do. The relationship between health worker and client is a tenuous one. The health worker has an opportunity to be extremely influential on a client simply by the way he/she interacts with that person. Many people view a health worker in the

same light as a parent. Consequently, clients expects health providers to behave and act in a manner deserving such respect. Numerous studies cited low satisfaction of quality of care because of poor attitude from health care provides.

From this study, it was concluded that health workers' attitude has an influence on patient satisfaction because it carries weight with regard to staff-patient relationship and delivery of care hence the need to improve on the way they interact with patients.

2.6 CONCLUSION

The above studies show that in order to provide optimal cancer services and win patient satisfaction, research based interventions are needed in areas such as clinical care processes, nursing services, staff attitude and treatment of patients, physical environment and waiting time. Furthermore, good communication skills enhance patient satisfaction with cancer care. To make these improvements, institutionalizing quality management in health services is a must and using its feedback in a systematic way can enhance efficiency and patient satisfaction with cancer care.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research methodology refers to the steps, procedures and strategies for gathering and analyzing the data in research investigations (Polit and Beck, 2008). The purpose of this study was to determine patient satisfaction with cancer care at Cancer Diseases Hospital. This chapter includes details of research design, research settings, study population, sample selection and sample size. It also includes data collection techniques and an explanation of a pilot study which was conducted to ascertain validity and reliability of the research instruments. Ethical considerations, plans for data analysis and dissemination of findings are also included.

3.2 RESEACH DESIGN

A research design is a blue print for conducting the study that maximizes control over factors that could interfere with the validity of the findings (Burns and Grove, 2005). The research design guides the researcher in planning and implementing the study in a way that is most likely to achieve the intended goals. The control provided by the design increases the probability that the study results are accurate reflections of reality (Burns and Grove, 2005). The design of the study is the end result of a series of decisions made by the researcher concerning how the study will be implemented.

A descriptive non-intervention study design was used as the investigators did not introduce any form of intervention in form of treatment or any control group. A descriptive study is one which is carried out for the purpose of providing an accurate portrayal of a group of subjects with specific characteristics (Basavanthappa, 2006). This study was conducted in a natural setting at Cancer Diseases Hospital in Lusaka. The research on patient satisfaction with cancer care was the first at CDH research would help in bringing the investigators to an understanding of this complex issue of patient satisfaction hence extending knowledge of the subject.

The study was quantitative because there was an assignment of numerical values to objects and events/situations. Descriptive study design helped the investigators to observe, describe and document aspects of cancer care. The purpose was to obtain new knowledge by describing the associations among variables which included satisfaction, waiting time, availability of electro-medical equipment and infrastructure, Information Education and Communication (IEC) and attitude of health workers. Descriptive research design was also chosen because of the advantage that it is less expensive, easy to obtain information and does not require a lot of time in which to complete the survey (short duration). With regard to time dimension, the study is cross-section as information from participants was obtained at one point in time.

3.3 RESEARCH SETTING

Research setting is a physical location or condition in which data collection takes place in a study (Polit and Beck, 2008). The study was conducted at Cancer Disease Hospital (CDH) a government owned out-patient hospital situated within University Teaching Hospital (UTH) premises in Lusaka. The services that are offered at CDH are out-patient services only. These services include treatment of cancer patients in the form of radiotherapy, chemotherapy and brachytherapy. Other services offered are screening patients, laboratory services and follow-up care. The services are offered through clinics which are held from Tuesday to Thursday.

Being the only Cancer Diseases Hospital in the country, the study setting was the most suitable place for the researchers to capture the target population as cancer patients from all over Zambia are referred to this hospital for treatment. In addition, Cancer Diseases Hospital was chosen because the investigators observed an increase in cancer burden resulting in a rise in the number of patients requiring treatment and yet infrastructure remained the same, equipment had been reducing due to wear and tear and staffing levels remained inadequate. These factors could affect the provision of cancer care to patients and consequently patient satisfaction.

3.4 STUDY POPULATION

According to Basavanthappa (2006), a study population refers to a total category of persons or objects that meets the criteria for study established by the researcher. The study population comprised patients aged 18 years and above both male and female who were being treated for cancer and those coming for reviews at Cancer Disease Hospital.

This study population included patients with the top five (5) types of cancer (Cervical, Breast, Kaposi Sarcoma, Head and Neck and Prostate). These are the commonest types of cancers and patients were available to give primary information which would help eliminate threats to validity.

3.5 SAMPLE SELECTION

A sample is a subset of the population that is selected for a study (Burns and Grove, 2005). Sampling is the process of selecting representative units of a population for study in research. It is the process of selecting a subset of a population in order to obtain information regarding a phenomenon in a way that represents the entire population (Basavanthappa, 2006).

A non-probability purposive sampling is the strategy in which the researcher selects subjects who are considered to be typical of the population (Lobiondo-Wood and Haber, 2006). In this study, purposive sampling method was used to sample the population of cancer patient because this allowed us to select patients who only had the top five cancers which our study focused on. This could not have been possible if a probability method was used to select two hundred (200) patients.

3.6 SAMPLE SIZE

Sample is a set of elements that make up the population; an element is the most basic unit about which information is collected (Lobiondo-Wood and Haber, 2006). The criterion which was used to select the sample size took into consideration the duration of the study (short), availability of resources in terms of time, manpower, transport and research funds. The sample size was 200.

3.7 DATA COLLECTION

Data collection is precise, systematic gathering of information relevant to the research purpose or the specific objectives, questions or hypothesis of a study (Burns and Grove, 2005). It may take the form of a questionnaire, an interview schedule or some other type of tool for eliciting information.

In this study, a semi structured interview schedule and checklist was used to collect data. The interview schedule had both open and closed ended questions which were used to interview all the respondents. The schedule was divided into sections, from A to F contained questions on demographic data, satisfaction with cancer care, waiting time, availability of electro-medical equipment and infrastructure, Information, Education and Communication (IEC) given during cancer care and attitude of health workers towards cancer patients respectively. A check list was used by the researchers to find out the availability of electro-medical equipment and adequacy of infrastructure. A semi structured interview schedule was used because it allowed cancer patients to describe the situation using their own words and misunderstandings were corrected there and then. In addition, the presence of the investigators during the interview assisted not only in obtaining high response rate but also observation of non-verbal communication to correlate the verbal to non-verbal responses. Despite the process of administering the interview schedule being long, the investigators prepared questions that were only relevant to the topic of study so that the process of interviewing was short. The interview lasted between 30 to 40 minutes.

3.8 VALIDITY

Validity refers to whether a measurement instrument accurately measures what it is suppose to measure. When an instrument is valid it truly reflects the concept it is suppose to measure (Basavanthappa, 2006). In this study, validity was measured through content validity which is the extent to which the research instrument samples the factors or situation under study. To achieve this, the content and questions asked in the semi structure interview schedule were related to the objectives and variables of the study. The instrument was then presented to the supervisor for evaluation of the content validity. A pilot study was also carried out to measure validity of the interview schedule.

3.9 RELIABILITY

Reliability is the consistence of measures obtained in the use of a particular instrument. If the same measurement scale is administered to the same individuals at two or more different times, the measurement is reliable if the individual's responses to the items remain the same (Burns and Grove, 2005). In this study, reliability of the interview schedule was achieved by carrying out a pilot study on cancer patients (with top five types of cancer) who came for review and expected not to be back within the next three (3) months. This was done in order to test the degree of accuracy with which the interview schedule determined patient satisfaction with cancer care. Inaccuracies were prevented by making corrections and additions to the interview schedule after the pilot study. There were two (2) more questions which were included in section B; where you satisfied with the care you received? If no, why were you not satisfied? One (1) question was modified as follows; if yes, how would you rate the satisfaction with cancer care which was rendered to you? In section E, only one (1) question was modified to make it clear; to what extent did the health care provider speak to using the language you understand? In section F, corrections were made on assessment of attitude by writing the statements in neutral and respondents were asked to strongly agree, agree, disagree or strongly disagree to the statement.

3.10 DATA COLLECTION TECHNIQUE

Data collection technique is a precise, systematic gathering of information relevant to the research purpose or the specific objectives, questions and hypotheses of the study (Burns and Grove, 2005). This was the technique the researchers used to collect relevant data from study participants because if data was to be collected haphazardly, it would have been difficult to answer the research question in a conclusive way. Data was collected by a group of four student researchers over a period of 10 days and 5 interviews were conducted per day by each student researcher. The procedure for data collection in this study was as follows:

In this study, a semi structured interview schedule and checklist was used to collect data. The interview schedule had both open and closed ended questions which were used to interview all the respondents. The schedule was divided into sections, from A to F contained questions on demographic data, satisfaction with cancer care, waiting time, availability of electro-medical equipment and infrastructure, Information, Education and Communication (IEC) given during cancer care and attitude of health workers towards cancer patients respectively. A check list was used by the researchers to find out the availability of electro-medical equipment and adequacy of infrastructure. A semi structured interview schedule was used because it allowed cancer patients to describe the situation using their own words and misunderstandings were corrected there and then. In addition, the presence of the investigators during the interview assisted not only in obtaining high response rate but also observation of non-verbal communication to correlate the verbal to non-verbal responses. Despite the process of administering the interview schedule being long, the investigators prepared questions that were only relevant to the topic of study so that the process of interviewing was short. The interview lasted between 30 to 40 minutes.

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The researchers got permission from Cancer Diseases Hospital Management to carry out a pilot study and the main study. Before carrying out the study, the student researchers introduced themselves to the respondents and explained the purpose of the study. Later on, reassurance of confidentiality and anonymity was given to the respondents. Feedback procedures were as well given to the respondents. After obtaining the consent from the respondents to carry out the interview, the student researchers read out the questions and recorded responses as they were given. At the end of the interview, the student researchers went through the interview schedule to check for consistence in the answers given and for completeness of the interview schedule. Then the interviewers asked the respondents for any questions, comments or contributions regarding the study and thereafter thanked them for their participation. The interview lasted between 30 to 40 minutes.

3.11 PILOT STUDY

A pilot study is commonly defined as a smaller version of a proposed study to refine the methodology (Burns and Grove, 2005). It is developed much like the proposed study, using similar subjects, the same setting, the same treatment and the same data collection and analysis techniques (Burns and Grove, 2005). The researchers used the pilot study to determine whether the proposed study was feasible, to identify problems with the design, to determine the reliability and validity of research instruments and give the researchers experience with the respondents. A pilot study was conducted at Cancer Diseases Hospital as it is the only hospital providing cancer services. It consisted of 20 respondents which was 10% of the actual study sample population who were selected using purposive sampling method. The respondents were interviewed using semi structured interview schedule to test the data collection tool. Necessary adjustments were made to the tool after the pilot study. These changes included the addition of extra questions which we thought could help us collect valuable data. Other statements in the interview schedule were reconstructed to improve on clarity.

3.12 ETHICAL CONSIDERATIONS

Ethical considerations involve an understanding of the ethical codes and guidelines for protecting the rights of the research subjects (Basavanthappa, 2006). A good research problem conforms to moral, ethical and legal standards of scientific enquiry. A research should have deep concern for human welfare and sensitivity for the rights of research subjects. Any research that may be

harmful violates the ethical code of nursing and may be illegal (Basavanthappa, 2006).The respondents have the right to know the risks involved in participating, the purpose of the research, nature of the study situation and the results of the study. They also have the right to confidentiality and the right to participate or withdraw from the study.

In this study ethical issues were addressed by requesting for permission to conduct the study from Cancer Diseases Hospital Management. Personal consent was obtained from the clients who participated in the study. The respondents were briefed about the purpose of the study and that they had the right to participate or withdraw from the study. The respondents were assured of confidentiality of personal information shared with the researchers. They were informed that their names would not be written on the interview schedule, therefore the information given would not be attached to any name and the results would be generalized to the population being represented. The completed semi structured interview schedule was kept under strict security conditions to avoid unauthorized access to the information contained therein.

Some questions during interviews caused emotional stress and anxiety to the patient. For example, question 7 in the interview schedule which asked for the type of cancer which the patient had. Most patients who have cervical and cancer of the penis were uncomfortable to mention or point at the affected area where the cancer is. Some even started tearing because of the psychological impact which comes with the cancer and the loss of function of the affected area. Such issues were addressed by giving the respondents a moment to breathe out and release their tension. The researchers encouraged the respondents to share their concerns with the family and health care providers to help relieve their anxiety. The researchers also reassured the respondents that cancer is a disease that can be cured if detected early. For those who come at a later stage, the researchers assured them that cancer growths can be controlled and that respondents can even learn to manage side effects of treatment and live normal lives.

CHAPTER FOUR

4.0 DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 INTRODUCTION

This chapter presents the research findings for the study. The aim of the study was to determine patient satisfaction with cancer care at Cancer Diseases Hospital. Data was collected from respondents using a semi-structured interview schedule and check list for electro-medical equipment. There were two hundred (200) respondents who participated in this study.

4.2 DATA ANALYSIS

Data analysis is the systematic organisation and synthesis of research data and in quantitative studies, the testing of hypotheses using those data (Polit and Beck, 2008). After every interview, the researchers went through the interview schedule to check for completeness, accuracy, internal consistence and legibility, and to correct mistakes. The interview schedules were sorted out according to serial numbers at the end of each day. Responses from open-ended questions were categorized and coded before being entered in the Statistical Package for Social Scientists software (SPSS). The responses from closed closed-ended questions were straight away entered in SPSS. The data was analyzed electronically in SPSS version 16.0. Examples of statistics which were calculated in SPSS include mean for age, percentages for all variables and P – Values for association between dependent and independent variables.

Analysis of data was done systematically starting with section A demographic data; followed by section B patient satisfaction; section C waiting time; section D availability of electro-medical equipment and infrastructure; section E information Education and Communication and finally section F attitude of health workers towards patients with cancer.

4.3 PRESENTATION OF FINDINGS

Data has been presented using frequency tables, pie charts, bar charts and cross tabulations. Frequency tables are suitable because they summarize the findings in a meaningful way, which is easy to understand and communicate a lot of information quickly (Polit and Beck, 2008). Cross tabulations of dependent and independent variables was done to show the relationship among

variables so that meaningful inferences could be drawn. Pie charts and bar charts have also been used as a way of displaying and reporting data, making it easier to report patterns and relationships, shapes of distributions, and trends (Flockton, Crooks and Gilmore, 2004).

4.3.1 SECTION A: DEMOGRAPHIC DATA

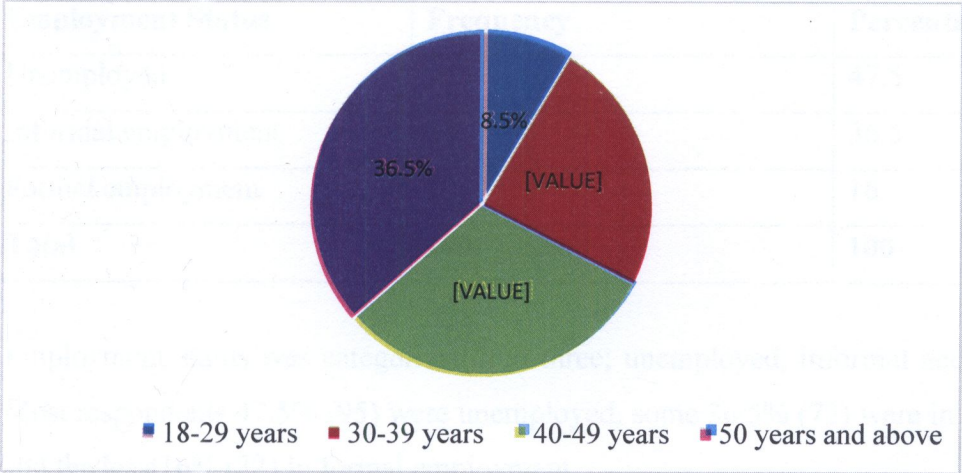
Demographic data included respondent’s characteristics such as sex, age, level of education, socio-economic status and occupation. Three (3) frequency tables and two (2) pie charts have been used to display the findings.

Table 4.1: Respondent’s Sex Distribution (n-200)

Sex	Frequency	Percentage (%)
Female	151	75.5
Male	49	24.5
Total	200	100.0

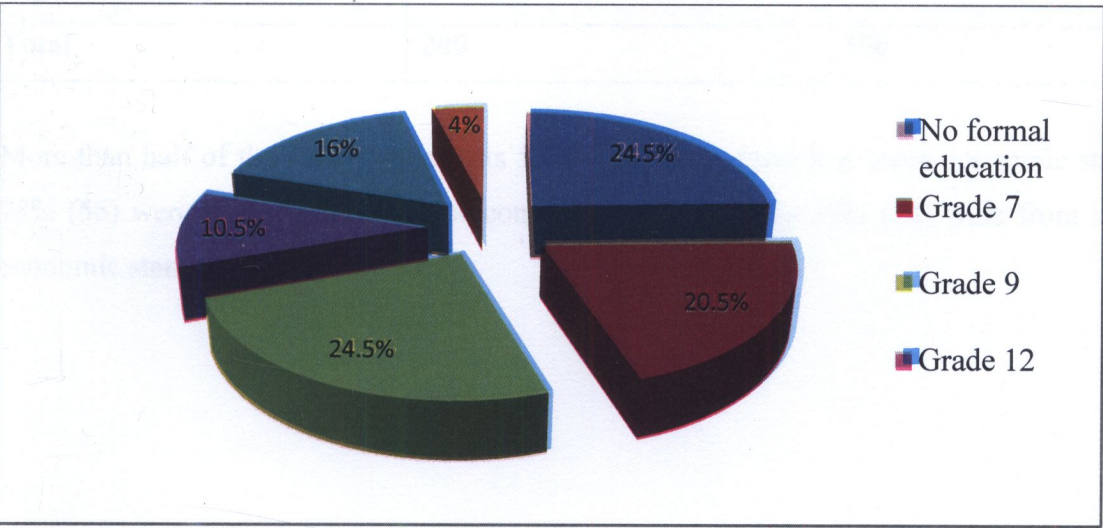
The majority 75.5% (151) of the respondents were female, while 24.5% (49) were male.

Figure 4.1: Respondents' age distribution (n=200)



The age distribution ranged from 18 years to 50 and above. Most respondents 36.5% (73) were aged 50 and above. In the age group of 40-49 there were 31% (62) respondents. Those aged 30-39 were 24% (48). The least 8.5% (17) were in the age group of 18-29.

Figure 4.2: Respondents' Level of Education (n=200)



The respondents' educational level ranged from no formal education to University. Majority of respondents 24.5% (49) fell into two categories; no formal education or grade 9. Those who attained grade 7 were 20.5% (41), while 10.5% (21) went up to grade 12 and the least 4% (8) reached university.

Table 4.2: Respondents' Occupation (n-200)

Employment Status	Frequency	Percentage (%)
Unemployed	95	47.5
Informal employment	73	36.5
Formal employment	32	16
Total	200	100

Employment status was categorized into three; unemployed, informal and formal employment. Most respondents 47.5% (95) were unemployed, some 36.5% (73) were in informal employment and the least 16% (32) in formal employment.

Table 4.3: Respondents' Socio-economic status (n-200)

Monthly Income	Frequency	Percentage (%)
Low (below K500,000)	106	53
Medium (K500,000 – 2,000,000)	56	28
High (above K2,000,000)	38	19
Total	200	100

More than half of the total respondents 53% (106) were from low socio-economic status, some 28% (56) were from medium socio-economic status and only 19% (38) were from high socio-economic status.

4.3.2 SECTION B: SATISFACTION WITH CANCER CARE

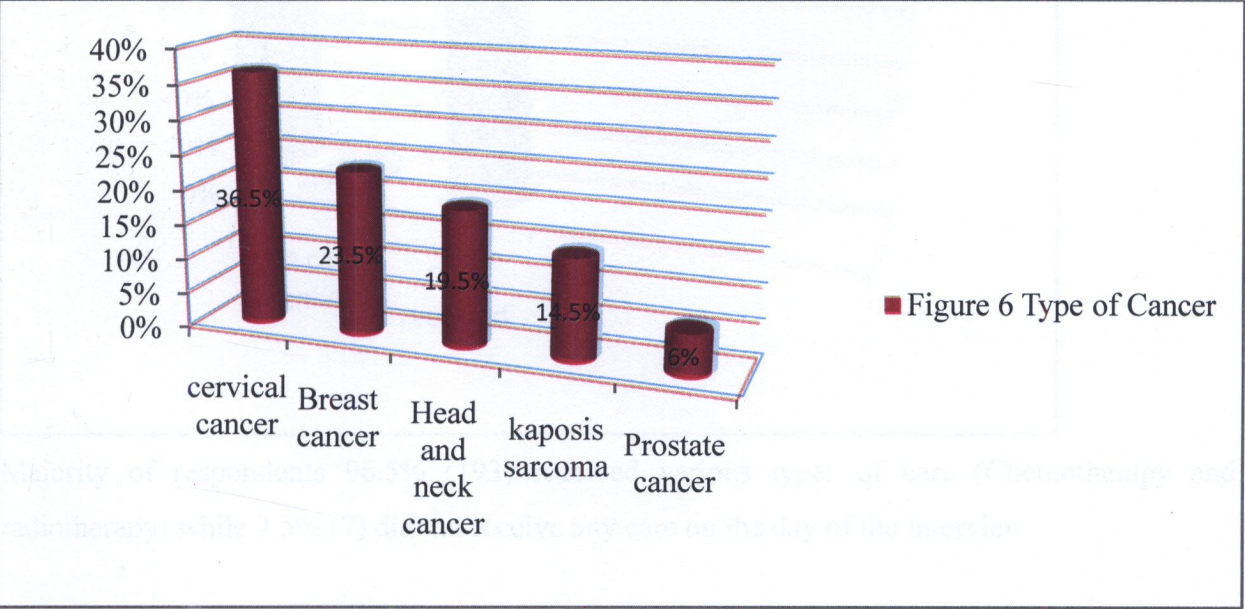
In this section, the researchers sought to determine the satisfaction levels of respondents with regard to cancer care. There were five (5) questions which elicited information on satisfaction; one (1) frequency table and six (6) bar charts have been used to display the findings.

Table 4.4: Reason for seeking Cancer Care on the day of Interview

Reason for seeking care on the day of interview	Frequency	Percentage (%)
Treatment	188	94
Review	12	6
Total	200	100

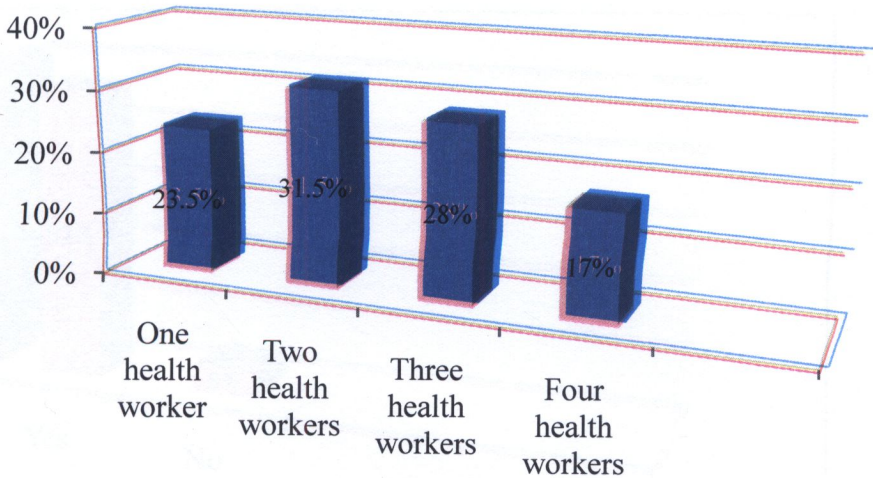
Almost all of the respondents 94% (188) were seeking treatment on the day of interview while 6% (12) were being reviewed.

Figure 4.3: Type of Cancer (n-200)



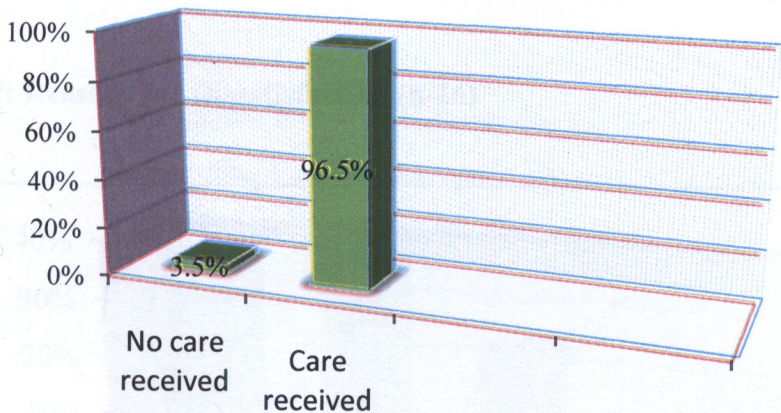
The most common type of cancer among the respondents was cervical 36.5% (73), followed by breast 23.5% (47), head and neck 19.5% (39). Kaposi sarcoma was 14.5% (29) and the least was prostate cancer 6% (12).

Figure 4.4: Number of health workers attending to patients (n - 200)



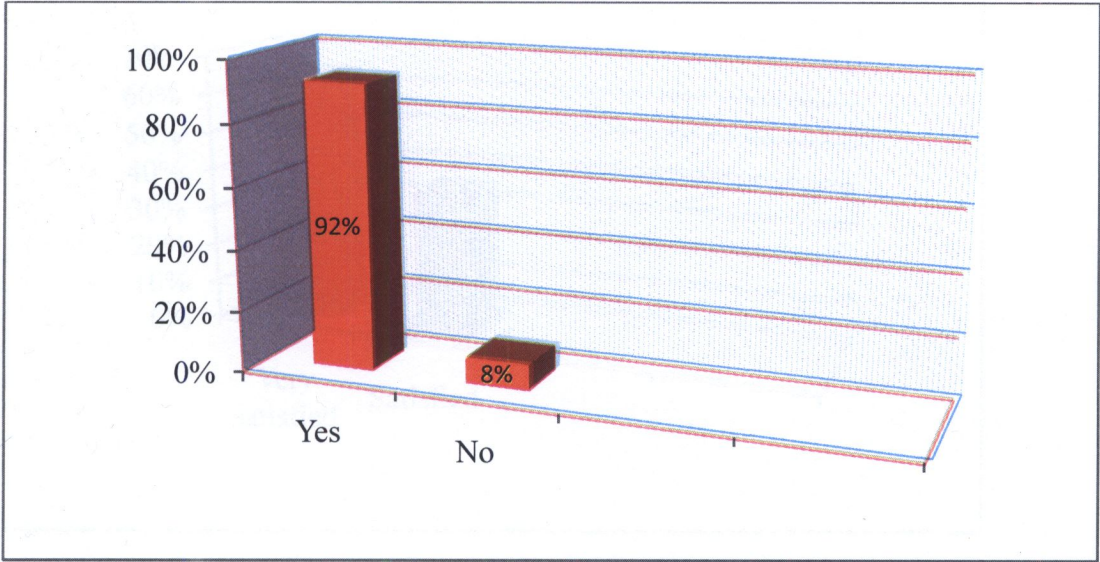
Most of the respondents 31.5% (63) were attended to by two health workers, 28% (56) by three, 23.5% (47) by one health worker while only 17% (34) were attended to by four.

Figure 4.5: Care Received (n-200)



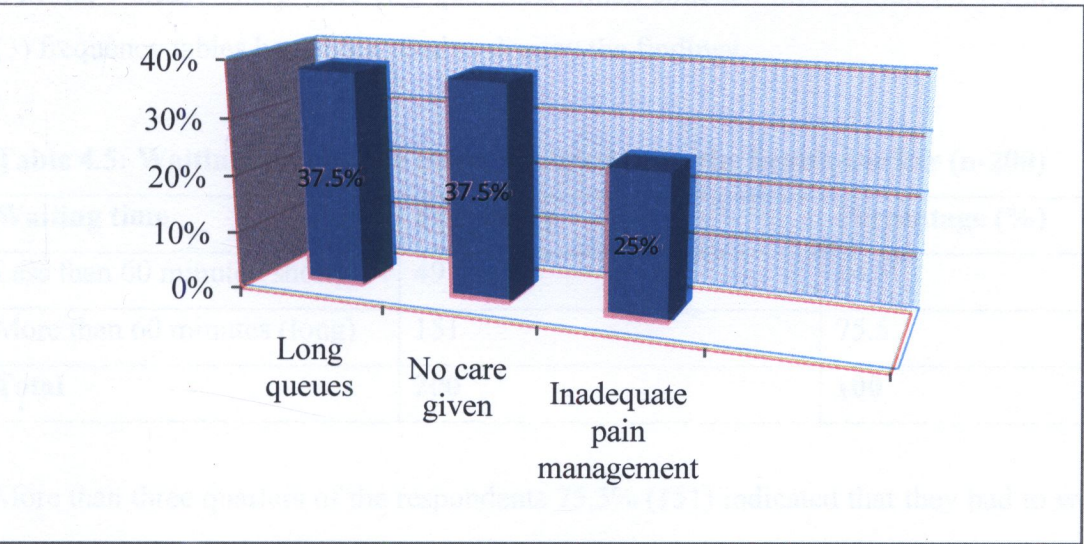
Majority of respondents 96.5% (193) received various types of care (Chemotherapy and radiotherapy) while 3.5% (7) did not receive any care on the day of the interview.

Figure 4.6: Respondents' Satisfaction with care received (n-200)



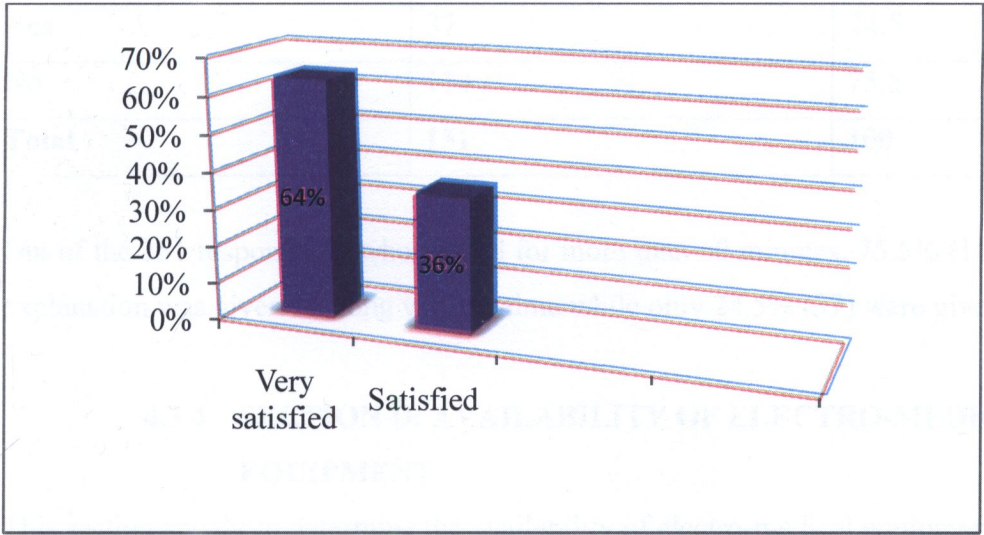
Majority 92% (184) of the respondents agreed that they were satisfied with the care received, while 8% (16) were dissatisfied.

Figure 4.7: Reasons for Dissatisfaction (n-16)



Among the 16 respondents who were dissatisfied, the major reasons for dissatisfaction were; no care received 37.5%, (6) long queues 37.5% (6) and inadequate pain management 25% (4).

Figure 4.8: Respondents' Satisfaction Rate (n-184)



Out of the 184 respondents who agreed to having been satisfied with the care received, 64% (117) indicated to having been very satisfied, while 36% (67) were just satisfied.

4.3.3 SECTION C: WAITING TIME

This section sought to establish how long the patients had to wait before they were attended to by a health worker. There were two questions which solicited information on waiting time. Three (3) frequency tables have been used to display the findings.

Table 4.5: Waiting time before being attended to by the health worker (n-200)

Waiting time	Frequency	Percentage (%)
Less than 60 minutes(short)	49	24.5
More than 60 minutes (long)	151	75.5
Total	200	100

More than three quarters of the respondents 75.5% (151) indicated that they had to wait for more than 60 minutes before being attended to and about a quarter 24.5% (49) waited for less than 60 minutes.

Table 4.6: Explanation given for long waiting time (more than 60 minutes) (n-151)

Explanation given	Frequency	Percentage (%)
Yes	37	24.5
No	114	75.5
Total	151	100

Out of the 151 respondents who waited for more than 60 minutes, 75.5% (114) indicated that no explanation was given for long waiting time while only 24.5% (37) were given an explanation.

4.3.4 SECTION D: AVAILABILITY OF ELECTRO-MEDICAL EQUIPMENT

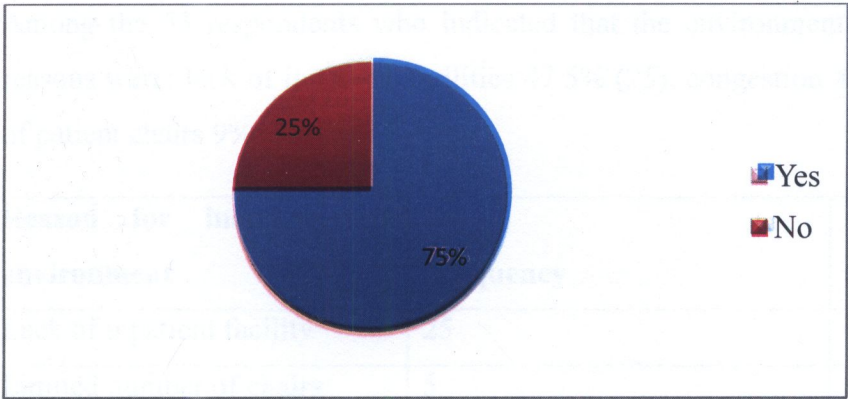
This section sought to determine the availability of electro-medical equipment and infrastructure. There were five questions which solicited for information on the availability of electro-medical equipment and infrastructure. Three (3) frequency tables and two (2) pie charts have been used to display the findings.

Table 4.7: Availability of electro-medical equipment (n-200)

Availability of electro-medical equipment	Frequency	Percentage (%)
Yes	173	86.5
No	12	6.0
Not applicable	15	7.5
Total	200	100

Majority of the respondents 86.5% (173) acknowledged availability of electro-medical equipment at CDH whilst 6% (12) denied. The remaining 7.5% (15) did not require use of electro-medical equipments as such they could not comment.

Figure 4.9: Explanation given for non-availability of Electro-medical Equipment (n-12)



Among the 12 respondents who indicated that electro-medical equipment was not available, 75% (9) agreed that explanation was given for the non-availability while 25% (3) indicated that no explanation was given.

Table 4.8: Appropriateness of the Environment for Care (n-200)

Appropriate environment	Frequency	Percentage (%)
Yes	147	73.5
No	53	26.5
Total	200	100

Utmost 73.5% (147) of respondents acknowledged that the environment was appropriate for care and the least 26.5% (53) denied.

Table 4.9: Reasons for Inappropriate Environment (n-53)

Among the 53 respondents who indicated that the environment was inappropriate, the major reasons were; lack of inpatient facilities 47.5% (25), congestion 43.5% (23) and limited number of patient chairs 9% (5).

Reason for inappropriate environment	Frequency	Percentage (%)
Lack of inpatient facility	25	47.5
Limited number of chairs	5	9
Congestion	23	43.5
Total	53	100

Table 4.10: Levels of Adequacy of Electro-medical Equipment and Infrastructure (n-200)

Level of adequacy	Frequency	Percentage (%)
Adequate	4	2
Inadequate	196	98
Total	200	100

Almost all the respondents 98% (196) indicated that electro-medical equipment and infrastructure was not adequate and only 2% (4) said it was adequate.

4.3.5 SECTION E: INFORMATION, EDUCATION AND COMMUNICATION

This section sought to determine the Information, Education and Communication (IEC) given to patients receiving cancer care. Five questions were asked to obtain data on IEC. Five (5) frequency tables have been used to display the findings.

Table 4.11: Information Education Communication given on management of cancer (n-200)

IEC on management of cancer	Frequency	Percentage (%)
Yes	149	74.5
No	51	25.5
Total	200	100

Almost three quarters of the respondents 74.5% (149) agreed having received IEC on management of cancer and a few 25.5% (51) disagreed.

Table 4.12: Extent of patient understanding of language used by the health worker (n-200)

Extent of patient understanding	Frequency	Percentage (%)
Larger Extent	172	86
Lesser Extent	28	14
Total	200	100

A good number of the respondents 86% (172) indicated that they understood to a larger extent the language that health workers used during IEC while only a few 14% (28) understood to a lesser extent.

Table 4.13: Information Education and Communication given on treatment options for Cancer (n-200)

IEC on treatment options	Frequency	Percentage
Yes	141	70.5
No	59	29.5
Total	200	100

Most of the respondents 70.5% (141) were given IEC on treatment options while 29.5% (59) were not given.

Table 4.14: Information Education and Communication given on follow-up care (n-200)

IEC on follow-up	Frequency	Percentage
Yes	162	81
No	38	19
Total	200	100

Majority of the respondents 81% (162) were given IEC on follow-up care with only 19% (38) who were not.

Table 4.15: Information Education and Communication given during course of Care (n-200)

IEC during care	Frequency	Percentage
IEC given	166	83
IEC not given	34	17
Total	200	100

A good number of the respondents 83% (166) were given IEC during care while 17% (34) were not given.

Table 4.16: Adequacy of Information Education and Communication given on cancer care (n-200)

Adequacy of IEC given	Frequency	Percentage
Adequate	152	76
Inadequate	48	24
Total	200	100

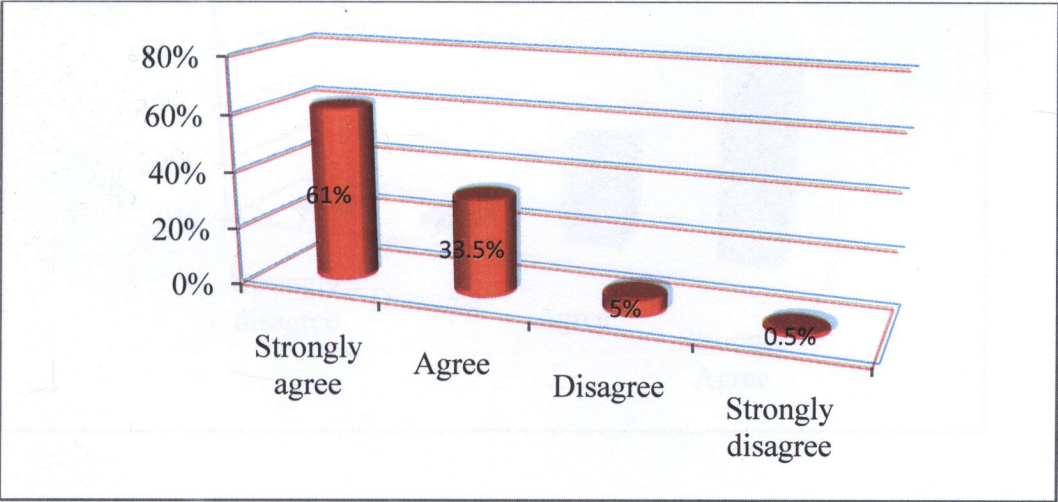
Response from respondents 76% (152) indicated that information education and communication given on cancer care was adequate while less than a quarter 24% (48) indicated that it was not.

4.3.6 SECTION F: ATTITUDE OF HEALTH WORKERS

This section sought to determine the attitude of health workers towards patients seeking cancer care. There were four (4) questions which solicited for information on attitude of health workers; four bar charts have been used to display the findings.

Figure 4.10: Attitude to patients' queries and concerns (n-200)

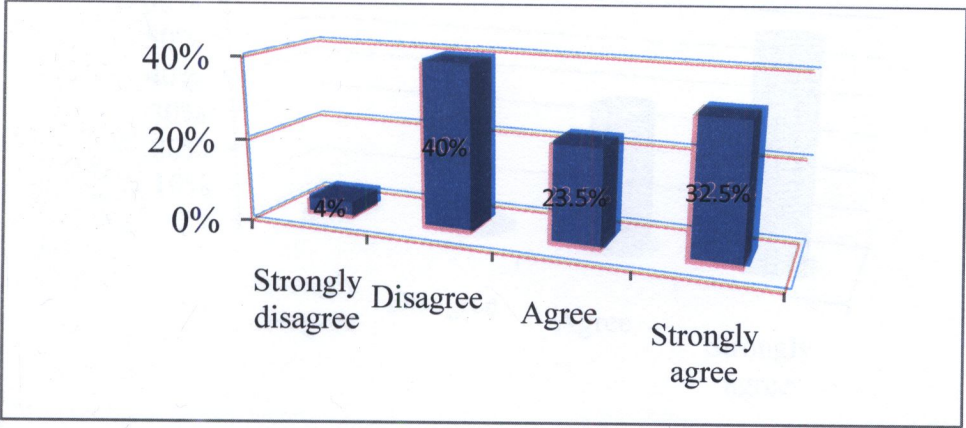
Figure 4.10: Health Provider's Courtesy (n-200)



Most of the respondents 61% (122) strongly agreed that health workers showed courtesy, 33.5%

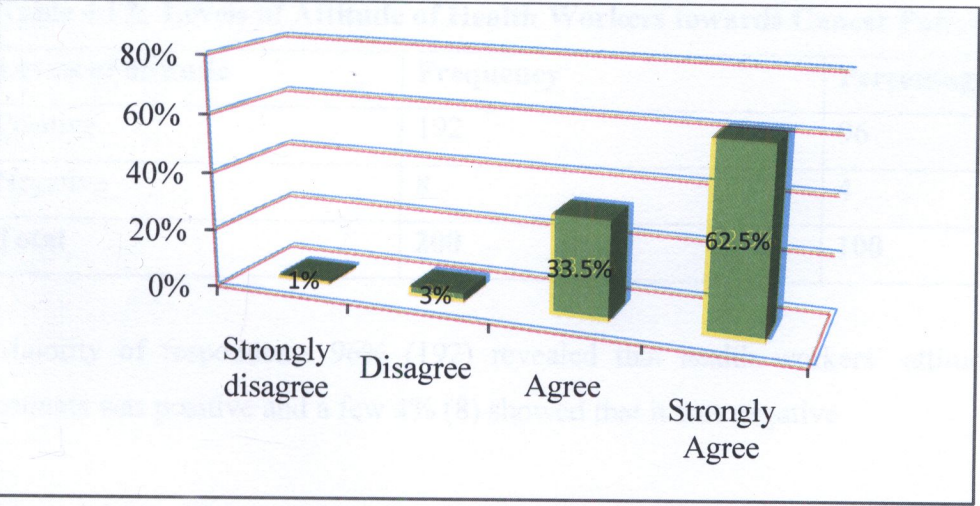
Most of the respondents 61% (122) strongly agreed that health workers showed courtesy, 33.5% (67) agreed, 5 % (10) disagreed while only 0.5% (1) strongly disagreed.

Figure 4.11: Patient involvement in decision making (n=200)



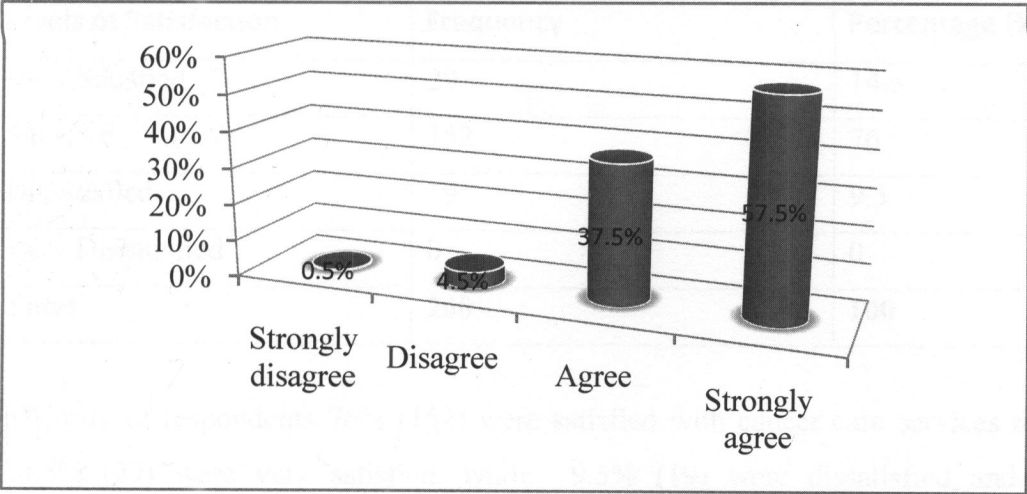
The majority of respondents 40% (80) disagreed being involved in decision making, 32.5% (65) strongly agreed, 23.5% (47) agreed and 4% (8) strongly disagreed.

Figure 4.12: Attention to patients' queries and concerns (n=200)



Most of the respondents 62.5% (125) strongly agreed that health workers attended to their queries and concerns, 33.5% (67) agreed, 3% (6) disagreed and 1% (2) strongly disagreed.

Figure 4.13: Nurse’s Concern when carrying out medical orders (n-200)



Most of the repondents 57.5% (115) strongly agreed that nurses showed concern when carrying out medical orders, 37.5% (75) agreed, 4.5% (9) disagreed and 0.5% (1) strongly disagreed.

Table 4.17: Levels of Attitude of Health Workers towards Cancer Patients (n-200)

Levels of attitude	Frequency	Percentage (%)
Positive	192	96
Negative	8	4
Total	200	100

Majority of respondents 96% (192) revealed that health workers’ attitudes towards cancer patients was positive and a few 4% (8) showed that it was negative.

4.3.7: OVERALL SATISFACTION

Overall satisfaction was calculated based on the responses from all the five independent variables; waiting time, availability of electro-medical equipment and infrastructure, Information Education and Communication and attitude of health workers used in the study.

Table 4.18 : Levels of Satisfaction with Cancer Care (n-200)

Levels of Satisfaction	Frequency	Percentage (%)
Very Satisfied	29	14.5
Satisfied	152	76
Dissatisfied	19	9.5
Very Dissatisfied	0	0
Total	200	100

Majority of respondents 76% (152) were satisfied with cancer care services received at CDH, 14.5% (29) were very satisfied, while 9.5% (19) were dissatisfied and none was very dissatisfied.

4.3.8 CROSS TABULATIONS

Cross tabulation is a calculation of frequencies for two variables considered simultaneously (Beck and Polit, 2008). Cross-tabulations allow the visual comparison of summary data output related to two variables within the sample (Burns and Grove, 2005). In this section, cross tabulation tables have been used to showrelationship between overall satisfaction and the following factors; age, level of education, social economic status, waiting time, availability of electro-medical equipment, Information Education and Communication and health workers’ attitude. The Chi-square statistical test was used to test the hypotheses of this study. Chi-square test is used to determine whether the two variables being examined are independent or related (Burns and Grove, 2005).

Table 4.19: Relationship between satisfaction and patient age

Patient age (years)	Level of satisfaction				Total	P- Value
	Very satisfied	Satisfied	Dissatisfied	Very Dissatisfied		
18-29	4 (24%)	10 (59%)	3 (18%)	0 (0%)	17 (8.5%)	0.367
30-39	9 (18.8%)	34 (70.8%)	5 (10.4%)	0 (0%)	48 (24%)	
40-49	10 (16%)	47 (76%)	5 (8%)	0(0%)	62 (31%)	
50 and above	6 (8%)	61 (84%)	6 (8%)	0(0%)	73 (36.5%)	
Total	29 (14.5%)	152 (76%)	19 (9.5%)	0(0%)	200 (100%)	

Among the respondents who were aged 50 and above, the majority 84% (61) were satisfied, 8% (6) were very satisfied, another 8% (6) were dissatisfied while none was very dissatisfied. Similarly those in the age range 40 to 49, majority 76% (47) were satisfied, 16% (10) were very satisfied, 8% (6) were dissatisfied and non was very dissatisfied.

P – Value - 0.367 indicating lack of an association between patient’s age and satisfaction.

Table 4.20: Relationship between satisfaction and level of education

Level of education	Level of satisfaction				Total	P-Value
	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied		
No formal education	6 (12.2%)	36 (73.5%)	7 (14.3%)	0 (0%)	49 (24.5%)	0.121
Grade7	3 (7%)	34 (83%)	4 (10%)	0 (0%)	41 (20.5%)	
Grade 9	13 (26.5%)	32(65.3%)	4 (8.2%)	0 (0%)	49(24.5%)	
Grade 12	4 (19%)	16 (76.2%)	1 (4.8%)	0 (0%)	21 (10.5%)	
College	3 (9.4%)	28 (87.5%)	1 (3.1%)	0 (0%)	32 (16%)	
University	0 (0%)	6 (75%)	2 (25%)	0 (0%)	8 (4%)	
Total	29 (14.5%)	152 (76%)	19 (9.5%)	0 (0%)	200 (100%)	

None of the respondents who attained university education was very satisfied or very dissatisfied, 75% (6) were satisfied and 25% (2) dissatisfied. Of the respondents who attained grade 9 education 26.5% (13) were very satisfied, 65.3% (32) were satisfied, 8.2% (4) were dissatisfied and none were very dissatisfied.

P – Value - 0.121 indicating lack of an association between patient satisfaction and educational level.

Table 4.21: Relationship between satisfaction and Socio-economic status

Socio-economic status	Level of satisfaction				Total	P-value
	Very satisfied	Satisfied	Dissatisfied	Very Dissatisfied		
High	2 (5.3%)	32 (84.2%)	4(10.5%)	0 (0%)	38(19%)	0.168
Moderate	10 (18%)	44 (78.5%)	2 (3.5%)	0 (0%)	56(28%)	
Low	17(16%)	76(71.7%))	13(12.3%)	0(0%)	106(53%)	
Total	29(14.5%)	152(76%)	19(9.5%)	0(0%)	200 (100%)	

Among the respondents from low socio-economic status, 71.7% (76) were satisfied, 16% (17) were very satisfied and 12.3% (13) were dissatisfied. Only 5.3% (2) of the respondents from high socio-economic status were very satisfied, 84.2% (32) were satisfied and 10.5% (4) were dissatisfied.

P – Value - 0.168 indicating lack of association between patient satisfaction and socio-economic status.

Table 4.22: Relationship between satisfaction and waiting time

Waiting time	Level of satisfaction				Total	P-value
	Very satisfied	Satisfied	Dissatisfied	Very Dissatisfied		
Short waiting time (less than 60 minutes)	14 (28.6%)	34(69.4%)	1(2%)	0	49(24.5%)	0.001
Long waiting time (more than 60 minutes)	15(10%)	118(78%)	18(12%)	0	151(75.5%)	
Total	29(14.5%)	152(76%)	19(9.5%)	0	200(100%)	

Among the respondents who waited for a short time, 69.4% (34) were satisfied, 28.6% (14) were very satisfied and only 2% (1) were dissatisfied. Of the respondents who waited for a long time, 78% (118) were satisfied, 12% (18) were dissatisfied and only 10% (15) were very satisfied.

P – Value - 0.001 indicating an association between satisfactions and waiting time.

Table 4.23: Relationship between Satisfaction and adequacy of electro-medical equipment and infrastructure

Electro-medical equipment	Level of satisfaction				Total	P-value
	Very satisfied	Satisfied	Dissatisfied	Very Dissatisfied		
Adequate	4(100%)	0(0%)	0(0%)	0(0%)	4 (2%)	0.000
Inadequate	25(13%)	152 (77%)	19(10%)	0(0%)	196 (98%)	
Total	29(14.5%)	152 (76%)	19(9.5%)	0(0%)	200(100%)	

All the respondents 100% (4) who indicated that electro-medical equipment and infrastructure was adequate were very satisfied. Among the respondents who indicated that electro-medical equipment and infrastructure was inadequate, 77% (152) were satisfied, 13% (25) were very satisfied, and only 10% (19) were dissatisfied.

P – Value - 0.000 indicating an association between satisfaction and adequacy of electro-medical equipment and infrastructure.

Table 4.24: Relationship between satisfaction and Information Education and Communication

IEC	Level of satisfaction				Total	P-value
	Very satisfied	Satisfied	Dissatisfied	Very Dissatisfied		
Adequate	28 (18.4%)	122(80.3%)	2 (1.3%)	0 (0%)	152 (76%)	0.000
Inadequate	1(3%)	30(62%)	17(35%)	0 (0%)	48 (24%)	
Total	29 (14.5%)	152 (76%)	19(9.5%)	0(0%)	200 (100%)	

Of the respondents who indicated that Information, Education and Communication (IEC) given on cancer care was adequate, 80.3% (122) were satisfied, 18.4% (28) were very satisfied and only 1.3% (2) were dissatisfied. Among the respondents who indicated that IEC given on cancer care was inadequate, only 3% (1) was very satisfied, 62% (30) were satisfied and 35% (17) were dissatisfied.

P – Value – 0.000 indicating an association between satisfaction and adequacy of Information Education and Communication given on cancer care.

Table 4.25: Relationship between satisfaction and Level of health workers’ attitude

Attitude	Level of satisfaction				Total	P-value
	Very satisfied	Satisfied	Dissatisfied	Very Dissatisfied		
Positive	28 (14.6%)	151 (78.6%)	13 (6.8%)	0 (0%)	192 (96%)	0.000
Negative	1 (12.5%)	1(12.5%)	6(75%)	0 (0%)	8(4%)	
Total	29 (14.5%)	152 (76%)	19 (9.5%)	0 (0%)	200 (100%)	

Among the respondents who indicated that health workers’ attitude towards cancer patients was positive, 78.6% (151) were satisfied, 14.6% (28) were very satisfied and only 6.8% (13) were dissatisfied. Of the respondents who indicated that health workers’ attitude was negative, only 12.5% (1) was very satisfied while75% (6) were dissatisfied.

P – Value - 0.000 indicating an association between satisfaction and attitude of health workers at Cancer Diseases Hospital.

4.3.9 SUGGESTIONS FROM PATIENTS

Table 4.26: Suggestions from respondents (n-200)

Suggestions	Frequency	Percentage (%)
Maintain same standards of care	18	9
Improve the standards of care through provision of more staff, electro-medical equipment, in- patient facility, waiting time and decentralized cancer services	182	91
Total	200	100

Almost all the respondents 91% (182) suggested that the standards of care be improved and only 9% (18) suggested that it should be maintained.

CHAPTER FIVE

5.0 DISCUSSION OF FINDINGS AND IMPLICATIONS FOR THE HEALTH CARE

The study sample consisted of 200 respondents who received cancer care at Cancer Diseases Hospital. Convenient sampling method was used to select the respondents. The purpose of the study was to determine patient satisfaction with cancer care at Cancer Diseases Hospital. The discussion is centred on the following study variables; patient demographic characteristics, patient satisfaction with cancer care, waiting time, availability of electro-medical equipment and infrastructure, Information Education and Communication (IEC) and attitude of health workers.

5.1 CHARACTERISTICS OF THE SAMPLE

Section A of the questionnaire obtained information on the demographic characteristics of the respondents. The demographic characteristics of the respondents which were relevant to this study were; sex, age, educational level, occupation and socio-economic status.

Majority 75.5% of the respondents were female, while 24.5% were male (Table 4.1). This discrepancy could probably be attributed to the fact that cervical cancer is the leading type of cancer in Zambia and is only found in women. This is evidenced by the percentage of patients who had cervical cancer 36.5% as compared to 6% for prostate cancer (Figure 4.3) in our sample.

The respondent's age ranged from 18 to 85 years with a mean of 51. Majority of respondents were above the age of 50 (Figure 4.1). This could be attributed to the fact that cancer is more common in the elderly than the young ones. This finding is supported by Black and Hawks (2005) that cancer incidence increases with age.

The findings revealed that 24.5% (49) of the respondents had no formal education and another 24.5% (49) had attained grade nine education, 20.5%(41) had attained grade seven education, 16% (32) college, 10.5% (21) grade 12 and only 4% (8) had attained university education (figure 4.2). The results may be attributed to differences in location and economic status because respondents in this study came from across the country. Higher education has also been found to be associated with early detection of the cancer as such people are able to notice any abnormality on their body and seek medical attention at the earliest possible time than those with lower

educational level as they can see a problem but delay in seeking medical advice due to low levels of understanding disease processes. This is supported by a study conducted by Dalton et al (2007) at A Brazilian Cancer Hospital to evaluate the influence of socioeconomic status and educational level in the prognosis of breast cancer patients. It was found that higher education was found to be associated with early stage disease diagnosis. Early diagnosis may reflect a better health awareness, which may depend on the cultural background and adequate information.

The findings under occupation were that, a large number of respondents 47.5% (95) were unemployed (table 4.2). This could be attributed to the fact that those who were employed and in high socio-economic status were more likely to be accessing cancer services abroad where the standards of care are better. Those with low socio-economic status (the unemployed) seek their services from Cancer Diseases Hospital which is a government hospital with free cancer services. The other reason for this finding could be due to high levels of unemployment in Zambia.

More than half of the respondents 53% (106) were from low socio-economic status with monthly income below K500, 000 while less than a quarter 19% (38) were from high socio-economic status with monthly income of more than K2,000,000 (table 4.3). This is attributed to the fact most of the respondents did not reach tertiary education and so there is lack of formal employment. According to the Jesuit Center for Theological Reflection, in Zambia, the reduction in formal employment has been accompanied by a decline in wage index (JCTR, 2010) possibly the reason why more than half of our respondents earned less than K500, 000.

5.2 DISCUSSION OF EACH VARIABLE

5.2.1 SATISFACTION

In this study patient satisfaction is defined as a feeling and contentment a patient with cancer gets when his/her desire, needs (short waiting time, adequate electro medical equipment, adequate staffing, adequate IEC and positive staff attitude) or expectations have been fulfilled.

Analysis of data revealed that majority 76% (152) of the respondents were just satisfied, 14.5% (29) were very satisfied, 9.5% (19) were dissatisfied and none were very dissatisfied (table 4.18).

This could be attributed to factors like inadequate electro-medical equipment and infrastructure (table 4.10) and lack of inpatient facilities. This can be attributed to the high cost of purchasing electro-medical equipment enough to cater for all patients. In addition, the hospital was built to offer only outpatient cancer services.

Level of education was not one of our independent variable. Literature review indicated that it can affect satisfaction (Omdavari et al, 2008). Therefore, level of education was cross tabulated with satisfaction and findings are provided in table 4.20. According to table 4.20, none of the respondents among those who attained university level of education were very satisfied, most 75% (6) were just satisfied. Among those who attained grade 7 education 7% (3) were very satisfied while 83% (34) were satisfied. This could be attributed to the fact that those with higher education have a higher expectation of how they are supposed to be managed and have a certain standard of care that they expect while those with low educational level have lower level of understanding on how they are supposed to be managed. This finding is consistent with those from a study conducted by Omdavari et al (2008) on patient satisfaction survey at five large hospitals of Tehran University in Iran which showed 85.6% of clients were satisfied above average and 41.5% showed very good satisfaction. The results showed that those with higher educational level were less satisfied. Educational level was one of the key factors of patient satisfaction with care given as those with higher education have a better understanding of what is happening while those with low education may expect anything due to lack of knowledge.

5.2.2 WAITING TIME

Waiting time was the time spent before a client was seen by a health worker at Cancer Diseases Hospital from the time they arrived. Waiting time was rated as short (less than 60 minutes), or long (more than 60 minutes). Among the respondents who waited for a short time, only 2% (1) were dissatisfied while those who waited for a long time 12% (18) were dissatisfied, P-Value – 0.001 (table 4.22). Based on these findings on waiting time the researchers reject the null hypothesis which states that there is no association between waiting time and patient satisfaction with cancer care.

These findings are similar to those from a study conducted by Anderson et al (2007), in the United States to examine the relationship between patient waiting time and willingness to return

for care and patient satisfaction ratings with primary care physicians, the findings indicate that longer waiting times were associated with lower patient satisfaction. The relationship between waiting time and patient satisfaction is supported by another study conducted by Westaway, et al (2003) on Interpersonal and organizational Dimensions of Patient satisfaction in South Africa. It was reported that in respect of a country setting (developed or not developed), the highest levels of dissatisfaction were with long waiting time.

The association between waiting time and satisfaction is further supported by Kano Satisfaction Model to cancer care under its category of differential services which are those services that directly correlate with patient satisfaction. For example short waiting time of less than an hour will promote patient satisfaction as this will be viewed as a positive experience while long waiting time of more than an hour will promote patient dissatisfaction as it will be viewed as a negative experience.

5.2.3 AVAILABILITY OF ELECTRO-MEDICAL EQUIPMENT AND INFRASTRUCTURE

Almost all of the respondents 98% (196) indicated that electro-medical equipment and infrastructure was inadequate (table 4.10). Of the respondents who indicated that electro-medical equipment was inadequate, the majority 77% (152) were just satisfied, 13% (25) were very satisfied and the least 10% (19) were dissatisfied. Although there were only 4 respondents who indicated that electro-medical equipment was available, they were all very satisfied, P-Value-0.000 (Table 4.23). Based on the findings on electro-medical equipment and infrastructure, the researchers reject the null hypothesis which states that there is no association between availability of electro-medical equipment and infrastructure and patient satisfaction with cancer care.

This is attributed to the fact that adequate equipment improves delivery of cancer services as this reduces on waiting time and patients are attended to within a short period of time, thereby satisfying patients. On the other hand inadequate equipment may result in long queues hence dissatisfying patients.

The association between availability of electro-medical equipment and infrastructure and patient satisfaction with cancer care is also supported by Kano Satisfaction Model to cancer care under its category of basic or expected services (when available patients take for granted) which state that failing to fulfill an expected service can create significant patient dissatisfaction. For example, a patient sent for radiation treatment will be dissatisfied if the service is not provided.

5.2.4 INFORMATION EDUCATION AND COMMUNICATION (IEC)

IEC was the information given about the patient's condition and how they were going to be managed including follow up care. More than three quarters 76% (152) of the respondents indicated that Information Education and Communication given on cancer care was adequate while less than a quarter 24% (48) showed that it was not adequate. Among the respondents who indicated that IEC on cancer care was adequate, 18.4% (28) were very satisfied, 80.3% (122) were satisfied and 1.3% (2) were dissatisfied. Respondents who indicated that IEC given was inadequate, only 3% (1) were very satisfied, 62% (30) were satisfied and 35% (17) dissatisfied, P-Value-0.000 (Table 4.24). With these results, the researchers rejected the null hypothesis that there is no association between IEC on cancer care and patient satisfaction. This could be due to the fact that Information, Education and Communication (IEC) is a key factor in the care of patients with cancer as patients exercise patience, cooperation and better understanding when well informed.

Findings on the relationship between IEC and satisfaction are supported by those from a study conducted by Thompson et al (1996) at McNeal Hospital, Berwyn, Illinois, USA entitled "Effects of actual waiting time, perceived waiting time, information delivery and expressive quality on patient satisfaction in the emergency department". Perceptions regarding waiting time, information delivery, and expressive quality predict overall patient satisfaction, but actual waiting times do not. In addition, Thompson et al (1996) indicated that providing information, projecting expressive quality, and managing waiting time perceptions and expectations may be a more effective strategy to achieve improved patient satisfaction.

5.2.5 ATTITUDE OF HEALTH WORKERS

In this study, attitude is a settled way of thinking or feeling typically reflected in the behavior of the health care provider towards a patient. Almost all the respondents 96% (192) rated the attitude of health workers as positive and only 4% (8) rated it as negative (Table 4.17). Among the respondents who indicated that the attitude of health workers was positive, 14.6% (28) were very satisfied, most 78.6% (151) were satisfied while 6.8% (13) were dissatisfied. Of the respondents who indicated that the attitude of health workers was negative, 12.5% (1) were very satisfied, another 12.5% (1) were just satisfied while the majority 75% (6) were dissatisfied, P - Value - 0.000 (Table 4.25). With these results, the researchers rejected the null hypothesis that there is no association between patient satisfaction and attitude of health workers. This is an indication that poor attitude of health workers results in patient dissatisfaction as evidenced by larger percentage 75% (6) of respondents who were dissatisfied among those who indicated that attitude was negative.

The findings are similar to those from the study conducted by Mandokhail (2007), entitled "health worker-client relationship" in Thailand. The results showed that health workers' attitude has an influence on patient satisfaction because it carries weight with regard to staff-patient relationship and delivery of care hence the need to improve on the way they interact with patients.

5.3 SIGNIFICANT TO NURSING

5.3.1 Nursing Practice

Slightly above three quarters 75.5% (151) of the respondents waited for more than 60 minutes (table 4.5). Among the respondents who waited for more than 60 minutes, 75.5% (114) were not given any explanation for long waiting time (table 4.6). Although it is not acceptable for patients to wait for long hours, these results show that there is need for nurses to inform patients on the reasons for waiting longer than necessary. This is because an informed patient will exercise patience and satisfaction as he/she knows what is going on.

5.3.2 Nursing Education

The findings of the study show that most of the respondents 40% (80) disagreed being involved in decision making during their care (Figure 4.12). These results imply that there is need to educate nurses on the importance of patient involvement in their care because it enhances satisfaction.

5.3.3 Nursing Administration

Findings revealed that only a small percentage 10% (15) of respondents among those who had long waiting time were very satisfied (table 4.22). Study findings also revealed that only 13% (25) of the respondents among those who indicated that electro-medical equipment and infrastructure was inadequate were very satisfied. This is because inadequate electro-medical equipment results in long waiting time and poor delivery of cancer careservices. There is need for nursing administrators to lobby and ensure that there is enough electro-medical equipment in good working condition to enhance quality delivery of cancer care and improve satisfaction.

5.3.4 Nursing Research

The results of the study shows that majority of the respondents were just satisfied 76% (152) and very few 14.5% (29) were very satisfied (table 4.18). Findings further revealed that satisfaction was significantly associated with; availability of electro medical equipment and adequacy of infrastructure, IEC and waiting time. Therefore nurse researchers need to investigate more on other factors that could influence patient satisfaction with cancer care, for example knowledgeand skill of nurses on cancer care.

5.4 CONCLUSION

The aim of this study was to determine patient satisfaction with cancer care at Cancer Diseases Hospital (CDH). A non-probability purposive sampling method was used to select 200 respondents. The findings of this study indicated that majority 76% (152) of the respondents were just satisfied. Other significant findings were; majority 75.5% (151) of the respondents indicated that they waited for a long time (more than 60 minutes) while 24.5% (49) stated that they had waited for a short time. Among those who waited for a short time only 2% (1) was dissatisfied while those who waited for along time 12% (18) were dissatisfied.

Almost all the respondents 98% (196) indicated that electro-medical equipment and infrastructure were inadequate and only 2% (4) stated that they were adequate. All the respondents 100% (4) who stated that electro-medical equipment was adequate were very satisfied while 77% who stated that electro-medical equipment was inadequate were just satisfied. This result meant that higher satisfaction can be achieved through availability of adequate equipment as evidenced by the 100% (4) of respondents who indicated that they were very satisfied and the equipment was adequate.

The majority of respondents 76% (152) who indicated that Information Education and Communication given on cancer care was adequate, 80.3% (122) were satisfied with the cancer services they received. This result meant that apart from electro medical equipment and waiting time, IEC also has a direct impact on patient satisfaction. Furthermore out of the 192 of respondents who indicated that attitude of health workers was positive, 78.6% (151) were satisfied with the cancer services. The findings indicate that a positive attitude of health workers also influences the patients' rate of satisfaction.

The researchers therefore conclude that waiting time, availability of electro-medical equipment and infrastructure, Information Education and Communication and attitude of health workers have significant association with satisfaction. In order for patients to be very satisfied, all these associated factors should be addressed.

Based on our findings, one major recommendation made to Ministry of Health and Cancer Diseases Hospital was to purchase more electro-medical equipment in order to reduce on congestion and waiting.

5.5 RECOMMENDATIONS

Based on the findings of the study and suggestions from respondents, the following recommendations have been made to the relevant authorities:

5.5.1 To the Ministry of Health

- I. The Ministry of Health should decentralize cancer services to all provincial headquarters of the country for easy accessibility and cost effectiveness.
- II. Ministry of Health should buy more electro-medical equipment in order to reduce on congestion and waiting time for patients.
- III. The Ministry of Health should ensure that they train more health workers in oncology in order to increase on staffing levels thereby improving service delivery and patient satisfaction.

5.5.2 To Cancer Diseases Hospital (CDH)

- I. The management at CDH should lobby for more funds from the Ministry of Health to purchase more electro-medical equipment and to hasten the construction of inpatient facilities.
- II. The management at CDH should lobby for more health workers to improve the staffing levels hence reduce on patient waiting time (Table 4.22).

5.6 DISSEMINATION OF FINDINGS

Dissemination of research findings is the diffusion or communication of research findings by presentation and publication to a variety of audiences, such as nurses, other health professionals, policy developers and consumers (Burns and Grove 2005).

Findings of this study will be disseminated to the relevant stakeholders:

- I. The University of Zambia Medical Library for reference by students and other researchers.
- II. The Department of Nursing Sciences for reference and aid to teaching.

- III. Cancer Diseases Hospital to be used for implementation of the recommendations.
- IV. Ministry of Health to be used for implementation of the recommendations and to lobby for funding from donors.
- V. The Tropical Health Education Trust (THET) to be used to implement more partnership programmes.
- VI. Health workers through seminars and scientific meetings in order to expand knowledge on factors that influence satisfaction.

5.7 LIMITATION OF THE STUDY

It was difficult to find data on studies done in Zambia on Patient satisfaction with cancer care. This made it difficult to make comparisons with other local findings to determine the similarities and differences in the findings. For this reason, we mainly compared with findings of studies done in Africa as most African countries have similar health conditions as those prevailing in Zambia.

REFERENCES

- Afridi, M.I. (2002). **Consumer's satisfaction towards health care services provided by health centers at Salaya Sub-district**, NakhonPathom Province, Thailand (M.P.H.M Thesis in Primary Health care Management). NakhomPathom: Faculty of Graduate Studies, Mahidol University.
- Aharony, L., Strasser, S. (1993). **Patient satisfaction: what we know about and what we still need to explore**, Med Care Rev.
- Ajzen, I., (2001). **Nature and operation of attitudes**, Annual Review of Psychology.
- American Society for Therapeutic Oncology, (1999). **International journal of Radiation Oncology** volume45, issue 5, San Francisco.
- Anderson, R., Barbara, A., and Feldman, S. (2007). **What patient want: A content of key qualities that influence patient satisfaction**. Medical Practice Management.
- Anderson, R.T., Camacho, F.T. and Balkrishnan, R., (2007). **Willing to wait? The Influence of Patient waiting Time on Satisfaction with Primary care**. Journal Biomed Central volume 7.
- Attree, M. (2001). **A study of the criteria used by health professionals, managers and patients to represent and evaluate quality care**. Journal of nursing management volume 9.
- Back, A.L., Arnold, R.M.Tulsky, J.A, Baile., W.F, Fryer-Edwards, K.A, (2003). **Teaching communication skills to medical oncology fellows**, Journal of clinical oncology volume 21.
- Baiter, R. Beziak, K. Loblaw, D. A.Gotowiec, A.P. and Davins, G.M., (2004). **Does Tumour Status Influence Cancer Patient's Satisfaction with the Doctor-Patient Interaction?** Department of Medical Imaging, Faculty of Medicine University of Toronto, Toronto.
- Basavanthappa, B.T. (2006). **Nursing Research**. Jaypee Brothers, New Delhi.
- Black J. M. and Hawks J.H. (2005). **Medical-surgical Nursing Clinical Management for Positive Outcomes**, 8th Edition, Saunders, St. Louis.

- Bredart, A., Razavi, D., Robertson C. (2001). **Assessment of quality of care in an oncology institute using information on patients' satisfaction.** *Oncology Journal* Volume 61.
- Burns, N. and Grove K., (2005). **The Practice of Nursing Research: Conduct, Critique and Utilisation.** 5TH Edition St. Louis Missouri.
- Canadian Cancer Society (2004). **Talking about Cancer - In Your Own Words.** <http://www.cancer.ca/ccs/internet/standard> accessed on 22nd July, 2012.
- Cancer Diseases Hospital (2012-2014) Action Plan Lusaka.
- Dalton, S.O. Ross, L. Durning, M. Carlsen, K. Mortensen, P.B. Lynch, (2007). **Influence of socio-economic factors on survival after breast cancer-a nationwide cohort study of women diagnosed with breast cancer in Denmark 1983-1999.** *International Journal of Cancer* volume 5 issue 3.
- Epstein, R. M. and Street, R.L. (2007). **Patient-centered communication in cancer care: promoting healing and reducing suffering.**
- Flockton, L. Crooks, T. and Gilmore, A. (2004). ***Graphs, Tables and Maps: Assessment Results 2003.*** Dunedin: Educational Research Unit, University of Otago.
- Guldvog, B., (1999) **Can Patient Satisfaction Improve Health Among Patients with Angina Pectoris?** *International Journal of Quality Health Care.*
- Gupta, P. and Srivastava, R.K. (2011). **Customer Satisfaction for Designing Attractive Qualities of Healthcare Service in India using Kano Model and Quality Function Deployment.** *MIT International Journal of Mechanical Engineering* Vol.1 Issue 2
- Haide, T. P. Dains, J. E. Paterniti, D. A. (2001). **Medical students' attitudes toward patient-centered care and standardized patients' perceptions of humanism: a link between attitudes and outcomes.** *Academic Medicine* Volume 7 issue 4.
- Hoberg, D. (2011). **Patient Satisfaction in Ambulatory Oncology setting: Are Patients needs met? A cross sectional survey,** University of Adelaide.

- Jacobs, R. (1999), Evaluating satisfaction with media products and services
- Jennings, B. M. Heiner, S.L. Loan, L.A. Hemman, E.A. and Swanson, K. (2005).What really matters to patient.
- Jesuit Center for Theological Reflection (2010). Journal.
- Journal of Nursing Administration (2007), Vol. 35, no. 4
- Kano. N. (2000). **“Life Cycle of Quality and Attractive Quality Creation” Proceedings of Quality Excellent in New millennium.**The 14th Asia Quality Symposium 2000 Taipei.
- Kombo D. K and Tromp D. L. A. (2010). **Proposal and Thesis writing**, 9th Edition, Pauline publication Africa, Nairobi.
- Krupat, E., Yeager, C.M., and Putnam, S. (2000). **Patient role orientation, Doctor-patient fit and visit satisfaction.**
- Lindwall, L. Von, Post, L. and Bergbom, I.(2003). **Patients’ and Nurses’ Experience of Preoperative.**
- Lobiondo-Wood,G. and Haber, J. (2006). **Nursing Research, Methods and critical appraisal for evidence-based practice.**6th Edition, Mosby, Philadelphia.
- Mandokhail, A.K. (2007). **Patient Satisfaction towards Out Patient Department Services of Medicine Department in Banphaeo Community Hospital SamutSakhon Province, Thailand.**
- Muhondwa, E. P.Y., Leshabari, M. T., Mwangu, M., Mbembati, N. and Ezekiel, M. J. (2008). **Patient Satisfaction at Muhimbili National Hospitalin Dar-es Salam, Tanzania.**East African journal of Public Health Volume 5 Number 2.
- Omidvari, S. Shahidzadeh, G.A.Montazer, A.Azini, S.A.Harirchi, A. M., (2008). **Patient satisfaction survey in Hospitals of Tehran University of Medical Sciences**, Health sciences Journal of Jihad, Iran, available at [[http://www. Intejem.com/content/](http://www.Intejem.com/content/)].

Osse, B. H. Vernooij-Dassen, M. J., de Vree, B.P., Schade, E., Grol, R. P., (2000). **Assessment of the need for palliative care as perceived by individual cancer patients and their families: a review of instruments for improving patient participation in palliative care.**

Polit, D.F. and Beck C.T.(2001). **Essentials of Nursing Research**, 6th Edition, Lippincott, Philadelphia.

Polit, D.F. and Beck, C.T. (2008). **Essentials of Nursing Research**, 8th Edition, Lippincott, Philadelphia.

Polit, D.F. and Hungler, B.P. (2001). **Essentials of Nursing Research**. Lippincott, Philadelphia.

Renz, C. Abeni, D. Picardi, A, and Pasquini, P. (2006). **Factors associated with patient satisfaction with care among dermatological out-patient.** Br. J. Dermatol 2001; 145: 617-623.

Shelton P, J, (2000). **Measuring and Improving Patients' Satisfaction**, Aspen, Maryland.

Siminoff, L. A, Ravdin, P., Colabianch, N. Sturm C.M., (2000) **Doctor-patient communication patterns in breast cancer adjuvant therapy discussions.** Health Expect.

Smeltzer, S. C. Bare, B.G. Hinkle, J. L. Cheever, K. H., (2008). **Brunner and Suddarth's Textbook of Medical-Surgical Nursing**. 11th Edition Vol.1. chapter 4 Walter Kluwer/Lippincott Williams & Wilkins, Philadelphia, USA.

Tran, T.N. (2002). Utilization of Health Services at Commune Health Centre (CHC) in Donjon District, Hanoi, Vietnam. [M.P.H. **Thesis in Health Promotion**]. Bangkok, Faculty of graduate Studies, Mahidol University.

UNFPA, (1999) Annual Report.

Varkevisser, M. C., Pathmanathan, I. and Brownlee, A., (2003). **Designing and Conducting Health Systems Research Projects**. Volume 1, Proposal Development and Field Work. WHO International Development Centre, Amsterdam.

Von Essen, L. Larsson, G. Oberg, K. Sjoden, P.O. (2002). **'Satisfaction with care': associations with health-related quality of life and psychosocial function among Swedish patients with endocrine disorders**

Wen, K. Y. Gustafson, D. H., (2004). **Needs Assessment for cancer patients and their families**
Health Quality Life Outcomes.

Westaway, M.S., Rheeder, P., Van, Zyl D.G., *et al.*, (2003). **Interpersonal and organizational dimensions of patient satisfaction: the moderating effects of health status**, International Journal of Quality Health Care. Volume 15. Accessed from Pubmed on 25th September 2012.

Wong, W.S., Fielding, R., (2009). **A longitudinal analysis of patient satisfaction and subsequent quality of life in Hong Kong Chinese breast and nasopharyngeal cancer patients**. Med Care

World Health Organisation (2008) **GLOBOCAN**.

APPENDIX I: Questionnaire

THE UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
DEPARTMENT OF NURSING SCIENCES

STUDY TITLE: PATIENT SATISFACTION WITH CANCER CARE AT CANCER
DISEASE HOSPITAL

INTERVIEW SCHEDULE FOR PATIENTS WHO ARE RECEIVING CARE FOR
CANCER AT CANCER DISEASES HOSPITAL

DATE OF INTERVIEW

INTERVIEW SCHEDULE NUMBER

INSTRUCTIONS TO THE INTERVIEWER

- 1. Introduce yourself to the respondent.
- 2. Explain the purpose of the interview and reasons for undertaking the research.
- 3. Ask for permission to interview the respondents.
- 4. Participants should not be forced to be interviewed.
- 5. Assure the respondent of confidentiality.
- 6. Do not write the respondent's name on the interview schedule.
- 7. Write/ tick responses in the spaces provided.
- 8. Thank the respondent at the end of each interview and reassure them of confidentiality.

SECTION A: DEMOGRAPHIC DATA

1. What is your sex?

a. Female

b. Male
2. How old were you on your last birthday?
3. What is your highest level of education?

a. University

b. College

c. Grade 12

d. Grade 9

e. Grade 7

f. No education
4. What is your occupation?
5. What is your family monthly income?

SECTION B: PATIENT SATISFACTION WITH CANCER CARE

6. What was your reason for seeking cancer care?

.....

.....

.....
7. What type of cancer do you have? -----

8. How many health workers attended to you the last time you came here?

.....

9. What type of care were you given by the health workers who attended to you the last time you came?

.....
.....
.....

10. Were you satisfied with care you received?

- a. Yes
- b. No

11. If yes, how would you rate the satisfaction with cancer care which was rendered to you?

- a. Very satisfied
- b. Satisfied
- c. Dissatisfied
- d. Very dissatisfied

12. If no, why were you not satisfied?

.....
.....
.....

SECTION C: WAITING TIME

13. How long did you wait before being attended by the health worker?

- a. Less than 60 minutes
- b. More than 60 minutes

--

14. If your answer to question 13 is (b), was there any explanation given for long
Waiting time?

- a. Yes
- b. No

--

SECTION D: AVAILABILITY OF ELECTRO-MEDICAL EQUIPMENT
AND INFRASTRUCTURE

15. Was the equipment needed for your care available?

- a. Yes
- b. No
- c. Not applicable

--

16. If your answer to question 13 is (b) was there an explanation given for the
non-availability of the equipment?

- a. Yes
- b. No

--

17. Was the number of equipment adequate to reduce on waiting time?

- a. Yes
- b. No

--

18. Was the environment appropriate for your care?

- a. Yes
- b. No

--

19. If the answer to question 16 is (b), give reasons.....
.....
.....
.....
.....

SECTION E: INFORMATION EDUCATION AND COMMUNICATION

GIVEN DURING CARE

20. Did the health care providers give you adequate information about your condition and how you were going to be managed?

- a. Yes
- b. No

21. To what extent were you able to understand the language used by health workers?

- a. Lager extent
- b. Lesser extent

22. Did the health care providers give you adequate information about your treatment modalities?

- a. Yes
- b.No

23. Did the health care providers give you information about your follow up care?

- a. Yes
- b. No

24. Briefly explain the information that was given to you by the health care providers during the course of your care.....

.....

.....

.....

SECTION F: ATTITUDE OF HEALTH WORKERS TOWARDS PATIENTS

WITH CANCER

25. Do you agree that health care providers at Cancer Diseases Hospital are courteous?

- a. Strongly agree
- b. Agree
- c. Disagree
- d. Strongly disagree

--

26. Health care providers at CDH always make an effort to include patients in decision making pertaining to their Care.

- a. Strongly agree
- b. Agree
- c. Disagree
- d. Strongly Disagree

--

27. Health care providers adequately attend to patient questions and worries.

- a. Strong agree
- b. Agree
- c. Disagree
- d. Strongly disagree

--

28. Nurses showed concern when carrying out medical orders.

- a. Strongly agree
- b. Agree

--

- c. Disagree _____
- d. Strongly disagree _____

29. There is room for improvement on patient satisfaction with cancer care at CDH.

- a. Strongly agree
- b. Agree
- c. Disagree
- d. Strongly disagree

30. Give suggestions and / or recommendations on how you think patient satisfaction can be improved at CDH.

.....

.....

.....

.....

.....

Thank you for your co-operation and participation in this interview.

APPENDIX II: Informed Consent

PATIENT SATISFACTION WITH CANCER CARE AT CANCER DISEASES HOSPITAL

INTRODUCTION

You are requested to participate in a research study whose title is mentioned above. The study is being conducted by- Beauty Lilala Namushi, Febby Sankalimba, Julia Mundemba and Louisa Lukupa all students of Bachelor of Science in Nursing at the University of Zambia. The study to determine patient satisfaction with cancer is important because the findings will help in improving quality of care for cancer patients. Before you decide whether or not to participate in this study, the purpose of the study, any risks or benefits and what is expected of you will be explained. You are free to ask questions about anything you do not understand. Your participation in this study is entirely voluntary. If you choose not to participate, that will not affect your relationship with the medical professionals and no privileges will be taken away from you. If you decide to participate, you are free to withdraw without any explanation and if you agree to participate, you will be asked to sign the consent in the presence of a witness. Agreement to participate will not result in any immediate benefits.

PURPOSE OF THE STUDY

The study is designed to obtain information on patient satisfaction with cancer care and identify potential areas for service improvement. This is important as the information will assist health managers to optimize health expenditure through patient guided planning and evaluation.

PROCEDURE

After having had chance to ask questions and signing the consent form, you will be asked questions regarding your satisfaction with cancer care. Thereafter, a chance will be given to you to make recommendation on how you think patient satisfaction can be improved.

BENEFITS

You may receive no direct benefit from participating in this study but the information provided to us will help relevant authorities and policy makers to come up with strategies that will improve patient satisfaction with cancer care. No act of kindness in monetary form will be given in exchange of information obtained.

RISKS AND DISCOMFORTS

Apart from spending 40 minutes in answering the questions in the presence of the interviewer, there are no other risks involved.

CONFIDENTIALITY

The only people who will know that you are a research participant are members of the research team and if appropriate, your physicians and nurses. No information about you or provided by you during this research will be disclosed to others without your written consent except if required by law. When the results of the research are published or discussed or reviewed by the Ministry of Health, the University of Zambia Research Ethics Committee or the school of Medicine, no information will be included that will reveal your identity.

INFORMED CONSENT FORM

The purpose of this study, benefits, risks, discomforts and confidentiality have been explained to me and I understand.

I further understand that, if I accept to take part in this study, I can freely withdraw at any time without having to give an explanation and taking part in this study is entirely voluntary.

I.....(Names) agree to take part in the interview.

Signed:

Date: (Participant)

Signed:

Date: (Witness)

Signed:

Date: (Researcher)

PERSONS TO CONTACT FOR PROBLEMS OR QUESTIONS

1. Beauty Lilala Namushi (0955832541), Febby Sankalimba (0973787784), Julia Mundemba (0977667012) and Louisa Lukupa (0977197656), University of Zambia, School of Medicine, Department of Nursing Sciences P.O. Box 50110, Lusaka.
2. Mrs. P.K Mukwato, University of Zambia, School of Medicine, Department of Nursing Sciences P.O. Box 50110, Lusaka. Cell: 0977564486.
3. Dr. P. Mweemba, University of Zambia, School of Medicine, Department of Nursing Sciences P.O. Box 50110, Lusaka. Cell: 0977754368.

APPENDIX III: Electro-Medical Equipment Checklist

THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

DEPARTMENT OF NURSING SCIENCES

TOPIC: PATIENT SATISFACTION WITH CANCER CARE AT CANCER DISEASES

HOSPITAL

**CHECKLIST FOR ELECTROMEDICAL EQUIPMENT AT CANCER DISEASE
HOSPITAL**

INSTRUCTIONS TO STUDENT RESEARCHERS

1. Introduce yourself to each department visited
2. Explain the purpose for carrying out the electro-medical equipment checklist.

NUMBER	EQUIPMENT	NUMBER AVAILABLE	STATE	COMMENT
1	COBALT 60			
2	CT SCANNER			
3	MAGNETIC REASONANCE IMAGING			
4	LINEAR ACCELERATOR			
5	HDR / BRACHYTHERAPY MACHINE			
6	MAMMOGRAM			
7	SIMULATOR			
8	3D ULTRASOUND MACHINE			

TOTAL SCORE: 8

APPENDIX IV: PERMISSION LETTER

University of Zambia
School of Medicine
Department of Nursing Sciences
P.O Box 50110
LUSAKA.
28th September, 2012.

The Executive Director,
Cancer Diseases Hospital,
P.O Box 51337,
LUSAKA.

U.F.S:
The Head,
Department of Nursing Sciences,
School of Medicine,
P.O Box 50110,
LUSAKA.

Dear Sir/Madam,

RE: PERMISSION TO CARRY OUT A RESEARCH STUDY

We are 5th year undergraduate students from the University of Zambia, School of Medicine in the Department of Nursing Sciences. We are required to conduct a research study as partial fulfillment of the Bachelor of Science Nursing degree programme. The title of study is **“Patient satisfaction with cancer care at Cancer Diseases Hospital”**. The study will be conducted among patients with the top five cancer; Cervical, Breast, Kaposi Sarcoma, Head and Neck and Prostate.

A pilot study will be conducted between 2nd and 3rd October, 2012 on patients coming for review to test the interview schedule which will be used for the main study. This will proceed to the main study which will commence on 8th October to 2nd November, 2012 on patients who are being managed and those coming for review but excluding the ones captured in the pilot study and new cases.

We therefore request for permission to conduct the study at your institution.
Your consideration will be highly appreciated.

Yours faithfully,

Lukupa Louisa
Namushi Beauty Lilala
Mundemba Julia
Sankalimba Febby

RECEIVED

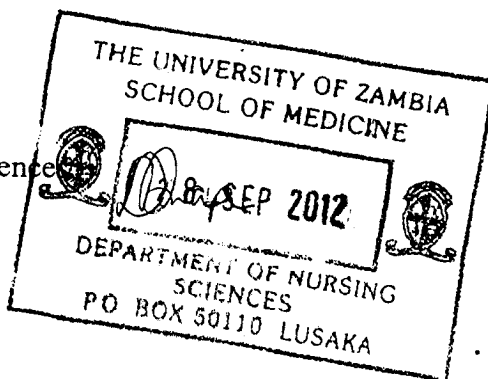
31/10/12

University of Zambia,
School of Medicine,
P.O Box 50110,
LUSAKA.

28th September, 2012.

The Executive Director,
Cancer Diseases Hospital,
P.O Box 51337,
LUSAKA.

U.F.S:
The Head,
Department of Nursing Science
School of Medicine,
P.O Box 50110,
LUSAKA.



Dear Sir/Madam,

RE: PERMISSION TO CARRY OUT A RESEARCH STUDY

We are 5th year undergraduate students from the University of Zambia, School of Medicine in the Department of Nursing Sciences. We are required to conduct a research study as partial fulfillment of the Bachelor of Science Nursing degree programme. The title of study is **"Patient satisfaction with cancer care at Cancer Diseases Hospital"**. The study will be conducted among patients with the top five cancer; Cervical, Breast, Kaposi Sarcoma, Head and Neck and Prostate. A pilot study will be conducted between 2nd and 3rd October, 2012 on patients coming for review to test the interview schedule which will be used for the main study. This will proceed to the main study which will commence on 8th October to 2nd November, 2012 on patients who are being managed and those coming for review but excluding the ones captured in the pilot study and new cases.

Minister Respond giving permission
to these students & that they
should satisfy all ethical procedures
required

We therefore request for permission to conduct the study at your institution.

Your consideration will be highly appreciated.

Yours faithfully,

Lukupu Louisa

Lukupu

Namushi Beauty Lilala

Namushi

Mundemba Julia

Mundemba

Sankalimba Febby

Sankalimba

In reply please quote:

No.....

MH/CDH/53/2/12



RESPONDENCE SHOULD BE ADDRESSED TO THE
DIRECTOR
+260 1 257706

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH
CANCER DISEASES HOSPITAL

P. O. Box Rw 51337
LUSAKA

8th October 2012

Ms Lukupa Louisa
Ms Namushi Beauty Lilala
Ms Julia Mundemba
Ms Febby Sankalimba
University of Zambia
School of Medicine
P O Box 50110
LUSAKA

Dear Ms Lukupa Louisa

RE: PERMISSION TO CARRY OUT A RESEARCH STUDY

Reference is made to the above mentioned subject.

Permission to carry out a Research has been granted and therefore you should satisfy all ethical procedures required by the Institution.

Yours sincerely

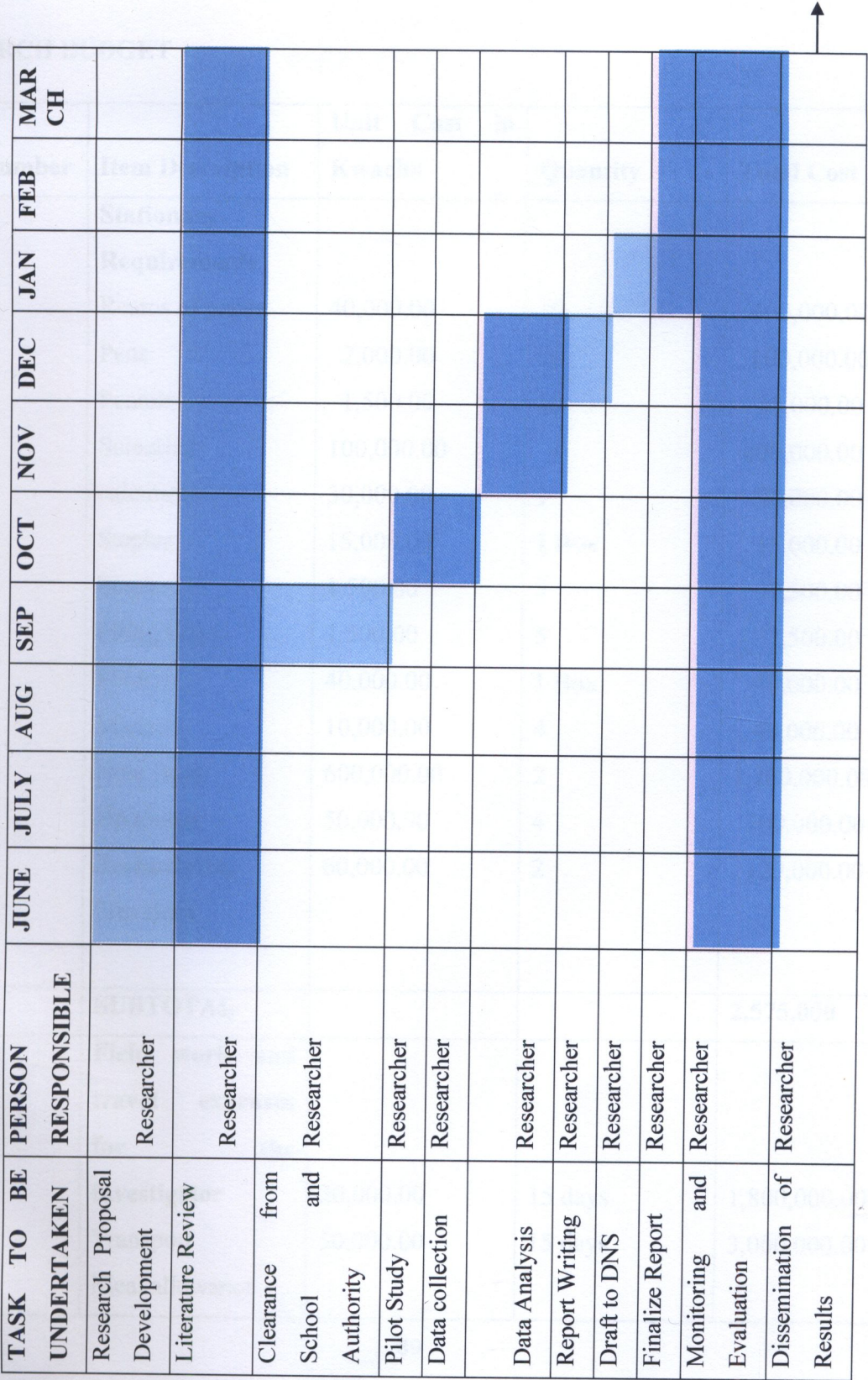
Dr. K. Lishimpi - BSc MB ChB M.Med FC Rad Onc (SA)
EXECUTIVE DIRECTOR

APPENDIX V:RESEARCH WORK SCHEDULE

	ACTIVITY	DATES	DURATION	RESPONSIBLE PERSON
1	Research Proposal Development	06/06/12 to 20/09/12	105 days	Researcher and Supervisor
2	Literature Review	Continuous	Continuous	Continuous
3	Clearance from School and Authority	24/09/12 to 8/09/12	5 days	Researcher
4	Pilot Study	01/10/12 to 02/10/12	2days	Researcher
5	Data Collection	8/10/12 to 26/10/12	15 days	Researcher
6	Data Analysis	12/11/12 to 07/12/12	30 days	Researcher
7	Report Writing	10/12/12 to 21/12/12	10 days	Researcher
8	Draft Report to DNS	7/01/13 to 21/01/13	14 days	Researcher
9	Finalize Report	28/01/13 to 01/03/13	30 days	Researcher
10	Monitoring and evaluation	Continuous	Continuous	Researcher and Supervisor

APPENDIX VI: Gantt Chart

THE GANTT CHART



APPENDIX VII: Research Budget

RESEARCH BUDGET

Serial Number	Item Description	Unit Cost in Kwacha	Quantity	Total Cost
1	Stationary Requirements			
	Reams of paper	40,000.00	10	400,000.00
	Pens	2,000.00	50	100,000.00
	Pencils	1,500.00	10	15,000.00
	Scientific calculator	100,000.00	4	400,000.00
	Stapler	30,000.00	1	30,000.00
	Staples	15,000.00	1 Box	15,000.00
	Filing Clips	1,500.00	5	7,500.00
	Folders	1,500.00	5	7,500.00
	Markers	40,000.00	1 Box	40,000.00
	Note Book	10,000.00	4	40,000.00
	Hp tonner	600,000.00	2	1,200,000.00
	Research Bag	50,000.00	4	200,000.00
	Flip chart	60,000.00	2	120,000.00
	SUBTOTAL			2,575,000
2	Field work and travel expenses for the investigator			
	Transport	30,000.00	15 days	1,800,000.00
	Meal allowance	50,000.00	15 days	3,000,000.00

	SUBTOTAL			4,800,000.00
3	Secretarial Services			
	Research proposal typing and photocopying	3,000.00	60 pages 100 pages	180,000.00
	Report typing and photocopying	3,000.00	8 Copies	2, 400,000.00
	Binding the Report	70,000.00		560,000.00
	SUBTOTAL			3, 140,000.00
	SUBGRAND TOTAL			10,515,000.00
	Total Contingency 10%			1,051,500.00
	GRAND TOTAL			11, 566,500.00

BUDGET JUSTIFICATION

The budget for this research proposal is intended to facilitate smooth conducting of the study. For this to be possible a number of costs will be incurred as administrative and technical costs.

Stationery

The researchers will need stationery such as reams of paper for printing research proposal and interview schedules, pens and markers for writing, Stapler and staples for securing papers together and folders and file clips for filing research documents. HP tonner will be required for printing the research proposal and interview schedules. Calculators will be used for calculations during data analysis. Note books will also be used for writing notes and the research bags will be used for carrying various items for research.

Field Work and Travel

The researchers will need money for transport to and from the research setting; lunch allowance will also be needed for the researchers.

Secretarial Services

Money will be required for typing, printing, photocopying of research proposal and interview schedules as well as binding of the final report.

10% Contingency of Total Amount

10% contingency budget has been added in case of unforeseen costs and also to cater for any inflation.

