# SHORT TERM OUTCOMES OF CANCER HEALTH EDUCATION IN CLINICAL PRACTICE AT OCEAN ROAD CANCER INSTITUTE, TANZANIA

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**MSc in Project Management, Monitoring and Evaluation in Health (PMMEH) – Dissertation**
**Muhimbili University of Health and Allied Sciences**
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**Muhimbili University of Health and Allied Sciences**

**School of Public Health and Social Sciences**

# SHORT TERM OUTCOMES OF CANCER HEALTH EDUCATION IN CLINICAL PRACTICE AT OCEAN ROAD CANCER INSTITUTE TANZANIA

**By**

**Chakou Halfani Tindwa**

**A dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Project Management, Monitoring and Evaluation in Health (PMMEH)**

**Muhimbili University of Health and Allied Sciences**
**October, 2020**

## CERTIFICATION

The undersigned certifies he has read and hereby recommends for examination of dissertation entitled *'**Short Term Outcomes of Cancer Health Education in Clinical Practice at Ocean Road Cancer Institute'**,* in fulfillment of the requirements for the degree of Master of Science (Project Management, Monitoring and Evaluation in Health) of Muhimbili University of Health and Allied Sciences.

_____

**Prof. G. Kwesigabo**

**(Supervisor)**

**Date: _____**

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I, **Chakou Halfani Tindwa,** declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

**Signature……  Date……..**

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Furthermore, my thanks also go to all those who have contributed to this research in one way or another especially Professor Method Kazaura for his enormous assistant during Data Analysis stage as well as my family, colleagues and co-workers.

## ABSTRACT

**Background:** The global cancer burden is estimated to have risen to 18.1 million new cases and 9.6 million deaths in 2018. More than two thirds of these deaths occurred in low- and middle- income countries (LMIC). In LMIC countries like Tanzania cancer management faces many challenges including poor cancer community awareness resulting into inadequate care and poor survival.

**Objectives:** The aim of this study was to evaluate short term outcomes of clinical health education interventions in improving knowledge, attitude, and perception of cancer patient healthy relatives towards cancer and its management**.**

**Materials and Methods:** This was cross-sectional study design. Participants were relatives of cancer patients enrolled into the study when escorting their patients visiting Ocean Road Cancer Institute for cancer management. They were recruited using systematic sampling procedure, and face to face interviewed using a structured questionnaire. Descriptive data analysis performed using SPSS software version 22 and level of significance tested by t-test statistical procedure.

**Results:** Study participants 60.5% were females, 53.3% aged between 24 to 44 years old, only 12 % attained university level education, 64.5% were married and 53.5% were from coast region. Health education significantly improved mean average score of cancer knowledge from 8.4 ± 2.068 to 11.67 ± 1.92, ($p<0.0005$). Pre and post health education perception score were 4.62 ± 0.913 and 5.05 ± 0.807 respectively ($p < 0.0005$). Cancer patient relatives had generally positive baseline attitude which minimally improved after health education with pre and post health education mean of 2.88 ± 0.942 and 3.2 ± 0.928 ($p<0.0005$) respectively. Those attained university educations had higher (44.9%) baseline adequate knowledge of cancer which increased to 77.6% after health education compared those with primary level (11.7%), which also increased to 75.1% after health education.

**Conclusion:** Health education in clinical settings significantly improves cancer knowledge, perception and attitude of its participants. Age and sex of cancer patient relatives was neither affects the baseline knowledge, attitude and perception of cancer nor affects uptake of health education. Education level of participants was found to significantly affect both cancer baseline knowledge and their uptakes of health education.

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| | |
|---|---|
| AI | After Intervention |
| BI | Before Intervention |
| BRCA | Breast Cancer Gene |
| CI | Confidence Interval |
| HINARI | Health Inter Network Access to Research Initiative |
| HPV | Human Papilloma Virus |
| KPA | Knowledge, Perception and Attitude |
| LMICs | Low and Middle Income Countries |
| MSc. PMMEH | MSc. in Project Management Monitoring and Evaluation in Health |
| MUHAS | Muhimbili University of Health and Allied Sciences |
| ORCI | Ocean Road Cancer Institute |
| SPSS | Statistical Package of Social Sciences |

# CHAPTER ONE

## 1.0 INTRODUCTION

### 1.1 Background

Cancer is abnormal growth of cells which tend to proliferate in uncontrollable ways and in many cases metastasize to distance organ(1). The global cancer burden is estimated to have risen to 18.1 million new cases and 9.6 million deaths in 2018, more than two thirds of these deaths occurred in low- and middle- income countries(2). One in every 5 men and one in every 6 women worldwide develop cancer during their lifetime, and one in every 8 men and one in every 11 women die from the disease(3). This highlight that Cancer is among very serious problem facing global health that call for immediate and sustained action to tackle it.

The most common cancers in Tanzania are cancers of the cervix, prostate, breast, liver, Kaposi's sarcoma and non-Hodgkin's lymphoma (4). The rise in the number of cases of cancer is due to many reasons but mainly due to risk lifestyle such as consumption of unhealthy diets, lack of physical exercise, harmful use of alcohol, tobacco use as well as other factors including ageing populations and environmental pollutions(5). Human papillomavirus and hepatitis B and C viruses' infections significantly contribute to the burden of common cancers in Africa, namely cervical and liver cancer respectively(6).

Cancer treatment can be either aiming to cure or prolonging life; the latter being most available options in Low and Middle Income Countries (LMICs) due to late stage presentation. Different treatment options are available which surgery; chemotherapy is or irradiation used either singly or in combinations. Cancer is very devastating disease to the patient and family due to its high fatality rate, long duration of suffering, aggressive treatment modalities and poor quality of life.

Many lives can be saved if appropriate interventions can be implemented to raise public awareness, improve early diagnosis and provide effective treatments in the region. The importance of health education in raising awareness hence improving cancer prevention cannot be overemphasized. Studies(3)(7) have shown health education is efficient and cost effective methods of cancer prevention. It improves knowledge, positive attitude and uptake of screening, acceptance of vaccine, reduction of obstacles of social support toward cancer. It also improves timely diagnosis of cancer, change of behavior and reduction of the disease risk factors. Four basic types of health education exist which are for increasing the public's awareness of cancer, for changing specific risk behavior (such as stopping smoking), for learning self-examination skills (such as breast self-examination), and for promoting early cancer detection in the community.

ORCI is implementing a cancer health education intervention to cancer patients and their relatives attending ORCI. This intervention targets knowledge, perception and attitude of cancer patients and their accompanying relatives towards cancer and its treatment. The health educations cover meaning of cancer, its causes, risk factors, treatment options and prevention modalities. It aims at helping the relatives to understand that cancer cannot be transmitted from one person to another, which minimize stigmatization to patients. It also aims to improve early diagnosis behavior due to understanding of early symptoms, and equip relatives to give appropriate care to their sick cancer patients throughout their painful journey.

This intervention given by either nurse or medical doctor, each session usually takes 40 to 1 hour, conducted in hospital waiting areas. Health educator talks to audience verbally only and sometimes asking questions to audience to measure their understanding.

The type of health intervention provided at ORCI is that specifically targets increasing the public's awareness of cancer.

## 1.2 Problem statement

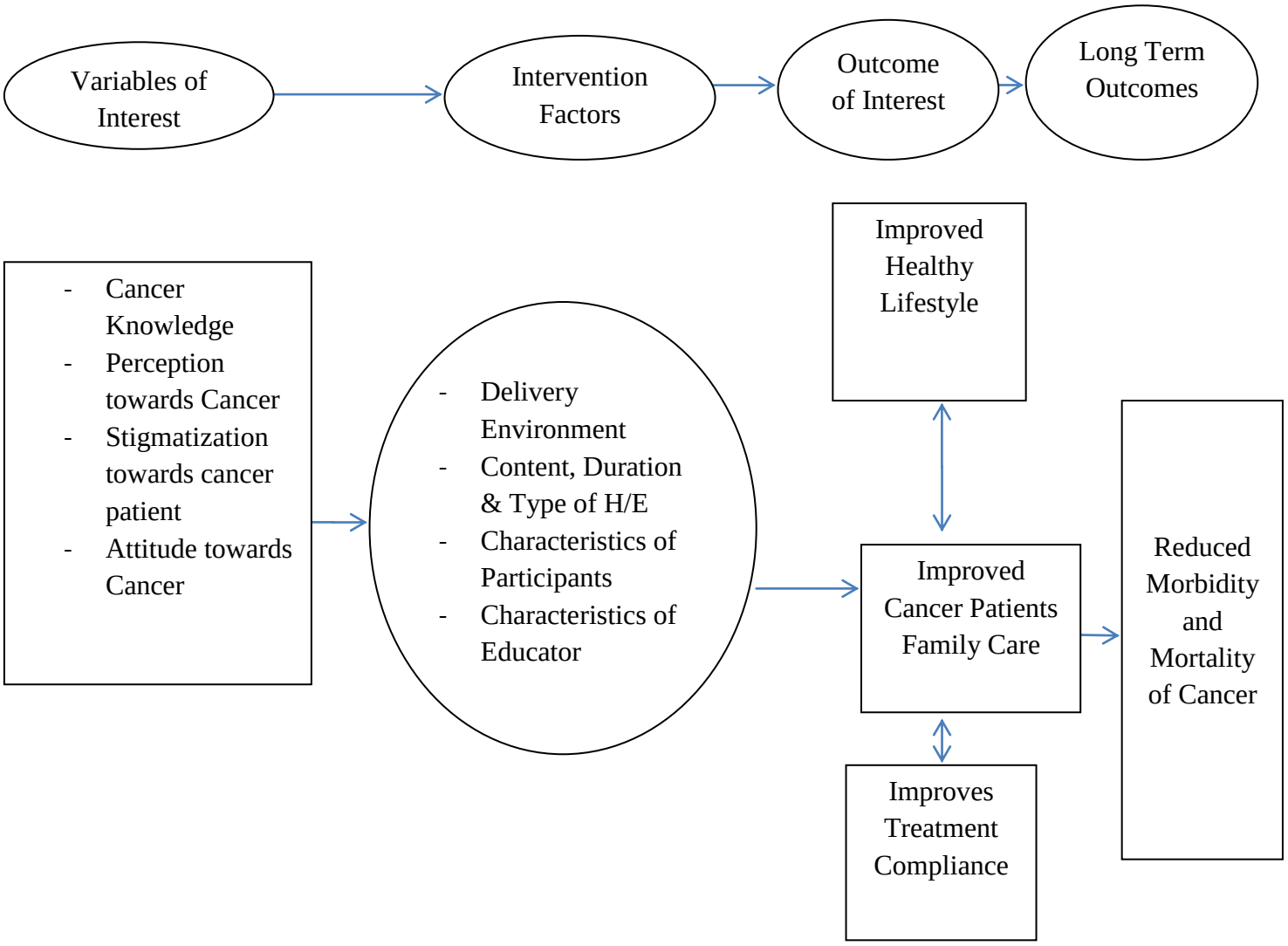
Cancer is leading a cause of death worldwide accounting to 13% of all deaths (8). In Tanzania over 10,000 of new cancers diagnosed annually, which accounts for less than 10% of all cancer cases estimated by Globocan (9). This implies that majority of cancer cases die unnoticed in the community. The cancer management outcomes in our settings is very poor, this is contributed by high rate of alternative medicines usage, low treatment compliance and late cancer patient hospital presentation (over 80%) (10).

This poor cancer outcome in our settings have been shown to associate with inadequate knowledge, poor attitude and perception of community about cancer(11)(12). Cancer education plays vital role in improving knowledge, attitude and perception of community and hence improves its management outcomes(3). Is common practice for cancer patients to be cared for by their relatives, who handle their bills, provide social-economic supports and ensure they comply to cancer management requirements including taking them to hospitals.

Inadequate knowledge, poor attitude and perception of cancer patient relatives can lead into stigmatizing cancer patient for the fear of cancer transmission, inability to spend for cancer care due to wrong understanding that eventually the patient has to die and may not provide adequate psychosocial support which is mostly required for cancer patients. Due to this fact, ORCI designed cancer health education intervention to bridge such gaps in knowledge, perception and attitude to both cancer patients and their relatives. Since its establishment over 10 years ago to date, effectiveness of this intervention has not been evaluated. This is against good practice which encourages periodic evaluation preferably annually. This study was then designed to evaluate short term outcomes of such intervention and its associated factors.

### 1.3 Conceptual Framework

Several variables associated with health education thoughts to influences desired outcomes in various ways which this study explored, as outlined in conceptual framework below(13).



## 1.4 Rationale

Cancer patients especially in our settings where it is mostly associated with late presentation are economically and physically not able to take care of themselves. They depend on their relatives for expenses associated with their treatment, and most decisions regarding which kind of treatment or actions to take in relation to their sickness. This makes healthy relatives to play vital role in guiding care to cancer patients. If these relatives have inadequate knowledge, poor attitude or negative perception about cancer and its treatment, will not only affect care to the patients but can lead into stigmatization and poor treatment outcomes. Over 10 years of implementing such health education intervention at ORCI without evaluation, it became critical now so as to provide clear understanding if such intervention is capable of producing its desired short term outcomes. Absence of periodic evaluation leads into lack of evidence to justify continued resource utilization as well as program improvement with time. This gave rationale for this study in order to evaluate not only if such intervention works but also if any improvement in term of program delivery is required.

## 1.5 Research Questions

### 1.5.1 Overall Research Question

What were short term effects and its associated factors of health education interventions in clinical settings at ORCI?

### 1.5.2 Specific Research Questions

i. What were social demographic characteristics of cancer patient relatives attending ORCI?

ii. What was effect of health education intervention given to cancer patients healthy relatives on their cancer knowledge, perception and attitude to its participants?

iii. What factors associated with improved health education outcomes?

## 1.6. Broad Objective

To determine short term effects and its associated factors of health education interventions in clinical settings at ORCI

### 1.6.1 Specific Objectives

i. To determine social demographic characteristic of relatives of cancer patients attending ORCI

ii. To determine effects of health education intervention on cancer knowledge, perception and attitude

iii. To determine factors associated with health education interventions on cancer knowledge, perception and attitude

# CHAPTER TWO

## 2.0 LITERATURE REVIEW

Cancer is leading cause of death globally while majority of it is preventable(14). Cancers results from abnormal growth of body cells which have potential to invade nearby tissue and metastasize to distant organs. Cancer burden in Tanzania(9) is more in females (over 10,800 deaths annually) than men (over 9,100 deaths annually). Prostate is most common cancer among males (30.2%) while Cancer of Cervix (37.9%) and Breast (12%) are most common in females. There are mostly five stages of solid cancers which are stage 0 (or, carcinoma in situ), stage 1, stage 2, stage 3, and stage 4(15). Few cancers such as blood cancers don't follow this classification. Lower stages indicate that the disease is more localized, or contained, whereas higher stages refer to cancers that have spread into other areas of the body. Cancer can be mainly of two types, solid tumor and nonsolid tumors. Solid cancers are like that of breast, prostate and liver, while nonsolid tumors are leukemia(4).

Most of time specific cause of cancer is unknown but inherited genetic defects for example, BRCA1 and BRCA2 mutations, infections such as of Human Papilloma Virus (HPV), environmental factors including air pollution, aging and unhealthy lifestyle habits such as smoking, heavy alcohol use and sedentary lifestyle are known to increase risks of getting cancer(5). Several studies (16)(17)(18)(19)(20) explored knowledge, attitude, perception and practice of community, healthcare works healthy relatives and patient. They found significant correlation between adequate knowledge in all of these groups and improved treatment outcome. Study explored knowledge, perception and attitude of health relatives at King Faisal Saudi Arabia Hospital towards cancer and its treatment found that over 50% of healthy relatives do not have adequate knowledge while significant numbers of them have poor attitude and bad perception which have significant negative affects towards the treatment outcomes of their sick relatives(20). In Tanzania for example a study recently published in journal of chronic diseases revealed that over 30% of women never heard about such a commonest cancer among women cervical cancer(21).

Physicians advised to spend more times with their patients so that to improves patients' health literacy in order to promote lifestyle, behavior and self-care changes, and hence improves non communicable diseases prevention(22). Effects of education programs doesn't spread evenly across socio economic groups of participants, but determined by three other issues that may be important in increasing the public health impact of patient education which are health literacy, participants level of education and lastly means of evaluating impacts(23). Health education in healthcare setting is very importance to improve outcomes and prevention of not only cancer but all non-communicable diseases. However, in order for it to be effective appropriate programs conducted by well-trained facilitators cannot be emphasized. Educations which poorly planned and haphazardly conducted can seriously lead into no impact and be wasteful of clinicians' time. In order to improve of health education to patients and their care givers, WHO in 1998 produced guidelines for therapeutic health educations(24).

In addition to short term behavior, lifestyle, attitude and practices changes associated with health education it also shown to improve long terms behavior change especially on treatment compliance. Those with long term use of cancer treatments such as hormonal treatments, observed that majority discontinue drug uptake in first year, however proper health education during start of treatment, improves its five years drug compliance(25). In addition to compliance and persistence, health education in clinical settings also increase patients and relatives' satisfactions as healthcare services (26). S.G. Rosenberg S.G. explained three problems which occur in the care of the chronically ill patients including cancer: "The first of these is clinical failure which occurs with an unavoidable exacerbation of the illness. Second is medical failure which occurs when technology cannot provide a cure. And third is an education failure when the patient will not follow the prescribed regime. This can result from either a choice made by the patient or family not to comply, or from a lack of knowledge on the part of the patient, or the lack of a planned education approach as part of the patient's care"(27).

Despite of all these positive impacts, health education in clinical settings associated with many identified challenges such drugs patients taking may affects his/her ability to learn, anxiety associated with being in the hospital may affect ability to learn of both patients and relatives and busy schedule of healthcare workers may affect his/her concentrations to the education and hence affects its quality(28).

Studied conducted in Tanzania specifically to explore short term outcomes of health education intervention on healthy relatives couldn't be retrieved, this emphasizes the need of this study. In addition to evaluation objective, his study was expected to bridge literature gap, provide clear understanding of the knowledge, perception and attitude of healthy cancer patients' relatives towards cancer and its treatment.

# CHAPTER THREE

## 3. 0 MATERIALS AND METHODS

### 3.1 Study Population

Study population was cancer patient healthy relatives or at least someone who take care of cancer patients that his/her awareness is vital to provision of care to cancer patient. Healthy relatives were people who give care to cancer patients without history of suffering from cancer. ORCI receive more than 500 people daily either visiting or accompanying their sick relatives. All age groups and both sex were included into the study however those with history of suffering from cancer excluded.

### 3.2 Sample Size

Sample size calculated using formula for probabilistic sampling technique (29) as follows:

$$n = \frac{t^2 \times p(1-p)}{m^2}$$

Where n =Sample Size

t = Value of Confidence Interval, which is 95% is this case, therefore t was 1.96

p = Expected prevalence of indicators used, in this case adequate knowledge, positive perception and positive attitude which is unknown, therefore accepted to put maximum value of 0.5 so as to maximize the sample size

m = Maximum marginal error accepted, which in this case I choose 5%

Therefore, can be put in the formula to yield $n = \frac{(1.96 * 1.96) \times 0.5(1-0.5)}{0.05 * 0.05} = 384.16$

Therefore, total sample size was 385.

### 3.3 Sampling Method

Systematic Probability sampling method used to recruit the study population. Each day more than 500 peoples visited ORCI escorting their cancer patients' relatives to receive treatments. During study participant's recruitment, cancer patient relatives escorting their patients at ORCI from 0700am to 1000am daily were screened for inclusion criteria. Those meets inclusion criteria were given numbers and listed starting from lowest (1) to highest. Each day 40 participants were systematically randomly selected to participate in the study from list of all relatives on that day for ten (10) consecutive intervention days. Number of relatives attending ORCI ascertained every day, sampling interval were calculated on daily basis depending on number of relatives available and number of participants required on that day, and sampled participants recruited accordingly.

### 3.4 Study Design

This before and after (Quasi experimental design) cross sectional study design to assess immediate outcome and process of cancer health education intervention at ORCI which used primary source of data(30). The same participants were control group (before health education) and intervention group (after receiving health education) without randomization. They interviewed before as control group and after received health education as intervention group to assess effects of health education on their knowledge, attitude and perception of cancer.

### 3.5 Data collection

Using structured questionnaire, face to face interview were conducted to collect data before and immediately after health education using similar questionnaire and interviewer. Five (5) research assistants who were medical students on their 5$^{th}$ year were recruited. These assistants were trained for one day on content of questionnaires and basic interviewing skills. First ten (10) interviews were used as pilot test, to ensure research assistants clearly understand their roles and questionnaire collect desired information, minimal changes on questionnaires such as translating into Swahili language and more training were conducted after piloting. Every filled questionnaire reviewed on daily basis to ensure completeness and conformity to the standard set. Daily feedback meeting was conducted between 0400pm to 0500pm with all research assistants to ensure everyone understand and sustain the quality outputs.

### 3.6 Study setting

Ocean Road Cancer Institute (ORCI) is located at Barack Obama Avenue along the Indian Ocean; it is among few specialized facilities for cancer treatment in Tanzania. The facility is one of the oldest health institutions in Tanzania having been founded in 1895 by the German colonial government. In June 1996, by an act of parliament, ocean road hospital was made an independent autonomous institute directly under the ministry of health and its name changed to Ocean Road Cancer Institute.

### 3.7 Data Analysis

This study involved both categorical variables such as sex and continuous variable such as age. Data entry and analysis were done using SPSS version 22. Factors related to knowledge, attitude and perception among participants towards cancer compared pre-test with post-test. Fourteen (14), Six (6) and four (4) questions related to knowledge, perception and attitude were asked respectively. Knowledge score were categorized into three levels depending on number of correct responses given by participants: 0 - 5 Low Knowledge, 6 -10 Average

Knowledge and lastly 11-14 Adequate Knowledge. Perception into two levels: 0 - 3 Poor Perception and 4 – 6 Good Perception. Attitude into two levels: 0 - 2 Negative Attitude and 3–4 Positive Attitude. Significance of variables associated with both intervention and participant's characteristics which influence health education short term outcomes also analyzed. Five percent significant level determined using two sample t-test analyses as appropriate to reject or accept null hypotheses.

### 3.8 Inclusion and Exclusion Criteria

#### 3.8.1 Inclusion Criteria

i. Both men and women aged ≥18 years
ii. Giving care to a guardian or relative suffering from cancer attending treatment at ORCI
iii. Never diagnosed from Cancer before
iv. First time attended cancer health education session

#### 3.8.2 Exclusion criteria

i. Refuse to give consent

ii. Other visitors or staffs of ORCI

### 3.9 Ethical Considerations

Every participant before being interviewed, informed consent was obtained using standard MUHAS consent form (Appendices 3&4). Ethical clearance was obtained from MUHAS (Appendix 5) and ORCI (Appendix 6) ethical clearance committees.

# CHAPTER FOUR

## 4. 0 RESULTS

### 4. 1 Interpretations

Results are presented based on questions this study aimed to answer i.e. Effect of health education intervention given to cancer patient's healthy relatives on their cancer knowledge, perception and attitude to its participants.

Total of over 24 questions were asked to assess knowledge, perception and attitude of health relatives towards cancer. Fourteen questions, six questions and four questions assessed knowledge, perception and attitude respectively, and they were categorized as shown in the table below.

**Table 1: Interpretations of Knowledge, Attitude and Perception**

| Knowledge: | Perception | Attitude |
|---|---|---|
| Total Score 14 | Total Score 6 | Total Score 4 |
| Knowledge Levels: | Levels | Levels |
| 0 - 5 Low Knowledge | 0 - 3 Poor Perception | 0 - 2 Negative Attitude |
| 6 -10 Average Knowledge | 4 – 6 Good Perception | 3 –4 Positive Attitude |
| 11-14 Adequate Knowledge | | |

**Results presentation divided into four sections which are:**

i. Social demographic characteristics of participants
ii. Descriptive statistics for KPA of participants before and after intervention
iii. Relationship between KPA and social demographic characteristics
iv. Effects of health education on KPA

## 4.2 Social Demographic Characteristics of Participants

Participants were of both sexes, from all over Tanzania and of diverse age group as shown in the table below: Majority (60.5%) of participants was female, people with primary education only (53.3%) and 25-34 years of age (26.8%).

**Table 2: Social Demographic Characteristics (N = 400)**

| Socio Demographic Variable | Sample Number (n) | Sample Percentage (%) |
|---|---|---|
| **Sex** | | |
| Male | 158 | 39.5 |
| Female | 242 | 60.5 |
| **Age Groups (Yrs.)** | | |
| 15 - 24 | 55 | 13.8 |
| 25 - 34 | 107 | 26.8 |
| 35 - 44 | 106 | 26.5 |
| 45 - 54 | 79 | 19.8 |
| 55+ | 53 | 13.3 |
| **Educational Level** | | |
| University | 49 | 12.3 |
| Secondary School | 98 | 24.5 |
| Not attended School | 36 | 9.0 |
| Primary School | 213 | 53.3 |
| Other | 4 | 1.0 |
| **Marital Status** | | |
| Single | 100 | 25.0 |
| Married | 258 | 64.5 |
| Divorced | 15 | 3.8 |
| Widowed | 27 | 6.8 |

### 4.3 Descriptive Statistics for KPA of Participants before and After Intervention

Participants were asked fourteen (14), six (6) and four (4) questions to assess their knowledge, perception and attitude on cancer respectively. It has been found that right responses on questions assessing knowledge were markedly improved by health education, but no notable improvement observed for perception and attitude related questions. Figures below show response scores to individual questions assessing their knowledge, perception and attitude. Incorrect answers were scored 0 and right answers were scored 1.

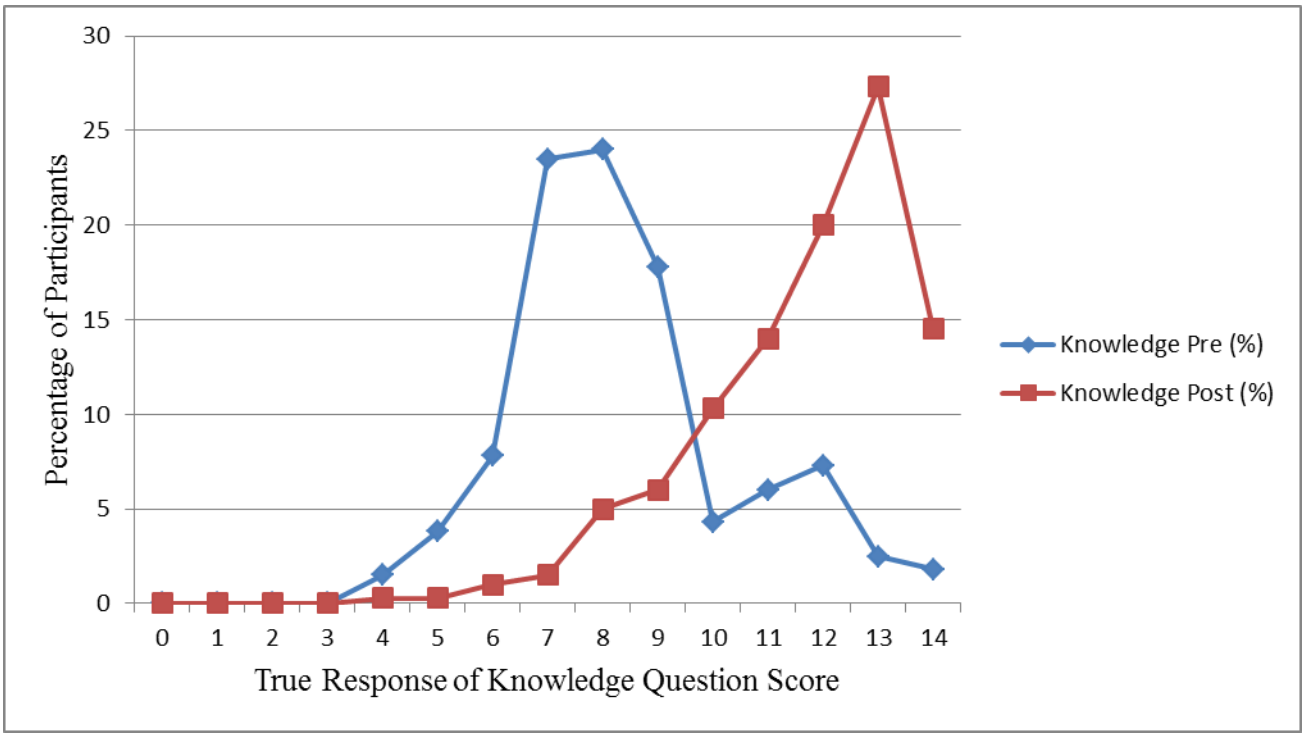



**Figure 1: Knowledge frequency score for pre and post health education (N=400)**

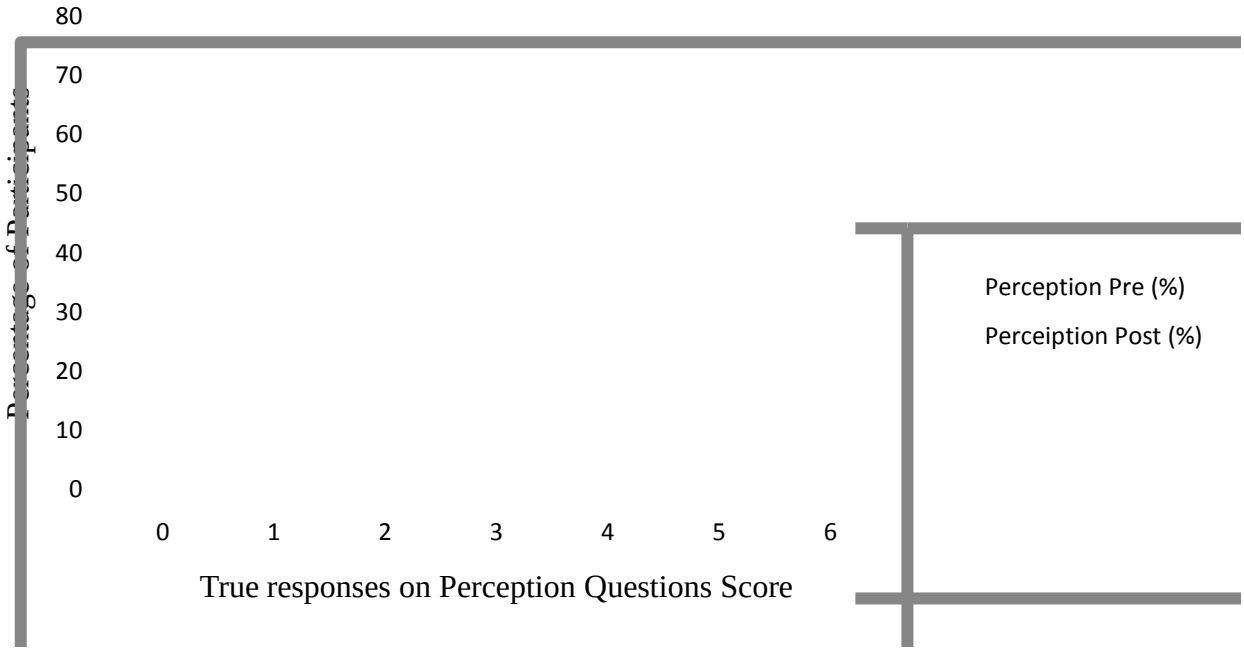



**Figure 2: Perception Frequency Score (N=400)**

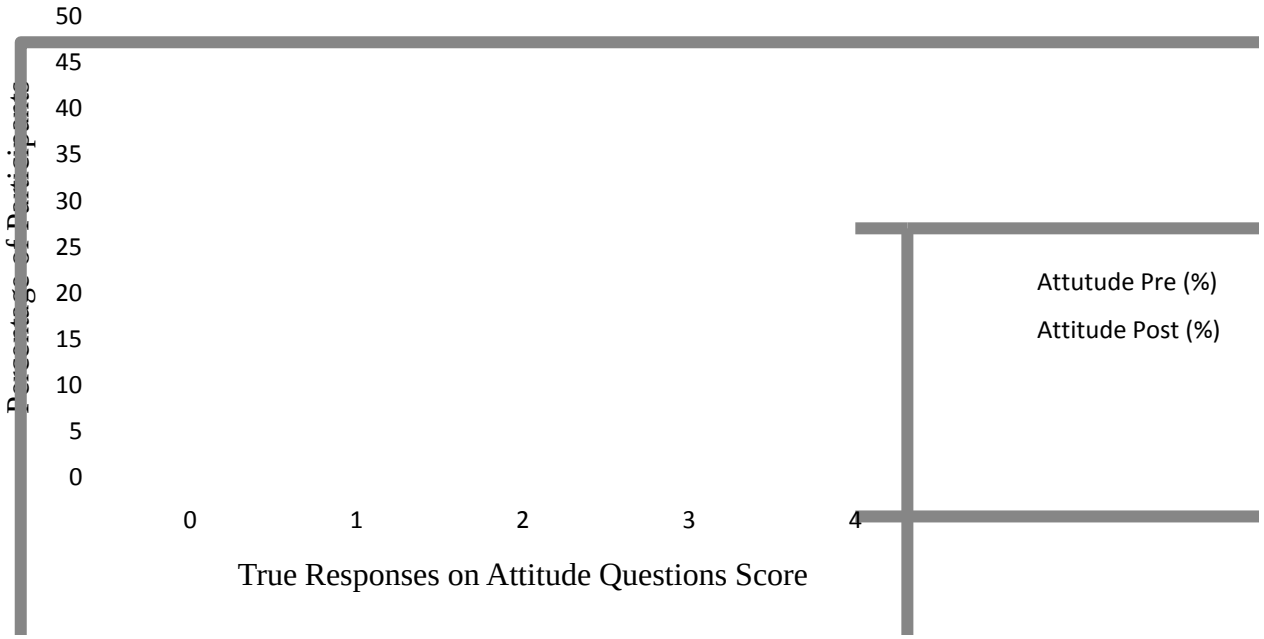



**Figure 3: Attitude Frequency Score (N=400)**

## 4.4 Relationship between KPA and Social Demographic Characteristics

Relationship between knowledge, perception and attitude with social demographic features i.e. age, sex and education level were explored and outlined in this section. Health education improved knowledge, perception and attitude for all age groups, all education levels and both sexes. Further analysis showed that only level of education significantly affect baseline and improves uptakes of health educations in clinical settings.

**Table 3: Cross tabulation between KPA versus Social Demographic Characteristics**

| | **Before Health Education Respondents with** | **After Health Education Adequate Knowledge** |
|---|---|---|
| **Level of Education** | | |
| University Level | 22(44.9%) | 38(77.6%) |
| Secondary School | 19(19.4%) | 80 (81.6%) |
| Illiterate | 3(8.3%) | 23 (63.9%) |
| Primary School | 25(11.7%) | 160(75.1%) |
| Other | 1(25%) | 2(50.0%) |
| *p-value 0.0005* | | |
| **Age Group** | | |
| 15 - 24 | 12(21.8%) | 42(76.4%) |
| 25 - 34 | (17.8%) | 84(78.5%) |
| 35 - 44 | 19(17.9%) | 77(72.6%) |
| 45 - 54 | 12(15.2%) | 61(77.2%) |
| 55 + | 8(15.1%) | 39(73.6%) |
| *P-value 0.725* | | |

| | | | |
|---|---|---|---|
| **Sex** | | | |
| Male | | 33(20.9%) | 116(73.4%) |
| Female | | 37(15.3%) | 187(77.3%) |
| | *p-value* | *0.067* | |
| | **Respondents with Good Perception** | | |
| **Education Level** | | | |
| University Level | | 44(89.8%) | 46(93.9%) |
| Secondary School | | 84(85.7%) | 94(95.9%) |
| Illiterate | | 25(69.4%) | 33(91.7%) |
| Primary School | | 188(88.3%) | 202(94.8%) |
| Other | | 4(100%) | 3(75.0%) |
| | *p-value* | *0.033* | |
| **Age Groups** | | | |
| 15 -24 | | 45 (81.8%) | 52 (94.5%) |
| 25 - 34 | | 86(80.4%) | 97(90.7%) |
| 35 - 44 | | 99(93.4%) | 103(97.2%) |
| 45 - 54 | | 70(88.6%) | 77(88.6%) |
| 55 + | | 45(84.9%) | 49(92.5%) |
| | *p-value* | *0.06* | |
| **Sex** | | | |
| Female | | 208 (86.0%) | 233(96.3%) |
| Male | | 137(86.7%) | 145(91.8%) |
| | *p-value 0.83* | | |

| | Respondents with Positive Attitude | |
|---|---|---|
| **Education Level** | | |
| University Level | 37(75.5%) | 41(83.7%) |
| Secondary School | 72(14.3%) | 72(79.6%) |
| Illiterate | 17(47.2%) | 32(88.9%) |
| Primary School | 161(75.6%) | 187(87.8%) |
| Other | 3(75.0%) | 3(75.0%) |
| *p-value* | *0.012* | |
| **Age Groups** | | |
| 15 - 24 | 32(58.2%) | 46(83.7%) |
| 25 - 34 | 73(68.2%) | 82(76.6%) |
| 35 - 44 | 87(82.1%) | 96(90.6%) |
| 45 - 44 | 60(75.9%) | 70(88.6%) |
| 55 + | 38(71.7%) | 47(88.7%) |
| *p-value* | *0.17* | |
| **Sex** | | |
| Female | 180(74.4%) | 214(88.4%) |
| Male | 110(69.6%) | 127(80.4%) |
| *p-value* | *0.297* | |

### 4.5 Effects of Health Education on KPA

Further analysis conducted to estimate effects of health education on knowledge, attitude and perception of cancer patients' healthy relatives at ORCI. Results showed that health education significantly improves levels of knowledge, perception and attitudes as depicted in the following graphs.

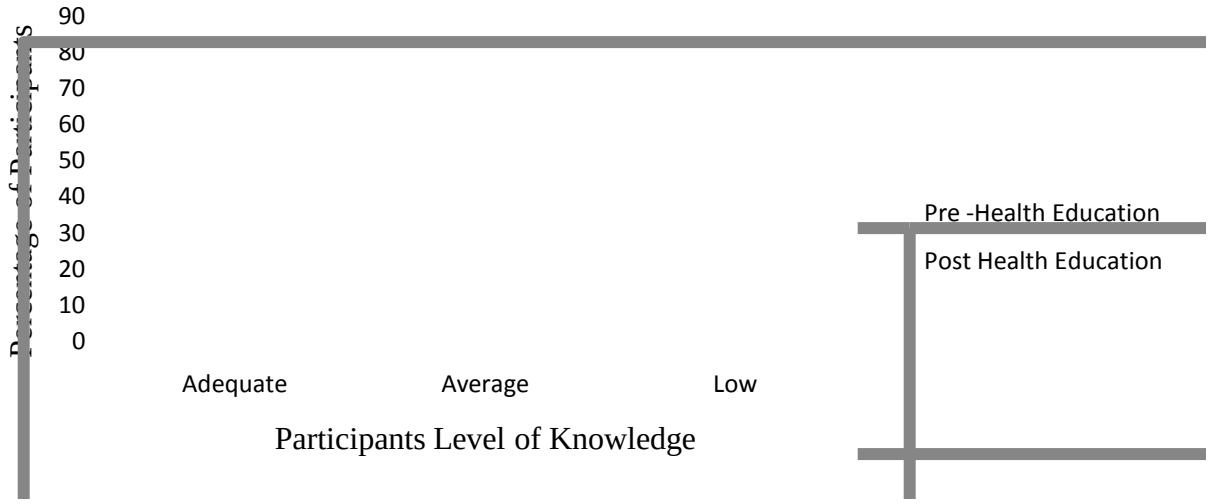



**Figure 4: Levels of knowledge before and after Health Education ($p<0.0005$).**

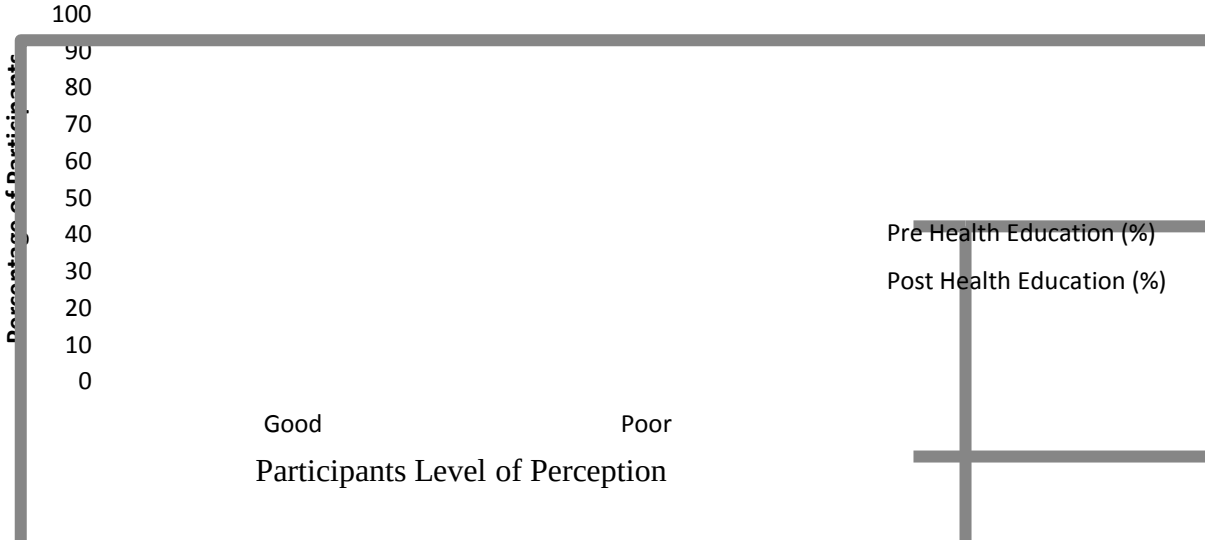



**Figure 5: Levels of Perception before and after Health Education (p<0.0005).**

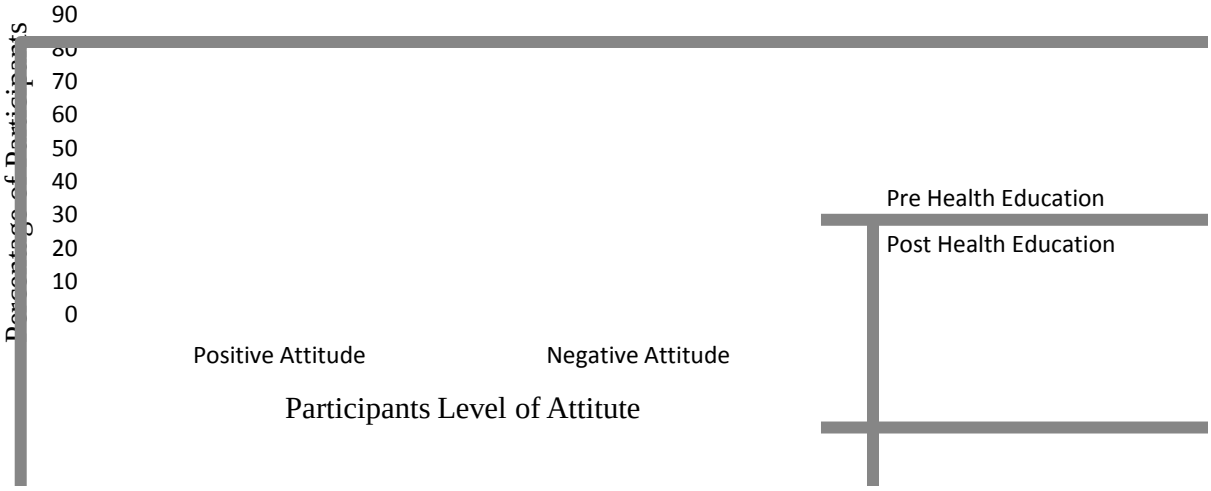



**Figure 6: Attitude before and after Intervention (p<0.0005).**

**Table 4: Pre and Post health education means average score of participants on KPA**

| **Does health education improve knowledge about cancer?** | | |
|---|---|---|
| | **Pre Health Education** | **Post Health Education** |
| Mean ± SD | 8.4 ± 2.068 | 11.67 ± 1.912 |
| Mean Difference, CI | 3.265, 95% CI (3.039,3.491) | |
| p-value (t-test) | < 0.0005 | |
| **Does health education improve perception about cancer?** | | |
| | **Pre Health Education** | **Post Health Education** |
| Mean ± SD | 4.62 ± 0.913 | 5.05 ± 0.807 |
| Mean Difference, CI | 0.433, 95% CI (0.329,0.536) | |
| p-value (t-test) | | < 0.0005 |
| **Does health education improve attitude about cancer?** | | |
| | **Pre Health Education** | **Post Health Education** |
| Mean ± SD | 2.88 ± 0.942 | 3.2 ± 0.928 |
| Mean Difference, CI | 0.323, 95% CI (0.229,0.416) | |
| p-value (t-test) | < 0.0005 | |

Further detailed analysis on individual questionnaire question response revealed that only 15.8% of people were aware that cancer can be inherited from parents and runs across the family, this knowledge significantly raised by 36% through health education. About 19.3% of relatives attending ORCI know that cancer may results from poor diet, this awareness rises significantly to 66.3% when exposed to health education. Participants still know witchcrafts as among causes of cancer; however, this myth significantly decreases with health education from 11% to 1.8%. Majority 87% of participants perceive disclosure of cancer status immediately to cancer patient after diagnosis is good practice, and this perception increases by 9% with health education intervention. From this study it has been found that health education increases the need of participants to desire more information about cancer.

Before health educations were given about 70% of participants thought they require more information about cancer, which increases to 95% of participants after health intervention. This also may highlight that either package of health education given in insufficient or time is very short to participants to receive information that they may feel adequate. About 59% of participants before health education was aware that cancer is not communicable diseases hence cannot be transmitted from one person to another. This extreme poor understanding about cancer transmission can significantly affect attitude and lead into stigmatization towards cancer patients which not only impair their care but also survival in our settings.

# CHAPTER FIVE

## 5.1 DISCUSSION

It has been observed that over 60% of people who escort their cancer patient relatives to receive care at ORCI were women. This might be caused by the fact that women are less tied in economic activities than men, and might provide similar situation allover other hospitals in Tanzania. In term of ages, above 50% of relatives escorting their relatives are at the age of 24 - 45 years old, the most productive age groups, which show significant impact of cancer in social economic development, as this productive work force take times to care for their sick relatives than get involved in production. The impact seems to be significant bearing in mind that the cancer is chronic diseases needing a long time of treatments and follow-ups. Majority (64.5%) of relatives are married, less than 15% of those relatives attained university education and most of them (53%) are from coast regions. This may imply that family is strong social factor which can provide care to the needs as well as less educated people are more available to give care to sick patients than more educated ones.

The correlation between knowledge, attitude and perception of cancer and social demographic characteristics showed that few factors are statistically significant while majority others were not. Age and sex of relatives were not found to significantly influence cancer knowledge ($p > 0.005$), but higher level of education associated with generally increase the level of knowledge ($p < 0.005$). Attitude and Perception were not influenced by age, sex and level education. People with higher education exhibits better baseline knowledge and tend to gain more knowledge about cancer after health education than those with lower level education. Further analysis demonstrates that participants with higher education level have better knowledge on causes, mode of transmission as well as tend to require more information about cancer than those with lower education levels. Understanding of Cancer symptoms was found to be mostly required information by study participants.

Baseline knowledge of cancer among cancer patient relatives is average and health education significantly improve such knowledge in many aspects as found in previous studies such as that of Maryam Changizi et al (31). Only 17.5% of relatives were found to have adequate knowledge before intervention which significantly increases to 75% after health education. Mean average score of knowledge before and after health education were 8.4 ± 2.068 (within average knowledge level range) and 11.67 ± 1.92 (within adequate knowledge level range) ($p<0.0005$) respectively.

Perception of cancer patient relatives at ORCI is generally good, with about 86.3% had good perception before intervention, which increased to 94.5% after health education. Pre and post intervention score were 4.62 ± 0.913 and 5.05 ± 0.807 respectively ($p < 0005$) both were on the good side of the scoring scale. Cancer patient relatives attending ORCI have overall positive attitude which further improved after health education from 75.5% to 85.2% with pre and post intervention mean of 2.88 ± 0.942 and 3.2 ± 0.928 ($p<0.0005$) respectively.

At ORCI health education was found to be mostly delivered by nurses standing in front of participants. Education lasts about 30 to 60 minutes given to both cancer patients and their relatives seated at hospital reception area waiting benches. These health educators did not use any visual aid gadgets such as flip charts, PowerPoint projections, brochures, etc. The content of the education was not similar between sessions which can jeopardize not only the results of this study but also impacts in term of knowledge it wanted to make to those people.

There was no significant limitation observed during this study which can jeopardize its validity. However, maintaining similar participants for both pre and post health education interview posed minimal challenge that was mitigated by good rapport and use of study registration numbers to tract similar participants after health education. Factors related to health education delivery such as duration, contents, educator's characteristics, etc. couldn't be analyzed due to failure to obtain adequate information required during data collection as expected, but this doesn't interfere other parts of the study.

# CHAPTER SIX

## 6.0 CONCLUSION AND RECOMMENDATIONS

### 6.1 Conclusion

This study managed to characterize the social demographic features of people escorting their cancer patient relatives at ORCI. It observed that majority are females, with age between 24 – 45 years old, with low academic background and from nearby coast areas where hospital is located.

It has also found that health education in clinical settings significantly and to a large extent improves cancer knowledge, perception and attitude of its participants.

Baseline knowledge, attitude and perception were neither affected by age nor sex of participants. Education level of participants was found to influence cancer baseline knowledge as well as uptakes of health education by participants.

## 6.2 Recommendations

The following are recommendations based on findings of this study.

i. Health education delivered ORCI shall be improved. A Standard presentation shall be formed and educator well trained so that to deliver same complete information to all participants in order to provide focused understanding to participants. Addition of visual aid such as pictures, flip charts, brochures etc. cannot be over emphasized.

ii. Health educations in clinical settings shall be adopted by all health facilities both private and public as it seems to significantly improve knowledge, attitude and perception about cancer. Bearing in mind that thousands of people pass through our health facilities countrywide daily and this can be very cost effective way to raise awareness of various diseases of public importance.

iii. More research shall be done that involves bigger sample size and more standard health education program to more characterize and strengthen evidence. The impact of health education in clinical settings for other diseases apart from cancer shall also be explored. This study explored more of participants' factors and effects of health education on knowledge, attitude and perception of cancer, more studies to explore more on intervention as well as educator characteristics is highly required.

iv. Policy and guideline change is advised through ministry of health so that all health facilities engage themselves in prevention of diseases especially NCD beyond treatments roles. This can mean integration of health education package within their service delivery continuum to all health facilities in the country.

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# APPENDICES

## I. Questionnaire (English Version)

### 1. Social demographic characteristics of participants (cycle as appropriate)

i. Age: _____

ii. Region of Residence: _____

iii. Sex:

- Male
- Female

iv. Marital Status:

- Single
- Married
- Divorced
- Widowed
- Other Specify _____

v. Highest Education Level:

- University level
- Secondary school
- Illiterate
- Primary school
- Other Specify _____

**2. Assessment of Knowledge, perception and treatment of cancer and its treatment modalities**

**2.1 Knowledge about causes of cancer**

Before Intervention

- Genetic Environment
- Diet
- Envy Black magic
- Stress
- Inflammation
- Do not know
- Sadness
- Other Specify

_____

After Intervention

- Genetic Environment
- Diet
- Envy Black magic
- Stress
- Inflammation
- Do not know
- Sadness
- Other Specify

_____

**2.2 Should doctors tell patients the full truth about the diagnosis?**

Before Intervention

- Yes
- No
- I don’t know

After Intervention

- Yes
- No
- I don’t know

**2.3 What kind of treatment should cancer patients accept?**

Before Intervention

- Chemotherapy and/or radiotherapy and/or surgery
- Chemotherapy
- Surgery
- Radiotherapy

After Intervention

- Chemotherapy and/or radiotherapy and/or surgery
- Chemotherapy
- Surgery
- Radiotherapy

**2.4 Should cancer patients receive alternative treatments (e.g., hormonal, biological, transplant)?**

Before Intervention

- Yes
- No
- I don’t know

After Intervention

- Yes
- No
- I don’t know

**2.4.1 If yes:**

Before Intervention

- With other treatment (e.g., chemotherapy, radiation, surgery)
- Alone
- Don’t know

After Intervention

- With other treatment (e.g., hormonal, biological, transplant)
- Alone
- Don’t know

**2.5 Can a person catch cancer from another person as they might catch flu?**

Before Intervention

- Yes
- No
- I don't know

After Intervention

- Yes
- No
- I don't know

**2.6 Shouldn't cancer patients tell anyone that they have been diagnosed?**

Before Intervention

- Yes
- No
- I don't know

After Intervention

- Yes
- No
- I don't know

**2.7 Shouldn't genital cancer patients tell anyone that they have been diagnosed?**

Before Intervention

- Yes
- No
- I don't know

After Intervention

- Yes
- No
- I don't know

**2.8 Why should patients not disclose their disease?**

Before Intervention

- Job loss
- Health insurance loss
- Social stigma
- Other Specify

_____

After Intervention

- Job loss
- Health insurance loss
- Social stigma
- Other Specify

_____

**2.9 Is health education sufficient?**

Before Intervention

- Yes
- No
- I don't know

After Intervention

- Yes
- No
- I don't know

**2.10 Do you require more information about cancer?**

Before Intervention

- Yes
- No
- I don't know

After Intervention

- Yes
- No
- I don't know

**2.10.1 If yes, what is it about?**

Before Intervention

- Preventions
- Causes
- Treatment
- Others, specify

After Intervention

- Preventions
- Causes
- Treatment
- Others, specify

Before Intervention

- Herbal
- Traditional healer
- Imported healthy ingredients like Aloe Vera
- Others, specify

_____

_____

After Intervention

- Herbal
- Traditional healer
- Imported healthy ingredients like Aloe Vera
- Others, specify

_____

_____

**2.11 Do you know about alternative treatments?**

Before Intervention

- Yes
- No
- Not Sure

After Intervention

- Yes
- No
- Not Sure

**2.11.1 If yes, what is it?**

**2.12 Do you require more information about alternative treatments?**

Before Intervention

- Yes
- No
- I don’t k know

After Intervention

- Yes
- No
- I don’t know

**3. Characteristics of Health Interventions**

**3.1 Health Educator cycle/fill appropriate**

- Education Level (Diploma, Degree, Masters, Ph.D.)

  _____
- Qualifications (Nurse, Doctor, Community Health Worker, etc.)

  _____
- Number of Previous Health Education Sessions Conducted

  _____
- Experience in field on Oncology

  _____

**3.1 Characteristics of the intervention cycle/fill as appropriate**

- Start Time: _____End Time: _____ Duration in minutes _____
- Contents
- Definition of cancer
- Causes
- Treatments (Options, Importance of Compliance, Etc.)
- Transmission & Risk factors
- Prevention
  - Primary
  - Secondary
  - Tertiary
- Myth and Stigmatization
- Survivorship (How to live with cancer or after cure)

**II. Questionnaire (Swahili Version)**

1. Sifa za mshiriki (zungusha jibu sahihi)

i. Umri: _____

ii. Mkoa unaoishi: _____

iii. Jinsia:

- Mke
- Mume

iv. Ndoa:

- Sijaoa/Kuolewa
- Nipo katika ndoa
- Nimeachika/Acha
- Mjane/Mgane
- Nyingine (taja) _____

v. Kiwango cha juu cha elimu:

- Chuo
- Secondary
- Sijasoma
- Shule ya msingi
- Nyingine (ipi) _____

2. Kupima uelewa juu ya saratani

2.1 Chanzo cha saratani nini?

Kabla ya elimu

- Kurithi kutoka kwa wazazi
- Chakula
- Uchawi
- Msongo wa Mawazo
- Mchubuko
- Sijui
- Upweke
- Nyingine (taja)

_____

Baada ya elimu

- Kurithi kutoka kwa wazazi
- Chakula
- Uchawi
- Msongo wa Mawazo
- Mchubuko
- Sijui
- Upweke
- Nyingine (taja)

_____

2.2 Unadhani ni sahihi Daktari kumwambia ukweli mtu aliegundulika na saratani?

Kabla ya elimu

- Ndio
- Hapana
- Sijui

Baada ya elimu

- Ndio
- Hapana
- Sijui

2.3 unafikiri ni tiba gani mgonjwa wa saratani akubali kutibiwa nayo?

Kbala ya elimu

- Chemo, Mionzi na upasuaji
- Chemo pekee
- Upasuaji pekee
- Mionzi pekee
- Nyingie (taja)_____

Baada ya elimu

- Chemo, Mionzi na upasuaji
- Chemo pekee
- Upasuaji pekee
- Mionzi pekee
- Nyingie (taja)_____

2.4 Unafifiki ni sahihi mgonjwa wa saratani kutumia tiba zaiudi ya za hapo juu? (e.g., homoni, za kibaologia au kuwekwa viungo vya mtu mwingine)?

- Kabla ya elimu
- Ndio
- Hapana
- Sijui

2.4.1 Kama Ndio:

Kabla ya elimu

- Na tiba nyingine (e.g., chemo, mionzi, upasuaji)
- Pekee
- Sijui

Baada ya elimu

- Na tiba nyingine (e.g., chemo, mionzi, upasuaji)
- Pekee
- Sijui

2.5 Mtu anaweza kuambukizwa saratani kutoka kwa mtu mwingine kama ilivyo mafua?

Kabla ya elimu

- Ndio
- Hapana
- Sijui

Baada ya elimu

- Ndio
- Hapana
- Sijui

2.6 Unadhani mgonjwa wa saratani amwambie mtu mwingine ana saratani au iwe siri yake?

Kabla ya elimu

- Ndio
- Hapana
- Sijui

Baada ya elimu

- Ndio
- Hapana
- Sijui

2.7 Mtu mwenye saratani ya sehemu za siri, unadhani ni sahihi kumwambia mtu mwingine?

Kabla ya elimu

- Ndio
- Hapana
- Sijui

Baada ya elimu

- Ndio
- Hapana
- Sijui

2.8 Kwa nini unadhani mgonjwa wa saratani asitoe taarifa kuhusu ugonjwa wake?

Kabla ya elimu

- Hofu ya kupoteza kazi
- Kupoteza bima ya afya
- Kutengwa na jamii
- Nyingine (ipi)

_____

Baada ya elimu

- Hofu ya kupoteza kazi
- Kupoteza bima ya afya
- Kutengwa na jamii
- Nyingine (ipi)

_____

2.9 Unadhani elimu inayotolewa inatosha kuelimisha Kwa kina juu ya saratani?

Kabla ya elimu

- Ndio
- Hapana
- Sijui

Baada ya elimu

- Ndio
- Hapana
- Sijui

2.10 Unaitaji elimu zaidi juu ya saratani?

Kabla ya elimu

- Ndio
- Hapana
- Sijui

Baada ya elimu

- Ndio
- Hapana
- Sijui

2.10.1 Kama ndio, iwe inahusu nini?

Kabla ya elimu

- Jinsi ya kujikinga
- Chanzo cha saratani
- Tiba za saratani
- Nyingine (taja)

_____

Baada ya elimu

- Jinsi ya kujikinga
- Chanzo cha saratani
- Tiba za saratani
- Nyingine (taja)

_____

2.11 Unadhani tiba mbadala zinatibu saratani?

Kabla ya elimu

- Ndio
- Hapana
- Sijui

Baada ya elimu

- Ndio
- Hapana
- Sijui

2.11.1 Kama ndio, zipi?

Kabla ya elimu

- Mitishamba
- Waganga wa kienyeji
- Zinazoingizwa kutoka nje ya nchi mfano Aloe Vera
- Nyingine (taja)

_____

Baada ya elimu

- Mitishamba
- Waganga wa kienyeji
- Zinazoingizwa kutoka nje ya nchi mfano Aloe Vera
- Nyingine (taja)

_____

2.12 Unaitaji elimu zaidi kuhusu tiba mbadala?

Kabla ya elimu

- Ndio
- Hapana
- Sijui

Baada ya elimu

- Ndio
- Hapana
- Sijui

3. Sifa za elimu inayotolewa (anajaza mtafiti)

3.1 Mtoa elimu

- Kiwango cha elimu (Diploma, Degree, Masters, Ph.D.)

  _____

- Utalaam (Nesi, Daktari, Huduma za jamii, nk.)

  _____

- Idadi ya vipindi vya elimu alivyokwisha wahi toa

  _____

- Miaka ya uzoefu katika masuala ya saratani

  _____

3.1 Sifa ya elimu inayotolewa

- Muda wa kuanza: _____, Kumaliza: _____ Muda uliochukua (dakika) _____

Vilivyofundishwa

- Maana ya saratani
- Sababu za saratani
- Aina za tiba na umuhimu wa kumaliza tiba
- Vitu vinavyoongeza uwezekano wa kupata saratani
- Kinga ya saratani
- Unyanyapaa na uvumi
- Jinsi ya kuishi na saratani au baada ya tiba ya saratani

## III. INFORMED Consent Form (English Version)

**Introduction**: My name is Chakou Halfani a medical student at Muhimbili University of Health and Allied Science (MUHAS), pursuing Master Degree of Science in Project Management, Monitoring and Evaluation. I am conducting a study to evaluate the short term outcomes of cancer health education interventions in clinical practice: the case of ocean road cancer institute. As you are one among this population, I hereby kindly ask for your consent to participate in the study and thus contribute to its success by providing the information required.

**Purpose of the study:** The study is aimed to is to evaluate short term outcomes of clinical health education interventions in improving knowledge, attitude, and perception of cancer patient healthy relatives towards cancer and its treatment. Your participation in this study is of value and will help to raise more understanding on this intervention which would help to improve understanding of cancer among relatives and prevent cancer.

**How to participate**: On acceptance to participate in the study you will be interviewed by the researcher through an interview form, a set of similar questions will be asked before and after receiving health educations. You will answer to the level of your understanding according to the specific responses that will be mentioned to you. I expect each interview session will take a period of 10 to 20 minutes.

**Possible Benefits:** Your participation in this study will contribute into having a clearer understanding of the effects of health education with its associated factors in clinical settings, and therefore improve cancer awareness and prevention through this intervention

**Risks:** No physical harm is attributed to you on your participation in this study.

**Confidentiality:** All information gathered in this study will be highly confidential and only be used in this study alone. No names or any personal details which might be used to identify the participant will be recorded. You will be interviewed in a private place to ensure that no third party will hear our conversation. At the end of the study information will be entered in an electronic system and then destroyed.

Participation in the study is fully voluntary, it's my hope that you will agree to participate and you are allowed to withdraw from the study at any stage during the participation in the study despite prior consent provided. You will not face any penalty by refusing to participate or withdrawing from the study.

**Contacts:** In case of any questions or concerns you can contact the:

**Principal investigator:** Dr. Chakou Halfani Tel: +255 782796357

**Research supervisor:** Prof. G. Kwesigabo Tel: +255 713443212

For any questions concerning your right as a participant in the study the chairperson of board of research and publication Dr Bruno Sunguya, director of research and publication MUHAS **P.O. Box 65001, Dar-es-salaam. Tel: +255-222-150-302, +255-222-152-489 Email drp@muhas.ac.tz.**

Please sign below if you agree to participate, if you do not agree you don't have to sign here.

I have read and understood well the contents of this form the benefits that I will get from participating in this study; I hereby agree to participate in this study.

Research participant's signature…….

Researcher's signature…….

Date of signed consent……

## IV Written Informed Consent- Swahili Version

**Utangulizi:** Jina langu ni Chakou Halfani, ni mwanafunzi wa chuo kikuu cha afya na sayansi shirikishi Muhimbili ninafanya Shahada ya pili ya sayansi mwaka wa 2. Ninafanya utafiti kutambua umuhimu ya elimu ya afya ya saratani kwa ndugu za wagonjwa wa saratani hapa Taasisi ya Saratani ya Ocean Road. Kwa kuwa wewe ni mmoja wa kundi hili, ningependa kuomba ridhaa yako kushiriki katika tafiti hii na kuchangia katika mafanikio yake kwa kutoa tarifa zinazohitajika.

**Dhumuni la tafiti:** Utafiti huu unadhumuni la kutambua umuhimu wa elimu ya saratani kwa ndugu za wagonjwa wa saratani. Ushiriki wako utaweza kufanikisha utafiti huu, hivyo kusaidia kuongeza uelewa kwenye suala hili na upatikanaji wa njia zitakazoweza kusaidia kuboresha elimu ya saratani kwa jamii hasa ndugu wa wagonjwa wa saratani.

**Jinsi ya kushiriki:** kwa kukubali kushiriki kwenye utafiti huu utahojiwa na mtafiti kupitia form ya mahojiano, utaulizwa maswali mara mbili, kabla na baada ya kupatiwa elimu na utajibu kadiri ya uelewa wako kulingana na majibu utakayo somewa. Ninategemea kila mahojiano haya yatachukua dakika 10 mpaka 20.

**Faida na hatari kwa washiriki**: Ushiriki wako kwenye utafiti huu utachangia katika kupata uelewa juu ya umuhimu wa elimu stahiki wa ndugu wa wagonjwa awa saratani, na kuchangia kuboresha uthibiti wa saratani nchini. Hakuna madhara ya kimwili yanayaotarajiwa kwa sababu ya ushiriki wako kwenye utafiti huu.

**Usiri:** Taarifa zote zitakazokusanywa kwenye utafiti huu hazitatumika sehemu nyingine yoyote, zitatumiwa kwa utafiti huu tu. Hakuna majina wala maelezo binafsi yatakayoweza kumtambua mshiriki yatachukuliwa. Utahojiwa katika sehemu faragha ili kuepusha watu wengine kusikiliza mazungumzo yetu. Mwisho wa utafiti taarufa zitaingizwa kwenye kwenye mfumo wa kielektroniki na baadaye kuharibiwa.

Ushiriki katika tafiti hii ni hiari, ni matumaini yangu kuwa utakubali kushiri na unaweza kujitoa kwenye utafiti huu katika hatua yoyote ya ushiriki licha ya kutoa ridhaa hapo kabla. Hakuna adhabu yoyote itatolewa kwako kwa kutaa kushiriki au kujitoa kwenye utafiti huu.

**Mawasiliano:** Iwapo utakuwa na maswali yoyote kuhusiana na utafiti huu tafadhali wasiliana na:

**Mtafiti mkuu**: Chakou Halfani Simu: +255 782 796357

Research supervisor: Prof. G. Kwesigabo Tel: +255 713443212

Iwapo unamaswali yoyote kuhusiana na haki yako ya msingi kama mshiriki unaweza kuwasiliana na mwenyekiti wa kamati ya tafiti na machapisho. Dr Bruno Sunguya Kurugenzi ya Tafiti na Machapisho, Chuo Kikuu cha Tiba na Sayansi Shirikishi za Afya Muhimbili S.L.P 65001, Dar-es-salaam. Simu: +255-222-150-302, +255-222-152-489 Barua pepe: drp@muhas.ac.tz.

Ikiwa umehafiki kushiriki katika utafiti huu, tafadhali weka sahihi yako hapo chini na ikiwa hujaridhia basi hautahitaji kuweka sahihi yako.

Nimesoma na kuelewa maelekezo hayo hapo juu, faida ntakazopata kwa ushiriki wangu kwenye utafiti huu, niko tayari kushiriki kwenye utafiti huu.

Sahihi ya mshiriki wa utafiti……

Sahihi ya mtafiti……

Tarehe ya kusaini fomu ya ridhaa…….

## V. Ethical Clearance MUHAS

**MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES**
**OFFICE OF THE DIRECTOR OF POSTGRADUATE STUDIES**

P.O. Box 65001
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Direct Line: +255-22-2151378
Telefax: +255-22-2150465
E-mail: dpgs@muhas.ac.tz

Ref. No. HD/MUH/T.614/2017

19th December, 2019

Dr. Chakou Halfani Tindwa
MSc. Project Management Monitoring and Evaluation in Health,
School of Public Health and Social Health,
**MUHAS.**

**RE: APPROVAL OF ETHICAL CLEARANCE FOR A STUDY TITLED: "SHORT TERM OUTCOMES OF CANCER HEALTH EDUCATION IN CLINICAL PRACTICE AT OCEAN ROAD CANCER INSTITUTE."**

Reference is made to the above heading.

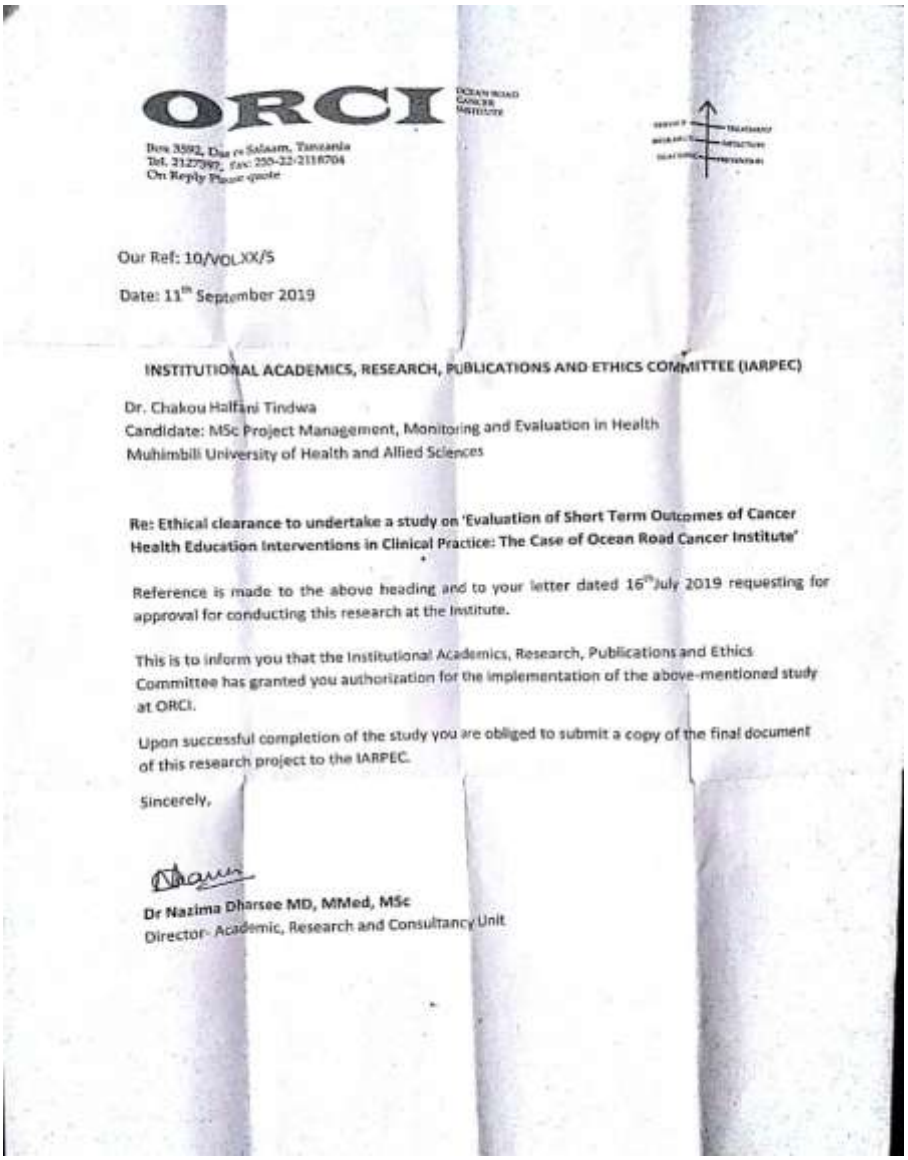
I am pleased to inform you that, the Chairman has, on behalf of the Senate, approved ethical clearance for the above-mentioned study. Hence you may proceed with the planned study.

The ethical clearance is valid for one year only, from **19th December, 2019 to 18th December, 2020.** In case you do not complete data analysis and dissertation report writing by **18th December, 2020,** you will have to apply for renewal of ethical clearance prior to the expiry date.

Dr. Emmanuel Balandya
**ACTING: DIRECTOR OF POSTGRADUATE STUDIES**

cc: Director of Research and Publications
cc: School of Public Health and Social Health, **MUHAS**

## VI. Ethical Clearance ORCI



ORCI

OCEAN ROAD CANCER INSTITUTE

Box 3592, Dar es Salaam, Tanzania
Tel. 2127397, Fax: 255-22-2116704
On Reply Please quote

Our Ref: 10/VOL XX/5

Date: 11th September 2019

**INSTITUTIONAL ACADEMICS, RESEARCH, PUBLICATIONS AND ETHICS COMMITTEE (IARPEC)**

Dr. Chakou Halfani Tindwa
Candidate: MSc Project Management, Monitoring and Evaluation in Health
Muhimbili University of Health and Allied Sciences

**Re: Ethical clearance to undertake a study on 'Evaluation of Short Term Outcomes of Cancer Health Education Interventions in Clinical Practice: The Case of Ocean Road Cancer Institute'**

Reference is made to the above heading and to your letter dated 16th July 2019 requesting for approval for conducting this research at the Institute.

This is to inform you that the Institutional Academics, Research, Publications and Ethics Committee has granted you authorization for the implementation of the above-mentioned study at ORCI.

Upon successful completion of the study you are obliged to submit a copy of the final document of this research project to the IARPEC.

Sincerely,

**Dr Nazima Dharsee MD, MMed, MSc**
Director- Academic, Research and Consultancy Unit