FACTORS INFLUENCING ACCESS TO HEALTH CARE SERVICES AMONG CERVICAL CANCER PATIENTS AT KENYATTA NATIONAL HOSPITAL

NGONDI BETH WANGIGI (BSC. BIOCHEMISTRY)

H57/ 69213/ 2011

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF THE MASTER OF PUBLIC HEALTH DEGREE OF THE UNIVERSITY OF NAIROBI.

2014

DECLARATION

I, Ngondi Beth Wangigi, declare that this is my original work and to the best of my knowledge has not been presented by any other person for research purpose, degree or otherwise in any other university or institution.

Signed ……………………………………. Date …………………………………

Ngondi Beth Wangigi.

H57/69213/2011.

APPROVALS

This dissertation has been submitted for partial fulfillment for the award of Master of Public Health with our approval as supervisors.

Prof. Violet Kimani, BA; MA; PhD

Professor,

School of Public Health, College of Health Sciences,

University of Nairobi

Signed …………………………..Date…………………………….

Dr. Richard Ayah, MBChB; MSc

Lecturer,

School of Public Health, College of Health Sciences,

University of Nairobi

Signed …………………………..Date…………………………….

Dr. Dismas Ongore, MBChB; MPH; PhD

Director,

School of Public Health, College of Health Sciences,

Signed …………………………..Date…………………………….

Director, School of Public Health, University of Nairobi

DEDICATION

I dedicate this work to the strong women battling cervical cancer. Your willingness to share your stories and treatment journey greatly informed this process. I am truly thankful.

Finally, to John Jumbi for his constant encouragement, sacrifice, contribution and overwhelming support.

ACKNOWLEDGEMENT

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

AIDS- Acquired Immune Deficiency Syndrome

DNA- Deoxyribonucleic acid

EBV- Epstein Barr Virus

FBO- Faith Based Organization

FIGO- International Federation of Gynecology and Obstetrics

HIV- Human Immunodeficiency Virus

HPV- Human Papillomavirus

HTLV- Human T Lymphotropic Virus

IAEA- International Atomic Energy Agency

KNH- Kenyatta National Hospital

LEEP- Loop Electrosurgical Excision Procedure

LLETZ- Large loop excision of the transformation zone

MoH- Ministry of Health

MOMS- Ministry of Medical Services

MOPHS- Ministry of Public health and Sanitation

NCI- National Cancer Institute

NGO- Non Governmental Organization

NHA- National Health Accounts

NHIF- National Hospital Insurance Fund

PAP- Papanicolau Test

SALC- Southern Africa Litigation Center

STD- Sexually Transmitted Disease

UoN- University of Nairobi

WHO- World health Organization

DEFINITIONS OF OPERATIONAL TERMS

Access

The ability or permission to make use of a specific service. In this study access was measured by dividing it into 4 subcomponents- affordability, accessibility, acceptability, and availability defined below.

Affordability

Having the means to do something, or bear the cost of something without risking serious consequences or inconvenience.

Accessibility

The geographical distance between the location of health facility and the location of patients.

Acceptability

User friendliness of a service or whether the service conforms to the norms, expectations and cultural behaviors of a population

Availability

It referred to whether health care workers or health facilities were readily obtainable when needed.

Health Seeking Behavior

Any activity undertaken by an individual in order to promote well-being or recovery from an illness.

Health Care Services

Medical or remedial care provided for purposes of maintaining or restoring health/wellbeing through prevention and treatment of disease by trained professionals.

Cervical Cancer Patient

In the study this meant a woman who had confirmed diagnosis of cancer of the cervix.

ABSTRACT

Cervical cancer poses a real threat to women's reproductive health despite it being considered easily preventable. The disease is caused by infection with sexually transmitted Human Papillomavirus but can be readily prevented by identifying and treating women with precancerous lesions in the cervix. In developing countries however, lack of awareness of the problem coupled with limited access to health interventions are responsible for the higher mortality witnessed compared to developed countries. In Kenya, mortality rates that are as high as morbidity rates suggest challenges in health care access for the patients. Several studies have been done on screening uptake and prevention of cervical cancer. However, in order to reduce the plight of those who already have the disease, there is need for studies on issues related to access to treatment. This study was therefore conducted to describe factors that influence access to health care services among cervical cancer patients at Kenyatta National hospital. It is the only public facility that is currently providing radiotherapy services hence the most frequented by those who cannot afford private hospitals or treatment overseas.

A descriptive cross sectional study was conducted of the cervical cancer patients attending the hospital for health care. A structured questionnaire was used to collect data from the patients on their cancer diagnosis and treatment journey. Data analysis was conducted by running frequencies and by use of Chi square to check for associations. The results were used to check for gaps in access to cervical cancer health services.

A total of 228 participants, selected by convenience sampling, took part. The study found cost to be a factor that influences access to health care, in agreement with findings from other studies. Additionally there was an association found between having health insurance and mode used for payment (p=0.05). Geographical accessibility was found to be another influencing factor with 83.3% of the respondents having come from outside Nairobi. This also highlighted availability of regional comprehensive cervical cancer health services as a gap that needs addressing. The study further highlighted poor knowledge of cervical cancer. 64.5% of the respondents did not know about cervical cancer prior to diagnosis and only 6.1% identified Human Papillomavirus as the cause. The study findings compare well with those of a study done in Nigeria by Abiodun et al which found only 2.3% of respondents knew of Human Papillomavirus as a cause of cervical cancer.

Reducing cost of treatment, increasing knowledge on cervical cancer as well as introducing comprehensive treatment facilities regionally may increase access and therefore utilization of health care services and thereby improve outcomes for this disease.

1. INTRODUCTION

There are more cancer cases being reported in Kenya today than was the case ten years ago but studies to determine the reasons for the increased prevalence and incidence are not being conducted (Musibi, A., 2008). It is not clear whether this stems from an actual increase in cancer cases or from an increase in awareness of the disease leading to better diagnosis. The cancer registry has not been well updated hence may not be fully representative of the trend of the disease. Cancer registries are meant to provide data on the incidence and prevalence of cancer as well as common cancers reported and their trends (Mutuma and Rugutt-Korir, 2006). Previously believed to be a disease of the affluent, the numbers of cases of cancer in Kenya seem to prove otherwise. It had been estimated that in 2010, cancer would kill nearly 8 million people worldwide while over 13 million new patients would be diagnosed with the disease; 72% of these cases would occur in developing countries (PACT, 2010). Unfortunately in developing countries, cancer treatment is unaffordable and more commonly unavailable. There are roughly 30 countries that lack a single radiotherapy machine, and most cases in low and middle income countries are diagnosed too late for curative treatment to remain an option (PACT 2010).

GLOBAL BURDEN OF CANCER

Cancer is one of the leading causes of death in the world (WHO, 2007). Based on projections, cancer deaths will continue to rise; by the year 2030 the burden is set to more than double with 26.4 million cancer cases, 17 million deaths and 75 million people living with the disease (Boyle and Levin, 2008). A majority of the cancer deaths occur in low- and middle-income countries, where resources available for prevention, diagnosis and treatment of cancer are limited or nonexistent (WHO, 2008). For that reason some cancers that are preventable or even curable have resulted in needless fatalities due to deficiency of financial resources whether for screening at a stage when it counts or for treatment when the diagnosis is confirmed. This is happening despite a reduction in morbidity and mortality in developed countries from primary prevention and early detection. Overall, case fatality from cancer is estimated to be 75% in countries of low income, 72% in countries of low-middle income, 64% in countries of high middle income, and 46% in countries of high income (Farmer, 2010).

A summary report by WHO/ICO on HPV and cervical cancer in Kenya, estimated that every year 2454 women are diagnosed with cervical cancer and 1676 die from the disease- this is approximately 68% of the cases (WHO/ ICO, 2010). Further, the report estimates that Kenya has a population of 10.32 million women aged 15 years and older who are at risk of developing cervical cancer. High level of exposure to HPV, absence of screening programs and poor access to appropriate treatment are to blame for the current burden of invasive cervical cancer in Kenya (Karanja and Wanyoro, 2011).

1.1 BACKGROUND OF STUDY

Cervical cancer is the second most common cancer among women worldwide, with almost half a million new cases each year; almost 80% of the women affected are in the developing world (WHO, 2002). In 2008, it is estimated that 529,409 new cases occurred globally, with 274,883 of the women (52% of cases) dying (MOPHS and MOMS, 2012). It is often preventable by screening asymptomatic women for precancerous cervical lesions and treating the lesions before they progress to invasive disease but most women in poorer countries do not have access to effective screening programs (WHO, 2002). This is because such screening requires an established laboratory, highly trained cytotechnologists, and up to three visits for screening, evaluation of cytologic abnormalities, and treatment and is therefore difficult to implement and sustain in settings with limited resources (Goldie et al, 2005). In this regard, the mortality is 10 times higher in developing countries, where approximately 80% of new cases occur, compared with developed countries (Haie-Meder, Morice and Castiglione, 2010).

A study done on the cost- effectiveness of cervical cancer screening in five developing countries, which included Kenya, suggests that the screening of women with one-visit or two-visit visual inspection or HPV DNA testing at about 35 years of age would reduce the lifetime risk of cervical cancer by 25 to 36 percent (Goldie et al, 2005).

CERVICAL CANCER SITUATION IN KENYA

Globally, many cancers can now be successfully cured owing to development in cancer treatment and better screening methods. Sadly, though, these advances are yet to be realized in Kenya especially among the economically disadvantaged populations. An

article published in Global Medicine (2011) reports that the incidence of the disease is rapidly increasing with over 82,000 new cases reported annually in Kenya. Kenyatta National Hospital, the national referral hospital that hosts most of the cancer experts and technology in Kenya is currently overwhelmed with inpatient and outpatient cases and simply cannot cope (Department of Research Kenya-National Assembly, 2011).

Cervical cancer is the leading cause of cancer death in African women accounting for over 80% of the global cervical cancer burden (SALC, 2012). In Kenya, 68% of the cases are fatal making it a major public health concern affecting women of reproductive age (WHO/ ICO, 2010; MOPHS and MOMS, 2012). Majority of the cases present late when treatment is more difficult and more expensive to obtain (MOPHS and MOMS, 2012). This is despite the fact that this cancer is easily prevented and controlled through early detection and treatment of pre-cancerous lesions. In a study done at the Moi Teaching and Referral Hospital in Eldoret, Kenya, 90% of the cases seen at the hospital presented with late stage disease and thus could only benefit from radiotherapy or palliative care (Were et al, 2011).

OBSTACLES IN CERVICAL CANCER CARE

Lack of Screening

Globally, screening has contributed to a decline in cervical cancer incidence and mortality (Franco et al, 2001; Ali et al, 2012). However in developing countries, lack of effective screening programs aimed at detecting and treating precancerous conditions is the key reason for the much higher cervical cancer incidence (Sherris et al, 2001). Only 5% of women in developing countries undergo screening for cervical cancer compared to over 40% in developed countries, and 70% or higher in countries that have shown marked reduction in incidence and prevalence of cervical cancer (MOPHS and MOMS, 2012).

In Kenya, cervical cancer screening coverage for all women 18 to 69 years of age is only 3.2% (MOPHS and MOMS, 2012). In the cervical cancer prevention Strategic plan 2012-2015, the challenges cited are:

- Low and haphazard implementation of the National Cervical Cancer Prevention Plan-NCCPSP- (2002-2006).

- Lack of additional diagnostic and treatment options at the secondary levels of care.

- A dysfunctional link between screening and treatment. Among others.

From the patient's perspective, one of the barriers to screening is lack of awareness (Denny et al, 2006). This stems from poor education whose consequence ranges from healthcare access to health seeking behavior to the ability to generate income (Denny et al, 2006). A study done at Kenyatta Hospital found only 51% of the respondents were aware of cervical cancer, 32% knew about Pap Smear testing and only 22% had had the test done in the past (Gichangi et al, 2003).

Another commonly cited barrier is embarrassment and fear of pain and the results (Byrd et al, 2007). In some cases the embarrassment is aggravated by the physician's gender with some studies reporting higher screening rates by female physicians (Ahmad et al, 2001)and age of patient (Byrd et al, 2007).

There are different methods of screening for cervical cancer:

- Papanicolaou (Pap) smear- The Pap smear test is a cytology-based test that involves collection of cervical cells, preparation of slides, reading and reporting (Ali et al, 2012). It is used to detect premalignant processes in the endocervical canal.

- Visual inspection of cervix with acetic acid (VIA)- VIA involves non-magnified visualization of uterine cervix soaked with 3-5% acetic acid with a light source (WHO 2002; PAHO 2003). The purpose is to identify acetowhite areas, an indication that tissue may be undergoing precancerous stages, and eliminating them (PAHO 2003). This method is feasible in low- to medium- resource settings because it is inexpensive and does not require extensive cytology laboratory facilities (Sankaranarayanan et al, 2001; PAHO, 2003).

- HPV DNA test- This test can be used as a follow-up of abnormal changes detected with a Pap smear. The HPV DNA test has the ability to detect the DNA

of the HPV in the sample of cervical cells though it can still be used as a primary cervical cancer screening method (Ali et al, 2012).

- Colposcopy- The purpose of the colposcopy is to assess further if some abnormalities are found in smear tests. It is most commonly used in the diagnosis of cervical intraepithelial neoplasia and lower genital tract carcinoma (Dresang, 2005).

Lack of Resources

Cancer has not been a politically visible disease that attracts African governments to allocate adequate budgetary resources for research and policy making (Global Medicine, 2011). Ill-equipped health centers, dispensaries and maternity homes serve the majority of the poor people at the community level in rural and urban centers. This contributes majorly to the late presentation cases frequently seen and the intensive procedures subsequently required for the advanced cancer cases (Global Medicine, 2011). If more action would be taken in cancer prevention and in screening programs the number of cancer cases would reduce and the early detection programs would ensure that cancers are found earlier and treated at a lower cost.

Currently, over 85% of health costs in low income countries are paid out of pocket and more than 100 million people are pushed into poverty every year because they lack insurance and have to pay for health care (PACT 2010). Unfortunately, financial barriers that delay treatment for a condition as serious as cancer can mean the difference between life and death.

Lack of cervical cancer awareness

Many cancer cases are not detected early due to poor awareness or lack of it. Lack of awareness of cervical cancer and of the benefits of early detection are critical barriers that affect women's participation in screening programs (Ngugi et al, 2012). A study done among female college students in India found that a large number of the students have neither heard of Pap test nor of HPV, the biggest attributable factor for cervical cancer (Saha et al, 2010). In fact, only a mere 11% had ever heard of the Pap smear test. Another study done in Nigeria on cervical cancer and Pap smear awareness found

approximately 50.9% of the respondents had ever heard about cervical cancer, 38% reported having heard about the Pap smear test and 27.0% said that regular screening with Pap smear test can prevent cervical cancer. Of these, only 10.2% had actually utilized the test (Hyacinth et al, 2012). These findings concur with findings of other studies about the low levels of awareness of screening and cervical cancer especially in developing countries (Ndikom and Ofi 2012; Gichangi et al, 2003).

Inadequate Facilities

Most developing countries have very limited cancer diagnostic, treatment and palliative care services (Denny et al, 2006). In the book *In Her Lifetime- Female Morbidity and Mortality in Sub- Saharan Africa* the authors talk about "medical distance"- that is, the degree to which the health care system is equipped with the appropriate knowledge and resources to deal with specific health needs of women and that there is good reason to believe that modern medical systems worldwide may not be adequately supplied with information about gender differences (Howson et al, 1996). The book goes on to cite urban-rural bias as a severe limitation on access in Sub-Saharan Africa.

Kenya is faced by inadequate and outdated equipment to mitigate cancer. The Cobalt 60 machines used by KNH are the remnants of an old generation and are equipped with limited capability to optimally treat complex cases (Department of Research Kenya-National Assembly, 2011). The only center in the country with newer technology, called Linear Acceleration, is the Cancer Care Unit at the MP Shah Hospital in Nairobi. While this technology is more accurate and handles a higher load than Cobalt 60, it is much more expensive and has very high maintenance demands (Department of Research Kenya-National Assembly, 2011).

Few specialized cancer health workers

One of the most commonly overlooked aspects of effective cancer control is the training of individuals capable of providing the medical care needed in developing areas (PACT, 2010). In Africa alone, there is a shortage of nearly 3000 cancer care workers (PACT, 2010). Kenya has few cancer specialists who are concentrated in few health facilities in Nairobi. This makes it difficult for a great majority of the population to access cancer

treatment services resulting in long waiting times causing some previously curable tumours to progress to incurable stages (National Cancer Control Strategy, 2011-2016).

Lack of accessibility to treatment

When it comes to cancer treatment, the problem is not just affordability but also accessibility. The country's few cancer specialists are concentrated in a few health facilities in Nairobi (National Cancer Control Strategy, 2011-2016). This inequity in distribution of resources greatly puts at a disadvantage those living outside the city.

HEALTH MANAGEMENT IN KENYA

The health Sector in Kenya is guided by the declaration in the Vision 2030 which states: "Kenya will restructure the health delivery system and also shift the emphasis to "promotive" care in order to lower the nations' disease burden."

Health care financing and equity currently dominate policy agendas worldwide (Chuma and Okungu, 2011). With rising health care expenditures worldwide, and in the face of fierce competition for resources, governments worldwide have to manage multiple objectives and competing demands. As they strive for greater efficiency and value for money, they must seek ways to achieve more equity in access and outcomes and to reduce exclusion (WHO, 2007).

Health care funds in Kenya come from the public (government), private (private companies and households) and donors. Out-of-pocket payments remain the largest source of health funds in Kenya (Chuma and Okungu, 2011). According to the general findings of the National Health of Accounts 2009-2010, the health sector continues to be predominantly financed by private sector sources, including by households' out-of-pocket (OOP) spending (NHA 2009-2010). While most high income countries rely heavily on either general taxation, or mandated social health insurance contributions, in contrast, low income countries depend far more on out-of-pocket financing: in 60% of countries at incomes below $1000 per capita, out-of-pocket spending is 40% or more of the total whereas only 30% of middle and high income countries depend so heavily on this kind of financing (WHO, 2000).

1.2 STATEMENT OF RESEARCH PROBLEM

Cervical cancer is a disease of inequality (SALC, 2012). This is because it is easily preventable and treatable. Deaths from cervical cancer in resource-rich countries are therefore significantly lower, due to prevention and early detection and treatment (SALC, 2012; WHO 2002). In Kenya however, cervical cancer is a major public health concern due to its prevalence, morbidity and mortality (Kidula, 2012). One of the biggest concerns is the late presentation of cases which highlights a huge gap between screening and treatment options. For these late presenting cases, the options available for successful treatment are very limited and expensive which is the driving factor for the high mortality rate in Kenya (MOPHS and MOMS 2012; Were et al, 2011).

Currently in Kenya radiotherapy services are only available in KNH, The Nairobi Hospital, the Aga Khan University Hospital Oncology Centre and the MP Shah Hospital Cancer Centre (MOPHS and MOMS 2012). For the majority of Kenyans who pay out of pocket and cannot afford private care, KNH is the only public facility with a radiotherapy unit and hence their only option. This consequently translates to heavy booking and a long waiting list at the public referral hospital and for a progressive disease like cervical cancer the waiting has bearing on the quality of life of the patients.

There are significant gaps that require attention in the fight against cervical cancer in Kenya (Henley 2012). Determining the factors influencing access to treatment of cervical cancer is of utmost importance in controlling the disease. The aim of this study was to look closely at the current situation in Kenya and to evaluate the factors that determine access to treatment. An evaluation of the journey that some of these women had to walk and even finally reaching KNH for their treatment will hopefully inform policy makers and indeed the Kenyan Health System of the changes that need to be made in order to avert unnecessary deaths and suffering that come with cervical cancer.

1.3 CONCEPTUAL FRAMEWORK

FIGURE 1: CONCEPTUAL FRAMEWORK

Predictor Variables

Economic Factors

- Health insurance
- Out of pocket payments
- Health system subsidies

Demographic Factors

- Age
- Education
- Marital status
- Employment status
- Sexual history
- Residence

Knowledge

- Perceived susceptibility
- Perceived benefits
- Perceived barriers

Provider Factors

- Distance to health facility
- Adequate equipment
- Available information

Intermediary Factors

Utilization of health facilities on the basis of Affordability, Accessibility, Availability and social Acceptability

Outcome

Improved access to Health Care Services for Cervical Cancer Patients

1.4 JUSTIFICATION OF THE STUDY

There has been notably better availability of treatment for patients with infectious diseases such as AIDs, tuberculosis and malaria due to an increase in international and national attention to these diseases and subsequently an increase in financial resources towards their fight. Cancer is however missing from key global health targets such as Millennium Development Goals.

Cervical cancer is the leading cause of cancer deaths in women of reproductive age in Kenya (MOPHS and MOMS, 2012-2015). It is important to note that, in Kenya there are 2454 new cervical cancer cases each year with 1676 annual deaths (WHO/ ICO, 2010). This mortality figure is approximately 68% of new cases and goes to show the impact of cervical cancer on affected women. For a cancer that can be easily controlled, the high cervical cancer mortality points to a gap in treatment of presenting cases.

Access to healthcare is a major contributor to survival rates and mortality outcomes for women with cervical cancer. Cancer patients who require radiotherapy and who cannot afford private healthcare have to travel across the country to access treatment at KNH. This is currently the only public facility providing radiotherapy services in the country.

Many of the studies done have focused on cervical cancer screening which is of utmost importance in preventing or detecting cervical cancer in the early stages. However there is little focus on the question of health care access and utilization of health care for those who already have the cancer. To enable appropriate intervention, there was need to highlight issues of access to health care for cervical cancer patients. In this regard, the aim of this study was to describe the factors that influence health care access in Kenya's public referral hospital, KNH.

1.5 RESEARCH QUESTION

What are the factors that influence access to health care services for cervical cancer patients?

1.6 RESEARCH OBJECTIVES

General Objective

To assess factors that influence access to health care services among cervical cancer patients at KNH.

Specific Objectives

1. To determine the association between socio-demographic characteristics of cervical cancer patients and access to health care.
2. To determine the association between affordability of cervical cancer services and access to health care.
3. To assess whether geographical accessibility to KNH is a factor that influences access to services for cervical cancer patients.
4. To assess relationship between patients' knowledge of cervical cancer screening and treatment and access to health care services.

1.7 HYPOTHESES

- There is no relationship between socio-demographic characteristics of cervical cancer patients and access to health care services.
- Affordability of cervical cancer services does not determine access to health care services.
- Accessibility of cervical cancer services does not determine access to health care services.
- There is no relationship between patients' knowledge of cervical cancer screening and treatment and access to health care services.

2. LITERATURE REVIEW

The burden of cervical cancer in developing is mostly due to poor access to cervical cancer prevention and control services (WHO, GAVI and UNFPA report, 2009). According to the report, the disparity between developed and developing countries in cervical cancer prevalence and mortality is mainly due to existence of effective cervical cancer prevention and control services in developed countries.

Provision of health services that are adequate, accessible, available, affordable and user-friendly are areas that need emphasis and urgent attention (Ibekwe, 2010). The extent to which a population gains access to healthcare depends on financial, organizational and social or cultural barriers that limit the utilization of services (Gulliford M. et al, 2002). Accessibility to healthcare is one of the basic human rights accepted by all governments in the world. Indeed the right to health is a constitutional right in Kenya.

Excerpts from the new constitution of Kenya, which was promulgated in August 2010, show provision for the right to health care services (The Constitution of Kenya, 2010):

- Chapter Four on the Bill of Rights states in article 43 (1a) that every person has the right to the highest attainable standard of health, which includes the right to health care services, including reproductive health care,

- Article 43(2), states that a person shall not be denied emergency medical treatment.

- Article 27(2) guarantees quality and freedom from discrimination, and the full and equal enjoyment of all rights and fundamental freedoms.

ACCESS - WHAT DOES IT ENTAIL?

Access to health care can be defined in a variety of ways. A broader definition identifies five dimensions of access, four of which will be used in this context (Penchansky and Thomas 1981):

- Affordability
- Availability
- Accessibility
- Acceptability

Affordability

Cancer is a very expensive disease to treat. The financial burden of cancer affects not only cancer patients and their families, but also the society as a whole.

Since 1990, the number of people living in extreme poverty has fallen in all regions except Sub- Saharan Africa, where the rate of population growth exceeded the rate of poverty reduction, increasing the number of extremely poor people from 290 million in 1990 to 356 million in 2008 (The World Bank, World Development Indicators, 2012).

Poverty is associated with a lack of resources, information, and knowledge; substandard living conditions; risk-promoting lifestyle; and diminished access to health care. Poverty and cancer are, too often, a lethal combination (Freeman, 2008).

In Kenya, poverty continues to be a huge problem and is fueled by a diversity of factors: unemployment, child labor, HIV/AIDS epidemic, political instability among other reasons. Only a minority of Kenyans have insurance cover (Chuma and Okungu, 2011). The majority of Kenyans with health insurance cover work in the formal sector and comprise the richest population. The NHIF is the main source of insurance cover for individuals working in the formal sector, and although it allows voluntary membership for informal sector workers, coverage levels remain low (Chuma and Okungu, 2011). As aforementioned, Kenyan households are a major contributor to health expenditure. This widespread imposition of user charges presents an important barrier to utilizing services and has led many households into impoverishment where a chronic disease is involved.

Health care costs can be divided into direct, indirect, and intangible costs.

Direct Costs

The direct cost of cancer care include diagnostic tests, hospital and physician fees, and the cost of drug therapy (Meropol and Schulman, 2007). Special diets and accommodation for remote treatment facilities are other direct costs for those who do not get admitted. These, generally, are the expenditures used in the direct provision of a service.

Indirect Costs

These are resources related to days lost from work (i.e., loss of productivity). Medical or health-related indirect costs are generally broken down into morbidity (e.g., lost productivity due to work disability) and mortality (e.g., lost productivity due to premature death) (NCI-Center to Reduce Cancer Health Disparities, 2004). These costs are incurred by patients as well as their care givers and families.

Intangible Costs

These are costs related to adverse health effects for which there are no market prices. For example, reduction in quality of life due to physical pain, emotional problems, and lifestyle changes. These costs can also extend beyond the patient to relatives who experience grief, bitterness, or depression (NCI-Center to Reduce Cancer Health Disparities, 2004).

The poor are at a greater risk of being diagnosed and treated for cancer at late stages of disease and are less likely to survive a diagnosis of cancer. This is because cost burdens of health care may deter or delay healthcare utilization or promote use of less effective healthcare sources or practices. Late presentation occurs because amongst this group, screening and early treatment is uncommon because of cost implication and also because of lack of awareness. Patients may fail to seek care or delay treatment because of economic disadvantage.

Estimating and projecting the economic burden of cancer, including health care expenditures, productivity loss, and morbidity for patients and their families, are

increasingly important issues for health care policy makers, health care systems, physicians, employers, and the society overall.

Recommended actions to alleviate barriers to access to health care relate mainly to financial interventions. However, as multiple factors play a role, addressing access costs alone will not ensure access to health services (Jacobs et al, 2011).

Availability

A treatment is available if the materials needed to treat a health problem can be found in the community. Half or more of cancer patients need radiotherapy (iaea, 2003). Yet although developing countries account for 85% of the global disease burden, they have only about one third of the world's radiotherapy machines (iaea, 2003). Limited access to radiotherapy as a form of cancer treatment results in increased fatalities in low- and middle- income countries.

In KNH, the largest teaching referral hospital in Kenya, arrival at the cancer treatment center does not mean outright access to treatment. Mulemi in his ethnographic study at the cancer ward in KNH observes, "Out of over 100 patients who turned up every Monday for regular admission, only 20 or fewer secured beds. The admission of patients who needed urgent attention on other days further limited the number of beds that would be available on Mondays. Patients and /or their relatives had to be at the clinic by 5 am in order take the first 30 positions in the queue. This increased the possibility of securing beds from 8:30 am when doctors began their work" (Mulemi, 2010). Availability of hospital resources therefore determines when patients can be admitted to the ward and when their treatment begins.

Routine screening such as pap smears and mammograms can detect cancer at early stages. These services have not been vastly available in Kenya and without early detection, women are at a higher risk to have cervical cancer as compared to their counterparts in developed countries where these services are more available. For advanced cervical cancer, the second most commonly diagnosed cancer among women in developing countries, cure rates range from 30% to 75% when radical radiotherapy is available (iaea 2006).

A study done in Ethiopia on health seeking behavior for cervical cancer found that modern medicine was not a preferred option for initial treatment with the women opting for traditional remedies. One of the reasons for this is lack of availability of appropriate services in their health care system coupled with their financial and logistical inaccessibility. This underscores the importance of availability of health services for health care utilization (Birhanu et al, 2012).

Accessibility

Over a billion people worldwide have little or no access to health services and the help and advice of health workers. As a result, millions die or are disabled every year (WHO and Global Health Workforce Alliance, 2008).

A frequently cited barrier to cancer treatment in resource-poor settings is the absence of specialists and specialty centers (Farmer et al, 2010). All of the oncology specialists in Kenya are located in Nairobi, making it almost impossible for the largest number of the population to access their services (Musibi, 2008). This lack of access to treatment results in prolonged waiting times causing some previously curable tumors to progress to incurable stages. Besides, many patients seek care in lower level health facilities where diagnosis of cancer is hampered by lack of facilities and qualified staff. Cancer treatment infrastructure in Kenya is inadequate and some cancer management options are not readily available (MOPHS and MOMS, 2012-2015).

The National Cervical Cancer Prevention Strategic plan 2012-2015 acknowledges that for a long time, cervical cancer staging and biopsy, a prerequisite to cancer treatment, was only offered at Kenyatta National Hospital. The MOH however, according to the report, is increasingly deploying gynecologists to various district hospitals in the country (MOPHS and MOMS, 2012-2015).

A study done in Marigat division of Baringo, within the Rift Valley region of Kenya sought to identify the major barriers to health service access. Distance, time and money were found to be the strongest barriers to health facility attendance in the study area, with distance being the single most important factor affecting the choice of the facility attended. The study concluded that area specific analysis of needs and barriers can

produce useful data for informing policy on improving accessibility to health services (Mwasi, 2010).

In their study of perception of risk and barriers to cervical cancer screening at Moi Teaching and Referral Hospital, Were et al, (2011) report that only radical surgery could be offered in the hospital for early cancer, but they only account for less than 5%. Majority present with late stage disease and thus can only benefit from radiotherapy or palliative care. This therefore means accessing the radiotherapy facility at the Kenyatta National Hospital and it introduces the issue of distance, cost and heavy booking at the national referral hospital.

Acceptability

Acceptability relates to socio-cultural barriers that determine health seeking behavior in individuals. Treatment choice involves a myriad of factors related to illness type and severity, pre-existing lay beliefs about illness causation, the range and accessibility of therapeutic options available, and their perceived efficacy (Ahmed, 2005).

A study done in Malawi to assess barriers to cervical cancer screening suggests that the stigma surrounding being ill creates a barrier to open communication about seeking healthcare. Fatalistic view of cervical cancer was also a barrier, with a participant of the study explaining that she did not see the benefit of screening because in her perception this would not prevent the disease (Fort et al, 2011).

In the aforementioned study in Ethiopia on the health seeking behavior for cervical cancer, stigma and discrimination of affected women by their family and community are cited as major barriers to seeking treatment. Due to the belief that cervical cancer is caused by unacceptable social behaviors, women were therefore reluctant to disclose their condition due to social consequences. A majority of the participants in that study believed that modern medicine cannot cure cervical cancer as the cause of the disease was due to supernatural powers, the devil, and/or punishment for violating normal sexual behaviors (Birhanu et al, 2012).

In several Kenyan communities, personal suffering due to 'unknown' or 'incurable disease' evokes speculation over the extent to which the patient might be personally

responsible for his or her condition. Health provider's responses or references to the disturbing issues create more unease with some patients perceiving them as inquiries lacking empathy. These factors influence the decision to access health care.

In the case of reproductive cancers such as breast cancer, prostate cancer, cervical cancer among others, individuals may fear the discovery of these cancers and worry about seeming defective or less feminine or masculine to a partner. These emotions, combined with the cost of healthcare, limited accessibility, and the daily need to care for a busy life, may lead many patients to postpone screening and treatment services (Kingsley, 2010).

Also important to note is that the methods of screening for cervical cancer are extremely invasive. The invasion of privacy and discomfort that may come with it can affect the uptake of screening. In a study done in Kenya on the knowledge and acceptability of Pap smears, 82% of the respondents when asked about methods of screening and prevention, reported that they would be comfortable using an at-home cervico-vaginal self-sampling device (Rositch et al, 2012). This would perhaps increase acceptability of these forms of screening.

ACCESS – OTHER CONTRIBUTING FACTORS

Health System Factors

For a function health system to work, having the appropriate mix of skilled health care workers is fundamental. But what we are experiencing now is a global health worker shortage of staggering proportions (O'brien and Gostin, 2011). When it comes to human resources for health a major issue Kenya is facing is brain drain. Brain drain is said to occur when a country becomes short of skills as people with such expertise emigrate (Oyelere, 2007). Kenya and indeed many other countries in Africa have experienced rapid emigration to the developed world in the past due to various causes. Some of these reasons are political instability, high rates of unemployment, corruption and bureaucracy amongst a host of other reasons.

In the book '*Coping with Cancer and Adversity*', Benson Mulemi observes a serious shortage of oncologists in Kenya. One of the reasons attributed for this is the lack of policy on oncology training in Kenya, this being apparent from the small number of practicing cancer management specialists (Mulemi, 2010). And the problem is not just shortage of oncologists but of radiographers, oncology nurses and other staff meant to be working in the cancer ward. Another observation in his hospital ethnography of Kenyatta National Hospital, was that there was scant focus on cancer in existing medical training programs. This tends to create a setting in which cancer patients feel less attended to.

TABLE 1: ESTIMATED CRITICAL SHORTAGE OF DOCTORS, NURSES AND MIDWIVES, BY WHO REGION.

WHO Region	Number of Countries		In Countries with Shortages		
	Total	With Shortages	Total Stock	Estimated Shortage	Percentage Increase required
Africa	46	36	590198	817992	139
Americas	35	5	93603	37886	40
South-East Asia	11	6	2332054	1164001	50
Europe	52	0	NA	NA	NA
Eastern Mediterranean	21	7	312613	306031	98
Western Pacific	27	3	27260	32560	119
World	192	57	3355728	2358470	70
NA, not applicable					

Source: WHO, (2006). The World Health Report 2006—*Working Together for Health*, page 13

The table illustrates the dire need of health workers in Africa. Forty-six countries comprise the African region of the WHO, and, as shown on the table, thirty-six of these fail to meet the WHO standard.

Health Provider Factors

A study done reported that poverty has a negative impact on the behavior of health care providers and the availability of health services (Freeman and Chu, 2005). The study suggests that the health care providers serving economically disadvantaged communities may not recommend screening and are prone to give inadequate patient education. In addition, relative to affluent areas, fewer health care resources may be available in poor communities, which may contribute to inadequate screening services, untimely reporting of screening outcomes, and diminished quality of care (Gerend and Pai, 2008). Wide differences in social status between practitioner and patient may also inhibit utilization. This may be through feelings of inferiority or simply an inability to communicate properly (Ensor and Cooper, 2004).

Pain is one of the most feared consequences of cancer experienced by patients (Shahnazi et al, 2012). Pain, when it is ongoing and uncontrolled, has a detrimental, deteriorating effect on virtually every aspect of a patient's life (Manalo, 2008). Health care providers therefore need to have sound knowledge on the effective management of this pain. A study done on the level of nurses' pain knowledge and attitude in Isfahan, Iran, showed that on average, the nurses included on that study presented low scores on knowledge and attitudes regarding cancer pain management (Shahnazi et al, 2012). Another study on Italian oncology nurses showed that more than 50% of oncology nurses underestimated the patients' pain and they did not treat it in the correct way; they also had an incorrect self-evaluation about their pain management knowledge (Bernardi et al, 2007). In yet another European study, considerable numbers of health care providers were found to underestimate symptom intensities (Laugsand et al, 2010). This suggests that educational support is needed for effective pain management.

Health care providers play a key role in screening behavior process by increasing awareness about cancer and screening tests. Moreover, some health care providers are the first professional contact point for cancer patients and usually define the journey of treatment that the patients will take. Delayed diagnosis and referral of patients results in more social, financial and emotional burden to patients. Admission to the referral hospital for most cancer patients in Kenya is usually a continuity of previous and difficult health seeking efforts (Mulemi, 2010). A study done at the Kenyatta National

Hospital showed that the referral system was the main cause of delayed presentation of head and neck cancer to the hospital (Onyango and Macharia, 2006). Late presentation, unfortunately, mostly means radical treatment which translates to financial and social burden as observed by Mulemi. Late referral or non- referral is therefore an important factor affecting access to cancer treatment.

Other factors cited as barriers to health care delivery are long waiting time, lack of drugs and poor services (Opwora et al, 2011). This study also found incompetence and perceived poor attitude of health workers as a barrier to health care access.

Patient Factors

The health sector continues to be predominantly financed by private sector sources, including by households' out-of-pocket (OOP) spending (NHA 2009-2010). For many who are without insurance, the requirement of user fees means another need will be the opportunity cost for purchasing health care. High reliance on user fees and other out-of-pocket expenditures on health care are both impoverishing and provide a financial barrier to care. As a consequence, health care competes with the other necessities of life like food and clothing.

Low-income and disadvantaged groups are generally more exposed to avoidable cancer risk factors, such as environmental carcinogens, tobacco use, alcohol abuse and infectious agents (WHO, 2008). In addition, poor nutritional status due to socio-economic disadvantage and infections such as malaria and HIV leave many people immuno-compromised and thus not able to properly fight off cancer. An example is the AIDS-related Kaposi Sarcoma.

Worldwide, women of low socio-economic status have a greater risk of having cervical cancer (Ntekim, 2012). Cervical cancer is often referred to as a disease of poverty and of poor women. Sub-Sahara Africa has widespread conditions that encourage substandard living conditions. These include wars, political chaos, internal conflicts, natural disasters, famine and drought. These often lead to large populations being displaced externally and internally for long periods of time. Under these refugee-like conditions, social vices like rapes, prostitution and multiple marriages and cohabitation prevail

encouraging the transmission of HPV, a major culprit in causation of cervical cancer (Ntekim, 2012).

Low socioeconomic status and lack of knowledge/awareness is also implicated in poor cancer symptom recognition. This lack of knowledge is not just in cancer symptom awareness but also in the risk factors for developing cancer (Macleod et al, 2009) and in the proper channels for seeking health information and subsequently health care. A study done in two national referral hospitals in Kenya showed that there was low use of internet by cervical cancer clients attended in the public referral facilities. This was attributed to lack of knowledge on how to use computers and lack of access to a computer (Kivuti-Bitok et al, 2012). Another study done reported that low socioeconomic status is linked to decreased rates of breast cancer screening, greater probability for late- stage diagnosis, receipt of inadequate and disparate treatment and higher mortality from breast cancer (Bigby and Holmes, 2005).

Some surveys done on some cancer patients reported that people hold negative beliefs and attitudes about the benefits of seeking medical help for cancer (Macleod et al, 2009). One such study found that holding negative beliefs about the consequences associated with breast cancer was an additional predictor of potential delay in help-seeking among women aged over 65 years (Grunfeld et al, 2003). This not only implicates negative attitude as a barrier of access to cancer treatment, but also shows age to be a contributing factor to accessing cancer treatment.

Disease Factors

Cancer is, in itself a very dreaded disease. Perhaps because the general belief is that it is a terminal disease and hence death is imminent, or perhaps because of the stigma that comes as a result of societal attitudes towards the disease. Either way these fears influence decision making in light of cancer. Decisions made by patients with terminal cancer are often borne out of a mix of fear, denial, and exaggerated hope (Aronowitz, 2010). Aronowitz goes on to suggest that, conversely, this same fear drives decision making in some situations where death is not staring one in the face: healthy people deciding on cancer screening, people with risk factors for cancer deciding on preventive measures, or patients with precancerous conditions of uncertain significance or very

early-stage cancer deciding on aggressive treatments. He further suggests we find ways to restrain these fears, so as to align decision making with the best sense of what works in general.

A high number of the reported cancer cases are diagnosed at late stages, when very little can be achieved with therapeutic intervention (Department of Research Kenya-National Assembly, 2011). Delayed presentation or late diagnosis is associated with low survival (Almuammar, Dryden and Burr, 2010). This has been suggested as one of the reasons for the known poorer survival from cancer in the United Kingdom compared with other European countries (Macleod et al, 2009). Additionally, late-stage tumors are more difficult and more costly to treat compared with Stage I and Stage II tumors; hence, reducing the number of late stage presentations in limited- resource settings should decrease government expenditures of treatment as well (Stapleton et al, 2010).

3. STUDY DESIGN AND METHODOLOGY

3.1 STUDY DESIGN

This was a descriptive cross sectional study aimed at assessing factors affecting access to health care services for cervical cancer patients. Data collection was through quantitative methods. A structured questionnaire was used to collect data from cervical cancer patients on their cancer diagnosis and treatment journey. This was used to assess important issues surrounding access to health care by the patients.

3.2 STUDY POPULATION

The study population was cervical cancer patients attending treatment at KNH.

3.3 STUDY AREA

The study was conducted in the largest referral hospital in Kenya, KNH, located in the capital Nairobi. Nairobi and its surrounding area also form the Nairobi City County.

Being the largest referral hospital in Kenya, the hospital deals with enormous referral cases from government and private hospitals all over the country (Mulemi, 2010). KNH is the only public hospital in Kenya at the moment that hosts a radiotherapy unit.

3.4 ELIGIBILITY CRITERIA

Inclusion Criteria

The patients were:

- Women aged 18 years and above.
- Women with confirmed cervical cancer diagnosis.
- Willingness to participate in the study and provide written consent.

Exclusion Criteria

- Patients who were unable to participate in the study because of being too ill.
- Patients who were unable to comprehend the study.
- Patients who were unwilling to participate in the study.

3.5 SAMPLING

Sampling Method

Data obtained from KNH Statistics department showed there were 497 cervical cancer patients seen in 2012, 436 patients seen in 2011 and 398 in 2010 (Data from Statistics, KNH). While the numbers have been increasing in the last 3 years, they did not seem to be sufficient for this study given the time frame. For this reason, convenience sampling was used by recruiting every presenting cervical cancer patient who met the inclusion criteria.

Sample size

Sample size was calculated using the formula;

$$N = \frac{z^2 p(1-p)}{d^2}$$

Where N is the minimum sample size

Z is the standard normal deviate at 95% confidence interval.

P is the hypothesized prevalence of the factors. This was set at 50% because there is no documented prevalence for cervical cancer.

d is the level of significance which will be set at 5%.

To substitute in the formula:-

n=1.96² x 0.5 (1-0.5)/0.05²

From the N calculated above, the minimum sample size was 384.

The proposed sample size however needed to be adjusted so as to be proportionate to number of patients seen in KNH.

Adjustment was calculated as below:

nf= n/(1+n/N)

Where nf is the adjusted sample size

n is the calculated sample size above (384)

N is the population size. This represents the number of patients attended to in KNH within the period of 1 year.

In this case the population size at KNH was taken as the average of the yearly numbers of cervical cancer patients seen for the last 3 years. Based on the number of cases per year since 2010, the population size, N is therefore 444.

To substitute in the formula:-

nf = 384/ 1+[(384/444)]

From the calculation, the adjusted sample size, nf, was 206.

3.6 DATA COLLECTION

A questionnaire was administered to cervical cancer patients to obtain information on four broad areas: socio-demographic characteristics, knowledge and beliefs about cervical cancer, attitudes and practice towards screening, and health seeking dynamics. They were administered individually to ensure confidentiality.

3.7 DATA PROCESSING AND ANALYSIS

Data was entered and analyzed using Statistical Package for Social Sciences (SPSS) version 17 computer package. For open ended questions, responses were grouped into broad categories and then frequencies of the responses calculated.

The Chi-square test of significance was used to determine the association between dependent and independent variables. A P value of 0.05 was set throughout the analysis.

The results were presented using the tables, charts and graphs.

3.8 VARIABLES

Dependent Variable

- Access to cervical cancer health care services.

Independent Variables

- Age of patient
- Residence of patient
- Level of knowledge/ education
- Socioeconomic status
- Sexual history
- Marital Status
- Parity
- Stage of cancer at presentation

3.9 MINIMIZATION OF ERRORS AND BIASES

A pilot test was done 2 weeks prior to the data collection at KNH and necessary adjustments done. The study was piloted on cervical cancer patients at the same hospital.

Standardized data collection tools was used on all the respondents.

A research assistant was trained on data collection tools and requirements of the study.

3.10 ETHICS APPROVAL

Approval was obtained from the KNH/UON ethics committee.

Consent was obtained from all the participants before filling the questionnaire.

All participants were given detailed information about the study

Participants were assured of confidentiality of the information they will provide.

The results obtained would be used to give recommendations to policy makers to increase access to cervical cancer treatment where necessary.

STRENGTHS AND LIMITATIONS OF THE STUDY

The study population was chosen by convenience sampling. This population is only representative of Kenyans who pay out of pocket and who have accessed a public facility and may not be generalized to the entire Kenyan health system.

The questions about sexuality were sensitive and there was the risk of respondents being untruthful given their age and because some wanted a care giver present as they were being interviewed. To minimize for inaccurate information, we sought to cultivate trust. The nurses were very helpful because they introduced the study on our behalf giving it significance.

While the study design allows for correlation of different factors it does not show causality and for that a longitudinal study would have to be conducted.

The response rate from the cervical cancer patients was good and allowed enough data for analysis.

4. RESULTS AND DISCUSSION

4.1 SUMMARY

A total of 228 cervical cancer patients attending treatment at KNH were interviewed against a target of 206 respondents. Below is a description of factors that influence the access and use of health care services among cervical cancer patients at KNH:

4.2 SOCIO-DEMOGRAPHIC CHARACTERISTICS

These include; age, level of education, marital status, socio-economic status and residence amongst others.

There was significant association found between knowledge of HPV and age p=0.014, marital status p=0.008,education level p=0.000, employment p=0.0.000. On the other hand, there was no association between residence and knowledge of HPV p=0.586.

There was also significant association found between stage of cancer at diagnosis and age p=0.008, marital status p=0.019,education level p=0.002, employment p=0.0.001. On the other hand, there was no association between residence and stage of cancer at diagnosis p=0.210.

There was however no significant association observed between age, marital status, level of education, residence, employment and alternative treatment options.

Similarly, there was no significant association observed between age, marital status, level of education, residence, employment and mode of payment as shown on Table above.

TABLE 2: SOCIO-DEMOGRAPHIC CHARACTERISTICS

Variables	Frequency (N)	Percentage (%)	Alternative treatment options	mode of payment	Stage of cancer at diagnosis	knowledge of HPV
			P-Values			
Age group			0.766	0.795	0.008	0.14
20-29	1	0.4				
30-39	33	14.5				
40-49	81	35.5				
50-59	63	27.6				
>60	50	21.9				
Level of Education			0.935	0.333	0.019	0.008
None	40	17.5				
Primary	133	58.3				
Secondary	50	21.9				
Tertiary	5	2.2				
Marital Status			0.585	0.320	0.002	0.000
Single	11	4.8				
Married	115	50.4				
Divorced	26	11.4				
Widowed	76	33.3				
Employment Status			0.119	0.220	0.001	0.000

			0.115	0.275	0.210	0.586
Employed	19	8.3				
Self-employed	79	34.6				
Unemployed	130	57				
Residence			0.115	0.275	0.210	0.586
Nairobi	37	16.2				
Outside Nairobi	191	83.8				

FIGURE 2: SOCIO DEMOGRAPHIC CHARACTERISTICS - AGE

The patients ranged from 22 years of age to 72. Out of the 288 respondents, 35.5% were between the ages of 40-49 years of age; 27.6% were between 50-59 years; 21.9% were above 60 years; 14.5% were between 30-39 years while only 0.4% were between the ages of 20-29 years.

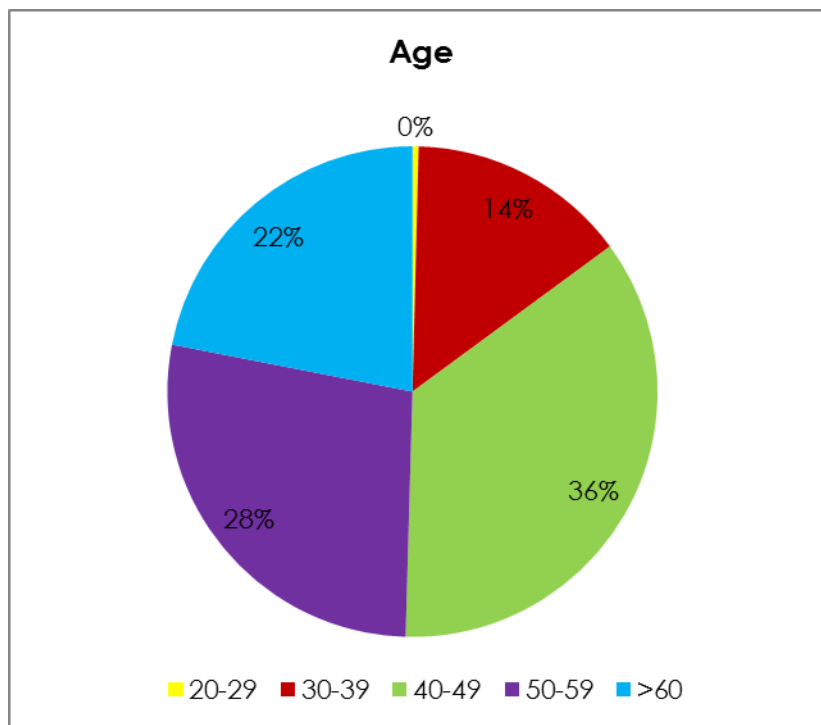**FIGURE 3: SOCIO DEMOGRAPHIC CHARACTERISTICS – LEVEL OF EDUCATION**

A majority of the respondents had only attained Primary level education (58.3%). Of these, a majority had only done a few years of school and had not even completed Primary school. Only 5 of the respondents (2.2%) had tertiary level education. Of the remainder, 21.9% had reached secondary school level while 17.5% had not gone to school.

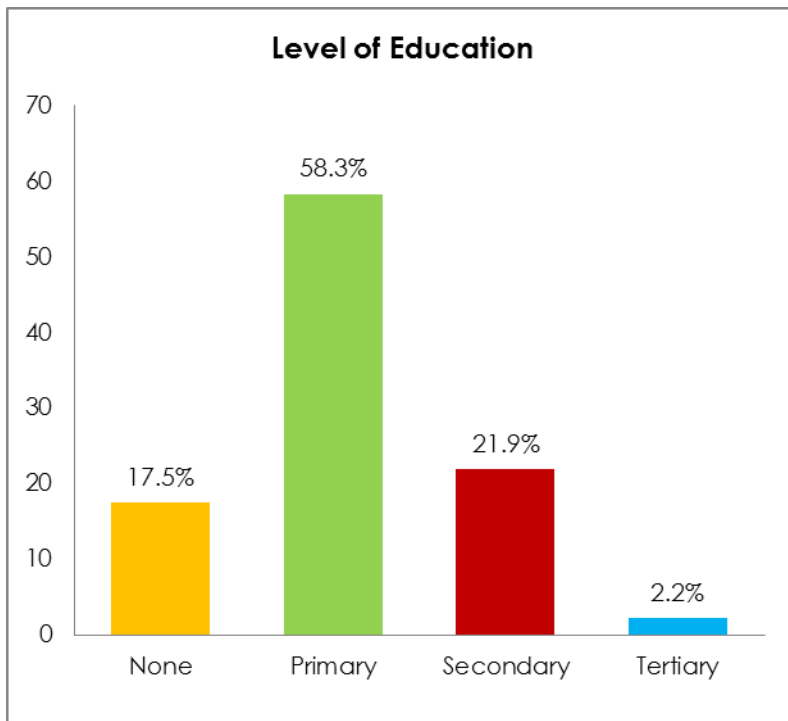Analysis of the respondents marital status showed that 50.4% were married (n=115) of the respondents were married, representing half of the total respondents. 33.3% were widowed (n=76), 11.4% were divorced (n=26) while 4.8% (n=11) of the respondents were single.
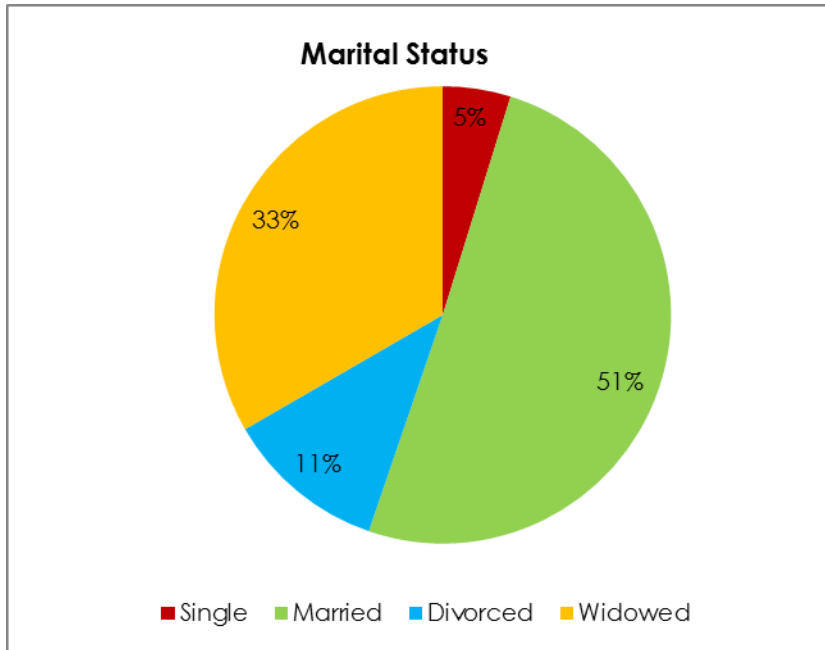
One hundred and thirty of the respondents (57%) indicated that they were unemployed and therefore earning no income. Only 8.3% (n=19) of the respondents were in formal employment while 34.6% were self-employed.

Those self-employed indicated doing manual jobs such as washing clothes, selling groceries, selling clothes amongst other such jobs. Most of them spoke of inconsistency in their business because of unpredictable market and also because of the nature of their illness that sometimes meant they were too weak to work. The employed were only 19 out of the 228 participants.

Many of the unemployed were subsistence farmers. Those who would sell some of their produce spoke of *'inconsistent market'* and one respondent said '*there are times I have made one hundred shillings or even less in a month because there is just no market'*.

Another respondent who used to wash clothes and clean houses for a fee spoke of being too ill to continue with such manual work. She said '*washing clothes became too difficult for me as I was constantly in pain and had to stay at home for a while and rely on well-wishers'*.
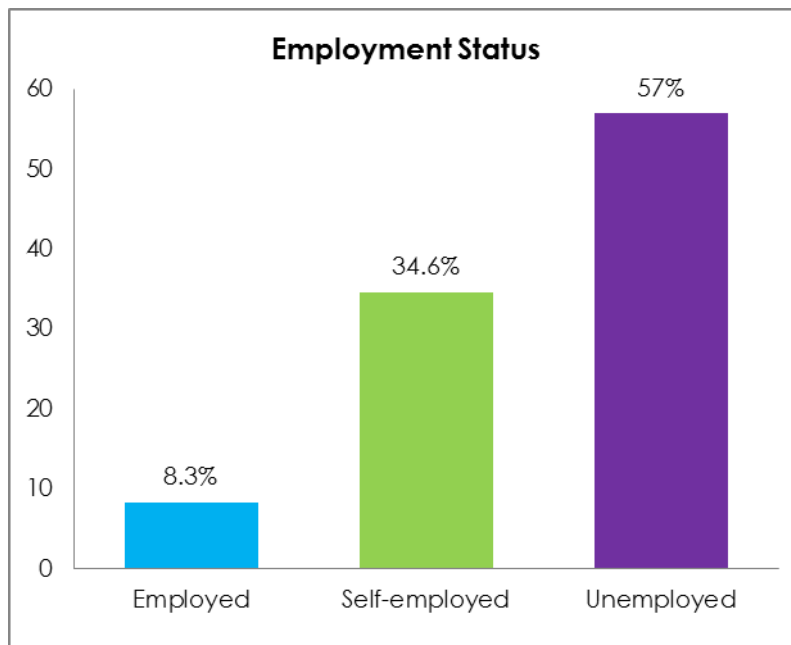
Among the respondents, 83.8% (n=191) were from diverse areas around the country. Those who were from Nairobi were 37 out of the 228 respondents representing 16.2%.
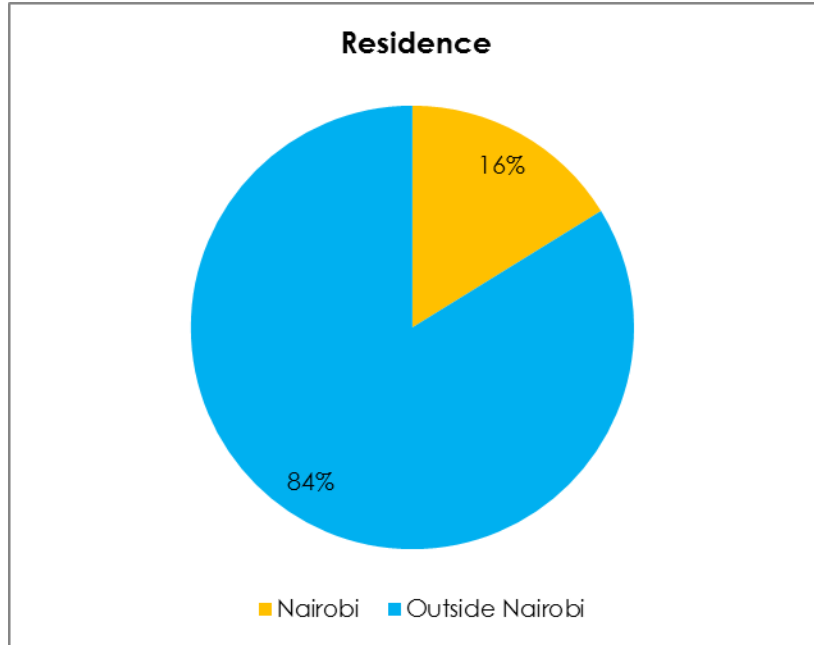
4.3 KNOWLEDGE AND BELIEFS ABOUT CERVICAL CANCER

TABLE 3: KNOWLEDGE AND BELIEFS ABOUT CERVICAL CANCER

Characteristic	Classification	Frequency	Percentage (%)
When patient first learnt about cervical cancer	Before diagnosis	81	35.5
	After diagnosis	147	64.5
Ever heard about HPV	Yes	14	6.1
	No	214	93.9
Ever heard about PAP smear?	Yes	115	50.4
	No	113	49.6
Possible to detect cervical cancer with PAP?	Yes	80	35.1
	No	12	5.3
	Don't Know	136	59.6
Early detection good for treatment outcome?	Yes	212	93.0
	No	2	0.9
	Don't know	14	6.1
Is it possible to treat cervical cancer?	Yes	213	93.4
	No	15	6.6

Distribution of Cervical Cancer Patients by the first time patients learnt of diagnosis.

Majority of the respondents (64.5%) first learnt about cervical cancer as a disease when they were diagnosed. They had never heard of it prior to this. Only 35.5% of the 228 respondents had previous knowledge of cervical cancer.

A respondent with stage 2 cancer stated '*Prior to diagnosis I never knew you could get cancer in such places. I had heard of cancer here and there but never this kind*'. This was a sentiment that was surprisingly shared by several other cervical cancer patients.

Distribution of Cervical Cancer Patients by the first time patients learnt of diagnosis.

214 of the 228 respondents had never heard of HPV. This represents 93.9% of all participants. Only 14 (6.1%) of the respondents reported knowing what HPV was. What is more out of the 14 respondents who knew what HPV was, 10 of them knew it was sexually transmitted, while 3 reported not know how the virus is transmitted. One respondent out of the 14 thought it was transmitted through poor personal hygiene. As expected, the 214 respondents who had never heard of HPV did not also know the mode of transmission.

Distribution of Cervical Cancer Patients by knowledge of Pap smear

The distribution of respondents who had previous knowledge of Pap smear was split almost right down the middle. 50.4% had heard of Pap smear while 49.6% of the respondents reported never having heard of Pap smear.

Distribution of Patients by the perception of the Efficacy of Pap smear

Of the women interviewed, 59.6% did not know whether it is possible to detect cervical cancer with Pap smear before symptoms appeared, 5.3% said Pap smear cannot detect cervical cancer before symptoms appeared, while 35.1% answered in the affirmative.

Distribution by perception of early detection versus treatment outcome

Majority of the respondents (93.0%) were of the opinion that early detection is good for treatment outcome. 6.1% of the remainder did not know while less than 1% thought that treatment outcome was not dependent on early detection of cervical cancer.

Distribution by Belief of Treatment of Cervical Cancer

Majority of the respondents believe that it is possible to treat cervical cancer (93.4%) while only 6.6% thought it was not treatable.

What was noteworthy, is that a good number of the respondents who believed that cancer can be treated cited their faith as the reason for this belief. '*I believe God will heal me*' was repeated many times by the respondents whenever we came to this question. A respondent with stage 4 cancer, particularly stood out when she claimed that she knows healing is imminent because of her faith. This faith seemed to keep them going more than belief in the medicine they were taking or their treatment course.

4.4 ATTITUDES AND PRACTICES

TABLE 4: ATTITUDES AND PRACTICES

Characteristic	Classification	Frequency	Percentage (%)
Number of sexual partners	Only one	118	51.8
	Two or more	110	48.2
Age at first sexual encounter	Before 18 years	139	61.0
	After 18 years	89	39.0
Ever had a PAP smear?	Yes	109	47.8
	No	119	52.2
Reasons for never having had a PAP smear	Did not know about it	111	93.3
	Was not comfortable with it	5	4.2
	Could not afford	3	2.5
How regular was PAP smear?	Yearly	5	4.6
	Once every two years	3	2.8
	Once every three years	2	1.8
	Never did until recommendation	96	88.1
	Occasionally	3	2.8
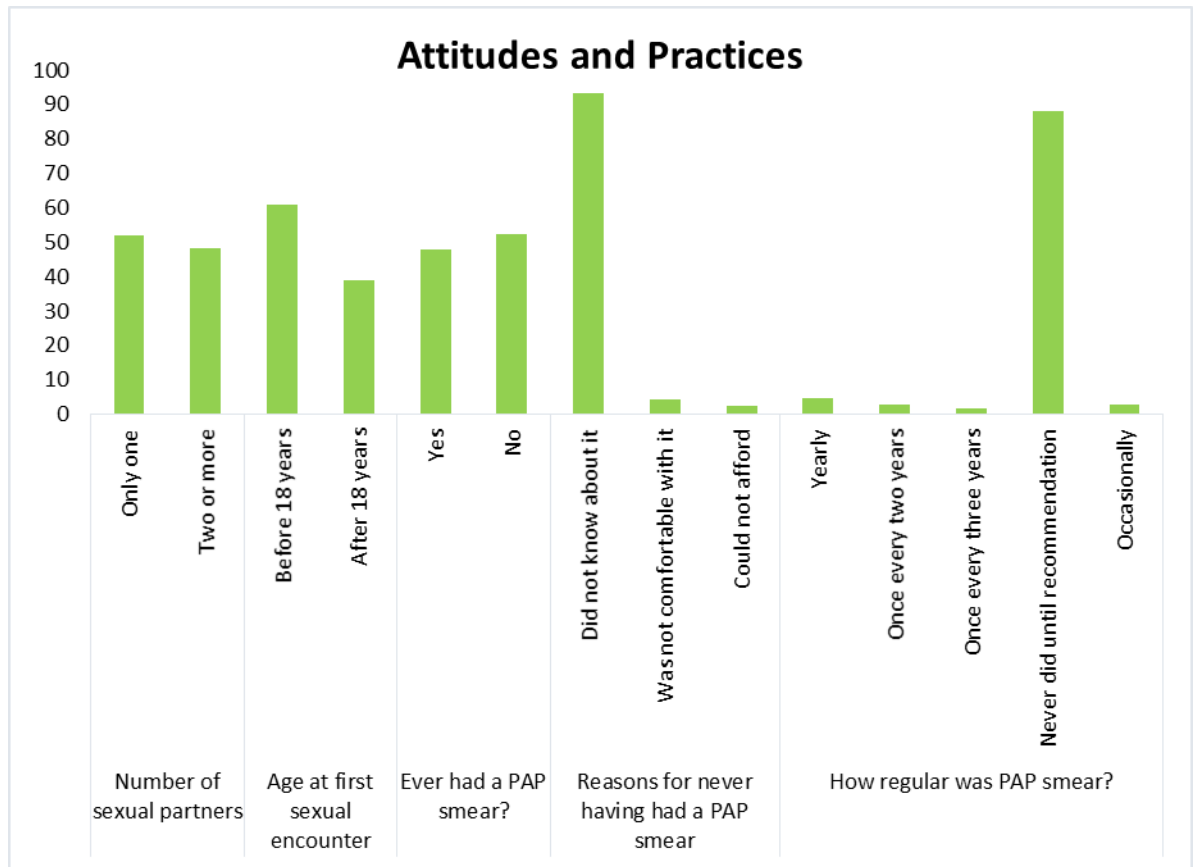
Distribution by Number of Sexual Partners

Of the women interviewed, 51.8% (n=118) reported having had only one sexual partner in their life. The remaining 48.2% (n=110) reported having had more than one sexual partner.

Younger respondents seemed more open to talking about their sexuality that older respondents. A respondent openly admitted '*I have had more than one sexual partner; to be honest, I have had more than five partners*'. These kinds of sentiments were shared by several other women who were not shy to talk about their sexuality. Moreover, some of the single women had children though never married suggesting that they have been sexually active at some point. There were also several other women who said they had been faithful to their partners but were aware that their partners had been seeing other women. One particular woman stands out, who broke down during the interview. '*I have only been with one man, my husband. But he had many other women on the side and I know he brought this to me*'.

38

A few of the respondents also admitted that they are HIV positive.

Distribution by Age at First Sexual Encounter

Majority of the respondents 61.0% (n=139) reported having had their first sexual encounter before they were 18 years of age. Only 39.0% (n=89) reported having had their first sexual experience after the age of 18 years.

Distribution of Respondents who had ever done a Pap smear

Out of 228 respondents 109 (47.8%) reported having done a Pap smear in their lifetime. The rest, representing 52.2% had never done a Pap smear. In this case diagnosis may have been done by other means such as biopsy.

Distribution by Reasons for never having done a Pap Smear

Out of the 119 respondents who reported never having done a pap smear, a majority reported it was because they did not know about it (93.3%). 4.2% of the remainder said it was because they were previously not comfortable with the procedure while 2.5% said it was because they could not afford it.

Distribution by Regularity of Pap smear before Diagnosis

Of the 109 respondents who reported having done a pap smear, 88.1% did their first test after recommendation, mostly because their symptoms were pointing to a possible HPV infection. Only 4.6% of the respondents had been screening yearly prior to diagnosis.

4.5 FINANCING

On the affordability question, having health insurance and which kind of insurance was found to be associated (p-value-0.000) as showed below.

	Do you have health insurance?		
	Yes	**No**	**P-Value**
How are you paying for health care			0.05
Health Insurance	6	0	
Out of pocket	135	87	
Which kind of health insurance			0.00
NHIF	131	2	
Work related health cover	2	0	
Personal health insurance	1	0	
Other	3	85	

FIGURE 8: FINANCING OF TREATMENT

61.8% of the respondents had health insurance while 38.2% of them did not. Of the 141 respondents who had health insurance, 95.7% of them had NHIF insurance which would only be used when they are admitted.

A majority of the respondents, 97.4% (n=222), were paying for health care out of pocket. Only 6 respondents during the time of data collection had health insurance that could cater for their treatment. Most had to rely on relatives to pay their hospital bill. The older respondents spoke of their children paying for them '*I have no source of income and therefore have to wait for my children to pay for me*'.

FINANCING
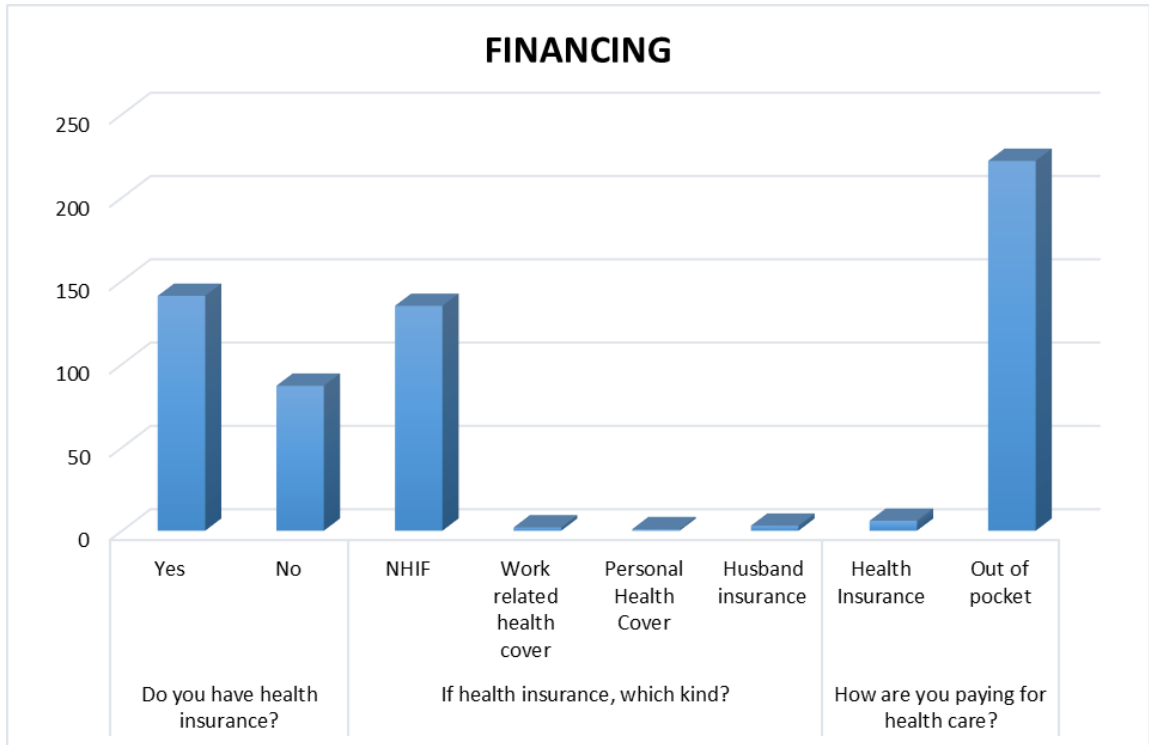
4.6 HEALTH SEEKING FOR CERVICAL CANCER

FIGURE 9: DISTRIBUTION BY TREATMENT OPTIONS GIVEN

Most of the treatment options prescribed included radiotherapy, either alone 41.7% (n=95), or alongside another form of treatment: Radiotherapy and Chemotherapy, 42.1% (n=96), Radiotherapy and Hysterectomy, 4.4% (n=10), Radiotherapy, Chemotherapy and Hysterectomy combined, 4.4% (n=10).
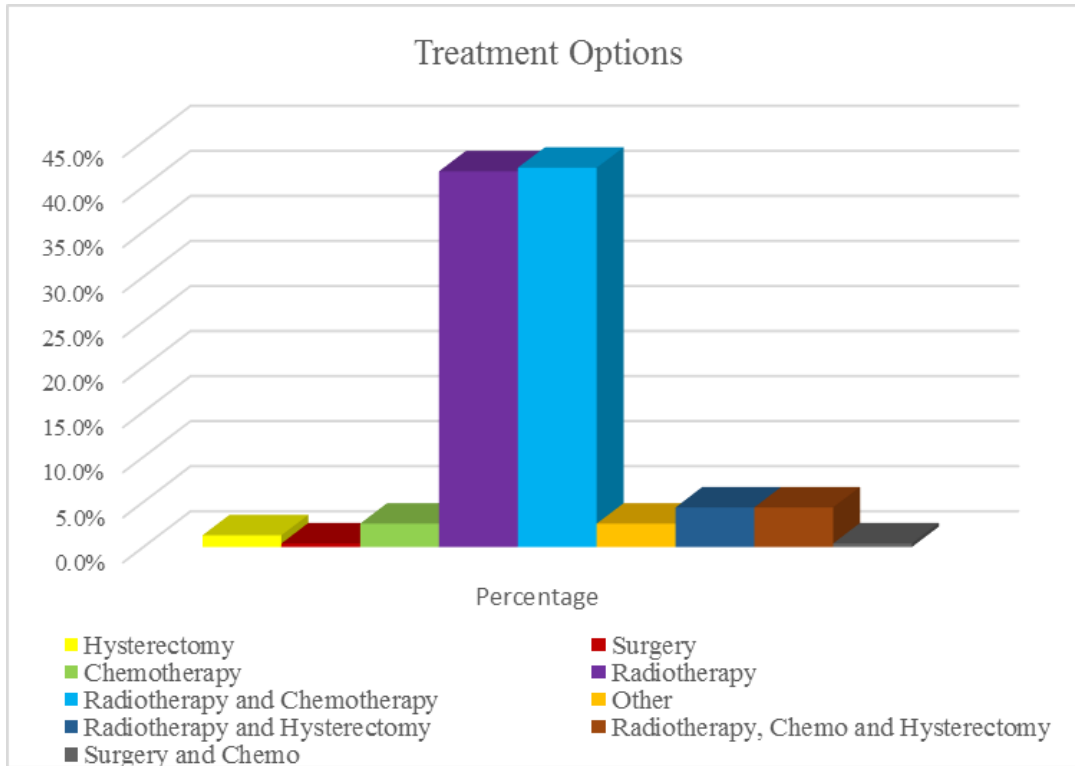
Treatment Options

FIGURE 10: RADIOTHERAPY VS. NON-RADIOTHERAPY OPTIONS

A summary of the treatment options that included radiotherapy versus options that did not include radiotherapy are as shown in the chart below.

Radiotherapy Vs Non- Radiotherapy Options

7%

93%

■ Radiotherapy Included   ■ Radiotherapy not Included

Majority of the respondents reported not knowing the stage of cancer at diagnosis (43.4%). Of those who knew, majority had been diagnosed with stage 2 cervical cancer (31.1%).
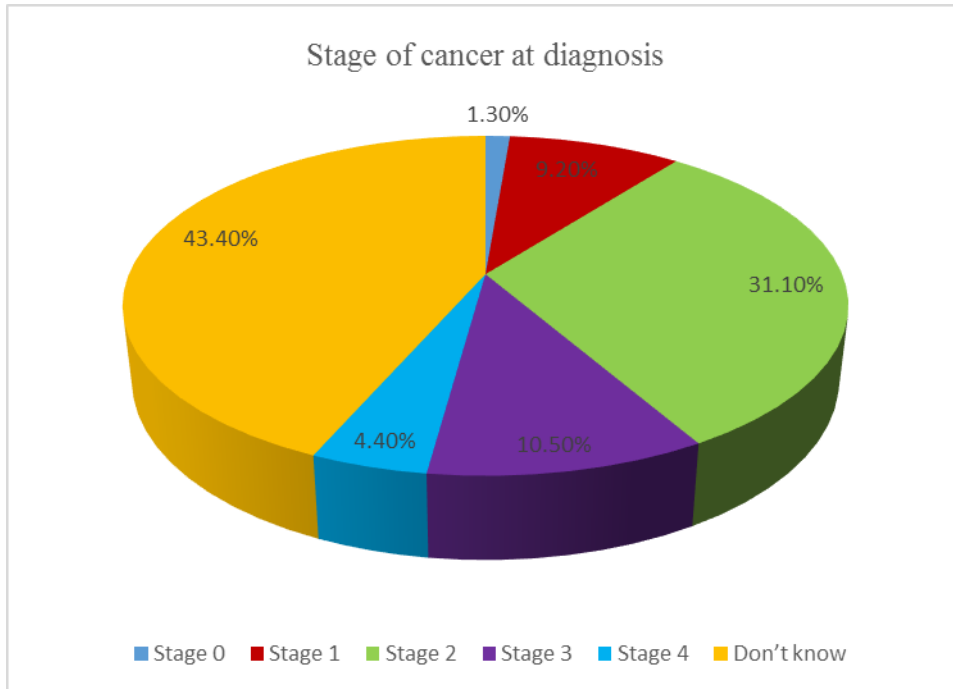
FIGURE 12: DISTRIBUTION BY ALTERNATIVE TREATMENT OPTIONS SOUGHT

Of the women interviewed, 49.1% reported never seeking other treatment options before coming to hospital. The rest reported either trying over the counter medicine, traditional remedies, and prayers amongst other options.
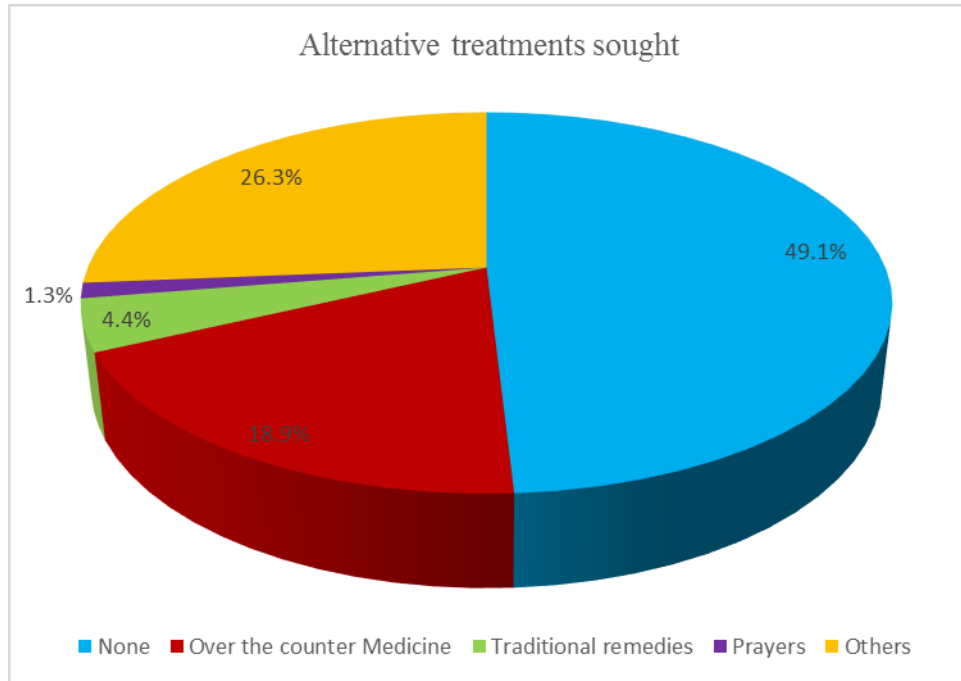
Most of those who sought over the counter medicines, reported trying to treat ailments such as malaria, typhoid, even amoeba before they knew their diagnosis. Most of the respondents past menopause recounted their shock when they started bleeding; '*I thought I was done with my menses only to find am bleeding again and I could not even tell why*'. One of the responde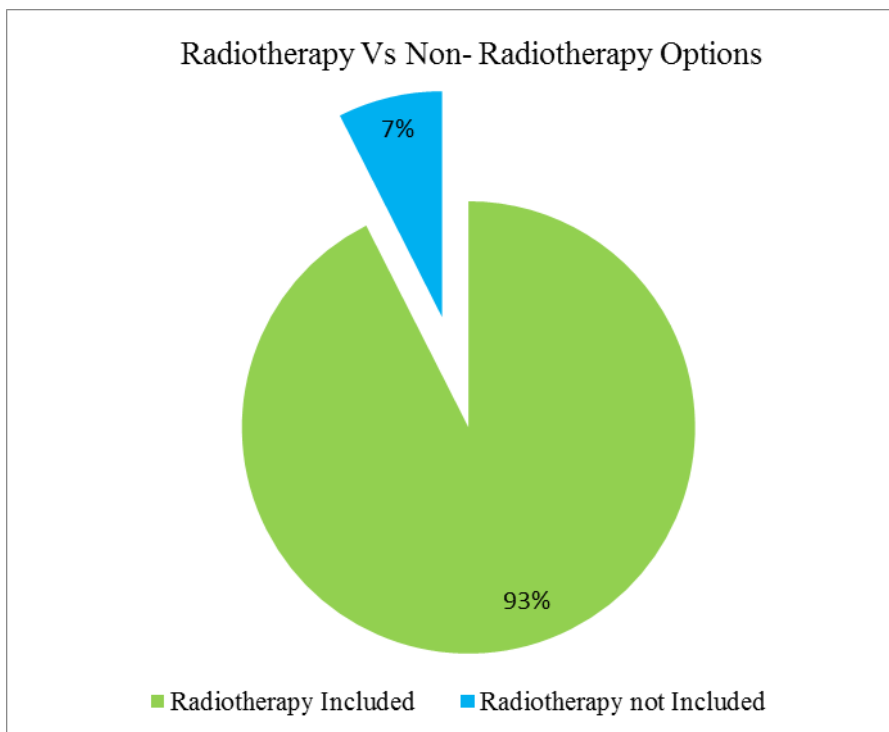nts, who was over 70 years spoke of her shame when she started bleeding due to the accompanying foul smell. For a long time she did not tell anyone. She described the dilemma and confusion she was in; '*I could not tell my children as I also did not understand what was going on. The discharge just started one day and it was often smelly. My children eventually intervened and took me to hospital but the shame was too much to tell them when it had started*'.

Being a teaching and referral hospital, majority of the respondents (89.0%) reported that they had to come to KNH on referral from other hospitals across the country. They expressed confidence in the doctors in KNH; '*They have sent me here because the hospital is big and has good doctors and medicines*'.

5.7% of the respondents had started seeking health care at KNH because it was affordable, 1.8% because it was accessible while 3.5% had other reasons that included the belief that KNH had the best doctors.
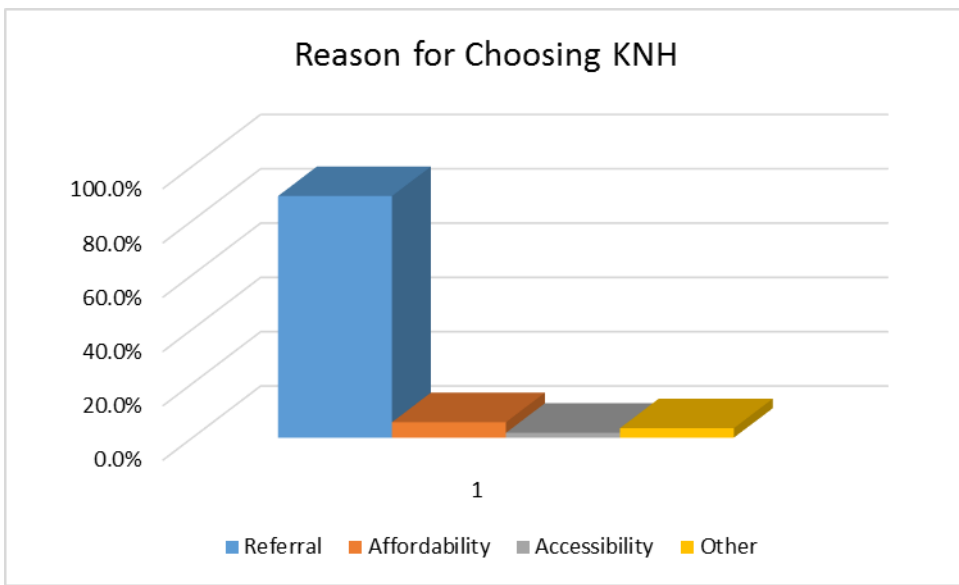
FIGURE 14: DISTRIBUTION BY SATISFACTION WITH TREATMENT AT KNH

Almost all respondents, 95.6% (n=218) were satisfied with the treatment they were getting at KNH. '*I stopped bleeding since I started treatment here. Even the pain I used to feel has been gradually fading. The treatment is helpful*' explained one patient who was on the last round of radiotherapy. Only 4.4% (n=10) were not satisfied with the treatment. One of the dissatisfied respondents complained '*I have been here since 5 am and it is now 11am and my name has not yet been called*'. Another complained of the time it was taking to get well '*I have been on chemotherapy and radiotherapy but I am still ill and it gets worse every day*'.
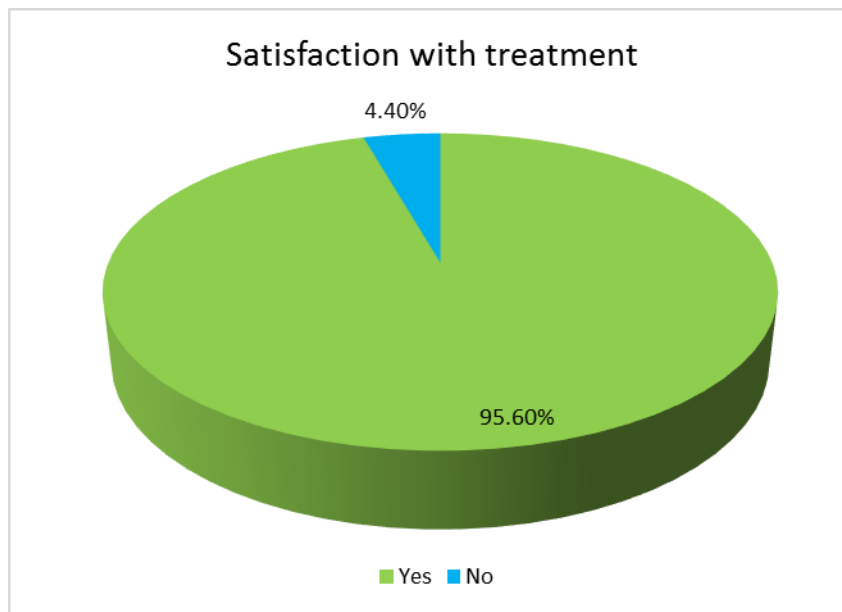
FIGURE 15: DISTRIBUTION BY PATIENTS GETTING SUPPORT FROM FRIENDS AND FAMILY

Most of the participants, 89.9% (n=205) were getting encouragement and support from family and friends. This support if further reiterated by the number of respondents whose health care was being financed by relatives and well-wishers. One respondent said '*My church came together and raised one hundred thousand to start me off on treatment. They have been praying for my recovery and I know it will be well*'. Similar sentiments were shared by patients who spoke of friends and family coming together to ensure that they never missed any appointment due to funds.

It was however not a family affair for all respondents as one particular woman explained *'my husband is mentally challenged and does not even comprehend what is going on. It therefore means I have to face this illness alone'*. Another caregiver whose mother was interviewed bitterly spoke of being left to carry the burden alone; *'My siblings have left me to care for mum alone. It is not easy for me as she has stage 4 cancer and is getting worse every day. I could use some help'*. In total, 10.1% of the participants reported not getting any support from friends and family.

Support from Friends and Family

10.10%

89.90%

■ Yes ■ No
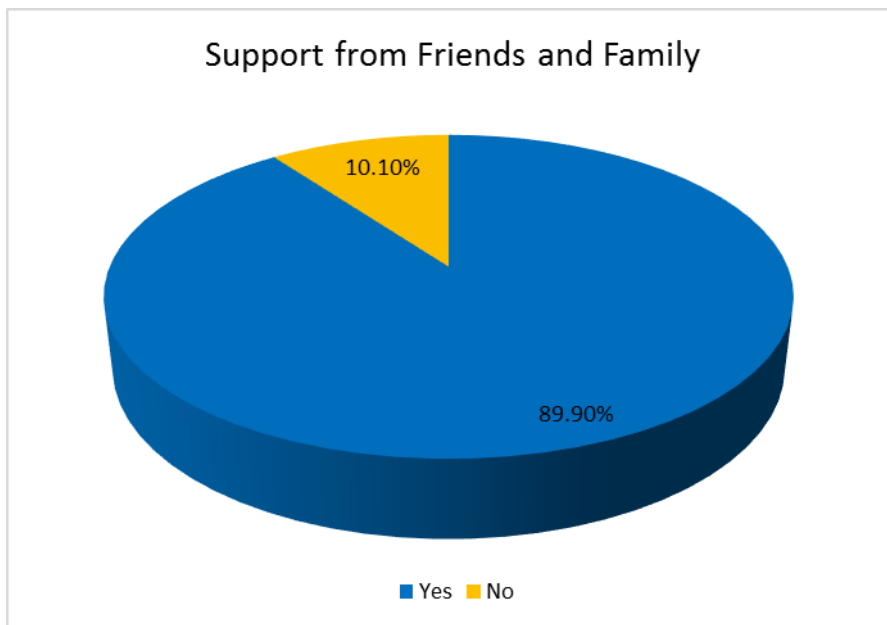
4.7 DISCUSSION

While prevention of cervical cancer is of utmost importance, there is need to focus on access issues for those who already have cervical cancer. Access to healthcare is a major determinant of the quality of life and survival rates for women with cervical cancer.

Affordability in relation to access to treatment

This study aimed to explore the impact of the cost of treatment of cervical cancer on the patient and their care givers. Cost was evaluated in terms of direct costs, indirect costs and intangible costs. The concern was whether cervical cancer services are affordable to Kenyans at large. Majority of the respondents reported difficulty in meeting the costs of treatment as well as the high indirect costs of having to seek services such as transportation, lost income and the sometimes unbearable long waits. This is in agreement with a study by Maranga *et al* which found that the barrier to getting treatment is that patients have to pay and yet cannot afford it (Maranga et al, 2013). Some respondents reported missing appointments due to lack of clinic fees, or transport to get to KNH. This is related to the fact that only 8.3% of them had formal employment translating to a regular income while the rest were either self-employed (34.6%) or unemployed altogether (57%). Even those self-employed were mostly doing informal businesses that give little and sometimes irregular returns.

The results of the study found an association between having health insurance and mode used for payment (p= 0.05). 38.2% of the respondents reported having no health insurance at all. Of the 61.8% who had health insurance 95.7% had NHIF insurance which is only used when one is admitted. This then explains why 222 of the respondents (97.4%) reported paying for health care services at KNH out of pocket. Only 2.6% of the respondents had private insurance, work related or otherwise, covering the cost of their treatment. As a result of this there were many accounts of some other financial need in the household being the opportunity cost of the medical cost. One of the participants explained that for her to be able to get money to pay for her radiotherapy sessions her son who was to enroll in high school had to drop out. At the time of the interview, almost two years from the time she started treatment, the family had still not been able to send him to school. There were numerous other accounts of having had to

sell family land in order to pay for treatment amongst other measures to raise money for services. Mulemi makes a similar observation in his hospital ethnography of cancer patients at KNH when he states "*Hospitalization caused further impoverishment as it involved rapid loss of income, unmanageable treatment costs, and depletion of asses and declining social support*" (Mulemi, 2010). This is consistent with observations from a study done in Burundi, Sierra Leone, DRC, Chad, Haiti and Mali to assess how user fees endanger health. The study found that up to 50% of people had to sell personal possessions (food reverses, cattle, land) or borrow money to pay for health care placing them at greater risk of further impoverishment and rendering households unable to pay for future care or other essential household expenses (Ponsar et al, 2010). The WHO Commission on the social determinants of health report states that upwards of 100 million people are pushed into poverty each year through catastrophic household health costs.

Moreover, some of the patients complained of losing jobs and businesses because of inability to work due to illness or reduction of productivity. This was seen to affect not only the patients but their families as well especially where the patients were the primary caregivers. Due to lack of insurance, the cost of treatment for many of the patients, especially the elderly, fell on their caregivers who in most cases were their children or spouses.

There were other costs that that came up that were intangible. These were costs for which no price could be attached and related to the adverse health effects of cervical cancer. Some respondents complained of discomfort while travelling on public transport due to the smelly discharge that is a common symptom. A few others who found the cost of sanitary towels too high had to deal with being constantly wet, a cause of major embarrassment. Still, there were patients who seemed emotionally distraught from the strain of the illness but who were not able to get professional emotional support. Experiences of immense pain for those with advanced cancer and mental anguish brought about by seemingly imminent death were also expressed. For these, the best type of care is palliative care, that is, the physical, psychosocial, and spiritual support that can considerably improve their quality of life and that of their families by relieving unnecessary suffering (WHO and International Union against Cancer, 2005).

Majority of the patients mentioned trying several alternative treatment options when they became unwell before they actually found out it was cervical cancer. Many reported being given prescription medicine to stop the incessant bleeding- one of the most common symptoms of cervical cancer- before finding out they actually had cancer. Still others were treated for such ailments as amoeba, malaria, typhoid before the disease was finally diagnosed. This pattern of health seeking would sometimes lead to multiple referrals compounding the cost of cancer management.

Of the 112 respondents who had done a Pap smear, only 4.6% had been doing it yearly at the time of diagnosis. Most of them were learning about it for the first time when it was recommended as a test to confirm diagnosis of their illness. By this time, the disease would have advanced as cervical cancer mostly remains asymptomatic in the early stages. Low socio- economic status meant poor cancer screening culture exposing these women to risk. In countries at all levels of income, health and illness follow a social gradient: the lower the socioeconomic position, the worse the health (WHO, 2008). This WHO report on social determinants of health further suggests that income amongst other factors is closely linked to people's access to, experiences of, and benefits from healthcare. Social stratification, therefore, influences differential access to and utilization of health care, with consequences for the inequitable promotion of health and well-being, disease prevention, and illness recovery and survival (WHO, 2008).

Out of pocket spending, imposed by user fees for health care has led to an overall reduction in utilization and worsening health outcomes. Lagarde and Palmer in their study search found that removing or reducing user fees was found to increase the utilization of curative services and perhaps preventive services as well, although this may have negatively impacted service quality (Lagarde and Palmer, 2007). The aforementioned study done in Burundi, Sierra Leone, DRC, Chad, Haiti and Mali concurs that user fees negatively impact on healthcare access and population health and their removal leads to better access to health services and reduced mortality (Ponsar et al, 2010). It therefore appears that removal of user fees would help reduce barriers to health care access.

Accessibility and its influence on access

The study also aimed at answering the question of whether the geographical accessibility of the health facility is a factor influencing general access to health care services. First and foremost, one has to appreciate that KNH is the only public facility currently that is equipped with a radiotherapy facility. This therefore means that cancer patients requiring radiation treatment have to travel to Nairobi for treatment. Of the 228 patients interviewed, 83.8% of them lived outside Nairobi. Only 16.2% reported coming for treatment from within Nairobi. Most were there on referral having come from all over the country. The cancer clinic at KNH operates every Monday to Thursday from 8 am to 1pm though the queues on some days would be very long. Patients however reported coming to the hospital to queue from very early in order not to miss a space in the queue. Those who do not have family in Nairobi or friends to host them would end up travelling at night and waiting for hours in the cold before having to travel back after the clinic. For many of the cervical cancer respondents this was added strain to their already ailing health.

The respondents narrated their suffering and struggles in their quest for treatment. A number of the women talked of non-stop discharge which would sometimes be smelly and which was a source of great discomfort especially on long trips in public transport. Some would need to carry an extra piece of garment because their clothes would be soiled during the trips to the hospital. One particular woman who was eager to participate requested to be allowed to take the interview while standing as sitting was too painful. She was not from Nairobi, so one can only imagine how frustrating the journey must have been.

While there are health facilities in most of these regions, the services offered and the type of specialists available would often be limiting necessitating the referral to KNH. The greater the distance the patient was from Nairobi, the more challenging it proved to access health care services. A number of the patients would arrive at the KNH cancer clinic after several referrals first from private clinics to slightly larger public hospitals in the rural areas then finally to KNH. Needless to say, there would be significant time wasted in this pursuit, first for a diagnosis, then for treatment not to mention the mounting costs. A study done in South Africa surmises that even when health services

are provided free of charge, monetary and time costs of travel represent the price of access to health care (McLaren, Ardington and Leibbrandt, 2013). In this regard then geographical distance proves to be an independent barrier to accessing health care services.

Accessibility as a factor influencing access to health care is closely linked with availability of services. Many of the patients attending clinic at KNH had been referred to the facility for radiotherapy. In fact 93% of the treatment options offered included radiotherapy. This is because while most treatment options can be found in some hospitals, radiotherapy is only done in one public hospital presently- KNH.

Several patients tired of the long journey and the cost implications said they would prefer to be admitted for the duration of their treatment instead. Some opted for admission because of pain and feeling the need to be within the hospital and ready help. Admission, however, was subject to availability and to the extent of the patient's illness. Capacity constraints therefore meant that admission would not be based on patient preference. The findings compare well with those of Benson Mulemi in his hospital ethnography at KNH cancer ward. His study reported that availability of hospital resources determined when patients could be admitted and when their treatment begun. One patient who was interviewed in January told us her first radiotherapy clinic had been scheduled for October. She would have to wait 9 months for her clinic. And this was not the longest wait. We were informed of patients who were being booked for January of the following year (2015). They would have to wait one year for their radiotherapy clinic. The oncology workers have the difficult task of prioritizing which cancer patients need to be seen earlier and which ones can wait a while. They also deal with emergencies which cannot wait for their turn and have to be pushed up. In the end, the irony is that, the patients who initially were not in dire need of attention become emergencies who now have to be seen urgently. This is because cancer is a progressive disease and the wait for care most often than not antagonizes the situation.

Knowledge and socio-demographic factors as influence to access

Another aspect that came out clearly from the study was the lack of knowledge about screening and cervical cancer itself. One of the challenges was describing what Pap smear is. Some of the respondents who had gone through the screening still did not

know what it is and we would have to describe the procedure for them to recognize it. All in all the study found that 50.4% of the patients knew what pap test is but mostly because they had gone through the procedure. The findings are comparable to those of another study on factors contributing to low survival of cervical cancer patients in Kenya which found 35.5% of the patients had heard of screening. The study found poor education as one of the contributory factors to poor survival outcomes (Maranga et al, 2013)

64.5% of the respondents found out about cervical cancer for the first time after they were diagnosed. Some said they knew of cancer but not specifically cervical cancer. Even worse, only 6.1% of the respondents heard ever of HPV virus. This is in agreement with a study done in Ogun State, Nigeria that found only 2.3% of the women could identify a virus as the cause of cervical cancer (Abiodun et al, 2013). In the study 90.5% of the respondents identified lack of knowledge as the barrier to uptake of cervical cancer screening. Another study on cervical cancer among Kenyan women, found that while 91% of the surveyed women had heard of cancer, only 29% had previously heard of cervical cancer (Sudenga et al, 2013). This explains why only 4.6% of the respondents in the current study had been doing Pap smear yearly at the time of diagnosis. Many other studies have identified knowledge, availability or lack thereof, as a factor influencing access to health care services (Gichangi et al, 2003; Aswathy et al, 2012).

The study found socio-cultural factors that influence health seeking behavior in individuals. These mostly had to do with patient's knowledge of cervical cancer, the pursuit of treatment including the patient's concerns and considerations regarding the illness. To help explain these health related behaviors, we will use the widely used Health Belief Model. The basis of the model focusses on an individual's perception of the threat posed by a disease, the benefits of avoiding the threat and factors influencing the decision to act (National Cancer Institute (NCI), 2003). The model assumes that the following constructs influence people's decisions regarding health seeking behavior:

Perceived Severity

This connotes an individual's belief about the seriousness of the disease. In the current study, 64.5% of the participants did not know about cervical cancer until they were

diagnosed. The respondents showed a somewhat poor knowledge of the risk factors of cervical cancer with 151 out of 228 respondents admitting they do not know what causes the disease, some even after having the disease for several years. The others believed cervical cancer was due to a variety of factors with a majority of them citing family planning as the cause. Even though a few patients knew it was sexually transmitted, they still did not know about the HPV virus. In fact, only 6.1% had ever heard of HPV, with the majority, 93.9%, not knowing what it was, let alone mode of transmission. This could shed light on why only 4.6% of the respondents had been doing PAP smears yearly at the time of diagnosis. These results show a positive association between knowledge and uptake of screening.

Perceived Susceptibility

This construct suggests that people are ready to act if they believe they are vulnerable to a condition. The greater the perceived risk, the greater the likelihood of engaging in behaviors to decrease the risk (Hayden, 2014). When people believe they are at risk of contracting a disease, they are more likely to take preventive measures, and the converse is true. Cancer in general is considered a disease of the Western world. Majority of the respondents did not consider themselves to be at risk. 61% of the respondents had started engaging in sexual relations before the age of 18 while 48.2% admitted to having more than one sexual partner. Of the 228 respondents who took part in the study, 194 of them had more than 3 children, with some having up to 15 children. These are factors that increase the risk of contracting cervical cancer, yet most of the respondents did not consider themselves vulnerable. This is in part because of their ignorance of the disease, but also because of a perception of low risk to diseases caused by choice of lifestyle. Several participants expressed shock at the diagnosis since no one in their family had ever been diagnosed with cervical cancer. It therefore seemed like a disease that happens to 'other people' and that they were safe from it. The same views are observed in a section of women in a study done on barriers and facilitating factors for cervical cancer in Iran (Akbari et al, 2010). In the current study, this belief may have been a contributing factor to delayed health seeking even when the symptoms become obvious.

Perceived Benefits

People believe that taking action would reduce their susceptibility or that engaging in health promoting behavior would reduce their risk of disease. People would make healthier choices if they believed that the new behavior would reduce their chance of getting a disease. In the current study, only 35.1% of the respondents agreed that it is possible to detect cervical cancer through Pap smear screening. The rest either did not know whether screening is beneficial in detecting cervical cancer (59.6%), or did not think it was beneficial at all (5.3%). Their views on the importance of screening points to gaps in health education by our health system.

On a positive note, a majority of the women believed that cervical cancer can be treated (93.4%). In addition, 95.6% were satisfied with the treatment they were getting at the hospital. Many testified of the changes they witnessed since starting treatment there. One of the respondents told us:

"I used to bleed uncontrollably. The pain was also unbearable but since I started receiving radiotherapy treatment, the bleeding has stopped and now am just attending clinic for follow up."

This greatly helped adherence to radiotherapy and/ or chemotherapy clinic dates.

Perceived Barriers

The construct refers to an individual's own evaluation of obstacles in the way of him or her adopting a new behavior (Hayden, 2014). Lack of knowledge of cervical cancer and the importance of screening programs was cited as the reason why most of the respondents had not been getting Pap smear checks. This could be positively associated with the respondent's level of education. The study found that 17.5% of the respondents had no education, 58.3% had only primary school education, 21.9% had secondary school education and only 2.2% had tertiary education. Most of those who reported having reached primary or secondary school had also dropped out and few had finished the level. In this case it was probably up to the health providers and the health system generally to ensure that screening education and services were availed to all, especially in the rural areas where people may not be exposed or knowledgeable enough to take initiative. The aforementioned study done in Malawi found that the most prominent

barriers women face in seeking cervical cancer screening are low knowledge of cervical cancer and a low perceived threat of the disease (Fort et al, 2011).

Lack of health insurance was found to be another significant barrier to accessing health care services. Since most of the respondents had to pay for health services out of pocket (97.4%), attending clinics was on a need-to basis. Financial ability as a barrier to health seeking has been noted in other studies (Moore de peralta, 2011; Were et al, 2011).

4.8 CONCLUSION

Access to health care, one of the basic human rights, is a constitutional right in Kenya. Determining factors that influence access to treatment of cervical cancer is important in controlling the disease. This study revealed significant gaps requiring attention in the fight against cervical cancer in Kenya.

Firstly, the findings highlighted cost as one of the key factors that influence access to treatment. User fees have excluded many people from care as evidenced by the number of women who struggled to pay for health care from limited economic resources. The resultant effect becomes under-use of health services. This is the primary reason for lack of yearly screening for most of the respondents and the reason why seeking formal health care when they had already become ill was a last resort.

Secondly, the findings identified some socio-cultural barriers that influence health seeking behavior. Lack of knowledge was a recurring factor when assessing the health access journey. Most of the women did not know about cervical cancer prior to their diagnosis let alone about Pap smear. Knowledge of cervical cancer is an important element in determining whether women will take preventive measures against the disease. Moreover, their poor cervical cancer symptom recognition also further confirmed lack of knowledge as an important factor in influencing health access.

Thirdly, unavailability of health care resources for diagnosis and treatment was the reason almost all the women had to come for treatment at KNH. Lack of proper infrastructure in regional centers is the reason for the congestion of cancer patients at the national referral hospital. The radiotherapy unit in KNH is stretched thin as a result leading to the long delays and perpetual queues.

Lastly, most of the cases in this study had limited geographical access to the hospital. They came on referral from different backgrounds from all over the country. The help seeking options taken before they ended up at KNH meant a lot of precious time was wasted which would translate to higher costs of treatment and late presentation. Decentralization of health resources to regions would help reduce the time between diagnosis and treatment.

4.9 RECOMMENDATIONS

The government could increase health care budgets or target to subsidize cancer treatment. This would reduce the cost of health care for patients and thereby improve utilization of services when most needed.

There needs to be concerted effort between the government and health care providers in providing health education on prevention and early detection of cervical cancer. Prevention of cervical cancer would be a cheaper option compared to treatment of the same.

The government could intentionally invest in more radiotherapy machines to cater for cervical cancer patients from other parts of the country. This would help bring down the cost of accessing health care and improve on timely utilization of these services.

There is also need to prioritize training of oncology professionals who would then need to be redeployed to regional health centers. The government could offer incentives to medical professionals specializing in cancer management.

More studies should be done to determine if factors found to affect health access in this study can be applied to other settings other than KNH. These studies would also help publicize cervical cancer as a public health priority.

There should be an increase of opportunistic screening for cervical cancer for women attending other clinic sessions. This has been known to happen for HIV positive women. The same can be applied so that women attending hospital for whatever reason are also encouraged to screen for cervical cancer. This can be done through effective partnerships between health programs such as maternal clinics, sexual and reproductive health, cancer control, child and adolescent health amongst others.

REFERENCES

Abiodun, O., Fatungase, O., Olu-Abiodun, O., Idowu-Ajiboye, B. and Awosile, J. 2013. An assessment of women's awareness and knowledge about cervical cancer and screening and the barriers to cervical screening in Ogun State, Nigeria.. *Journal of Dental and Medical Sciences*, 10 (3), pp. 52-58.

Ahmad, F., Stewart, D. and Hyman, I. 2004. Rural Physicians' Perspectives on Cervical Cancer and Breast Cancer Screening: A Gender based Analysis. *Journal of Women's Health & Gender-Based Medicine*, 10 (2), pp. 201-208.

Ahmed M., S. 2005. *Exploring health-seeking behaviour of disadvantaged populations in rural Bangladesh*.

Akbari, F., Shakibazadeh, E., Pourreza, A. and Tavafian, S. 2010. Barriers and Facilitating factors for Cervical Cancer Screening: A Qualitative Study from Iran. *Iran J Cancer Prev*, 4 pp. 178-184.

Ali, F., Kuelker, R. and Wassie, B. 2012. Understanding cervical cancer in the context of developing countries. *Ann Trop Med Public Health*, 5 (1), pp. 3-15.

Almuammar, A., Dryden, C. and Burr, J. 2010. Factors Associated with Late Presentation of Cancer: A Limited Literature Review. *Journal of Radiotherapy in Practice*, 9 (2), pp. 117-123.

Aronowitz, R. 2010. Decision Making and Fear in the Midst of Life. *The Lancet*, 375 (9724), pp. 1430-1431.

Aswathy, S., Quereshi, M., Kurian, B. and Leelamoni, K. 2012. Current Knowledge and Practice Among Women in a Rural Population of Kerala, India. *Indian J Med Res*, 136 pp. 205-210.

Bigby, J. and Holmes, M. 2005. Disparities Across the Breast Cancer Continuum. *Cancer Causes and Control*, 16 pp. 35-44.

Birhanu, Z., Abdissa, A., Belachew, T., Deribew, A., Segni, H., Tsu, V., Mulholland, K. and Russell, F. 2012. Health Seeking behavior for Cervical Cancer in Ethiopia: A Qualitative Study. *International Journal for Equity in Health*, 11 (83), pp. 1-8.

Boyle, P. and Levin, B. 2008. *World Cancer Report 2008*. [report] WHO Press.

Byrd, T., Chavez, R. and Wilson, K. 2007. Barriers and Facilitators of Cervical Cancer Screening Among Hispanic Women. *Ethnicity & Disease*, 17 pp. 129-134.

Chuma, J. and Okungu, V. 2011. Viewing the Kenyan health System Through an Equity lens: Implications for Universal Coverage. *International Journal for Equity in Health*, 10 (22).

Denny, L., Quinn, M. and Sankaranarayanan, R. 2006. Screening for Cervical Cancer in Developing Countries. *Vaccine*, 24 (3), pp. 71-77.

Department Of Research-National Assembly. 2011. *Policy Brief on the Situational Analysis of Cancer in Kenya*. [report] Nairobi, Kenya: Parliamentary Service Commision.

Dresang, L. 2005. Colposcopy: An Evidence- Based Update. *J Am Board Fam med*, 5 (5), pp. 383-392.

Ensor, T. and Cooper, S. 2004. Overcoming barriers to health service access: influencing the demand side. *Health Policy Plan*, 19 (2), pp. 69-79.

Fabricant, S., Kamara, C. and Mills, A. 1999. Why the poor pay more: household curative expenditures in rural Sierra Leone. *International Journal of Health Planning and Management*, 14 pp. 179-199.

Farmer, P., Frenk, J. and Knaul, F. 2010. Expansion of cancer care and control in countries of low and middle income: a call to action. *Lancet*, 376 p. 1186.

Fort, V., Makin, M., Siegler, A., Ault, K. and Rochat, R. 2011. Barriers to Cervical Cancer Screening in Mulanje, Malawi: A Qualitative Study.. *Patient Preference and Adherence*, 5 p. 125–131.

Franco, E., Duarte-Franco, E. and Ferenczy, A. 2001. Cervical Cancer: Epidemiology, Prevention and the Role of Human Papillomavirus Infection. *CMAJ*, 164 (7), pp. 1017-1025.

Freeman, H. 2004. Poverty, Culture, and Social Injustice: Determinants of Cancer Disparities. *CA: A Cancer Journal for Clinicians*, 54 (2), pp. 72-77.

Freeman, H. and Chu, K. 2005. Determinants of Cancer Disparities: Barriers to Cancer Screening, Diagnosis and Treatment. *Surg Oncol Clin N Am*, 14 pp. 655-669.

Gerend, M. and Pai, M. 2008. Social Determinants of Black-White Disparities in Breast Cancer Mortality: A Review. *Cancer Epidemiol Biomarkers Prev*, 17 pp. 2913-2923.

Gichangi, P., Estembale, B., Bayo, J., Rogo, K., Opiyo, A. and Temmerman, M. 2003. Knowledge and practice about cervical cancer and Pap smear testing among patients at Kenyatta National Hospital, Nairobi, Kenya. *Int J Gynecol Cancer*, 13 (6), pp. 827-833.

Global Medicine Report. 2011. Cancer Crisis in Kenya. *IFMSA-NL magazine on global health*, [online] Available at: http://www.globalmedicine.nl/index.php/global-medicine-11/207-cancer-crisis-in-kenya [Accessed: 2 Nov 2012].

Goldie, S., Gaffikin, L., Goldhaber-Fiebert, J., Gordillo-Tobar, A., Levin, C., Mahé, C. and Wright, T. 2005. Cost-Effectiveness of Cervical-Cancer Screening in Five Developing Countries. *New England Journal of Medicine*, 20 pp. 2158-2168.

Grunfeld, E., Hunter, M., Ramirez, A. and Richards, M. 2003. Perceptions of breast cancer across the lifespan. *Journal of Psychosomatic Research*, 54 (2), pp. 141-146.

Gulliford, M., Figueroa-Munoz, J., Morgan, M., Hughes, D., Gibson, B., Beech, R. and Hudson, M. 2002. What does 'Access to health Care' Mean? *J Health Serv Res Policy*, 7 (3), pp. 186-188.

Haie-Meder, C., Morice, P. and Castiglione, M. 2010. ESMO Clinical Practice Guidelines for Diagnosis Tretment and Follow-up. *Annals of Oncology*, 21 (5), pp. 37-40.

Hayden, J. 2014. *Introduction to Health Behavior Theory*. 2nd ed. New Jersey: Jones and Bartlett Publishers.

Henley, P. 2012. Preventing Preventable Cervical Cancer in Kenya. *Africa Portal*, 38.

Howson, C., Harrison, P. and Law, M. 1996. *In Her Lifetime- Female Morbidity and Mortality in Sub- Saharan Africa*. Washington, D.C: National Academy Press.

Hyacinth, H., Oluwatoyosi, A., Ibeh, J. and Osoba, T. 2012. Cervical Cancer and Pap Smear Awareness and Utilization of Pap Smear Test Among Federal Civil Servants in North Central Nigeria. *Plos One*, 7 (10).

Ibekwe, P. 2010. Healthcare Problems in Developing Countries. *Medical Practice and Reviews*, 1 (1), pp. 9-11.

Jacobs, B., Por, I., Bigdeli, M., Annear, P. and Van Damme, W. 2011. Addressing Access Barriers to Health Services: An Analytical Framework for Selecting Appropriate Interventions in Low-Income Asian Countries. *Health Policy and Planning*, pp. 1-13.

Karanja, F. and Wanyoro, A. 2011. Understanding the Spatial Prevalence of Cervical Cancer Using GIS in Nairobi, Kenya. *AGSE*.

Kidula, N. 2012. *Cervical Cancer in Kenya- Presentation to the Cancer Workshop-KNH*. [report].

Kingsley, C. 2010. Cultural and Socioeconomic Factors Affecting Cancer Screening, Early Detection and Care in the Latino Population. *Ethnomed*, [online] Available at: https://ethnomed.org/clinical/cancer/cultural-and-socioeconomic-factors-affecting-cancer-screening-early-detection-and-care-in-the-latino-population [Accessed: March 2013].

Kivuti-Bitok, L., Mcdonnell, G., Pokhariyal, G. and Roudsari, A. 2012. Self-reported Use of Internet by Cervical Cancer Clients in Two National Referral Hospitals in Kenya. *BMC Res Notes*, 5 (1).

Largarde, M. and Palmer, N. 2008. The Impact of User Fees on Health Service Utilization in Low- and Middle-Income Countries: How Strong is the Evidence? *Bulletin of the World Health Organization*, 86 (11), pp. 839-848.

Laugsand, E., Sprangers, M., Bjordal, K., Skorpen, F., Kaasa, S. and Klepstad, P. 2010. Health Care Providers Underestimate Symptom Intensities of Cancer Patients: A Multicenter European Study. *Health and Quality of Life Outcomes*, 8 (104), pp. 1-13.

Macleod, U., Mitchell, E., Macdonald, S. and Ramirez, A. 2009. Risk Factors for Delayed Presentation and Referral of Symptomatic Cancer: Evidence for Common Cancers. *British Journal of Cancer*, 101 (2), pp. 91-101.

Manalo, M. 2008. Knowledge Toward Cancer pain and the Use of Opioid Analgesics Among Medical Students in Their Integrated Clinical Clerkship. *Palliative Care: Research and Treatment*, 2 pp. 9-17.

Maranga, I., Hampson, I., Olive, A., Gamal, A., Gichang, P., Opiyo, A., Holland, C. and Hampson, I. 2013. Analysis of Factors Contributing to the Low Survival of Cervical Cancer Patients Undergoing radiotherapy in Kenya. *plos one*, 8 (10).

Mclaren, Z., Ardington, C. and Leibbrandt, M. 2013. *Distance as a barrier to health care access in South Africa. A Southern Africa Labour and Development Research Unit Working Paper Number 97*. [report] Cape Town: SALDRU, University of Cape Town.

Medical Practice and Reviews. 2007. Cervical Cancer and Hormonal Contraceptives: Collaborative Reanalysis of Individual Data for 16573 Women with Cervical Cancer and 35509 Women Without Cervical Cancer from 24 Epidemiological Studies. *Lancet*, 370 pp. 1609-1621.

Meropol, N. and Schulman, K. 2007. Cost of Cancer Care: Issues and Implications. *J Clin Oncol*, 25 (2), pp. 180-186.

Moore De Peralta, A. 2011. *Health beliefs and socio-cultural factors that predict cervical cancer screening behaviors among Hispanic women in seven cities in the upstate of South Carolina*. Doctor of Philosophy (PhD).

MOPHS and MOMS. 2012. *Draft National Cancer Control Strategy 2010-2015*. [report] Nairobi, Kenya: Republic of Kenya.

MOPHS and MOMS. 2012. *National Cervical Cancer Prevention Program- Strategic Plan 2012-2015*. [report] Nairobi, Kenya: Republic of Kenya.

Mulemi, B. 2008. *Coping with cancer and adversity: Hospital Ethnography in Kenya*. Netherlands: African Studies Centre.

Musibi, A. 2008. *Cancer in Kenya*. [report] Nairobi Kenya.

Mutuma, G. and Rugutt- Korir, A. 2006. *Cancer Incidence Report Nairobi 2000-2002: Nairobi Cancer Registry*. [report] Nairobi, Kenya: Roche Products.

Mwasi, B. 2010. *Factors Affecting Access to Rural health Services- A Case Study of Baringo Area of Kenya Using GIS*. Ethiopia: OSSREA.

National Cancer Institute (NCI). 2004. *Economic Costs of Cancer health Disparities- Summary of meeting proceedings*. [report] Center to Reduce Cancer Health Disparities.

Ndikom, C. and Ofi, B. 2012. Awareness, Perception and Factors Affecting Utilization of Cervical Cancer Screening Services Among Women in Ibadan, Nigeria: A Qualitative Study. *Reproductive health*, 9 (11).

Ngugi, C., Boga, H. and Muigai, A. 2012. Factors Affecting Uptake of Cervical Cancer Early Detection Measures Among Women in Thika, Kenya. *Health Care Women Int*, 33 (7), pp. 595-613.

NHA. 2010. *Kenya National Health Accounts 2009-2010*. [report] Nairobi: Ministry of Medical Services, Ministry of Public Health and Sanitation.

Ntekim, A. 2012. Cervical Cancer in Sub Sahara Africa. In: Rajkumar, R. eds. 2012. *Topics on Cervical Cancer with an Advocacy for Prevention*. In Tech, pp. 51-74.

O'Brien, P. and Gostin, L. 2011. *Health Worker Shortages and Global Justice*. [e-book] New York: Milbank Memorial Fund. http://www.milbank.org/uploads/documents/HealthWorkerShortagesfinal.pdf.

Onyango, J. and Macharia, I. 2006. Delays in Diagnosis, Referral and Management of head and Neck Cancer Presenting at Kenyatta National Hospital, Nairobi. *East African Medical Journal*, 83 (4).

Opwora, A., Nyabola, L., Olenja, J. and Laving, A. 2011. Who is to Blame? Perspectives of Caregivers on Barriers to Accessing Healthcare for the Under-fives in Butere District, Western Kenya. *BMC Public Health*, 11 (272), pp. 1-10.

Oyelere, R. 2007. Waste or Gain? What We Know About the Kenyan Case. *Journal of Global Initiatives*, 2 (2), pp. 113-119.

PACT. 2010. *The call to Fight Cancer*. [report] Austria: Program of Action for Cancer therapy.

PAHO. 2013. *Visual Inspection of the Uterine Cervix with Acetic Acid (VIA) - A Critical Review and Selected Articles*. [report] USA: Pan American Health organization.

Penchansky, R. and Thomas, J. 1981. The Concept of Access: Definition and Relationship to Consumer Satisfaction. *Med Care*, 19 (2), pp. 127-140.

Ponsar, F., Tayler-Smith, K., Philips, M., Gerard, S., Van Herp, M., Reid, T. and Zacharia, R. 2011. No Cash, No Care: How User Fees Endanger Health- Lessons Learnt Regarding Financial Barriers to Healthcare Services in Burundi, Sierra Leone, Democratic Republic of Congo, Chad, Haiti and Mali. *Elsevier Journal*, 3 pp. 91-100.

Rositch, A., Gatuguta, A., Choi, R., Guthrie, B., Mackelprang, R., Bosire, R., Manyara, L., Kiarie, J., Smith, J. and Farquhar, C. 2012. . Knowledge and Acceptability of Pap Smears, Self- Sampling and HPV Vaccination Among Adult Women in Kenya. *Plos One*, 7 (7), pp. 1-9.

Saha, A., Chaudhury, A., Bhowmik, P. and Chatterjee, R. 2010. Awareness of Cervical Cancer among Female Students of Premier Colleges in Kolkata, India. *Asian Pacific Journal of Cancer Prevention*, 11 pp. 1085-1090.

SALC. 2012. *Tackling Cervical Cancer: Improving Access to Cervical Cancer Services for Women in Southern Africa*. [report] Johannesburg, South Africa: Southern Africa Litigation Centre.

Sankaranarayanan, R., Budukh, A. and Rajkumar, R. 2001. Effective Screening Programmes for Cervical Cancer in Low- and Middle- Income Developing Countries. *Bulletin of the World Health Organization*, 79 (10), pp. 954-962.

Shahnazi, H., Saryazdi, H., Sharifirad, G., Hasanzadeh, A., Charkazi, A. and Moodi, M. 2012. The Survey of Nurse's Knowledge and Attitude Toward Cancer Pain Management: Application of Health Belief Model. *J Edu Health Promot*, 1 (15).

Sherris, J., Herdman, C. and Elias, C. 2001. Cervical Cancer in the Developing World. *West J Med*, 175 (4), pp. 231-233.

Stapleton, J., Mullan, P., Dey, S., Hablas, A., Gaafar, R., Seifeldin, I., Banerjee, M. and Soliman, A. 2011. Patient-Mediated Factors Predicting Early- and Late-Stage Presentation of Breast Cancer in Egypt. *Psychooncology*, 20 (5), pp. 523-527.

Sudenga, S., Rositch, A., Otieno, W. and Smith, J. 2013. Knowledge, Attitudes, Practices, and Perceived Risk of Cervical Cancer Among Kenyan Women. *Int J Gynecol Cancer*, 23 (5), pp. 895-899.

The Constitution of Kenya. 2010. *The Constitution of Kenya*. [report] Nairobi: Kenya Law Reports.

The World Bank. 2012. *World Development Indicators*. [report] Washington, D.C.: Green Press initiative

Walboomers, J., Jacobs, M., Manos, M., Bosch, F., Kummer, J., Shah, K., Snijders, P., Peto, J., Meijer, C. and Muñoz, N. 1999. Human Papillomavirus is a Necessary Cause of Invasive Cervical Cancer Worldwide. *Journal of Pathology*, 189 (1), pp. 12-19.

Were, E., Nyaberi, Z. and Buziba, N. 2011. Perceptions of Risk and Barriers to Cervical Cancer Screening at Moi Teaching and Referral Hospital (MTRH), Eldoret, Kenya. *Afr Health Sci*, 11 (1), pp. 58-64.

WHO and Global Health Workforce Alliance. 2008. *Scaling Up, Saving Lives- Task Force for Scaling Up Education and Training for Health Workers*. [report] WHO press.

WHO and ICO. 2010. *Information Center on HPV and Cervical Cancer. Human Papillomavirus and Related Cancers. Summary Report 2010*. [report].

WHO and ICO. 2010. *Information Center on HPV and Cervical Cancer. Human Papillomavirus and Related Cancers. Summary Report 2010*. [report].

WHO and International Union Against Cancer. 2005. *Global Action Against Cancer*. [report] Geneva, Switzerland: WHO press, pp. 12-16.

WHO, UNFPA and GAVI. 2009. *Strengthening Cervical Cancer Prevention and Control*. [report] Geneva, Switzerland: WHO Press.

WHO. 2000. *Health systems performance assessment*. [report] Geneva, Switzerland: WHO Press.

WHO. 2000. *The world health report 2000- Health systems: improving performance*. [report] WHO Press.

WHO. 2002. *Cervical Cancer Screening in Developing Countries- Report of a Who consultation*. [report] Geneva Switzerland: WHO Press.

WHO. 2006. *The World Health Report 2006- Working Together for Health*. [report] WHO Press.

WHO. 2007. *Everybody Business: Strengthening health Systems to Improve Health Outcomes: WHO's Framework for Action*. [report] Geneva, Switzerland: WHO Press.

WHO. 2007. *The World Health Organization's Fight against Cancer. Strategies That Prevent, Cure and Care*. [report] Geneva, Switzerland: WHO Press.

WHO. 2008. *Cancer Control : Knowledge into Action. Diagnosis and Treatment. WHO guide for Effective Programmes*. [report] Geneva, Switzerland: WHO press.

WHO. 2008. *Cancer Control: Knowledge into Action- WHO Guide for Effective Programmes- Diagnosis and Treatment*. [report] Geneva, Switzerland: WHO Press.

WHO. 2008. *Commision on Social Determinants of Health Final Report- Closing the Gap in a Generation*. [report] Geneva, Switzerland.

APPENDIX 1: PLAGIARISM FORM

UNIVERSITY OF NAIROBI
Declaration of Originality Form

Name of Student: **NGONDI BETH WANGIGI**

Registration Number: **H57/69213/2011**

College: **HEALTH SCIENCES**

Faculty/School/Institute: **SCHOOL OF PUBLIC HEALTH**

Course Name: **MASTER OF PUBLIC HEALTH**

Title of work: **FACTORS INFLUENCING ACCESS TO HEALTHCARE SERVICES AMONG CERVICAL CANCER PATIENTS AT KENYATTA NATIONAL HOSPITAL**

DECLARATION

1. I understand what Plagiarism is and I am aware of the University's policy in this regard

2. I declare that this **Thesis** is my original work and has not been submitted elsewhere for examination, award of a degree or publication. Where other people's work or my own work has been used, this has properly been acknowledged and referenced in accordance with the University of Nairobi's requirements.

3. I have not sought or used the services of any professional agencies to produce this work.

4. I have not allowed, and shall not allow anyone to copy my work with the intention of passing it off as his/her own work.

5. I understand that any false claim in respect of this work shall result in disciplinary action, in accordance with University Plagiarism Policy.

Signature of student _____

Date _____

Signature of supervisor(s) _____

Date _____

APPENDIX 2: REQUEST LETTER

NGONDI BETH WANGIGI

UNIVERSITY OF NAIROBI,
COLLEGE OF HEALTH SCIENCES,
SCHOOL OF PUBLIC HEALTH,
P.O.BOX 30197-00100,
NAIROBI.

DATE………………………..

TO

THE OFFICER IN CHARGE,
KNH
P.O.BOX……………..,
…………………………

Dear Sir/Madam,

 REF: REQUEST TO CARRY OUT A RESEARCH AT KNH

I am a Master of Public Health student at the University of Nairobi, School of Public Health. It is a requirement to conduct a research as part of the postgraduate programme. I am planning to carry out a research on 'Factors influencing access to health care services among cervical cancer patients at KNH' through the UoN/KNH/ERC.

I will be using questionnaires to collect data from cervical cancer patients attending treatment in KNH. I confirm that confidentiality will be upheld and data collected will only be used for the purposes of the study, only patients who consent will participate in the study. The results of the study shall be forwarded to your office upon completion of my study for your future use. Thank you in advance.

Yours faithfully,

Ngondi Beth Wangigi.

APPENDIX 3: CONSENT INFORMATION

Title of Study:

Description of factors influencing access to health care services among cervical cancer patients at Kenyatta National hospital.

Principal Investigator:

Beth Wangigi

Supervisors:

Prof. Violet Kimani, PhD, MA, BA

Associate Professor

School of Public Health, College of Health Sciences,

University of Nairobi

Dr Richard Ayah, MBChB; MSc;

Lecturer

School of Public Health, College of Health Sciences,

University of Nairobi

Introduction

My name is Ngondi Beth Wangigi, a Master of Public Health student at the School of Public Health University of Nairobi. I am planning to do an evaluation of factors that influence access to health care services among cervical cancer patients and my study site is KNH. This is an integral requirement for my postgraduate program and I seek your permission to answer a questionnaire on your journey towards cervical cancer treatment. As we go along, kindly let me know if you need clarification on any issue and I will take time to explain.

Purpose of the Research

The purpose of this study is to evaluate the factors that influence access to cervical cancer health care services. Findings from this research will be used to highlight impediment issues, if any, faced by cervical cancer patients as far as accessing health care services is concerned.

Type of Research Intervention

This research will involve a self-administered questionnaire.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not.

Confidentiality

Confidentiality will be maintained and no names will be used on the questionnaire or elsewhere regarding the information volunteered. Note that participation in this study is voluntary and one can withdraw from the study at their convenience without any consequences posed on them.

Benefits and Risks

Information provided will be used to address the issue of access to health care services for cervical cancer patients. This will also inform policy makers on areas of focus and improvement as far as cervical cancer control in concerned.

There are no major risks for participating in this study. Some of the questions may be personal but the responses given will be kept confidential and anonymous. Data collected will be for research purposes.

Right to Refuse or Withdraw

You do not have to take part in this research if you do not wish to do so. You may also stop participating in the research at any time you choose. It is your choice and all of your rights will still be respected.

Contact

This proposal has been reviewed and approved by Kenyatta Hospital – University of Nairobi ERC, which is a committee whose task it is to make sure that research participants are protected from harm. In case of any questions you can contact them: P.O BOX 20723-002002, Nairobi. Tel: (020) 726300-9, Email uonknh_erc@uonbi.ac.ke.

I am ready to make any clarifications required regarding this study. For any queries you can contact me on this number: 0723 739636. Thank you in advance.

I ……………………………………… have read and understood the nature of the study and I give an informed and voluntary consent to participate in the study.

Signature of respondent……………………………………Date: ……………

APPENDIX 4: QUESTIONNAIRE

Part A: DEMOGRAPHIC PROFILE

1. What is your age_____ (Years)?

☐ <20   ☐ 20-29   ☐ 30-39   ☐ 40-49   ☐ 50-59   ☐ Above 60

2. What is you level of education?

☐ None   ☐ Primary   ☐ Secondary   ☐ Tertiary

3. What is your marital Status?

☐ Single   ☐ Married   ☐ Divorced   ☐ Widowed

4. How long have you been married? (Years) _____

5. How many children do you have? _____

6. What is your employment Status?

☐ Employed   ☐ Self-employed   ☐ Unemployed

7. How much do you earn per month? Ksh _____

8. Which is your place of residence?

☐ Nairobi County. If so where? _____

☐ Outside Nairobi County. If so where? _____

Part B: KNOWLEDGE AND BELIEFS ABOUT CERVICAL CANCER

9. When did you first learn about cervical cancer?

☐ Before I was diagnosed

☐ After I was diagnosed

10. What are the risk factors of cervical cancer? (More than one response is acceptable)

☐ Sexually Transmitted Disease

☐ Smoking

☐ Multiple Partners

☐ Early age at marriage (Less than 18 years)

☐ Pregnancy related

☐ Family Planning Methods

☐ Diet

☐ Other

☐ Don't know

11. Have you ever heard of Human Papillomavirus (HPV)?

☐ Yes   ☐ No

12. If Yes, what are the ways in which HPV is transmitted?

☐ Sexual Intercourse

☐ Touching infected people

☐ Coughing

☐ Poor hygiene and washing

☐ Don't know

13. Is it possible to treat cervical cancer?

☐ Yes   ☐ No

14. Have you ever heard about the Pap smear?

☐ Yes   ☐ No

15. Where did you hear about the Pap smear for the first time?

☐ Relatives, friends

☐ Gynecologist

☐ Mass media (newspaper, internet, television)

☐ Family Physician

☐ Nurse

☐ Other _____

16. Is it possible to detect cervical cancer with the Pap smear before symptoms appear?

☐ Yes   ☐ No   ☐ Don't know

17. Is early detection of cervical cancer good for treatment outcome?

☐ Yes   ☐ No   ☐ Don't know

Part C: ATTITUDE AND PRACTICES

18. How many sexual partners have you had in your lifetime?

☐ Only one   ☐ Two or more

19. What was your age at first sexual encounter?

☐ Before 18 years   ☐ After 18 years

20. Have you ever had a pap smear done?

☐ Yes   ☐ No

If yes why?

☐ Routine care   ☐ Bleeding   ☐ Abdominal pain   ☐ Other_____

If no why?

☐ Did not know about it

☐ Was not comfortable with it

☐ Could not afford

☐ Did not know where to get it

☐ Other _____

21. When was your last Pap smear test done?

☐ 1-3 years ago ☐ More than 3 years ago? ☐ Never had a Pap smear test

22. How regular was your Pap smear test screening prior to diagnosis?

☐ Yearly

☐ Once every two years

☐ Once every three years

☐ Never had a pap smear until on recommendation

Part D: HEALTH SEEKING FOR CERVICAL CANCER

23. When did you learn that you had cervical cancer?

Month   _____

Year   _____

24. When did you begin treatment at the hospital?

Month   _____

Year   _____

25. Which treatment options were you given?

☐ Hysterectomy/ removal of uterus

☐ Surgery

☐ Chemotherapy

☐ Radiotherapy

☐ Chemotherapy and radiotherapy

☐ Other   _____

26. In which stage was the cancer diagnosed?

☐ Stage 0   ☐ Stage 1   ☐ Stage 2   ☐ Stage 3   ☐ Stage 4 ☐ Don't know

27. Before coming to hospital, what other treatment options did you try? (select all that apply)

None   ☐ Yes   ☐ No

Over the counter medicine   ☐ Yes   ☐ No

Traditional remedies   ☐ Yes   ☐ No

Prayers   ☐ Yes   ☐ No

Others   _____

28. What influenced your decision to come to this hospital?

☐ Referral   ☐ Affordability   ☐ Accessibility   ☐ Other _____

29. If it was a referral, when was it done?

Month   _____

Year   _____

30. From which hospital were you referred?   _____

31. Are you satisfied with the treatment you are getting here?

☐ Yes   ☐ No

32. Are you getting encouragement and support from your family and friends?

☐ Yes   ☐ No

Part E: FINANCING

33. Do you have health insurance?

☐ Yes   ☐ No

34. How are you paying for health care?

☐ Health Insurance   ☐ Out of Pocket

35. If health insurance, which kind?

☐ NHIF   ☐ Work related health cover   ☐ Personal health insurance   ☐ Other_____

36. If out of pocket, how will you raise the hospital bill?

☐ Savings   ☐ Fundraising   ☐ Relatives   ☐ Well-wishers   ☐

Other

Thank you for your Participation.