UNIVERSITY OF NAIROBI

DEPARTMENT OF SOCIOLOGY AND SOCIAL WORK

KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING CERVICAL CANCER AND SCREENING AMONG WOMEN VISITING PRIMARY HEALTH CARE FACILITIES IN KIBERA INFORMAL SETTLEMENT IN NAIROBI CITY, KENYA

BY

MARK M. MUASA
REG NO: C50/ 73982 /2009

RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF REQUIREMENTS FOR THE AWARD OF MASTER OF ARTS DEGREE IN MEDICAL SOCIOLOGY OF THE UNIVERSITY OF NAIROBI

2016

DECLARATION

I declare that this study is my original work and has not been submitted for a degree award in this or any other university.

Signature…………………………   **Date:** ………………………………….

Student Name: Mark M Muasa

Registration number: C50/74184/2009

This research project report has been submitted for examination with my approval as University Supervisor.

Signature……………………………   **Date:** ………………………………...

Prof. Charles Nzioka

ACKNOWLEDGEMENTS

I want to thank the almighty God who has seen me through to this stage of my academic pursuit. My sincere gratitude go to my supervisor Prof Charles Nzioka for his professional guidance that he provided as I developed this report; he greatly shaped my academic thought process.

Special thanks go to the facility in charges for granting me the approval to conduct this research.

I also wish to thank my research assistants who helped in the collecting data.

My sincere gratitude goes to my late parents Simon Muasa and Jane Kalondu for their inspiration in life.

I wish to acknowledge and thank all the women who participated in this study. Their willingness to respondent to the questionnaires made the completion of this research an enjoyable experience.

Finally, in a special way, I want to thank my dear wife Evelyne who constantly encouraged me to continue with my pursuit despite the life hurdles. She was always supportive socially, spiritually and morally.

I will also thank my sons Emmanuel and Jesse for being patient as they missed the fatherly love and company most of the times.

DEDICATION

I dedicate this work to my parents, wife Evelyne, son Emmanuel and Jesse.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ACCP	Alliance for Cervical Cancer Prevention (ACCP)
AIDS	Acquired Immunodeficiency Disease Syndrome
AMREF	African Medical and Research Foundation
ART	Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus
IBSCC	The International Biological Study on Cervical Cancer
LEEP	Loop Electrical Excision Procedure
MOH	Ministry of Health
MSF	Médecins Sans Frontières
NGOs	Non-Governmental Organizations
STI	Sexually Transmitted Infections
SVA	Single visit Approach
VIA	Visual Inspection with Acetic acid
VILI	Visual Inspection with Lugols Iodine
WRA	Women of Reproductive Age
HR-HPV	high risk human papilloma virus
MC	Male circumcision

ABSTRACT

In Kenya, Cervical cancer is the second most common form of cancer among women aged 18-49 years after breast cancer. Current estimates indicate that every year in Kenya, 2454 new cases of cervical cancer are reported and 1676 deaths from the disease. The screening levels remain low at just 3.2 percent of among women aged 18-69 years compared with 70 percent of women in the developed world. This study was undertaken with the objective of determining the knowledge, attitude, and practice relating to cancer of cervix among women seeking healthcare services in primary health facilities in Kibera. It was guided by four research objectives; to examine the level of knowledge on cervical cancer and screening among women attending primary health care services; to evaluate the attitude towards screening for premalignant cervical lesions among women attending primary health care services, to establish the practice of women attending primary health care services on cervical cancer screening and to find out the factors that determine uptake and non-uptake of screening for cancer of cervix among women attending primary health care services. The study adopted a cross sectional, descriptive study design with the population consisting of women of reproductive age 18-49 years attending health care services in the targeted facilities in Kibera. The study employed simple random sampling technique to select a sample of women seeking healthcare services in healthcare facilities in Kibera. Three of the 47 health facilities in Kibera which offered cancer screening services were selected purposely. The total available population was 450 out of whom a sample of 45 was selected from the three facilities on the basis of proportion. Questionnaires were used to collect data from the respondents and the data analyzed through the use of SPSS. The study findings showed that women of reproductive age lacked the knowledge on various aspects of cervical cancer. The uptake of screening services has however remained low with the women's education, attitude and knowledge contributing significantly to the level of uptake. The study therefore recommended that there is need for the Ministry of Health to enhance education at the health facilities especially lower cadre facility to promote awareness for cervical cancer and cervical cancer screening. There is need also to make a deliberate effort to invest in the well trained personnel and equipment. The Ministry of Health should also provide more training and health education services to the women in Kenya on the cervical cancer.

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

Worldwide documentation has it that cancer of cervix is in the second position of the most common cancer among women and consequently main cause of mortality in less developed countries. In the year 2008, approximation has it that 529,409 new cases of cancer of cervix occurred worldwide with 52 percent (274,883) of the reported succumbing to death. About 86% of all the new cases reported every year emanate in less developed world, with 80-90% deaths related to cervical of cancer occurring (GLOBOCAN, 2008). Cancer of cervix claims lives when women are at the peak of their age-35-45 years. A time when they are most productive socially and economically. Averagely, 25.3 life years are lost as a result of cervical cancer ((MOPHS and MOMS, 2012-2015)

Despite cervical cancer being curable and easily noticeable in the early phase, merely 5% of women in less developed countries undertake routine check-up for cancer of cervix against over 40% that of countries that are developed. Countries that have manifested a reduction in rates of cervical cancer, over 70% of women undergo screening for cervical cancer. This explains why in African where access to screening is dismal most women go to health facility when the disease has advanced to invasive stage. Only 3.2% of women are reported to have undergone screening (WHO, 2010).

Cancer of ervix is said to be the most widespread cancer within the developing countries; where more than 75 percent of the projected 500,000 new incidents of cancer of cervix are reported yearly. The highest case is seen in less developed countries comprising sub-Saharan Africa. The high cases result from the inadequate programs for screening and also from the lack of knowledge of cervical cancer in developing countries. The condition remains to be a big health concern of the reproductive system amongst women and especially in less developed countries where services for screening services are wanting or not accessible for most of people.

In Kenya, cancer of cervix is major source of death in women of reproductive age (WRA) and also remains second amongst all kinds of cancer affecting womenfolk. Presently in Kenya, the

predictable annual testified cases of cervical cancer are 2454 and fatalities associated with it every year 1676. By year 2025, projections has it that Kenya will report about 4261 new diagnoses (WHO, 2010)**.** Data from registries in the hospitals here in Kenya suggest that close to 80 percent of illness related with the genital tract are resultant from cancer affecting the cervix. Estimates has it that Nairobi records between 10-15 new cases. This is according to the Kenya Cancer registry occurrence report (2006).

Only 3.2% of women age 18 to 49 years are estimated to have had access to screening in any 3-year period in Kenya (WHO, 2010). This notwithstanding the degree of the problem, and the fact it is certainly avoidable. In HIV infection, cervix cancer is also renowned as an AIDS-defining disease. However, with women accessing Ante Retroviral Therapy hence have this becomes a lifestyle disease that affects their daily lives. Cancer of cervix burden rate stands at 15 percent in HIV positive against 7 percent that of the national. From a research done amongst women that were HIV positive in Kenya clinics, based on the screening done 43% of them had abnormal cervical outcome from the tests. The abnormal results gotten from HIV-positive women was higher than of average women within the population which stands at 3.6 percent. Based on the fact and awareness that HIV-positive women lose lives resulting from, efforts have been made to have screening as part of primary care.

Cancer has continued to be gradually fatal more so in young women. This results from the thought in women that cancer leads to unavoidable death. Thus Women choose to keep away from screening and remain unconscious of their state of health. Awareness and sensitization regarding cancer affecting the cervix as well as breast continued to reduce and fatality risen as a result of women being ignorant (Powe, 2006).

Cervix cancer results from the Human Papilloma Virus (HPV) passed through sex, commonly the male is a carrier of the virus that is passed to females. Both the females and males do not seem to be alert of the virus and the dangers associated with it. (Roland et al, 2009).

1.2 Problem Statement

In Kenya, second after cancer of breast among women of ages 18-49 years is cancer of the cervix. Close to 10.32 women aged 15 years and above within the population are said to at risk of contracting HPV leading to development of cervix cancer. and above It is projected that Kenya has 10.32 million women of ages 15 years and above and all are at a risk of getting HPV contagions and developing cancer of cervix (WHO, 2010). Estimates as of current show yearly in Kenya, 2454 new incidences of cancer of cervix are registered and 1676 deaths from the disease (WHO, 2010).

Cancer of cervix is easily avoidable by way of vaccination before it sets on using HPV vaccine. It can also be averted through regular screening to detect any abnormality in the cervix. Inspection of the cervix is accessible in most of the health facilities in Kenya through use of VIA/VILI and Pap smear. Though, screening levels remain low at just 3.2 per cent of among women of age 18-69 years in against 70 per cent of women in the advanced countries (WHO, 2010).

The low uptake for screening has been observed as a cause for illness and death. Through consistent cervix screening and timely management, mortality and morbidity resulting from the condition can be greatly achieved. Uptake of cervical cancer screening services still remain low despite efforts made by the government to incorporate screening programs in the regular patient care through the nationwide cervical cancer prevention strategy that is focusing on primary avoidance, screening and early detection and treatment (MOPHS and MOMS, 2012-2015).

Existing gaps need attention to help combat enhance cervix cancer in Kenya (Henley, 2012). For timely checkup and timely detection, it helps to have knowledge. Women with a better familiarity of cancer of cervix were highly likely to seek screenings. Lack of knowledge about cancer of cervix remains a critical barrier in women's access to the screening servies (Terefe & Gaym, 2008). Knowledge level regarding cancer of cervix and screening, perceived behavior in health is higher in the city compared to the country side (Eze, et. al., 2012), however, little is

known regarding level of knowledge regarding cancer of cervix in the urban informal settlement such as Kibera.

Most study findings show practice of screening is followed by awareness of cancer of cervix and knowledge of screening (Terefe & Gaym, 2008). This all show the need of information touching on aspects that are linked with cervix cancer, awareness and promoting screening uptake for cancer of cervix.

Globally women of that are resource poor have a higher chance of having cancer of cervix. Cancer of cervix has been termed as a condition for the poor.

Hence, this study is intended to assess the awareness, behavior and attitude on cancer of cervix test and factors related with it. **Determining the knowledge, attitude and practices concerning cervical cancer screening uptake and non-uptake among women** visiting primary healthcare facilities is of utmost importance in governing the disease. This information will hopefully inform the related authorities of the possible interventions that need to be made in order to deter death and suffering that is linked with cervical cancer especially in the urban slums such as Kibera.

1.3 Research Questions

This study sought to answer the following research questions:

1. What is the level of knowledge on cancer of the cervix and screening among women attending primary health care services in Kibera?
2. What is the attitude towards screening for premalignant cervical lesions among women attending primary health care services in Kibera?
3. What is the practice of women attending primary health care services on cervical cancer screening?
4. What are the factors that determine uptake and non-uptake of screening for cancer of cervix among women attending primary health care services in Kibera?

1.4 Research Objectives

1.4.1 General objective

The general objective of the study was to determine the knowledge, attitude, and practice connecting to cancer of cervix among women seeking healthcare services in primary health facilities in Kibera.

1.4.2 The specific objective

The specific objectives that the study sought to achieve include the following:

1. To establish knowledge level on cervix cancer and screening among women seeking care in Kibera health facilities.
2. To determine the attitude towards screening for precancerous lesions among women seeking care in Kibera health facilities.
3. To find out the practice of women seeking care in Kibera health facilities.
4. To determine the uptake and non-uptake of screening for cancer of cervix among women attending primary health care services in Kibera.

1.5 Justification

There has been notably better accessibility of treatment for patients with infectious diseases such as malaria, tuberculosis and AIDs due to an increase in global and national attention to these diseases and afterward an increase in financial resources towards their fight.

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 effect of cervical cancer on affected women. For a cancer that can be easily controlled, the high cervical cancer mortality points to a gap in admittance to screening and treatment of giving cases at an early stage.

Cancer of the cervix is avoidable disease; one of the ways through which it can be prevented is through screening and detection and treatment before development to high grade level of the disease. Screening for cervical cancer before it advances to high grade level through the visual approaches is deemed to be a practice and cost effective alternative for control of cancer of

cervix in set ups that are poor resource wise. Discovery of the precancerous cells however needs awareness regarding the condition to improve acceptance to screening and make people more informed.

Information derived from this project should inform health authorities so as appropriate steps can be seized to save women's lives by educating them and provide several screening opportunities. Of importance, this study may be helpful to the health care providers to organize awareness program associated to CC and its inspection and finally lessening affliction of cancer of cervix amongst womenfolk in Kibera. Further the results can facilitate the evaluation of current cervical cancer screening programs particularly those that target resource poor settings.

1.6 Study Scope and Limitation

The research was limited to women visiting primary health care in Kibera drawn only in three community units.

The tool was not translated to Swahili; this may have led to some misunderstanding of some questions or words by research assistants. To alleviate this, the research assistants were selected who understood Swahili and were also trained how to ask questions and probe where necessary.

The responses by the interviewed screening uptake was self-reported and there was no way of verifying the responses.

Despite the fact that Kibera has several villages, the study was limited to health facilities in Gatwekera and Soweto West villages of Kibera.

The distribution of the selected respondents did not take into contemplation factors such as literacy and financial status.

The study did not consider interviewing clinical staff to corroborate the data.

1.7 Limitations of the Study

Although the study was successfully undertaken, some challenges (limitations) were encountered during the study execution period. These included; financial limitations where the research required much funds for the data collection as well as other costs in the study event. The study was also limited to the women attending health services at Kibera. The study was further faced with the limitation of the use of questionnaire tool for the data collection. This is because the

respondents only answered the given questions without giving extra information which would be sought using other data collection techniques like the use of interviews where the researcher would have asked for more information.

1.8 Definition of Significant terms and Concepts

Attitude: the certainty and sensation of the respondents about screening for cancer of cervix.

Awareness: Knowing that something does exist and is of importance, being captivated in something (Cormack, 1987).

Cancer: A disease characterized by malignant tumor formation or proliferation of a plastic cell (James, 2008).

Cervix Cancer: This is a malignant condition that occurs when the cells of the cervix proliferate to abnormal cells and can upset layers of cell that are deeper or increase to other parts of the body and cause harm.

Abnormal cells: This is when the cervix begins as slight abnormal squamous cellular change which may develop into severe dysplasia if left untreated (Ferlay, 2004).

Human Papilloma Virus: This is a virus that triggers alterations at the cells of the cervix, which can trigger the growth of cancer of the cervix (Cormack, 1987).

Knowledge: the understanding the respondents have regarding cancer of cervix in relation to disposing factors, signs, prevention and treatment, screening method.

Pap smear: A test in which cervix cells are taken and inspected underneath a microscope (James, 2008)

Practice: the action taken by individual respondents to go for screening

Precancerous cells: These are cells that may become cancer if not managed (Ferlay, 2004)

Social stigma: A feeling of disapproval that women with cancer feel (Cormack, 1987)

Uptake: This is the rate or number of times of which women undertake Pap smear test (Ferlay, 2004).

Women of Reproductive Age: All women from ages 18-49 years

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Literature review

This section reviews literature from the relevant sources on the cancer f cervix prevalence, risk perceptions for cervix cancer, and cancer of cervix prevention strategies, screening strategies, pre-cancer treatment and the factors associated with high incidence of cancer.

2.2 Cervical cancer prevalence

Cancer of cervix is preventable as well as cost effectively treatable, when screening for early, timely diagnosis in asymptomatic females (Lewis, 2004). Cancer of cervix prevalence in the developed nations very low but very high in less developed where it is a key health concern. While the incidence is going down in the developed states, it is going high in less developed states. The burden of cancer is high in Sub-Sahara Africa globally affecting women at the prime of their age. There is lack of programs for screening for early recognition of cancer in most states in Sub Sahara Africa. Most programs are undertaken as pilots and close when the pilot period is over. Only South Africa runs a nationwide intervention for screening in sub Saharan Africa. The program has been since 2001 however focus is wanting and impact is not known (Louie et al.2009). The increased cancer of cervix incidence has been attributed to rise in HIV/AIDS epidemic in the sub region. This has been made worse by the unavailability of resources.

In some regions like Ibadan in Nigeria, cervical cancer is second in all forms of cancer that afflict womenfolk (Adebamowo et al. 1999). About 75 percent of female that contract cancer of cervix in sub Saharan African reside in the rural. Due to unavailability of access to services as well as lack of finances, most of the women do not get treatment. More years are lost by Women in sub-Saharan Africa owing to cancer of cervix compared to any other form of cancer and this affects them when they are most productive socially and economically and required for stability of family (Parkin et al., 2002).

Actual statistics for cervix cancer in many nations in Africa is unknown. not known because of under-reporting. Cancer registries in most countries are lacking and documentation is wanting

where available. A number of statistics in literature reviews are informed by hospital registries which accounts to a small proportion of women with cancer of cervix. Most of the women have no access to hospital and would die at home. Eastern African has a mortality rate of 35 per 100,000 whereas the developed states is barely more than 5 per 100,000 women (Chokunonga et al., 2002).

2.3 Cervical cancer risk perception

Cervical cancer is the main contributor of mortality in women globally, but it is not the case for countries using Pap test (Ferlay, 2004). The woman's opening to the uterus has cells which may develop into cancer. Cervical cancer arises when there is change in the cells, which may also affect other cell layers or spread to other body organs near the cervix through movement in the blood and cause damage (James, 2008). For the cells to progress from normal to cancerous, it does take many years. Early screening many a times does detect abnormalities and can be treated before advancing into cancer (James, 2008). Close to 90% of women who are found with cancer can be cured if found early and treated (Parham, 2004).

Cancer of cervix begins as a slight abnormal cell change. If left raw, these cells may develop into high grade cancer and then to invasive cancer (Gustafsson et al., 1997). When cancer of cervix is found early before progressing into invasive level, the probability of treating it are high. Treatment becomes less likely once it spread to other tissues near the cervix (Chirenje et al, 2001). Cervical cancer is graded from I-IV with grade I being earliest stage and grade IV being the most advanced, it suggests that it has spread to other body parts. The least the grade suggest it has not spread. Cure rates also depend with the stages. For stage I, cure rate ranges from 85%-90% while for advanced it is between 5%-10%. The advanced stage of cancer of cervix is treated with radio-therapy or chemotherapy or surgery (Chirenje et al, 2001).

Cancer of cervix may develop in whatever age. While it is a lot in women over 40 years, younger women are also at risk. The risk associated with cancer of cervix will depend on the previous behavior regarding sex, individual immune system, status of health, and way of life (Ferlay, 2004). The aspects that influence include: staring sex early, multiple partners, or being in relation with persons with multiple partners, starting sex early below 18 years increase the possibilities of contracting HPV.

Women whose immunity is poor have higher risk of cancer of cervix and more so those who have been exposed to the causative virus of cervix cancer (Bosch et al, 2007). Factors which affect make women susceptible to cervical cancer and can heighten the chances of cervical cancer are: infections related to HIV, smoking tobacco, history of illnesses contracted via sex (STIs), history in the household for cervix cancer, poverty and older age (Bosch et al, 2007). Other risk factors include: Not going for regular test, cervical cancer history, history of cancer that has progressed (Bosch et al, 2007). Since cervical cancer can reappear, women's history of cancer also influences their risk for subsequent development of cancer.

Cervical cancer at the first degree does not have signs. When signs show up, the cells that cause cancer could have extended to other parts. When signs show up, the primary one could be bleeding, discharge that is watery from the vagina or spotting. Unusual heavy bleeding during menstruation, or bleeding after sex may happen. Other symptoms of cancer that has progressed include difficulty in passing urine, pain, and feet that has swollen if the cancer has affected nearby organs or the lymphatic nodes. Most unusual changes and low grade cancers are diagnosed in women who take regular and frequent screening; while high grade cancer is found in those who do not take regular screening hence the reason it is critical to take regular screening. If a woman has an unusual result after screening or signs of cancer of cervix, there might be a need for another test to determine whether unusual cells are cancerous or not. The tests help the doctor make a decision for treatment based on the extent to which it has affected other parts as well as its size.

In the developed countries, abnormality in the cervix are detected early before it becomes cancerous, abnormalities at the cervix that are detected early at pre-cancer stage is a result of a nationwide programs for screening (James, 2008). One good example of a program that has been successful in screening is the British. As a result of identifying cancer at its early stage when it is treatable, the program in the United Kingdom averts close to 4,500 deaths every year. Such kind of programs in Europe and America have led to significant reduction in cases of cancer of cervix, (James, 2008). Population based cancer screening programs are lacking (Chavers & Vermund, 2007) as a result of aspect such poverty, short staffing and materials, wanting health-care system,

marginalization of women, and unmet needs within the health-care related to issues malaria, tuberculosis and HIV (Chavers & Vermund, 2007)

2.4 Symptoms and signs of cancer of cervix

In the initial development of cancer of cervix, signs or symptoms rarely show but it can be diagnosed at this stage by routine screening. As cervical cancer develops to high grade level, indication start to show. Among the signs are: Hurting when having sex, pain in the pelvic pain, unusual discharge and vaginal bleeding. The fact that cervical cancer doesn't show any signs in the early stages, somewhat does tell why most cancer progress to advanced stage and more so in countries that lack Screening services. Another concern is the fact that signs for cancer of cervix resemble infections like vaginitis and inflammatory of the pelvic. It is not uncommon to get a woman with cancer of cervix on treatment for pelvic inflammation of the pelvic. Patients at time then buy over the counter medicines in an attempt to treat "menstruation related conditions", without undertaking a proper health check. (Gillet, at al., 2012). These factors coupled with lack of knowledge, poor access to care and poverty influence on management and preventive measures of cervical cancer.

2.5 Cervical Cancer screening strategies

Slow advancement of low grade cancer lesions to high grad cancer offers a 10-year window period or even more to discover and treat the lesions, hence averting their advancing into cancer that is invasive. It is possible to implement operative cancer of the cervix prevention programs in poor resource set up. Programs ought to aim to attain optimum coverage for screening of (over 70%), guarantees an acceptable and effective test, and ensure suitable management for women that test positive (ACCP, 2004).

Three screening strategy for cervical cancer are utilized. They include **Visual inspection of the cervix method (VIA and VILI),** HPV testing as well as the Pap smear. Pap smear entails a health provider taking a sample of cervical cells and examination by trained cytotechnicians in a laboratory. Pap smear involves obtaining a sample of cervical cells with a sending them to a laboratory. In HPV DNA testing the provider or the woman herself takes a swab and sends the contents to a laboratory. It's very hard to avail these tests in low-resource settings. And therefore they are almost nonexistent. Visual methods are of two types, mainly Visual inspection with

lugols Iodine (VILI) and with acetate (VIA). A skilled health care provider observes the cervix after putting acetate (VIA) or iodine (VILI). The technique is deemed safe, dependable, and effective and it is ideal for low resource environments (WHO, 2006) the screening ought to be carried out every five years through the age of 50 years when HPV examination and or Pap test should be utilized. VIA screening is commended in women between ages 25-49 years. It is commended that for women below the ages of 25 years to only access screening in case risk of cervical abnormality is high. These may include early sexual debut, women with many partners, HIV exposed or have had an abnormal screening test in the past. VIA/VILI is in effective in women of 50 years and beyond. Those beyond the age 50 years, it is desirable they do HPV test or Pap smear and within a 5-year interval (MOPHS/MOMS, 2012).

2.6 Cancer of the cervix causes and risk factors

The Papilloma Virus (HPV) is linked with **99.7% of all cancer of the cervixes.** Worldwide close to 70% of cancer of cervix cases result from Human Papilloma Virus sub 16 and sub 18 (Munoz et al, 2002). Among the factors that expose one to Human Papilloma Virus infectivity are sex partners, the sex partners that one has had in the past, individual immunity, and whether partner is circumcised or not. Studies have also suggested that development of low grade lesion to high grade cancer depends on several factors combined with HPV infection.

Among factors associated with HPV transmission and cancer of cervix comprise and not limited to; - count of deliveries, tobacco, family planning methods, (WHO/IARC 2002) illnesses tied to HIV and illnesses contracted through sex-STI's (Samoff E et al, 2005) suppresses immunity and herpes. Infection resulting from HIV reduces the system's ability to fight infection and that includes HPV related infection as well and increases the chances that low grade lesions will advance to cancer. History of infection with sexually transmitted infection (STI) and early sexual debut are some of other factors that are linked with increased rates of cervical cancer (Stanley, 2011).

2.7 Factors responsible for high prevalence

There are multitudes of factors which are responsible for the high pervasiveness of the cancer of the cervix; the following are among the factors behind the pervasiveness of cancer of cervix.

2.7.1 Social cultural factor

Many a times the papilloma virus (HPV) has been isolated in most countries in the world where cancer of cervix is high. The association of the papilloma virus (HPV) with the cervix cancer is grounded as depicted by studies in epidemiology in a number of nations. In a study by led by Bosch, in 1995 under the International Biological Study on Cervical Cancer (IBSCC) Study Group, communicated that virus that cause cancer of cervix was observed in 93 percent of the growths, and no major difference in results showing HPV presence between nations. The HPV virus is is widespread in Africa. Thomas et al., (2004) research in Ibadan, Nigeria examining on factors associated with cervical cancer infectivity with HPV virus interrogated and got cervical cell samples from 932 women who been sexually active for over 15 years. Thirty two (32) diverse HPV types were isolated. Overall, a 26.3% HPV prevalence was established and 24.8% among women that had no sign of cervical lesions.

HPV incidence was found to be high in both women that were young and also the middle and old aged. Among the women that were single (odds ratio, OR=2.1; 95% confidence interval, CI=1.1–3.9) and uneducated women (OR=1.7; 95% CI=1.1–2.5) indicated high positivity with HPV. High incidence Human Papilloma Virus across the various sets of age could distinguishing aspect for populace where papilloma virus progression goes through the middle age and cancer of cervix prevalence is significantly high. Many underlying causes which enhance transmission of HP Virus and enhance its spread are prevalent in developing countries (Schmauz et al 1989). They comprise: speedy marriage, marrying many wives and children delivered. The risk of cancer of cervix rises two-fold in polygamous marriages (Bayo et al., 2002). This is a factor that is male specific in addition to prostitution which adds to the high incidence of HPV in Sub Sahara Africa.

Number of births that is linked with particular traditions developing nations, is also facilitates progression of cancer of cervix (Brinton et al 1989). The HPV incidence rates has continued to low in circumcised as opposed to uncircumcised menfolk. Research done to establish the

association circumcision of the menfolk (MC) **and the rate of prevalence of papilloma virus of high risk nature,** Auvert et al,.. (2009) in a controlled study where the circumcised were the interventions group whereas the uncircumcised were the controls, collected 262 urethral swabs in a period of 262 days. The findings established that the HR-HPV incidence rates were high in the uncircumscised at 22.3 percent and lower in the circumscised at 14.8 percent. There was no significant effect on the results reported as a result of the confounding factors. *The outcome of MC on HR-HPV affirms recommendation from the WHO-UNAIDS for adoption of MC in countries where prevalence of HIV is high, a low MC incidence and increased MC acceptability (Auvert et al., 2009). In analysis classifying less developed countries as per pervasiveness of MC published by Drain et al., in 2006, it showed the categories in Sub-Saharan Africa to be as low, 20%, intermediate 20-80% and high > 80%.*

This report suggested that male circumcision, was linked with lower rates of some type of STIs, HIV and cancer of cervix (a proxy for HPV), but not with contamination that is transmitted through routes that a not sexual. By and large, increased male circumcision was significantly associated to lower rates of cancer of the cervix less cases of HIV, not dependent of any religion. Additionally, male circumcision was linked with HIV in countries where HIV is transmitted heterosexually. The result indicate that circumscion of the malefolk that male circumcision shileds against Papilloma Virus and HIV without correlation of religion.

2.7.2 Socio-economic factors

Globally there is high chances of getting cancer of cervix among women that are socio-economically. Cancer of cervix is mostly known as infection of the poor woman. Research done done in West Africa, targeting a sub-group that had high HPV infections indicated significant number of child birth, wanting social conditions as well as poor standards of hygiene as the major causes for cancer of cervix (Palacio-Mejia and friends 2003). Africa additionally has extensive circumstances which promote poor state of living. Such include political instability, conflicts, famine, natural catastrophe, internal fights, and drought. These mostly contribute to displacement of large populations both internally and externally extended durations. In such like refugee conditions, there is increased spread of social vices that contribute to the spread of HPV. War is closely linked with promiscuity among the male, this consequently leads to the

development of cancer of cervix in women that are monogamous sexually. In a case-controlled study done in 1996 and supported by Stanford University documentation had it that the fight in Vietnam substantially added the concern of cervical cancer in Vietnam. This led to establishment a program to prevent cancer of cervix. Data that attributed the war to the infection was deferred for a period of 8 years so as to reach a compromise to avoid accusation (Suba et al., 2006).

Due to difficulties in accessing treatment services, high rates of high grade cancer were identified in coastal areas of Coasta Rica. The difficult terrain characteristic of majority of nations in Africa hinders access treatment and care. The success of efforts to reduce deaths due to cervical cancer would be influenced by women's health care practices, including adoption of preventive measures and utilization of Pap smear services (WHO, 2006). Countries like Mauritius that have worked hard to promote Pap smear services have often been rewarded by dramatically lowered levels of cancer of cervix. In Mauritius the rates are as low as 18%, since it adopted more widespread access to Pap smears compared to Tanzania whose incidence is 68.6% and Zambia whose incidence is 53.7% (WHO, 2006).

2.7.3 Biological Factors

Poor state of nutrition and diseases such HIV, Tuberculosis and malaria destroying sub-Saharan Africa and led to many people becoming immune suppressed. Many research's shave depicted the association of HPV illness and HIV. Projections has it that the pervasiveness of high grade cancer to be high as 20–40% among women that are HIV-positive (Wright et al., 1994). The possibility f contraction HPV illness by HIV positive is greater in comparison to those that are HIV-negative. A study done in Abidjan among 2,198 women attending clinic for gynaecology found prevalence rates for cervical cancer to be higher among women that were HIV- (La Ruche et al., 1998). In another study by Temmerman et al (1999) conducted in Kenya in a family planning facility, established a five times greater risk of invasive cancer among 513 women that were HIV exposed. From other studies, it has been established that HIV-positive women get cancer of cervix ahead in age compared to those not having HIV virus (Moodley 2001). In a study by Gichangi et, al. (2003) in Kenya, it was established that womenfolk below 35 years of age with invasive cancer had higher likelihood of being HIV infected as opposed to control of same age group.

The incidence rate of HIV sub type 1, in a research in Tanzania was found to be greater among patients with cancer of cervix (21.0%) than it was in the control group (11.6%). (Moodley et al., 2006). According to (Buga;1998) 67 percent of all persons infected with HIV and AIDS in the world are in Su-Saharan Africa.

2.7.4 Knowledge of cervical cancer and screening

General awareness on cancer of cervix, screening knowledge and knowledge of places to visit for services were all below 40% in South East part of Nigeria (Eze, et al., 2012). Study done on South African university students shows that 33% of the participants heard of screening for cancer of cervix and 33% knew that screening for cancer of cervix can prevent it (Hoque, 2010). A research done in South Africa, nearly half-49% of those investigated mentioned to have heard of Pap smear exam. And of the 51% slightly more than half of the 43% were mentioned to have gotten information on inspection cervix cancer majorly from physicians. South Africa has a national policy on pap smear (Hoque M et al, 2008).

In Ethiopia, community based study done in Gonder by Getahun et al., (2013), 47% of its participants had no knowledge of risk factors of cancer of cervix, 39.6% did not know about the symptoms, 36.1% didn't know the preventive measures, 33.9% did not know treatment options and 63.9% know it can be prevented. As per the study 13.7 percent of womenfolk respondents mentioned having gotten information regarding Papanicolau test (Getahun, et al, 2013).

The results of this research indicated that comprehension regarding cancer of the cervix was low, however, most women were aware of the illness. Knowledge regarding the symptoms, signs and risk factors was particularly low. Instruction and awareness about cancer of cervix should comprise message on symptoms and signs as well as risk factors for cancer of cervix (Getahun, et al, 2013). In Addis Ababa a majority of the interviewed 81.2% mention not have received any information regarding Pap exam. Among those who received message on pap test, more than half 38 of the 52 had thorough comprehension regarding Pap smear test (Terefe Y, et al. 2008). A study KAP on Pap Test conducted among Nurses in Addis, Ethiopia revealed little understanding amongst the healthcare workers (Getachew, 2004). In Addis Ababa, Ethiopia, the respondents knew of cancer however nobody could state cancer of cervix naturally. Interviewees from the

rural had dismal knowledge regarding cancer of whatever type. Knowledge on cancer of cervix was particularly missing (Birhanu, et al., 2012).

Cancer of cervix has been relegated into a less health concern sub-Saharan Africa and precedence put on illnesses such tuberculosis, respiratory infections, malaria, diarrheal illnesses as well as HIV/AIDS which have clear prevention and management plans. A number of research depict low awareness of cancer of cervix in Africa and this is reflected across diverse level of literacy. A paltry 4.3 % of 500 women visiting clinics for treatment of children and women were established as having some knowledge of cancer of cervix (Anorlu et al., 2004). Still in Lagos-Nigeria in the year 2004, 81.7% of 139 patients with high grade cancer of cervix were established to know nothing about cancer of cervix before and 20%, 30% and 10% correspondingly held the belief that it was as result of menstrual recurrence, lower abdominal and menses that were irregular. A majority of the women 98% held the view that the illness was treatable, 12% did not view it as anything of concern and a paltry 9% knew it was cancer and hence a terrible disease (Ajayi et al., 1998). In a comparable research in Tanzania and Kenya similarly showed the knowledge of the illness among patients to be very low (Gichangi and friends., 2003&Kidanto and friends., 2002). Health care providers as well as patients have been reported to have very limited knowledge about the disease. In Lagos Nigeria, untimely referral for cancer of cervix cases was the basis presenting at referral facility with cancer at advanced stage. An average of 9 to 12.9 months is what the health professionals would take in detecting cancer in women and do a referral a hospital for further care (Anorlu et al., 2004).

Increased awareness and uptake for prevention against cancer of cervix is attributed to proper education. In a research conducted in amongst 375 female students in a university in Northern Nigeria as regards cancer of cervix awareness and HPV vaccine acceptability 133 of 375 (35.5%) were found to be knowledgeable of HPV, 202 (53.9%) of the interviewed had gotten message on cancer of cervix from some sources and a majority 74%, 277 were ready to take up the vaccine for HPV (Ilyasu et al., 2010). In a study on beliefs and knowledge about cancer of cervix screening among 157 college students over 18 years in Accra, Ghana, Apochie and colleague (2009) established that the interviewed appreciated that screening for cancer of cervix was beneficial. Slightly over a half, 64 percent held the view that the screening would help detect

abnormalities in the cervix before advancing to invasive cancer 78.5 percent believed that the detected alterations could be treated. Perceived barrier as mentioned by half of the interviewed was the belief that the essence of screening was to detect cancer, 40.6 percent said their partner would not give them consent to screen for cancer of cervix. Other barriers mentioned include; not knowing where to get services 24.3 percentage, cost 23.2 percent, and people would think of them to be active sexually 24.6 percent. Very few 9.4 percent mentioned the process to be painful. A majority 68 percent held the view that women that were younger are more prone cancer of cervix, a small proportion 52.5 percent though they are at risk.

About 73 percent thought that cancer of cervix was a deadly disease able to make life unbearable for a woman. About 62 percent of the student mentioned that there is treatment for cancer of cervix that are effective. By and large, a small percentage got know of cancer screening from significant others that had accessed screening or recommendation from service providers. The sub-group that got recommendation from health providers failed to go for the screening for reasons that follows; cost was prohibitive, not aware where to take the test, tight schedule and feeling that it was embarrassing. Approximately a third mentioned to have listened to a conversation in the media whereas a fifth got it from a dialogue in a church assembly. Close to half also said they were ready to obtain Visual inspection screening. Generally, the level of knowledge was found to be good as regards screening, however few gaps in knowledge regarding intervals for screening and risk factors were established.

2.7.5 Attitude toward cervical cancer and screening

In a study done in rural of India show that 84.6% of the interviewed were willing to take the check up for cancer of cervix as they felt it would benefit them in the long run and 62.5% were willing to be screened. Having good attitude is mostly followed by having understanding about the cancer of cervix and also screening. Those who have heard regarding cancer of cervix and screening have good attitude regarding cervical screening than those who have not heard about it (Terefe, 2008). There are deferent beliefs and perception regarding cervix screening for cancer. Some negative beliefs mentioned among rural areas are "cervical cancer screening is only for commercial sex workers" and other positive beliefs like "pap smear decrease early death". Good attitude was strongly linked with increase in chances of undertaking screening

services. There was a five times chance of increase (McFarland, 2003). Another study in Tanzania suggested that 79.2% of study participants were agreed that cervical cancer screening can prevent cervical cancer (John J, 2011) and also on similar study in Kenya 87% of respondents agreed (Gichangi, et al, 2003).

A very insignificant proportion of female are undertaking screening for cancer of cervix in Africa. Of the 500 women from the poor village in Lagos visiting the health facility for mother and baby care not one has never done a Pap test. A paltry 9 percent of health professionals from 2 treatment facilities have undertaken a Papanicolau test. Explanations leveled against taking the test include the following: Feeling healthy, absence of symptoms, negligence, intrusive examination, lack of interest, unpleasant procedure and feeling young for the test. Furthermore, 25% of the were uncomfortable taking test from a male service provider (Mutyaba etal 2006). In another comparable research in Hospital in Tanzania regarding screening practice experience on the cervix cancer amongst female physician's significant number, 116 of 137 of the respondents had not taken Papanicolau exam. The reasons levelled for not taking Pap test among them was not being aware of places that offer the test mentioned by 54.7 percent of the respondents, poor attitude for exam (13.1%), fearing procedure 9.5% percent and scared of positive result 7.3 percent (Urasa & Darj, 2009).

2.7.6 Practice of screening services

According to study conducted in Botswana the rates of cancer screening are very low and is even way below the targets of the Ministry of Health of 75% coverage or more. In the very research less than have, 40.0% of the participants have knowledge of Pap exam (McFarland, 2003). The findings showing low uptake for screening for cancer of cervix is in tandem with researches undertaken in less developed nations which showed a mean rate of 23 percent in uptake for screening and 46 percent rate for follow up within an interval of 3 years (Carry P. et al 1993). Result from study in Tanzania (John, 2011) and Kenya (Gichangi and others 2003) Shows that habit of cervical cancer screening is 14% and 22% respectively.

Nigerian study describes that absence of gynecologic symptoms, fear for positive result, unavailable information and failure by health providers to suggest as reason for not taking up screening practice (Aliyu, et al., 2013). In contrary in Ethiopia prevalence of cervical cancer

screening is only 0.6% (WHO/ICO 2014). And study done in Gonder, Ethiopia from the participants that have awareness of cancer of cervix test only 14.7% had the test (Getahun, et al, 2013). In Addis Ababa, facility based cross sectional study that assesses KAP, only 6.5% of the interviewed have done a Papanicolau test. This is by far low even compared to other developing countries (Terefe, et al. 2008).

2.7.7 Factors associated with cervical cancer screening

In different researches different aspects were connected with screening for cancer of cervix knowledge, attitude and practice. Age was a significant factor towards accessing cervical cancer screening services. Chances of going for screening services for cancer of cervix among women aged 45 years and above was established 90% less compared to young women of between ages 25 and 34 years old. Screening is high among women of ages 30-39 and tend to be married and who admit to take up screening are youthful (aged 30–39), in marriage, has been expectant and with good education and has been on some form of family planning (Were et al, 2011). The profession of the respondents were an important aspect. Women who labored as traders in the marketplace had 96 percent less likelihood for taking up screening services for cancer of cervix compared with women who were farmers (Sylvia C. et al, 2011). On same study, health facility factors like accessibility, affordability and availability of screening service at the possible nearest place is related to screening practice among women. Socio economic factors also play significant role in access and utilization of screening service, Females who were financially independent, who have formal education and aged 25-34 have higher affinity to access cancer screening service (Slvia, et al, 2011). Knowledge levels on cancer of cervix and screening has been found to have strong association with literacy level as well as income levels (P, 0.01) (Gu, et al, 2010). A Study in Botswana shows that cancer of cervix awareness, uptake of screening was inadequate amongst women in groups with low revenue (McFarland DM 2003).

Number of child birth has been established as being directly correlated with participation in cancer of cervix test suggesting that earlier contact with health care providers does increase positive attitude towards health (Sankaranarayanan, et al., 2007).

As a result of economic challenges females tend to prioritize other financial and social responsibilities related to their families, other than their health resulting to self-neglect (Singh et al, 2012).

Awareness levels for risk factors and purpose and availability of screening, higher educational status and history of cancer of cervix in the family has been associated with participation in cancer of cervix test practice (Gu, et al., 2010). Various studies have established lack of knowledge on cancer of cervix as a critical hindrance for practice of screening for cancer of cervix (Sylvia, et al., 2011 and Gu, et al., 2010).

Access to places of services as a result of distance hinder women's uptake for screening services (Jo, et al., 2009). Wanting transport system has been cited in some cross-sectional to be a concern affecting service access (Bener, et al., 2001).

Some of the barriers as mentioned in study in Bangladesh regarding perception of the community on cervical cancer and examination of cervix include: lack of urgency to seek for care for signs suggestive of cancer of cervix, short staffing and inadequate health care services (Ansink, et al., 2008).

In a study in Nigeria, lack of knowledge, low levels of literacy, not feeling to be at risk, negative attitude towards own health and lack of finance and being afraid of a positive screening result are among main barriers to service utilization (Ndikom & Ofi, 2012).

In Brazil, the research established embarrassment as the biggest barrier to health seeking of services among women irrespective of education status. Not having time, commitments of work, taking care of children, fear of a positive result, partners not consenting and financial constraints are other barriers mentioned in the research (Lyimo & Beran; Were et al, 2011; Sudenga et al, 2013; Augusto et al, 2013).

2.8 Theoretical Framework

This study will adopt the Health Belief Model (HBM), Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB).

2.8.1 Health Belief Model (HBM)

The Health Belief Model (HBM) is intended to describe health behavior by better understanding attitudes and principles regarding wellbeing and health. It was first applied in vaccination programs and in screening programs of public health nature and further adopted to study other

behavioral areas (Becker, 1976). The model has four beliefs that dictate whether a person will take a given action of a particular situation of health.

The model suggests one will act in a manner to promote or protect health (Becker, 1976). The Health Belief Model suggests that an individual is willing to take action if they: consider themselves vulnerable (perceived susceptibility), consider the disease to have grave implications (perceived severity), think taking a remedy will lessen the gravity of the condition (perceived benefits), consider the actions to take will yield better result (Perceived barriers) are less than the positive aspects, are exposed to things that would prompt one take immediate action.

For example, if application of this model to the prevention of cervical cancer is considered, in order to adopt behaviors that minimize vulnerability towards the infection by women folk, they need to: view self to at risk of contracting the disease, perceive that cancer of cervix has potentially grave consequences, perceive that preventive measures are available that can reduce their susceptibility, or minimize the consequences of cervical cancer, perceive that the importance of taking remedy exceed the barriers or any amount of money. The theory applies to cervical cancer in the sense that, if women know that they are vulnerable to cancer of cervix, if they know that cancer of cervix has grave consequences on their lives, if they know that preventive measure that can lessen vulnerability or minimize the aftermath of cancer of cervix is within their disposal, and if they believe that positive aspects are more than the costs, they would be motivated to seek preventive services (Becker, 1976).

Application of HBM

With the intention to learn more on the young women's awareness regarding the health consequences that the human papilloma virus infections, the progression of cancer of cervix as well the effectiveness of Pap smears in detecting changes in the cervix early, (Burak, Meyer, 1997) used the HBM in evaluating 400 female students. He concluded that poor vulnerability perception, poor attitudes towards screening procedure, lack of awareness about cancer of cervix, and its link to illnesses transmitted sexual and more so papilloma virus were seen as important attributes affecting womenfolk resolve to get frequent Pap exams.

According to (Vail-Smit, White, 1992) awareness regarding Pap exams and assessment of the pelvic are wanting among this population. Poor knowledge regarding cancer of cervix among the

adolescent, factors that expose to cancer of cervix, and techniques for screening are seen intellectual features which intensely affect the poor vulnerability perception of contracting cancer of cervix. Similarly, Najem and others (Najem, Batuman, Smith, 1996) were out to establish what role knowledge, attitudes and beliefs regarding cancer played in access to regular smears for pap test. While low knowledge overall on cancer of cervix was established, other barriers such lack of finance and lack of suggestion from doctors came into play. This especially firmed by the fact that 50 percent of the womenfolk have never taken up pap exam previously.

Results show the HBM elements demonstrated effectiveness in giving relevant evidence on the about the association among adolescents conduct towards examination of cancer of cervix, and their awareness and attitude on cancer of cervix. Knowledge gap on various respects such as: gravity and implications of both cervical cancer and of STDs, cancer of cervix screening approaches, effects of dangerous sexual behaviors, and availability to programs that promote prevention screenings programs are some of the major obstacles that prevent this subgroup in accessing pa test on regular basis. As a concern the knowledge gap makes the group not feel to be at risk delaying uptake of preventive screening programs. While HBM supports in better understanding intellectual factors affecting participation of preventive screening programs, it is not enough to get a bigger picture all aspects influencing the behavior of this group.

Strengths for Health Belief Model

The theory is instrumental for making it clear to understand on the specific perception which affect health behavior.

The theory is efficient in explanations regarding the variations and stability of certain health behaviors. Hence easy to generalize its applicability.

This model has offered an important hypothetical framework in line with the challenges for participation prevention programs.

The major focus being health, the HBM is best placed for adoption in addressing problem behaviors that arouse concerns that of health importance.

Limitations

It is limited owing to its neglect of critical sociocultural and features related to the surrounding. Features which link to conduct of womenfolk as well as outlook and approaches for prevention.

Figure 2.1: Health belief model: major components and linkages
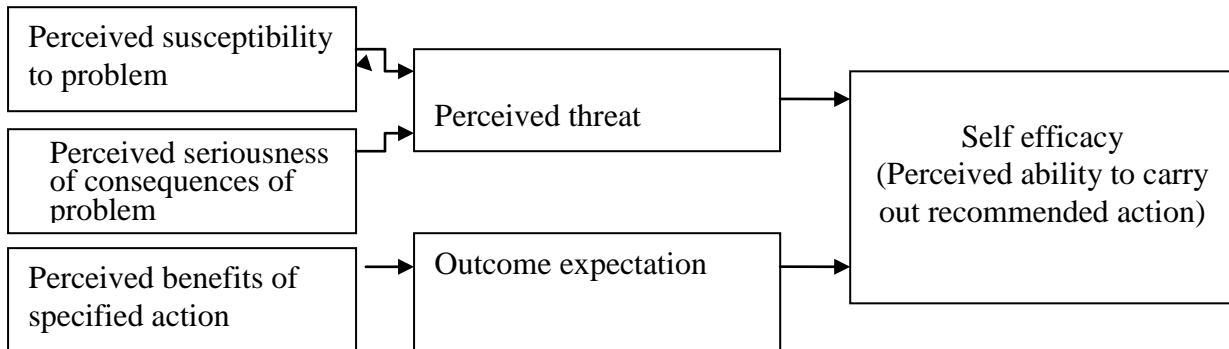
2.8.2 Theory of Reasoned Action (TRA)

The theory was developed in the 1960s by Fishbein and Ajzen and isfounded on the premise that human man is reasoning being and employ logical use of knowledge at their disposal. They postulate that people think through the consequences of their deeds in any given context before deciding to engage or not engage. TRA has been used to describe and forecast a variety of human behaviors. Based on assumptions that humans reason and that the actions in study are under individual own control, the theory attempts to explain the linkages between individual personal convictions, outlook of things, intent and conduct (Fishbein, et al, 1994).

The tenets of the model are as explained and their definitions as described by Fishbein et. al (1994) are;

Behavioural intention: These are specific behaviors that encompass 4 specific elements that include; time, target, action, and context. Also explained as the perceived likelihood of performing behavior. The intent to undertake and a certain conduct is the best predictor that needed behavior will be achieved. For accuracy in measurement intent ought to be described using equal elements which are; action, target, context and time.

Attitude: Behavior evaluation at a personal level?

25

Subjective norm: Beliefs about significant others if they allow or not allow the conduct; drive to act in ways that attract acceptance from significant others.

Perceived behavioural control: Perception that one has ability to take control and mastery over behavior

Normative belief: person's own belief regarding the opinion of others on behavior and the person's readiness to adapt those opinions.

The emphasis of the model is on the function of individual intent in influencing whether a particular behavior happens.

For purposes of this research this model of reasoned action tends to clarify the specific intent in taking up screening services -behavior and this is carefully guided by ones on idea about the consequences or benefits. It is upon the individual to decide carefully the behavior to engage in the knowledge acquired from health care providers while seeking care guide such behavior. In relation to this study, the TRA seeks to assess: once womenfolk get their former examination (behavior); what are the chances they will take another (intent); their view of seeking examination (attitude); approval/disapproval from significant others on taking a test (subjective norm); and whether getting tested is within the control of the individual (perceived behavioral control). This would then be checked against the results from the research about who has or has not gone for screening to identify attitudes, beliefs and intentions that predict seeking one.

2.8.3 Theory of Planned Behavior (TPB)

The TRA was later challenged to have gaps. It was found that making intent predictions not to be possible and the association score would significantly go lower should the individual view themselves as having little power as regards their attitudes or behavior and similarly perceive self as to be having major control for behavior (Godin and Kok, 1996).

As a result of TRA criticism, Ajzen (1991) perceived behavioural control was enlisted in the tenets, and called it Planned Behaviour theory (TPB) (Ajzen, 1991). The theory made the assumption that if intention for behavior stayed constant, behaviors that can be controlled would have a significant chance of taking place (Armitage and Christian, 2003). One's outlook concerning a behavior determines intent (general assessment of the behavior), subjective norms

(approval/disapproval of significant others), and perceived power over conduct (the ease or difficulty of engaging in a behavior), and thus mediates the influence of other factors on real conduct. Perceived behavioral control may impact directly on behavior, especially in situations where actual control by own choice is minimized (Ajzen, 1991; Armitage & Conner, 2001).

Application of TPB

Povey et al. (2000) utilized the theory in a research that entailed vegetables and a low fat diet consumption. In the study, it was established that attitudes informed desire to take products that have no fat however personal standards did not. Attitude and subjective norm have been established to be directly linked with behavior prediction. Povey et al.'s (2000) inference was that perceived behavioral control and self-efficacy are not the same (Povey et al., 2000). Other sources of research indicate that pain, worry and embarrassments as some of the barriers to examination of the cervix (Blomberg et al., 2008; Hay et al., 2005).

Day et al. (2010) mentioned of perception of individual women could inform behaviors. Such views might be made by: assuming those behaviors of persons around, being in touch with messages that are being repeated over and over, and linking of beliefs with emotions that are found to be encouraging or discouraging (negative or positive) (Day et al, 2010).

Strengths and weaknesses of the Theory of Reasoned Action and Theory of Planned behavior

TRA explains what informs the behavior of a person but not how the person gets to arrive at accepting or rejecting an idea. The hypothesis of intent to conduct oneself in given way could be good in helping to appreciate the adoption decision-making and is among the individualized aspects in the model for adoption decision-making.

Researchers have explored the theory to support in predicting intentions and or behaviors but the outcomes were diverse. The TPB can allow for adjustments in intent and conduct however, personal standards, attitude and ease or difficulty of to perform an action forbid estimation of behaviors that of health nature (Taylor et al., 2006). While the theory is an effective and

frequently used model for predicting and explaining behaviors of health nature (**Armitage & Conner, 2001; Cooke & French, 2008; Godin & Kok, 1996**), gap between behavior and intent is acknowledged showing that the link amongst behavior and intention is not sufficient. TPB-based motivational interventions that aim to simply increase intention have generally failed to facilitate behavior change. This suggests that the TPB model alone is insufficient. A criticism of the TPB theory is that it puts major emphasis on the motivation as overlooks the behaviors that are self-driven where intent is converted into action.

Figure 2.2: Theory of Reasoned and Theory of Planned Behavior: major components and linkages
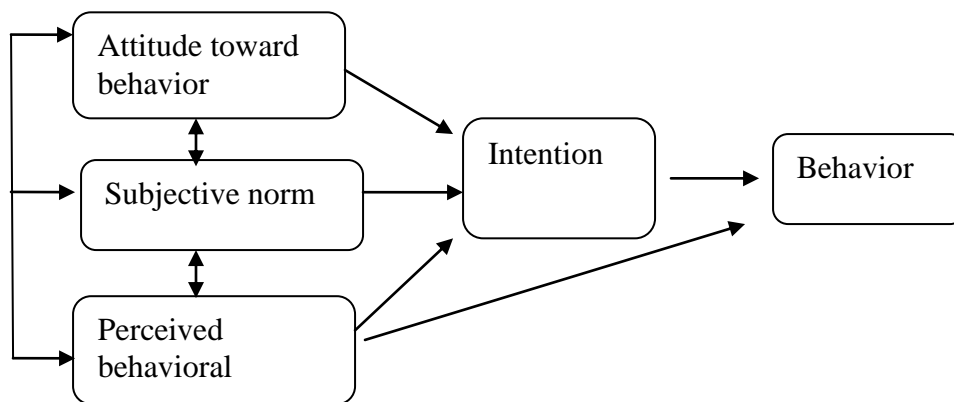
2.9 Conceptual Framework

The conceptual framework demonstrates the interlinkage amongst between the independent and dependent variables, the awareness level cervical cancer and examination determines the accessibility of the primary health care services among the women, negative attitude towards the screening for precancerous lesions amongst women determine their level of interest for attending the primary health care facilities. With a positive attitude towards some activity, it is likely that this is accompanied with positive intents of participating in these activities. Similarly, the positive altitudes may influence knowledge about the cancer of cervix and screening amongst the women in age of reproduction. Finally perceived barriers for the cervical cancer among women influence their choice to attend the primary health care services.

Figure 2.3: Conceptual framework

Independent Variables   **Intervening variables**   **Dependent variables**

Socio-demographic factors

| Age
Education level
Marital Status
Employment status
Number of births
Number of years in marriage |

Facility related factors

| Availability of service

Cost of screening service

Staff capacity

Adequate Equipment

Accessibility to the health facility

Quality of service |

Knowledge related factors

| Awareness of cervical cancer
Awareness of cervical screening services
Knowledge of risk related factors
Available information |

| Uptake or non-uptake for cervical cancer screening |

Other related factors

| Fear of positive result
Painful procedure
Stigma |

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the research methodology used to attain the objectives of this research. Research methodology discusses the various procedures or methods used in studying the study problems by the researcher with a reason behind them (Kothari, 2004) It comprises of the site description, study design, study population, selection, data collection techniques, ethical consideration, pre testing, data analysis, dissemination and utilization of results and limitation of the study.

3.1.1 Site Description

This study was conducted in Kibera in Langata sub-county Nairobi. Kibera informal settlement located in Nairobi County comprises the locations of Kibera, Laini Saba and Serang'ombe and has a population of approximately 170,070 all of whom reside in a 2.5 square kilometres area (KNBS 2009). Livelihoods have developed in line with the global market economy and households rely almost entirely on market forces to make a living. The majority is engaged in economic activities in the informal sector. Living conditions are poor in the informal settlement. Basic necessities such as food, fuel, water and rent absorb the majority of households' monthly incomes. The 2013 baseline quantifies these basic expenditures at 80 percent of monthly incomes for the poorest households (Save the Children June 2013). The population's health seeking behavior is affected by the pitiable and congested living and sanitation conditions in Kibera coupled with poverty and limited access to free/ inexpensive health services, hence propagating the spread of transmissible diseases.

A great majority of people living in the slum lack access to quality healthcare. Only one dispensary out of 47 health facilities in Kibera is a MOH owned health facility. Only recently has the government beefed the area with the 9 Beyond-Zero clinics. Out of which 4 are functional but offering basic care and staffing is a challenge. All others are either private clinics or are run by NGOs and faith based organizations. The major Health providers are therefore charitable organizations like AMREF, MSF, and CFK among others. Only 3 health facilities provide cervical cancer screening using the one stop method-Visual Inspection with Acetic acid (VIA). These are Ushirika Medical clinic, Tabitha medical clinic and SHOFCO clinic. The three are run

by AMREF, CFK and SHOFCO respectively. All which are nonprofit organization and they do not charge a fee for their services. For this reason, they are attractive as a choice for accessing care since the cost barrier is addressed.

Figure 3.1: Map of Kenya showing the location of Nairobi

Source: http://www.kenya-advisor.com/images/map-nairobi-in-kenya.jpg

Figure 3.2: Map of Kibera informal settlement
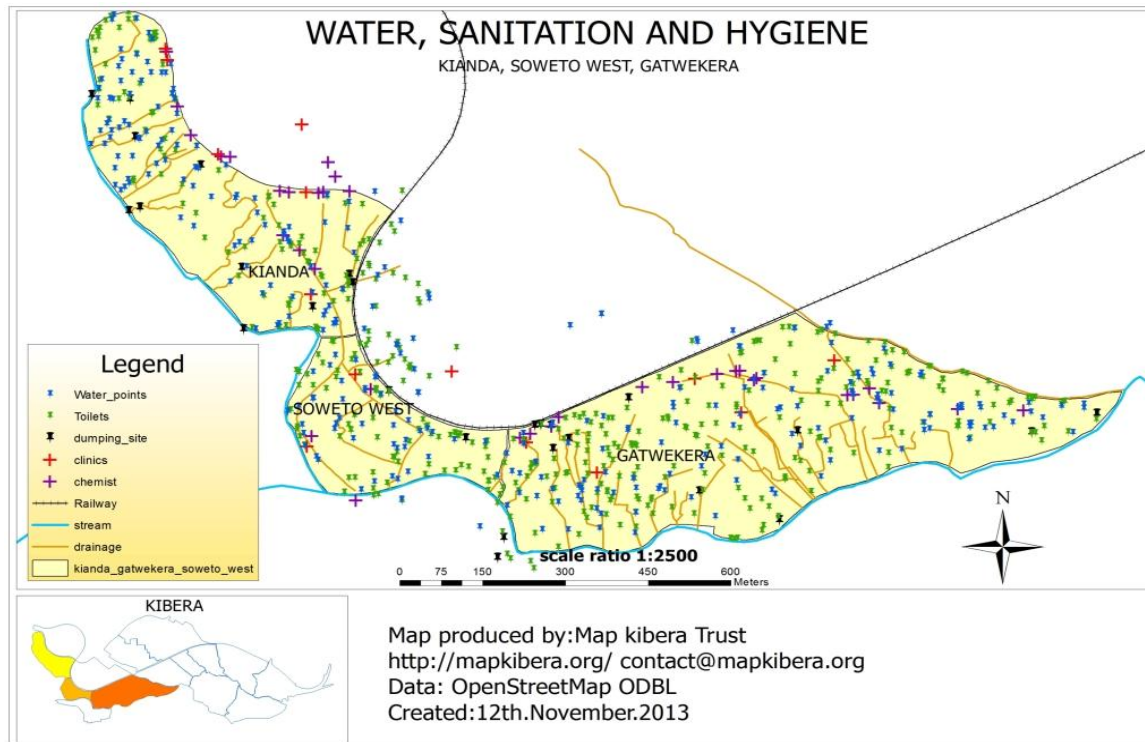
Source: mapKibera.org

3.2 Study Design

A study design is a researcher's general plan for finding answers to the research questions or for testing the study hypotheses (Polit & Hungler, 2001). A research design explains the various techniques that will be used to gather data (Kothari, 2004). A research design explains the diverse techniques employed by the researcher to gather data, the type of sampling techniques, the population to be studied, methods to be used in analyzing data and dealing with time or cost constraints (cooper & Schindler, 2003). This study adopted a cross sectional, descriptive study design. In a descriptive survey, information is collected by interviewing a sample of individuals to establish their opinions, attitude and practice (Kothari, 2004).

It was descriptive in nature because it is set out to describe and document aspects of a situation (Polit & Hungler, 2001). The study involved collection and presentation of data about awareness of cervical cancer, knowledge and uptake of screening of cervical cancer amongst women of ages 18-49 years seeking healthcare in facilities in the targeted area.

Gay and Airasian (2003) define descriptive research as a process of collecting information with an aim of testing the hypotheses or seeking answers to questions regarding the present status of the subjects under research. This type of research determines and shows the state of things and attempts to explain such things as possible attitudes, behavior, characteristics and values. This study is cross-sectional because it involved the compilation of data at one point in time (Polit & Beck, 2003). The phenomenon under study was captured during one data collection period (Polit & Beck, 2003). Cross-sectional designs are especially appropriate for describing the status of phenomena or relationships among phenomena at a fixed point (Polit & Beck, 2003).

3.3 Study population

Mugenda and Mugenda (2008), stipulates that a target population is the whole cluster of individuals, objects or events having prevalent observable distinctiveness.

The study population in this research included women age 18-49 years considered to be the reproductive age, attending health care services in the targeted facilities in Kibera. VIA screening usage is suggested for women between 25-49 years of age (primary target). However, those under 25 years of age should only be screened when considered to have an elevated risk of cervical abnormalities (these includes those who have had multiple partners, early sexual debut, are HIV positive or had previous abnormal screening results. This is the age group that can give consent for participating in research. A total of 450 women fall under the targeted accessing healthcare services.

3.4 Inclusion Criteria

All women of reproductive age attending healthcare services in the chosen amenities.

3.5 Exclusion Criteria

Those who did not give consent to participate.

3.6 Sample Size and Sampling Procedure

3.6.1 Sample Size

A sample size refers to the number of items to be chosen from the populace to comprise a sample. A good sample size should be cost-effectively feasible, able to manage systematic partiality, lead to optimal sample size but minute sampling error, facilitate outcome to be functional to the cosmos in general with a rational echelon of confidence and the ensuing sample should be sufficient, truly representative and analogous to population.

The sample should neither be excessively large nor too small (Kothari, 2004). Mugenda and Mugenda (2003), posit that a sample size of 10 to 30 percent is adequate for a descriptive study. This study therefore utilized a sample representing 10 percent of the whole population of the women seeking healthcare services in the three health facilities. Thus, with a total population of 450, the sample size of the study included 45 respondents who were selected from the three facilities on the basis of proportion. The sample was drawn from women seeking care in the selected health facilities in Kibera. This is as shown in the table 3.1.

Table 3.1: Summary of the study sample

Facility name	Average number seeking care	Sample size	Total %
Tabitha Medical clinic	170	17	37.78
Ushirika Medical clinic	70	7	15.56
SHOFCO Medical Clinic	210	21	46.67
Totals	450	45	100

3.6.2. Sampling Procedure

Nachmias and Nachmias (1996), define a sample as a subset of a population. Sampling is simply the procedure of choosing the objects to be examined in the course of the study. Cooper and Schindler (2003), defines sampling as the technique of picking a number of individuals for study in such a manner that the persons chosen represents the big bunch from which they are chosen. The research employed a probability sampling technique to select a sample of women seeking healthcare services in healthcare facilities in Kibera. Simple random sampling was employed ensuring that all the individuals had equal chances of participating in the study and the selection was on chance basis to avoid biasness of the researcher in selecting the sample.

There are 47 health facilities in Kibera offering different health services. However, only three (3) offered cancer screening services in the area, thus, for the selection of the health facilities, purposive sampling was conducted. This facilitated selection of the health facilities that offered the screening services whereas only three health facilities had screening services for cervical cancer and have in the past conducted intensive information education to the community regarding the availability of the service.

The participants were selected by simple random sampling. The 3 health facilities had a combined estimate of 450 patients that they see in a day. These formed the population (*N*)**.** In order to choose a sample (*n*) of women respondents from this population of 450 clients visiting the health facility, simple random sampling was chosen.

Using simple random sampling, there would be an equal likelihood (probability) that each of the 450 women visiting the facility could be selected for inclusion in our sample. The desired sample size was 45 women. Each of these women was subsequently interviewed using a structured questionnaire.

As per Mugenda and Mugenda (2003), a sample size of 10 to 30 percent is adequate for a descriptive study. This study therefore utilized a sample representing 10 percent of the sum population of the women seeking healthcare services in the three health facilities. This number was also chosen because it reflected the limit of the budget and the time available to administer the questionnaire.

Respondents were allocated to each health facility according to the customer flow where a higher ratio was given to those that had higher customer flow. This was repeated until 45 respondents was achieved cumulatively from all the health amenities.

3.7 Methods of Data Collection

Data collection tools comprise those devices that detail and objectify the data compilation procedure (Macnee and McCabe, 2008). According to Mugenda and Mugenda(2003), there are various data collection techniques that can be used such as observation, interviews and questionnaires.

Primary data was collected in this study through the use of a structured questionnaire. The questionnaire was structured according to the objectives of the study seeking to obtain information on four broad areas: Individual distinctiveness, Knowledge, attitude and practices regarding cervical cancer and screening. This was administered individually to ensure confidentiality.

3.7.1 Data collection techniques and tools

Data collection was facilitated by research assistants who were taught on the motive of the study and data collection procedures. There were three (3) research assistants drawn from Kibera where each was allocated one of the three health facilities. These were responsible for pretesting and administering the questionnaire tool to the respondents requesting for their participation who upon their consent proceeded to fill the questionnaire. Where the respondent could not complete the questionnaire on their own, the research assistants interpreted the questions and gave more explanation to the patients on the question at hand.

Authorization to carry out the research was sought from the management of the three health facilities (Tabitha Medical clinic, Shofco health centre and Ushirika health centre) where the study was conducted. This was sought by the researcher who visited these facilities to meet with the manager's in-charge and discussed the objective of the research and the possible implications of the research to the facilities' operations.

3.8 Validity and Reliability

Validity is the level to which results obtained from the analysis of the data essentially represents the occurrence under study (Mugenda & Mugenda, 2003). If a research instrument is reliable and steady, and therefore conventional and precise, it is said to be dependable/ reliable (Kumar, 2005). The researcher ascertained the validity and reliability of the questionnaire through pre-testing.

In this study, a pilot study was conducted at Ushirika Medical Clinic which also offers cancer screening services. This involved pre-testing the questionnaire with 10 women seeking the services from this clinic. Their responses were analysed to study the accuracy and internal consistency of the questionnaire. Where inconsistency was found, the questionnaire was adjusted accordingly. The following adjustments were made to the questions: Additional responses were factored to the following question numbers: Seven (7) to include response 4 as none, thirteen (13) to include response 7 as other specify, nineteen (19) to include response 5 as Other specify. Question 24, the referenced questioned number was changed from 18 to 23.

3.9 Data Analysis

Seidel (1998) describes data analysis as a process in which the researcher sorts and sifts data, probing for types, classes, sequences, processes, patterns or wholes with the aim of assembling or reconstructing the data in a consequential or understandable manner. In this study, the researcher adopted this definition as a guide to the study's data analysis.

Quantitative data was collected in this study. To analyze quantitative data, the study utilized the Statistical Package for Social Scientists (SSPS) Vs. 20. Data was coded for ease of entry, and entered for the analysis. Descriptive analysis techniques were applied to present the trends of the data. These included frequencies and percentages which were presented in table and figure forms where appropriate.

3.10 Ethical Considerations

Due protocol was observed in seeking permission to collect data from relevant authorities before conducting the research. The researcher obtained a letter from the University of Nairobi before undertaking the actual data collection. Clearance was also sought from the health in-charges of the health facilities. Respondents were also guaranteed of confidentiality in handling of any information provided. All the information obtained from the respondents would be used for the sole purpose of this study.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

This chapter presents data findings from the field, its analysis and interpretations. The information was gathered through the use of questionnaires and analyzed using both descriptive and inferential statistical analysis techniques. The discussion of these findings has also been presented under this chapter where the results are compared with the previous research.

4.2 Response Rate

The study realized a response rate of 98%. This was achieved as the researcher was able to collect data from 44 out of 45 targeted women that were considered valid and reliable to be used in the study.

4.3 Social and Demographic Characteristics of the Respondents

The segment presents the results on the background distinctiveness of the respondents. These comprise age of the respondents, area of residence, education level, occupation, marital status, years of marriage, and the number of births. The results on the background characteristics are as presented in table 4.1 which also shows the level of knowledge among different categories of the women.

Table 4.1 : Background Characteristics (N=44)

		Frequency (n)	Percentage (%)
Age	19 - 29 years	24	54.5
	30 - 39 years	14	31.8
	40 - 49 years	6	13.7
	Total	44	100.0
Residence	Kibera	40	90.9
	Outside Kibera	4	9.1
	Total	44	100.0
Education	No formal education	1	2.3
	Primary Education	18	40.9
	Secondary Education	10	22.7
	College Education	15	34.1
	Total	44	100.0
Occupation	Employed Full time	13	29.5
	Employed part time	8	18.2
	Unemployed	7	15.9
	Self employed	5	11.4
	Housewife	11	25.0
	Total	44	100.0
Marital status	Single	9	20.5
	Married	34	77.3
	Divorced	1	2.3
	Total	44	100.0
Years in marriage	1-5	7	20.6
	6-10	16	47.1
	11-20	6	17.6
	>20	5	14.7
	Total	34	100.0
Number of Births	None	4	9.1
	1	8	18.2
	2-4	26	59.1
	5 and above children	6	13.6
	Total	44	100.0

The findings as presented in the table shows that majority of the respondents were below 30 years of age. This category represented 54.5% (n=24) of the respondents where all the respondents under this category were found aware of the cervical cancer. The age group 30 -39 years had 31.8% (n= 14) of the respondents who were aware of cervical cancer whereas 2.3% (n=1) were not aware. 13.7% (n=6) of the respondents were aged between 40 – 49 years representing the eldest age group among the respondents. 90.9% (n = 40) of the respondents were residents of Kibera. 9.1% (n=4) were found to be resident of other place outside Kibera.

Age has been found to be a significant factor towards accessing cervical cancer screening services. Women aged + 45 years in some studies have been found to be 90% less possibility of accessing cervical screening compared with women between 25 and 34 years old. Women who agree to screen tend to be younger (aged 30–39), married, had mostly been pregnant, better educated and had ever used contraception (Were et al, 2011).

With regard to the level of education of the respondents, majority of the respondents had attained primary education and above where 40.9% (n= 18) had primary education as their highest level achieved, 22.7% (n= 10) had secondary education and 34.1% (n= 15) had up to college education. 29.5% (n= 13) of the respondents were full time employees whereas 18.2% (n= 8) were employed on a part time basis. 15.9% (n=7) were unemployed, 11.4% (n=5) were self-employed and 25.0% (n=11) were house wives. On their marital status, 20.5% (n=9) were single, majority were married representing 77.3% (n=34) of the respondents whereas 2.3% (n=1) were divorced.

Socio economic factors too play a significant role in access and utilization of screening service. According to studies, females who are financially independent, who have formal education and aged 25-34 have a higher likelihood of accessing screening services (Slvia, et al, 2011). Also women with higher levels of education and income also had higher levels of knowledge (Gu, et al, 2010). Study in Botswana shows that knowledge of cervical cancer and cervical cancer screening tests was inadequate amongst women in low income groups (McFarland DM 2003).

Of the respondents, 47.1% (n= 16) had been married for 6 – 10 years followed by 20.6% (n=7) who were in marriage for a period of 1 – 5 years and 17.6% (n=6) who were married for 11 – 20 years whereas the least (14.7%, n=5) were the respondents who had been in marriage for more

than 20 years. Majority of the respondents had between 2 – 4 children. These represented 59.1% (n=26) of the respondents who reported to have had 2 – 4 births followed by 18.2% (n=8) who had only 1 child whereas 13.6% (n=6) had 5 children and above.

Number of child birth has been found to be directly correlated with uptake of screening services suggesting that earlier contact with health care providers does increase positive attitude towards health (Sankaranarayanan, et al., 2007).

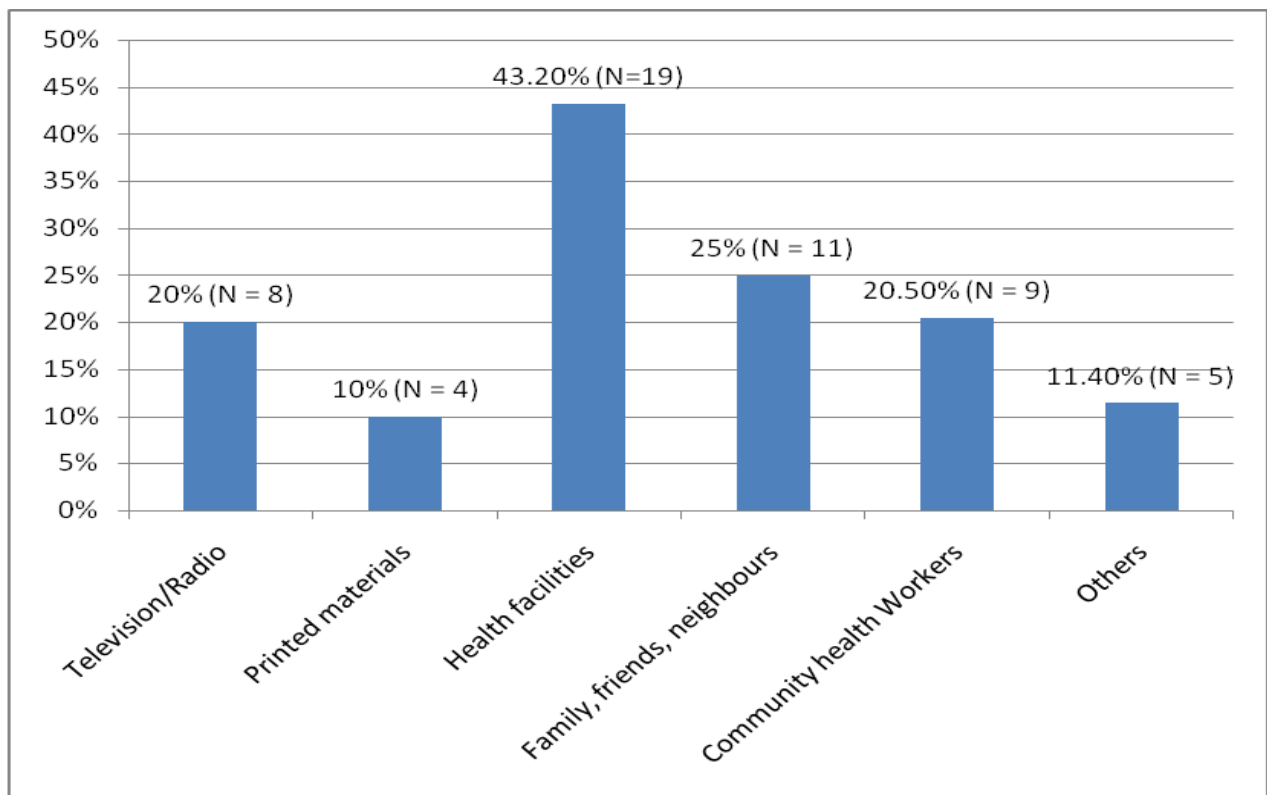**Figure 4.1 : Knowledge in Cervical Cancer (N=44)**

Figure 4.1 presents the channels through which cervical cancer awareness has been disseminated. Among the contributing factors to awareness creation, radio and television had 20% (n=8), 10% (n=4) of the women were able to learn from printed materials, 43.2% (n=19) had learnt from the health facilities, 25% (n=11) from family friends and neighbors, 20.5% (n=9) from community health workers and 11.4% (n=5) learned from other sources. No one reported their awareness from the religious leaders. Thus, from the findings, health facilities were the main sources of information to the women on the cervical cancer.

The findings clearly suggest the need to enhance and support health education at health education since they remain key in passing vital information that would inform health seeking behavior. Proper guidance and constant health education on cervical cancer screening during any contact with health practitioners, screening needs to be enhanced. Uptake of health services is positively associated with increased knowledge and therefore, authorities need to optimise on patient visits to increase awareness of public health interest.

It is also evident that a very small fraction got information from print media. This could be accredited to low level of education amongst the respondents.

Table 4.2: Distribution of respondents according to knowledge of persons with cervical cancer

Response whether knows person with cervical cancer		Frequency (n)	Percentage (%)
	Yes	19	43.2
	No	23	52.3
	Do not Know	2	4.5
	Total	44	100.0
How the acquaintance got to know?	Hospital Screening	12	63.2
	Suggestive symptoms	7	36.8
	Total	19	100.0

The respondents were asked whether they were aware of anyone with cervical cancer among their close circle of acquaintances. The findings are as shown in table 4.2. From the table, responses given indicated that, 43.2% (n=19) of the respondents were aware of some of their close acquaintances who had been suffering from the cervical cancer. These cases were learnt through hospital screening majorly as reported by 63.2% (n=13) of the respondents who had awareness of someone with cervical cancer whereas the rest (36.8%, n=7) were able to learn through suggestive symptoms.

The findings that health facility screening is the source of knowledge for those that were affected as reported, suggests the need of interventions at lower tier facilities to be improved to support in early screening for early detection to enhance early treatment. Greater emphasis should be placed on the need for system spiraling to assist provision of primary deterrence, screening, early detection, diagnosis and appropriate management

Figure 4.2 : Signs and Symptoms of Cervical Cancer (N=44)
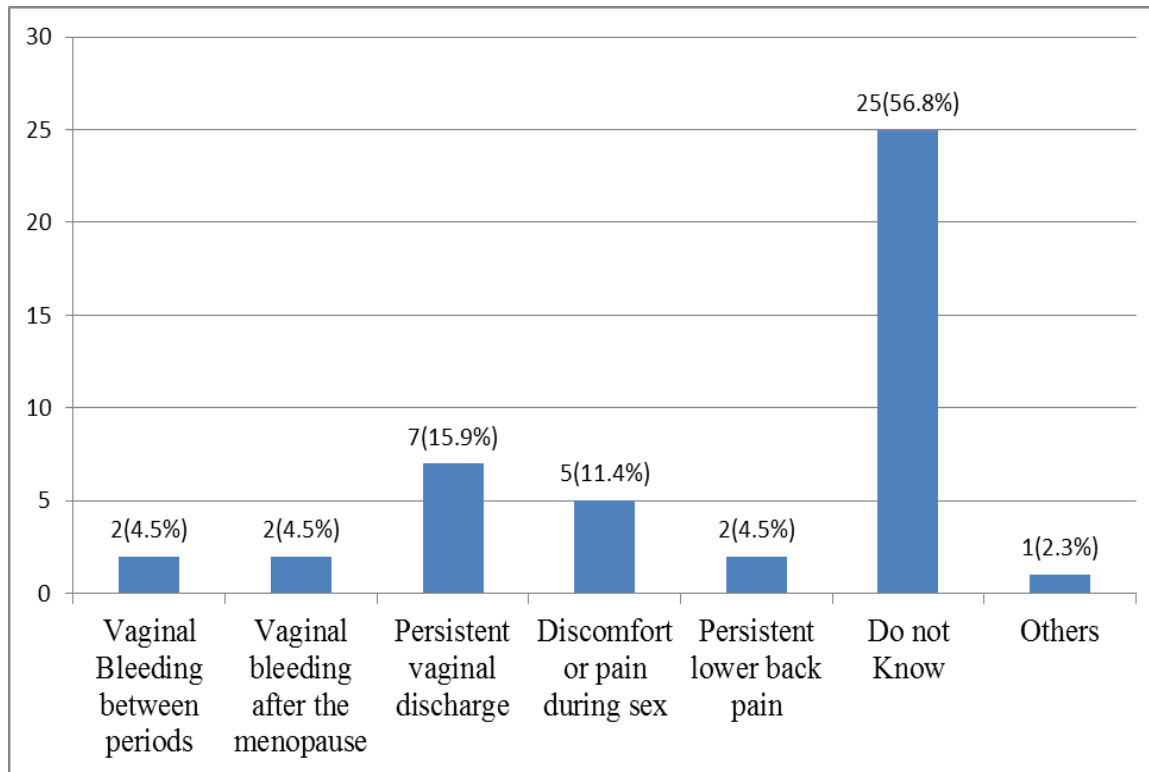
The respondents were further asked about the signs and symptoms of cancer cervix. The findings revealed that, majority of the respondents did not know the symptoms as reported by 56.8% (n=25) of the respondents. The cervical cancer according to 15.9% (n=7) of the respondents is characterized by persistent vaginal discharge majorly. Other signs that were reported were discomfort or pain during sex (11.4%, n=5), persistent lower back pain, vaginal bleeding between periods, as well as vaginal bleeding after the menopause all with 4.5% (n=2) each. These results reveal that knowledge about cervical cancer risk factors, signs and symptoms was scanty though, greater part of the women were aware of cancer of cervix. Emphasis about the disease should include information on risk factors, sign and symptoms of cervical cancer.

Figure 4.3 : Causes of cervical cancer (N=44)
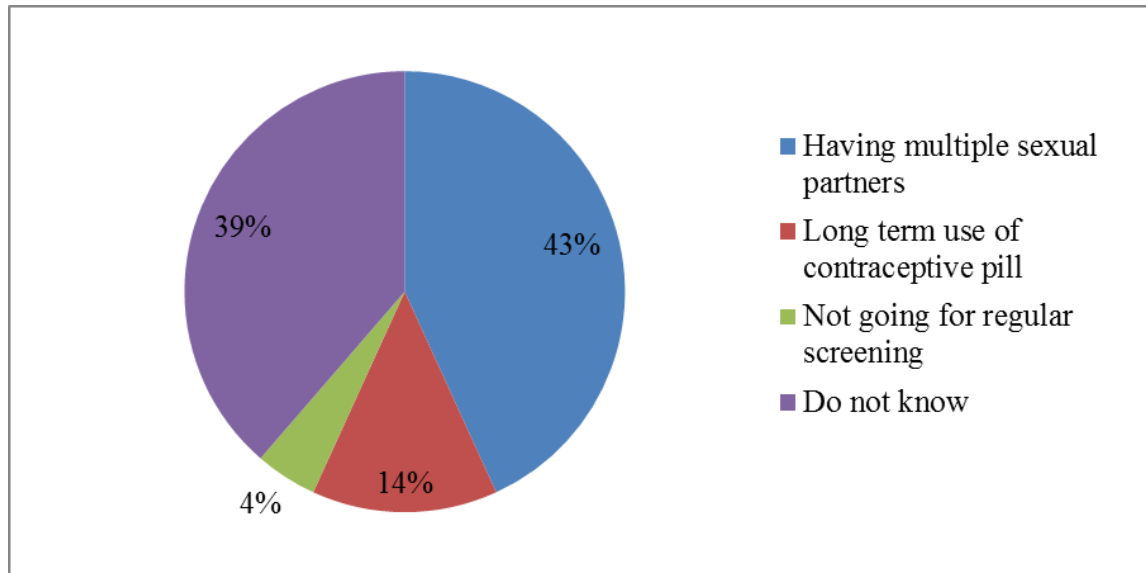
As shown in the figure, according to 43% (n=19) of the respondents, the major cause of cervical cancer is having multiple sexual partners. 14% (n=6) reported that long term use of contraceptive pills is the cause of cervical cancer and 4.5% (n=2) reported that not going for regular screening can be a cause. However, 39% (n=17) of the respondents reported that they were not aware of the causes of cervical cancer as shown in the table.

Cancer of the cervix is linked to a virus known as Human papilloma which can be transmitted sexually. Risk factors to Human Papilloma Virus (HPV) infection comprise the number of sexual partners, the sexual partner's number of preceding sexual partners, immune system status and partner's circumcision status. Some of the reported risk factors associated with HPV infection and cancer of the cervix include and not limited to high parity, tobacco smoking, long term use of oral contraceptives (WHO/IARC 2002) co-infection with HIV and other STIs. From the findings above, a majority of the respondents were found to be knowledgeable of multiple partners as a risk factor; however, it is also evident that there is need for intensified education on the risk factors associated with cervical cancer.

4.4 Knowledge on Prevention and Screening Uptake

The respondents were asked whether they knew of the cervical cancer test and screening services offered at different health facilities. The responses are shown on table 4.3 below:

Table 4.3 : Women's Knowledge on Cervical Cancer Test (N=44)

Knowledge on Cervical Cancer Test	Frequency (n)	Percentage (%)
Yes	43	97.7
No	1	2.3
Total	44	100.0

Table 4.3 presents the results on the women's knowledge on cervical cancer test. According to the findings, a majority, 97.7% (n= 43) of the respondents were aware of cervical cancer test. 2.3% (n=1) on the other hand were found unaware of cervical cancer test. From the response, it is clear that health facilities played a significant role. This could be associated with the campaigns that were undertaken by the health facilities both at the community and the health facility level. This should inform the authority on the need for supporting similar initiatives in health facilities at the community level to improve awareness.

Table 4.4 : Sources of Information Regarding Cervical Cancer Screening

Cervical cancer information source	Frequency (n)	Percentage (%)
Television/Radio	7	15.9
Printed materials	4	9.1
Health facilities	25	56.8
Family friends, neighbors	5	11.3
Community health workers	10	22.7
Others	3	6.8

The women were also examined on their awareness on cervical cancer screening. The response as well as the channels through which they had learnt is as presented in table 4.4. According to the results, the health facilities were the major contributors to the knowledge among the women. This finding shows the amount of effort employed by the health facilities to enhance awareness.

Again this would also be linked with the heightened campaigns conducted by the health personnel during their interactions with patients. The health facilities informed 56.8% (n=25) of the respondents who were found to have knowledge on cancer screening. Community health workers had contributed to knowledge creation to 22.7% (n=10) of the respondents which was the second knowledge creation tool followed by television/radio with 15.9% (n=7) and family friends and neighbors with 11.3% (n=5). Printed materials had informed 9.1% (n=4) of the respondents whereas 6.8 % (n=3) were able to learn of the service from other sources. Sources other than print media seem to be more effective.

**Table 4.5: Women's Knowledge on Cervical Cancer Screening Services**

Knowledge on Cervical Cancer Screening	Yes		No		Total	Total
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)	Percentage	Frequency
Can cervical cancer be detected through screening	40	90.9	4	9.1	100	44
Cervical cancer is treatable after screening	41	93.2	3	6.8	100	44
Awareness of health facilities offering screening services	36	81.8	8	18.2	100	44
Awareness on recommended frequency for screening of cervical cancer	24	54.6	20	45.4	100	44

According to the results as presented in table 4.4, majority of the respondents were found to be aware of the cancer treatment as they reported that it is possible to detect cervical cancer through screening /routine checkup before symptoms appear. This had knowledge of 90.9% (n=40) among the women interviewed. From the table also, a major proportion of the respondents were aware of the cervical cancer treatment where 93.2% (n=41) of the respondents reported that

cervical cancer is treatable if detected early. Further, 81.8% (n=36) of the women had awareness of the places where they could access cancer screening services in Kibera. However, 18.2% (n=8) were not aware of health facilities that offered such services.

From the result, it is evident that expanded screening is a viable option in low resource settings option where sufficient infrastructure and health system access exist. And that mobilization and education at the health facility and community level are important to achieve increased knowledge and awareness on service availability, detection and treatment of cancer of cervix

Figure 4.4 : Health Facilties Offering Cervical Cancer Screening Services in the Study Area (N=44)
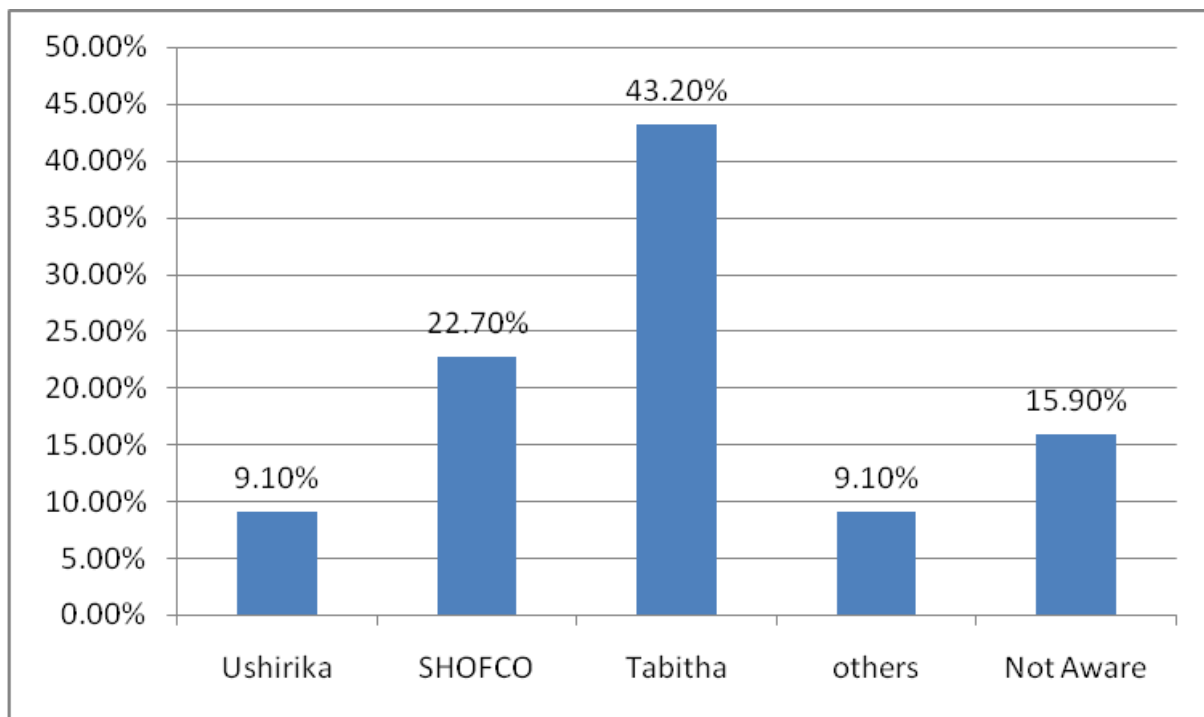
The respondents were asked whether they were aware of some of the health facilities offering cervical cancer screening services. Among the health facilities cited were; Ushirika (9.1%, n=4), SHOFCO (22.7%, n=10), Tabitha (43.2%, n=19) and others as reported by 9.1% (n=4) of the respondents. However, 15.9% (n=7) of the participants in the study were not able to cite some of the health facilities offering the services despite their seeking of the services in such hospitals.

By and large, the findings point to improved infrastructure as a precursor to access for services.

Location of health facility and its accessibility, availability of essential supplies and equipment is one of the factors that affect utilization of health services. While these factors were not considered, they could be among those that came into play for Tabitha clinic to be mentioned by majority as one offering the service. Equally, it could be linked to intensive education among its clients.

Figure 4.5: Women's Knowledge on the Required Frequency of Check-up Visits (N=44)
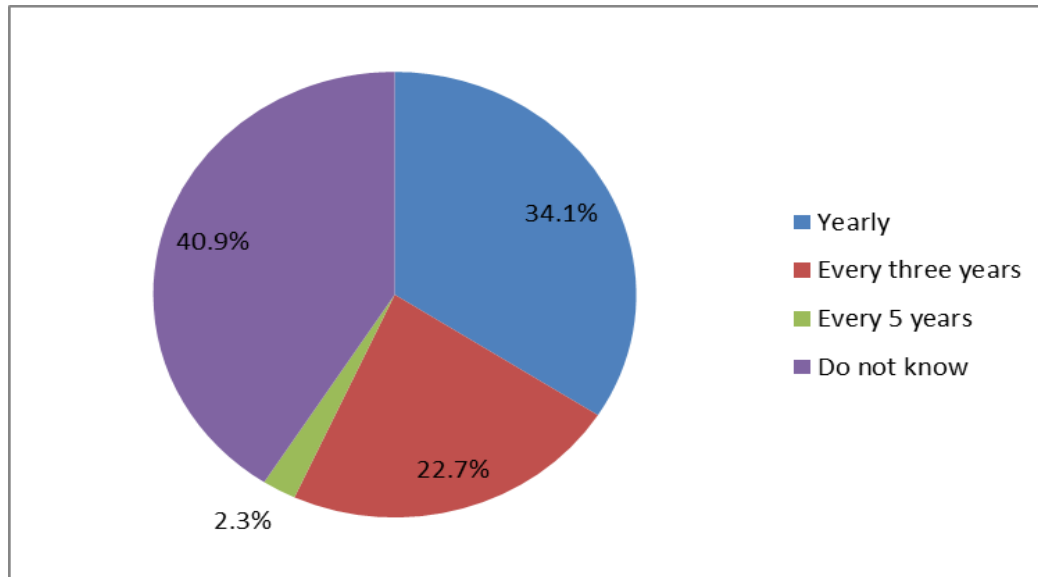
With regard to the level of women's awareness on the recommended frequency within which adult women should undergo checkup for cervical cancer, 59.1% (n=26) were found to be aware whereas 40.9% (n=18) were unaware. Among those who were found to be aware, 34.1% (n=15) reported that checkup should be done yearly, 22.7% (n=10) reported screening for every three years whereas 2.1% (n=1) reported that screening should be done every five years.

Most abnormal changes and early cancers are found in women who have regular screening; most advanced cancers of the cervix are found in women who have not had routine screening that is why it is important to have routine screening.

Table 4.6 : Best Place to reach women with cervical cancer screening messages (N=44)

Best place to reach women with cervical cancer screening messages	Frequency (n)	Percentage (%)
women's groups	21	47.7
Places of worship	6	13.6
Health facilities	20	45.5
At home	4	9.1
Market	7	15.9
Others	2	4.5

Findings in table 4.5 show that, women groups as the most preferred places to reach women with cervical cancer screening messages/information. This was reported by 47.7% (n=21) of the respondents which had the highest respondents followed by 45.5% (n=20) who reported that health facilities were the best places and 15.9% (n=7) who reported market places as the best sources of cancer screening information among women. 13.6% (n=6) reported the places of worship whereas home places were reported by 9.1% (n=4) of the women. 4.5% (n=2) reported other places other than the above discussed.

From the findings, consideration should be made by programs and health institutions to develop multiple strategies for mobilization. Use of existing structures to improve public awareness and support such as health facilities, women groups, Community Health Volunteers, churches among others is critical if cervical cancer prevention services and support use of accessible services is to be achieved.

The client-provider association significantly affects client contentment. For instance, the surroundings under which counselling takes place, how effectively and deferentially the provider passes information to the woman, the woman's capacity to ask questions, the respect for privacy and confidentiality could all be imperative factors that influence the woman's encounter with care. The results may be suggesting the significance of providers taking time to communicate with women at their comfort and disposal, answering questions, explaining procedures, and

giving encouragement where they are. This could have informed the need for awareness communication at women groups and health facility.

4.5 Attitude and Practice

Figure 4.6 : Women's Willingness to consult a health care provider (N=44)
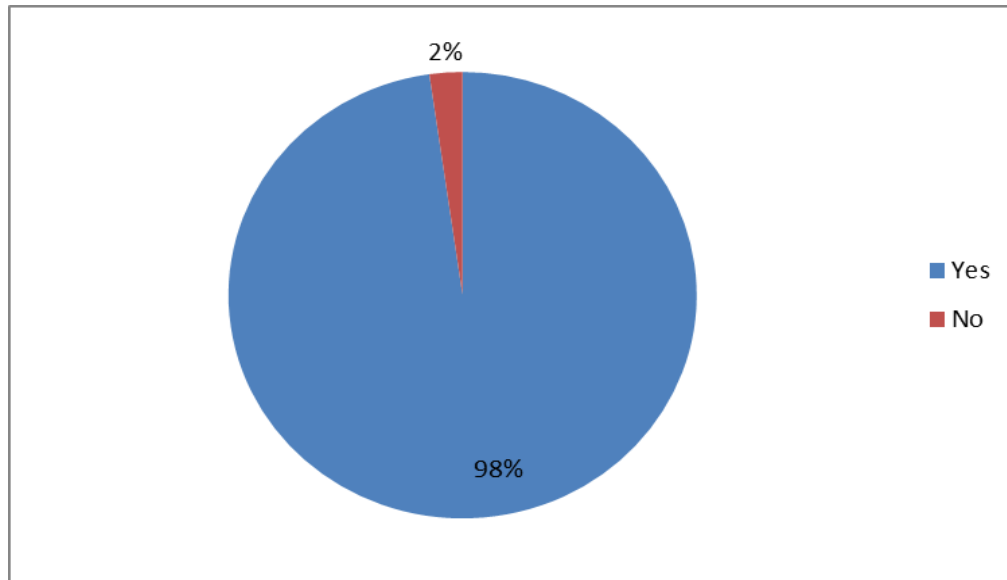
As illustrated in Figure 4.6, most of the respondents (98%, n=43) have the will to recurrently confer with a health care provider for cervical cancer screening. However, 2% (n=1) of the women who participated in the study were not willing. This indicates that, an important number of women were concerned about their health and were much willing to undertake the screening services provided with the details and availability of the services.

Positive belief is considerably linked to increase in the probability of accessing cervical c a n c e r screening and thus an important area for health care providers to support in offering the right message to promote positive attitude towards the service.

Figure 4.7 : Women's Knowledge of who should be screened (N=44)
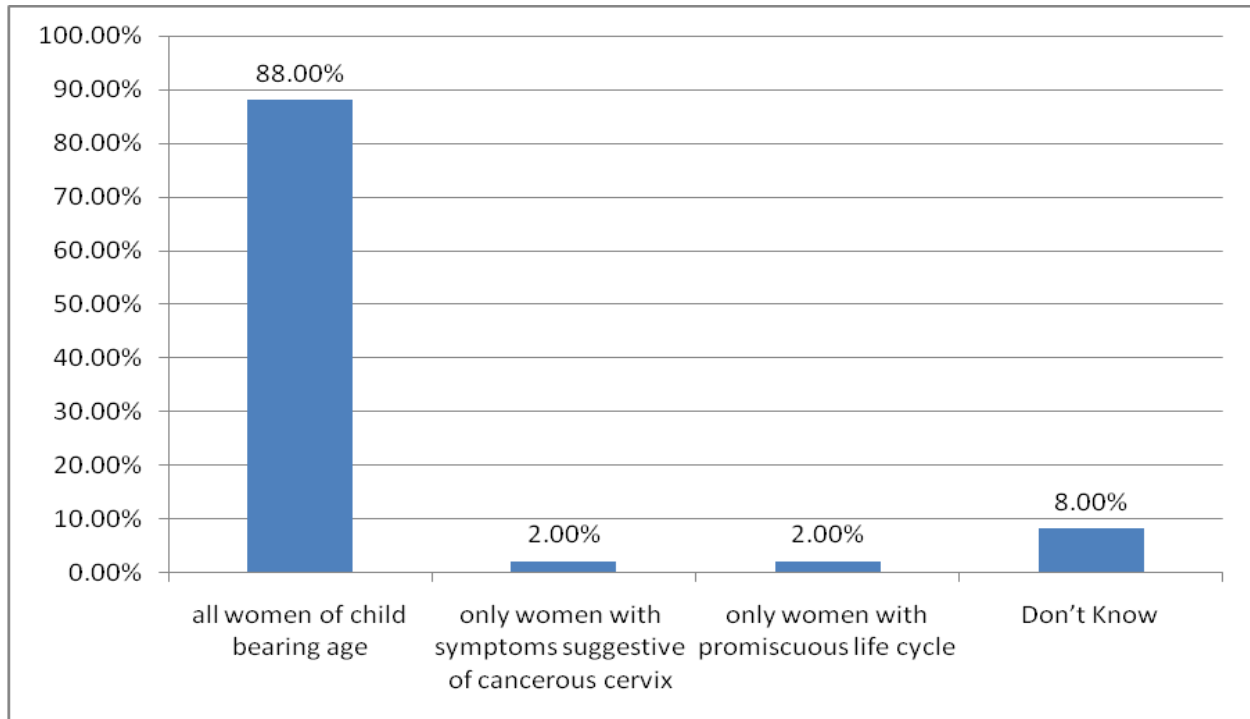
As shown in figure 4.7, most of the women (88%, n=38) felt that all women of child bearing age should be screened for cervical cancer. Others suggested that only women with symptoms indicative of cancerous cervix should be screened (2%, n=1) as well that only women with promiscuous life cycle need to be screened (2%, n=1). However, 8% (n=4) of the respondents were not aware of who should be screened for cervical cancer. It is evident from the findings that, despite the number of women with knowledge on cervical cancer screening, there is poor knowledge about who is eligible for cervical cancer screening among age of reproduction women.

Table 4.7 : Level of Cervical Cancer Screening Uptake among Women of Reproductive Age

Screening uptake		Frequency (n)	Percentage (%)
Have you been screened	Yes	27	61.4
	No	17	38.6
	Total	44	100
When was the last time screening was done?	3 months ago	5	18.5
	six months ago	0	0.0
	1 year ago	13	48.1
	3 years ago	7	25.9
	Over 5 years ago	2	7.4
	Total	27	100
What made you go for screening?	Friend/Family encouraged me	1	3.7
	Health care providers suggested	4	14.8
	Community health workers encouraged me	5	18.5
	The services were free of charge	8	29.6
	Need to clear doubt	4	14.8
	Had symptoms that made me want to screen	1	3.7
	Awareness that if found early it is treatable	4	14.8
	Total	27	100

Findings also revealed that 61.4% (n=27) of the women who participated in the research had been screened for cancer of the cervix. A significant number of the women (38.6%) had however never been screened in the past. Among those who had been screened, only 18.5% had undergone the screening for less than five months as at the time of study. 48.1% had undergone screening for a year before the time of study. This could be as a result of the recent campaign that the facilities have been undertaking as regards the service. The findings also indicated that 25.9% had been screened 3 years before the study. 7.4% of these also had been screened five years before the period of study. Consequently, the study results revealed that the uptake of the screening services among age of reproduction women is not adequate despite their response that majority had been screened. This is evidenced by the findings that only 18.5% had been screened within a span of less than a year prior to the study period whereas majority had the screening services previously for a period of more than a year prior to the study period.

The respondents were further asked on their decision (what contributed to their decision) to undertake the screening services. The findings revealed that, of the 61.4% (N=27) most of the women were encouraged to take up the test since the services were offered free of charge (29.6%). 18.5% (n=8) reported that they were encouraged by the community health workers, 14.8% (n=6) went for the services since it was suggested by the health care providers, they needed to clear doubts as well that they had the awareness that if found early it can be treated. Others were encouraged by their family and friends (3.7%, n=1) as well as those who had symptoms that made them look for the services (3.7%, n=1).

Thus, according to the findings, the socio-economic status of the women as well as their awareness of the services and the perceived importance of the services influenced their uptake of the screening services. The fact that the services were not paid for attracted a majority of women to undertake the screening services. Women would always tend to prioritize other financial and social responsibilities related to their families, other than their health resulting to self-neglect due to economic challenges. Cost as a blockade to health need to be tackled to promote prompt health seeking behavior.

The Ministry of Health focus is aimed at achieving at least 70% coverage among age of reproduction women. Going by the result findings only 61.1% of women in the age cluster with the uppermost risk-benefit proportion had been screened at the time of the research. For this target to be achieved programs and the Ministry of Health should endeavor to involve communities to build awareness and support.

Table 4.8: Hindrances to the Women's Uptake of the Screening Services (N=44)

Hindrances to the Women's Uptake of the Screening Services	Frequency (n)	Percentage (%)
Costly	2	4.5
Not know where to be screened	10	22.7
No time	6	13.6
I am healthy	3	6.8
It is painful	17	38.6
Fear of a positive outcome	23	52.3
Fear of exam process	9	20.5
Not allowed by religion	2	4.5
Not suggested by health care workers	1	2.3
Attitude of health worker	3	6.8
Lack of convenient clinic time	1	2.3
It is embarrassing	4	9.1

Findings as shown in table 4.8 revealed some reasons why women forfeit screening services. According to the findings, 52.3% (n=23) of the women do not have courage to undergo the screening tests due to the fear of positive outcomes that one might be diagnosed with cancer. Another proportion (38.6%, n=17) of the women have the perception that cervical cancer screening is a painful process that would hurt them making them uncomfortable to undertake the screening test. A number of women 22.7% (n =10) have no awareness of where to be screened. This indicates that the women need to be informed of the screening services and the availability of the services in their areas as some women of reproductive age lack the awareness of whether the services exists and are open to all the women at no cost.

It is also evident that some women have the fear of examination process (20.5%, n=9) due to some perception and altitude on the screening test services. Others (14.3%, n =6) do not value the screening test services as of importance hence could not create time to attend the screening from the nearby service center whereas others think that it is an embarrassing process (9.1%, n=4). The health workers' attitude had some influence on the women's intent to undertake the screening services (6.8%, n=3). Thus, the friendliness of the service providers determines the extent of uptake and the women's ability to seek the services.

Also as table 4.8 indicates, some women had the perception that they were healthy and did not deserve to be screened (7.1%, n=3). This affected their uptake levels regardless of their lack of knowledge of their health status. It is also clear from the findings that the women's religion affected their level of uptake of the cervical cancer screening services. This, religious matters where women were not allowed by their religion to undertake the screening test had influenced 4.5% (n=2) of the women who took part in the study who were unable to undertake the services despite of the services availability in their reach. The women's perceived that the screening testing should be as a suggestion from the health workers (2.3%, n=1) hence did not see the need for them to seek for the services as they had never been unwell or detected some cancerous infection. As well, some women had tightly schedules hence they lacked convenient clinic time that they could visit the health facility for the screening (2.3%, n=1).

These results suggest that there were specific gaps in knowledge about the procedure for cervical cancer screening that need to be addressed to overcome the barriers to access. This is especially important since a majority of the respondents mentioned fear of exam, painful procedure and fear of positive as the major hindrances. With proper education on cervical cancer, studies have shown good utilization of the screening and treatment services for cervical cancer. Meaning that it is possible for such challenges to be overcome where mass awareness campaign coupled with accessibility of service is availed.

It is crucial for programs to understand who is presently utilizing the amenities that are offered, and find out the factors preventing those who do not seek care from seeking.

Table 4.9 : Women's Knowledge on the Transmission of Cervical Cancer

Transmission of Cervical Cancer		Frequency (n)	Percentage (%)
Is cervical cancer transmittable?	Yes	18	40.9
	No	13	29.5
	Do not Know	13	29.5
	Total	44	100.0
How is it transmitted?	Sexually transmitted	17	94.4
	Through contact with the sick	1	5.6
	Total	18	100.0

According to the response given, 40.9% (n=18) of the respondents reported that cervical cancer is transmittable. 29.5% (n=13) were for the view that cervical cancer cannot be transmitted whereas 29.5% (n=13) were not aware whether the disease is transmittable or not. They were further asked to give the channels of transmission. The findings revealed that, according to the respondents, cervical cancer can be transmitted through sexual intercourse as reported by 94.4% (n=17) of the respondents who felt that the disease is transmittable whereas 5.6% (n=1) of these reported that the disease can be transmitted through contact with the sick.

Figure 4.8: Health system well equipped to treat and diagnose cervical cancer (N=44)
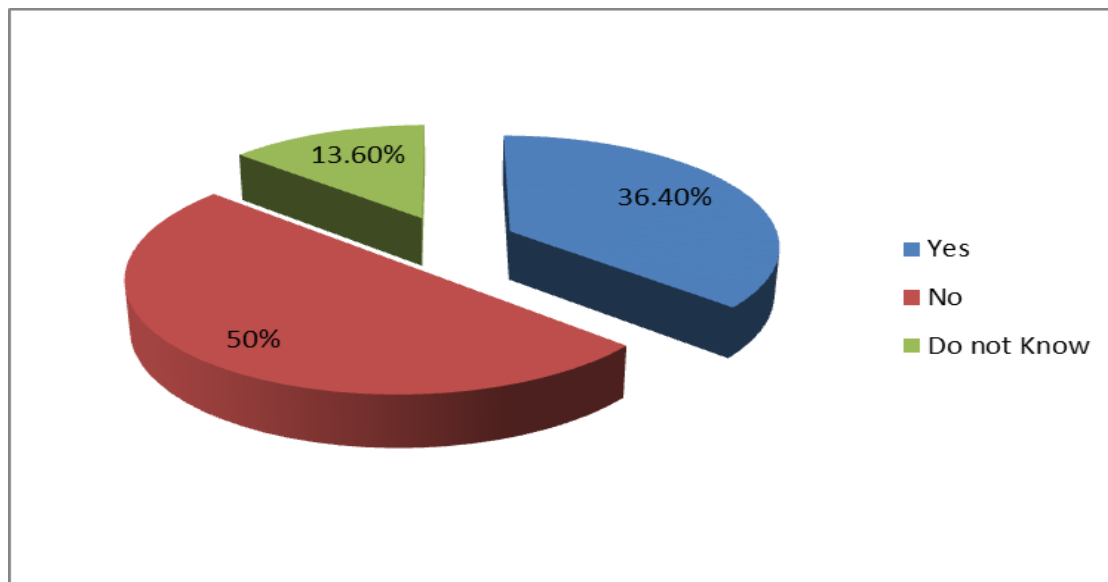
As shown in the figure, 36.4% (n=16) of the respondents felt that the health systems are well equipped for diagnosis and cancer treatment. However, most of the respondents (50%, n=22) disagreed to this indicating that the health system is not equipped whereas 13.6% (n=6) were unaware of the status in the health system. Asked of what is missing in the health system, 20.5% of the respondents reported the lack of adequate personnel whereas 31.8% reported the lack of equipment for screening.

From the findings, there is need for health facilities to be improved to guarantee quality service to those seeking care.

Table 4.10 : Cervical Cancer diagnosis and treatment

Cervical Cancer diagnosis and treatment		Frequency (n)	Percentage (%)
Do you know someone diagnosed with cervical cancer	Yes	19	43.2
	No	22	50.0
	Do not Know	3	6.8
	Total	44	100.0
Were they able to get treatment?	Yes	7	36.8
	No	12	63.2
	Total	19	100.0

From the table, 43.2% (n=19) of the respondents reported some cases of some individuals who had been diagnosed with cervical cancer. Of these, only 36.8% (N=7) were able to get treatment while the rest 63.2% (N=12) did not get treated.

From the findings, ability of individuals to judge when care should be sought and knowledge of what care is available and its potential benefits may be incomplete or totally unknown. That could have informed the high percentage (63.2%) of those reported to not have got the required treatment. A single based approach that requires treatment same when screening test suggests need for treatment should be applied by health providers and programs to avoid missed opportunities.

Table 4.11 : Reasons for the Women's Non-Uptake of the Cervical Cancer treatment (N=12)

Reasons for not accessing treatment		Frequency (n)	Percentage (%)
Late diagnosis	Yes	4	33.3
	No	8	66.7
Did not follow up treatment	Yes	1	11.8
	No	11	88.2
Did not have money for treatment	Yes	5	47.1
	No	7	52.9
Do not Know	Yes	2	17.6
	No	10	82.4
Other	Yes	1	5.9
	No	11	94.1
	No	11	94.1

According to the study findings in table 4.10, the reason as to why they were not treated according to the respondents was late diagnosis (33.3%, n=4), lack of money for treatment (47.1%, n= 5) as well as failure to follow up on treatment (11.8%, n=1).

From the findings above the following can be deduced: The poor are at a bigger risk of being diagnosed and treated for cancer at late stages of disease and are less likely to subsist a diagnosis of cancer. This is because cost burdens of health care may discourage or holdup healthcare use or encourage 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 load of cancer, counting health care expenditures, output loss, and morbidity for patients and their families, are increasingly important issues for health care policy makers, health care systems, health providers and the society overall. To address timely access to treatment services a multiple factors need to be looked into and not just cost, even though it was suggested as the biggest barrier.

Table 4.12: Treatment Options for Cervical Cancer Patients (N=7)

Treatment Options		Frequency (n)	Percentage (%)
Modern treatment	Yes	5	78.3
	No	2	21.7
Traditional treatment	Yes	2	28.6
	No	5	71.4
Prayers	Yes	1	13
	No	6	87
Do not know	Yes	1	13

With regard to other treatment options, most of the respondents reported that the affected had tried modern treatment options (78.3%, n=5). 28.6% (n= 2) reported that the patients used traditional treatment whereas 13% (n = 1) reported that the patients used prayers as alternative methods of treatment.

4.6 Discussion of Findings

The study established that the knowledge on the cervical cancer among women of reproductive age is high which stood at 97.7%. The main source of information regarding the cervical cancer was from the health facilities, family and friends, community health workers, radio and television and other printed materials. The findings were however contrary to the findings of Anorlu et al., (2004) in Lagos-Nigeria which revealed that 81.7% of 139 patients with advanced cervical cancer had never heard of cervical cancer before, and 20%, 30% and 10% respectively thought the symptoms they had were due to resumption of menses, lower genital infection and irregular menses. The high levels of knowledge as reported could be associated with the campaigns that were undertaken at the community by the health facilities. This should inform the health authorities on the need for supporting similar initiatives in health facilities and community to improve awareness.

Intensive Education and Communication by health providers to women and persons visiting the facilities for care should be upheld and therefore, need for health providers to be equipped with the right information. Other strategies should also not be ignored and programs should promote their use since they were found to be a source of information though to a smaller percentage of the respondents.

Cervical cancer cases that were reported were diagnosed majorly through hospital screening while others were able to learn through suggestive symptoms. However, majority of the women were found to be unaware of the signs and symptoms of cervical cancer. Those who were found to have some knowledge on the signs reported persistent vaginal discharge, discomfort or pain during sex, persistent lower back pain, vaginal bleeding between periods, as well as vaginal bleeding after the menopause. The results suggest a glaring gap in knowledge about cervical cancer risk factors, signs and symptoms. This was found to be poor despite the majority of the women having heard about the disease. Programs and health authorities should include information on risk factors, sign and symptoms of cervical cancer in their behavior awareness campaigns.

On the causes, 38.6% of the women were unaware of the causes of the cervical cancer. 43.2% of the women who participated in the study reported the major cause of cervical cancer as having multiple sexual partners. Other causes reported included long term use of contraceptive pill as well as absence of regular screening. These findings were in line with the findings of Gillet et al. (2012) which illustrated that symptoms of cervical cancer mimic infections like vaginitis and pelvic inflammatory disease. Cancer of the cervix is associated with Human papilloma virus which can be transmitted sexually. Risk factors to Human Papilloma Virus (HPV) infection include the number of sexual partners, the sexual partner's number of previous sexual partners, immune system status and partner's circumcision status. From the findings above, a majority seem to be knowledgeable of multiple partners as a risk factor, however, it is also evident that there are cases with inadequate knowledge of the basic symptoms of cancer of the cervix hence need for intensified education by health providers and programs to make a deliberate effort to educate the populace on the risk factors associated with cervical cancer.

Findings on the women reported to be knowledgeable of cervical cancer screening test report the health facilities as the major source of knowledge, others include sources that were mentioned include community health workers, television/radio, family friends and neighbors, and Printed materials. 90.9% (n=40) of the women reported that cancer can be diagnosed through screening whereas 9.1% (n=4) believed that it cannot be diagnosed. Further, 93.2% (n=41) were aware that cervical cancer can be treated if detected early where 81.8% of the women were aware of the places where they could access cancer screening services in Kibera. There was a general lack of knowledge among women on the recommended frequency within which adult women should undergo checkup for cervical cancer. Most abnormal changes and early cancers are found in women who have regular screening; most advanced cancers of the cervix are found in women who have not had routine screening that is why it is important to have routine screening. This makes the need for awareness regarding regular screening all the more important.

The success of efforts to reduce deaths due to cervical cancer would be influenced by women's health care practices, including adoption of preventive measures and utilization of regular screening services (WHO, 2006).

From the response, it is clear that health facilities played a significant role. This could be associated with the campaigns that were undertaken at the community by the health facilities. This should inform the authority on the need for supporting similar initiatives in health facilities at the community level to improve awareness.

Endeavor to decrease prevalence, death and illness related to cancer of cervix, would require putting focus on improving the health system to enable delivery of preventive care, promote examination of cervix for timely and effective care early advanced cancer. Health facilities especially at the lower tier of service provision should be given priority by programs these being the first contact of care for majority of women. With regard to the attitude and practices, majority of the women were found to be willing to regularly consult a health care provider for screening of cervical cancer. 88.4% (n= 39) of the women also felt that all women of child bearing age should be screened for cervical cancer. However, others suggested that only women with symptoms suggestive of cancerous cervix should be screened as well that only women with promiscuous life cycle need to be screened. A number of the women in the study had not been screened. However, 61.4% (n= 27) of the women had been screened for cervical cancer where only 18.5% (n= 8) had undergone the screening for less than five months prior to the time of study, 48.1% (n= 21) had undergone screening for a year before the time of study whereas 25.9% (n=11) had been screened for 3 years prior to the study. 7.4% (n=3) of these also had been screened five years prior to the period of study. The reason as to why the women went for the services that, most of the women were encouraged since the services were offered free of charge, others were encouraged by the community health workers, 14.8% (n = 7) went for the services since it was suggested by the health care providers, they needed to clear doubts. Others were encouraged by their family and friends whereas others had symptoms that made them look for the services as well that they had the awareness that if found early it can be treated. This resonates with a study in Tanzania which suggested that 79.2% of study participants agreed that cervical cancer screening can prevent cervical cancer (John J, 2011) and also on similar study in Kenya 87% of respondents agreed (Gichangi, et al, 2003).

From the results, having good attitude is mostly followed by having knowledge about the cervical cancer and screening. Those who have heard about cervical cancer and screening have positive attitude about cervical screening than those who have not heard about it (Terefe, 2008). Given that a high percentage of respondents that had accessed screening prior to the study, suggests that a majority were knowledgeable of cervical cancer hence contributing to the uptake.

Access for screening was influenced by among others that the services were free, encouragement by healthcare providers and believe that if identified early it can be treated. The socio-economic status as well as awareness of the services and the perceived importance of the services influence uptake of the screening services. Cost as a barrier to health need to be addressed to promote prompt health seeking behavior.

The study established the major reason as to why women do not attend the screening services as the fear of positive outcomes that one might be diagnosed with cancer. Other reasons were that some women think that it is a painful process, lack of awareness of where to be screened, fear of examination process, lack of time to go for screening, having the thought that it is an embarrassing process, attitude of health workers, the feeling that one is healthy and did not deserve to be screened as well as some religious matters where some women were not allowed by their religion while others believe that it should be suggested by health workers. These also supported the findings of Mutyaba et al., (2006) where cancer screening practices in most of the respondents had never had a Pap smear. The common reason was that the patients did not know where to go for the test, followed by seeing no reason for the test, being afraid of the procedure and being afraid of bad results. With proper education on cervical cancer, studies have shown good utilization of the screening and treatment services for cervical cancer. Meaning that it is possible for such challenges to be overcome by programs through mass awareness campaign coupled with provision of service. It is also paramount for programs to establish who is currently using the facilities that are available, and what factors are preventing those who do not seek care from doing so with an aim of improving timely health-seeking behaviour.

The study results further indicated that, only 40.9% (n = 18) of the respondents reported that cervical cancer is transmittable. They therefore reported that cervical cancer can be transmitted through sexual intercourse as well as through contact with the sick. The findings are in support of

the findings of Parkin et al., (2002) in their study that established that about 60–75% of women in sub-Saharan Africa who develop cervical cancer live in rural areas where most of these go untreated, mostly due to lack of access (financial and geographical) to health care.

From the findings, more than 50% of the respondents did not know that cervical cancer is transmissible. Cancer of the cervix is associated with Human papilloma virus which can be transmitted sexually. From the findings, it is also evident that there is inadequate knowledge of the basic symptoms of cancer of the cervix hence need for intensified education by health providers and programs to make a deliberate effort to educate the populace on the risk factors associated with cervical cancer. This finding seem to in tandem with study done in Ethiopia, a community based study done in Gonder by Getahun et al., (2013), 47% of its participants did not know about the risk factors of cervical cancer, 39.6% did not know about the symptoms, 36.1% did not know the preventive measures, 33.9% did not know treatment options and 63.9% know it can be prevented. (Getahun, et al, 2013).

On the health system status, most of the women felt that the health system is not well equipped for treatment of cervical cancer. This was attributed to the fact that there is lack of adequate personnel to offer the services as well as lack of equipment for screening. With some cases reported of cervical cancer, only 31.6% (n= 14) of these were able to get treatment. The reason as to why these were not treated were found to include; late diagnosis, lack of money for treatment as well as failure to follow up on treatment. Other options that were sought for treatment were modern treatment options, traditional treatment and prayers.

The success of cervical screening programs is pegged on available trained health personnel as well as improved infrastructure (facilities, equipment, and supplies) within health facilities to enable them to carry out screening and treatment services. Trained staffs ensure service availability at the required time hence would promote early diagnosis and early treatment.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The chapter presents a summary of the study results as discussed in chapter four, conclusions that were done in line with the results as well as the recommendations that the investigator made with regard to the study results. The chapter also presents the recommendations that were made for further areas of research.

5.2 Summary of the Findings

The study was undertaken with an aim of determining the awareness, attitude, practice and the perceived hindrances uptake of screening for cancer of cervix amongst women of ages 18-49 years seeking healthcare services in primary health facilities in Kibera. It included interviewing 44 women under the ages described who gave response to the study. Findings were therefore summarized as follows;

5.2.1 Knowledge on cervical cancer and screening services

On the level of awareness/women's knowledge on cervical cancer as well as screening services, the study findings revealed that, most women (97.7%, n=43) had ever heard and were aware of the cancer of cervix disease whereas only 2.3% (n=1) were unaware. Findings also revealed that health facilities were the main basis of knowledge on the cervical cancer followed by family and friends, community health workers, radio and television and other printed materials. The result were dissimilar with that of Anorlu et al. (2004) whose research found low levels of awareness among women visiting healthcare facilities. The findings were also inconsistence to research done in Tanzania and Kenya by Gichangi et al., (2003) and Kidanto et al., (2002) respectively where the findings also illustrated low awareness of cervical cancer and screening services among women. This may be attributed to the fact the facilities have played a critical role in sensitization at the facility and community level.

Cervical cancer cases that were reported were diagnosed majorly through hospital screening while others were able to learn through suggestive symptoms. However, majority of the respondents were established not to know the symptoms and signs of cancer of cervix. Comprehension on signs and indications of cancer of cervix was found to be low in this study with up to 56% (n=25) of the respondents not familiar with indications and signs of cancer of cervix. This agrees with a research done by Ajayi et al., (1998) that found lower rates of awareness of symptoms and signs associated with cancer of cervix amongst the interviewed. Those found to have some knowledge on the signs reported persistent vaginal discharge, discomfort or pain during sex, persistent lower back pain, vaginal bleeding between periods, as well as vaginal bleeding after the menopause. Symptoms and signs are not reliable in the prevention of a given disease. By time the signs set on the disease will have spread. On the causes, 38.6% (n= 17) of the respondents that were unaware of the causes of the cancer of cervix. 43.2% (n=19) of the women who participated in the research reported the major cause of cancer of cervix as having multiple sexual partners. Other causes reported included long term use of contraceptive pill as well as absence of regular screening.

Findings as well established that all women in the study were knowledge of cancer of cervix screening/test. The knowledge was majorly from the health facilities, community health workers, television/radio, family friends and neighbors, and Printed materials. 90.9% (n= 40) of the women reported that cancer can be diagnosed through screening whereas 9.1% (n=4) believed that it cannot be diagnosed.   This is in line with a research in South Africa by Hoque (2010) where close to half 49 percent of the interviewed stated to have ever heard of screening test. And from the rest 51% close to half of the interviewed (43%) got information on screening test majorly from health providers. With good assistance and regular health education on cancer of the cervix screening when clients are with health care providers, inspection for cancer of cervix need to be enhanced.

Findings further illustrated that 93.2% of the respondents who took part in the research were knowledgeable that cancer of cervix is treatable when diagnose early. From the findings, it is evident that among the women who participated, 81.8% were aware of the health facilities where they could access cancer screening services in Kibera. However, there was a general lack of

knowledge among women on the recommended frequency within which adult women should undergo checkup for cervical cancer. This resonates with a study conducted by John (2011) in Tanzania which suggested that 79.2% of study participants were agreeable to the fact that routine cervical cancer screening can prevent cervical cancer which was also the case in a similar study in Kenya where 87% of respondents were in agreement (Gichangi, et al., 2003).

5.2.2 Attitude and practices

With regard to the attitude and practices, majority of the women were found to be willing to seek frequent advice of health professional as regards cancer of cervix screening. From the findings, 88.4% of the women understood that women in the age should be screened for cancer of cervix. However, others perceived women who have signs symptoms that suggest one to have cancerous cervix should be the ones to be screened as well that only women with promiscuous life cycle need to be screened. Due to this, a number of the women in the research had not been inspected though 61.4% had undergone screening for cancer of cervix. However, only 18.5% of the respondent who took part in the research had undergone the screening for less than five months prior to the time of study, 48.1% had undergone screening for a year before the time of study whereas 25.9% had been screened for 3 years prior to the study. 7.4% of the women also had been screened five years prior to the period of study. Most of the women were encouraged to seek the services since they were offered free of charge. This result agrees with investigation by Singh, et al., (2012) that suggested economic challenges as a major barrier to access to care. As well, women tend to prioritize other financial and social responsibilities related to their families, other than their health resulting to self-neglect. Others sought the service since they were encouraged by the community health workers, 14.8% went for the services since it was suggested by the health care providers, they needed to clear doubts as well that they had the awareness that if found early it can be treated. Others were encouraged by their family and friends whereas others had symptoms that made them look for the services.

These study results appear to be in agreement with other studies conducted in rural India by Terefe (2008) which showed that 84.6% of the respondents were willing to undergo cervical screening test as they felt it would benefit them in the long run and 62.5% were willing to be screened. Having good attitude is mostly followed by being knowledgeable on the subject about

67

the cancer of cervix as well as on screening. Those who have heard of cancer of cervix and screening have good attitude of cervical screening than those who have not heard about it. And having belief that was positive was greatly associated with participation in screening for cancer of cervix (McFarland, 2003). Another study in Tanzania suggested that 79.2% of study participants agree that cervical cancer screening can prevent cervical cancer (John, 2011).

5.2.3 Barrier to screening

The study established the major reason as to why women do not attend the screening services as the fear of positive outcomes that one might be diagnosed with cancer. Other reasons were that some women think that it is a painful process, lack of awareness of where to be screened, fear of examination process, lack of time to go for screening, having the thought that it is an embarrassing process, attitude of health workers, the feeling that one is healthy and did not deserve to be screened as well as some religious matters where some women were not allowed by their religion while others believe that it should be suggested by health workers. The barriers to screening reported have been found to be similar with those mentioned in studies conducted in Tanzania by Urasa and Darj (2009) and that in Uganda by Mutyaba et al., (2006) as well as in a research done in Nigeria by Ndikom and Ofi (2012) which showed the main aspects mentioned by the respondents that affect participation examination of the cervix were lack of understanding, low levels of literacy, not feeling to be at risk, negative attitude towards own health and lack of finance and being afraid of a positive screening result are among main barriers to service utilization. Further studies and consistent with this findings also show not having time, commitments of work, taking care of children, fear of a positive result, partners not consenting and financial constraints are other barriers mentioned in the research (Lyimo & Beran; Were et al, 2011; Sudenga et al, 2013; Augusto et al, 2013).

The study results further indicated that, only 40.9% (n= 18) of the respondents reported that cervical cancer is transmittable. They therefore reported that cervical cancer can be transmitted through sexual intercourse as well as through contact with the sick.

On the health system status, most of the women felt that the health system is not well equipped for management of cancer of cervix. This was attributed to that there is inadequate personnel to offer the services as well that there is the lack of equipment for screening. With some cases

reported of cervical cancer, only 31.6% (n= 14) of these were able to get treatment. The reason as to why these were not treated were found to include; late diagnosis, lack of money for treatment as well as failure to follow up on treatment. Other options that were sought for treatment were modern treatment options, traditional treatment and prayers. These results are affirmed by a research in Bangladesh that established lack of urgency to seek for care for signs suggestive of cancer of cervix, short staffing and inadequate health care services to be amongst barriers mentioned towards access to screening (Ansink, et al., 2008).

5.3 Conclusions

The research in accordance with the results and discussions made concludes that;

The study revealed awareness of cancer of cervix and examination of cancer of cervix among the interviewed was high but their knowledge of the symptoms and signs regarding risk factors linked with cancer of cervix was found to be low.

The health facilities and the community health workers in the community have contributed positively to dissemination of information regarding cervical cancer among the women as per the responses.

Women are willing to seek the services for screening services regardless of their level of knowledge. However, some of the women do not know the importance of undergoing screening as they have the mentality that only women showing symptoms of cancer of cervix ought to be screened. Therefore, there is a negative attitude among some of the women towards screening services.

Majority of women in Kibera have not taken up cervical cancer examination. This is so despite knowledge of the availability of the services within the health facilities. This therefore shows that the uptake of screening services for cervix cancer among women is low. Women majorly seek the services when asked to do so by the health officers as well when they doubt their health status.

The low uptake of screening services among women has been attributed to the fear of the outcomes. Other women think it is embarrassing because the screening method in place is invasive.

Not understanding that cancer of cervix progression has no symptoms, not feeling at risk and waiting for symptoms is a major barrier.

Awareness of cancer cervix, awareness of cancer of cervix screening and knowledge of mode of prevention of cancer of cervix were found to be critical in determining uptake of cancer of cervix screening among women of reproductive age.

5.4 Recommendations

Following the outcome of this research, suggestions are made as follows;

1) There is need for the Ministry of Health to enhance education on cancer of cervix at the health facilities especially lower cadre facility to promote responsiveness towards cancer of cervix and cervical cancer examination. This is because, a most of the interviewed obtained their information from the health facility.

2) For the Ministry of Health to run successful programs on cervical cancer prevention, there is need to make a deliberate effort to invest in the well trained personnel and equipment. Special emphasis be given in facilities at tier 1 and tier 2 where most clients visit for immediate care and have little knowledge of cervical cancer.

3) Awareness campaigns and education programmes to enlighten the general public about cancer of cervix to put more emphasis on signs and symptoms, ways of transmission and risk factors

4) Women as well require to be equipped with knowledge on the significance of early and regular screening. This can be attained by using multiple strategies that will reach women at their convenience such as during their visit in the health facilities, women groups and

churches. Media such as televisions and radio stations that most of the people listen to and community health volunteers would facilitate creation of awareness and encourage more women to seek for the screening services regardless of their health status.

5.5 Suggestion for Further Studies

There is need for further studies to be undertaken covering Kibera at large to study the women's use of examination services for cancer of cervix for generalization of results.

A study to understand the disconnect between low utilization of services for screening and high knowledge of cancer of cervix and screening.

REFERENCES

Ajzen, I. 1991. The theory of planned behavior. Organizational Behavior and Human Decision Processes. 50**,** 179-211.

Ajzen, I., and Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. NewJersey: Englewood Cliffs

Ajayi, O., & IF Adewole, I. (1998). Determinants of utilisation of cervical cancer screening facility in a low socio-economic setting in Nigeria. *Journal of Obstetrics and Gynaecology*, *18*(2), 154-158.

Alliance for Cancer of the cervix Prevention (ACCP) (2004). *Planning and Implementing Cancer of the cervix Prevention and Control Programs*: A Manual for Managers. Seattle: ACCP; 2004

Anorlu, R., Imosemi, D., Odunukwe, N., Abudu, O., & Otuonye, M. (2004). Prevalence of HIV among women with vaginal discharge in a gynecological clinic. *Journal of the National Medical Association*, *96*(3): 367.

Ansink AC, Tolhurst R, Haque R, Saha S, Datta S. (2008). Cervical cancer in Bangladesh: community perceptions of cervical cancer and cervical cancer screening. *Transactions of the Royal Society of Tropical Medicine and Hygiene 102.5*: 499-505.

Armitage, C.J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. British Journal of Social Psychology, 40, 471–499.

Augusto, E. F., Rosa, M. L., Cavalcanti, S. M., & Oliveira, L. H. (2013). Barriers to cervical cancer screening in women attending the Family Medical Program in Niteroi, Rio de Janeiro. *Archives of gynecology and obstetrics*, *287*(1), 53-58.

Auvert, B., Sobngwi-Tambekou, J., Cutler, E., Nieuwoudt, M., Lissouba, P., Puren, A., & Taljaard, D. (2009). Effect of male circumcision on the prevalence of high-risk human papillomavirus in young men: results of a randomized controlled trial conducted in Orange Farm, South Africa. *Journal of Infectious Diseases*, *199*(1), 14-19.

Bayo, S., Bosch, F. X., de Sanjosé, S., Muñoz, N., Combita, A. L., Coursaget, P., & Meijer, C. J. (2002). Risk factors of invasive cervical cancer in Mali. *International journal of epidemiology*, *31*(1), 202-209.

Becker, M.H. (1976). *Health belief model*, 2nd edition. Mayfield Publishers: New York:

Becker, S. A., Affonso, D. D., & Beard, M. B. H. (2006). Talking circles: Northern Plains tribes American Indian women's views of cancer as a health issue. *Public Health Nursing*, *23*(1), 27-36.

Bener, A., Alwash, R., Miller, C. J., Denic, S., & Dunn, E. V. (2001). Knowledge, attitudes, and practices related to breast cancer screening: a survey of Arabic women. *Journal of Cancer Education*, *16*(4), 215-220.

Birhanu, Z., Abdissa, A., Belachew, T., Deribew, A., Segni, H., Tsu, V., & Russell, F. M. (2012). Health seeking behavior for cervical cancer in Ethiopia: a qualitative study. *International journal for Equity in health*, *11*(1), 83.

Blomberg, K., Ternestedt, B. M., Tornberg, S. & Tishelman, C. 2008. How do women who choose not to participate in population-based cervical cancer screening reason about their decision? *Psychooncology,* 17**,** 561-9.

Bosch, F.X, Munoz, N, Moreo, P, Ascunce, N & Gongalez, L. C. (2006). *Risk factors for cervical cancer, Oxford textbook of risk factors of diseases*, 2nd edition, New York: Oxford University Press.

Bosch, F.X. (2007). *The epidemiology of human papillomavirus infection and cervical cancer*. Mali; Pub Med Publisher.

Buga, G. A. (1998). Cervical cancer awareness and risk factors among female university students. *East African medical journal*, *75*(7), 411-416.

Burak LJ, Meyer M. (1997). Using the Health Belief Model to examine and predict college

Centers for Disease Control and Prevention. (1993). Revised classification system for HIV-1 infection and expanded surveillance case definition for AIDS among adolescents and adults. *PubMed, JAMA, 269:*729-730.

Central Statistics Office (2007). *Zambia Census of Population and Housing*. Lusaka, Zambia. Government printer

Central Statistics Office, Ministry of Health & Measure DHS (2008). *Zambia Demographic and Health Survey 2007:* Preliminary Report working internal draft, Macro International Calverton, Maryland, USA.

Central Statistics Office. (2007). *Zambia Living conditions monitoring survey.* Lusaka, Zambia. Government printer.

Centre for Infectious Disease Research in Zambia (CIDRZ) (2004).

Cervical Cancer Prevention Program of Zambia (CCPPZ). (2004).

Chavers, L. S., & Vermund, S. H. (2007). An introduction to emerging and reemerging infectious diseases. *Emerging infectious diseases: trends and issues, 2nd edn. Springer Publishing Company, New York*, 3-24.

Cheek, J. (2008). Women and Pap smear. *British Medical Journal, 7(1):*2-14.

Cheek, J. Joseph, C.D & Korn, A. (2008). Women and Pap smear: Issues in Promotion. *Journal of Pain and Symptom Management, 18*, 77-80,

Chirenje, Z. M., Rusakaniko, S., Kirumbi, L., Ngwalle, E. W., Makuta-Tlebere, P., Kaggwa, S, & Makoae, L. (2001). Situation analysis for cervical cancer diagnosis and treatment in east, central and southern African countries. *Bulletin of the World Health Organization*, *79*(2), 127-132.

Clarke, H.F, Joseph, R, Deschamps, M, Hislop, G, Band, P.R & Atleo, R.. (1998). "*Reducing cervical cancer among first nations women"* McGraw-Hill, New York

Cooper, D. R., & Schindler, P.S (2003). *Business research methods (8th ed.).* New delhi: Tata McGraw-Hill Publishing Company Limited.

Cooke, R., & French, D.P. (2008). How well do the theory of reasoned action and theory of planned behaviour predict intentions and attendance at screening programmes? A metaanalysis. Psychology and Health, 23, 745–765.

Coursaget, G. Marten, V. (1997) Knowledge on cancer of the cervix, Medical Publishers (P) Ltd, New Delhi decision making. *Gender Newsletter, July-September, 2006: 1(1):* 22.

Day, S., Dort, P. V. & Tay-teo, K. 2010. Improving participation in cancer screening programs: A review of social cognitive models, factors affecting participation, and strategies to improve participation. Australia, Melbourne

Dhamija, S, Sehgal, A, Luthra, K.U, & Sehagal, K. (1993). *Knowledge, attitude, and practice of cervical cancer,* New Delhi. India.

Drain, P. K., Halperin, D. T., Hughes, J. P., Klausner, J. D., & Bailey, R. C. (2006). Male circumcision, religion, and infectious diseases: an ecologic analysis of 118 developing countries. *BMC infectious diseases*, *6*(1), 1.

Elizabeth, M & Martin, A. (2005). Quality of health care, Macro International Calverton, Maryland, *USA Epidemiology: 5* (4). Viewed http://www.doh.gov.29.docs/research/vol5 4cancers.html.

Ezem, B. U. (2004). Awareness and uptake of cervical cancer screening in Owerri, South-Eastern Nigeria. *Annals of African Medicine*, *6*(3), 94.

Eze, J. N., Umeora, O. U., Obuna, J. A., Egwuatu, V. E., & Ejikeme, B. N. (2012). Cervical cancer awareness and cervical screening uptake at the Mater Misericordiae Hospital, Afikpo, Southeast Nigeria. *Annals of African medicine*, *11*(4), 238.

Fasano, A., Berti, I., Gerarduzzi, T., Not, T., Colletti, R. B., Drago, S., ... & Horvath, K. (2003). Prevalence of celiac disease in at-risk and not-at-risk groups in the United States: a large multicenter study. *Archives of internal medicine*, *163*(3), 286-292.

Ferlay, J, Bray, F, Pisani, P & Parkin, D.M. (2004). GLOBOCAN 2002 cancer incidence.

Fink, A. (2006). *How to conduct surveys: A step by step guide* (3rd ed.). California: Sage publications, Inc.

Fram, K, Lam, B. S., & Stephen, J. (2003). *Cancer screening;* Calverton Macro International.

Gay, L.R., & Airasian, P.W.(2003). *Educational research: Competencies for analysis and application* (8th ed.) Upper Saddle River, New Jersey: Prentice-Hall.

Getahun, F., Mazengia, F., Abuhay, M., & Birhanu, Z. (2013). Comprehensive knowledge about cervical cancer is low among women in Northwest Ethiopia. *BMC cancer*, *13*(1), 1.

Gichangi, P., Estambale, B., Bwayo, J., Rogo, K., Ojwang, S., Opiyo, A., & Temmerman, M. (2003). Knowledge and practice about cervical cancer and Pap smear testing among patients at Kenyatta National Hospital, Nairobi, Kenya. *International Journal of Gynecological Cancer*, *13*(6), 827-833.

Getachew T; (2004). *A study of knowledge, attitude and practice of screening procedure for carcinoma of the cervix among nurses in Addis Ababa*; unpublished.

Gillet, E., Meys, J. F., Verstraelen, H., Verhelst, R., De Sutter, P., Temmerman, M., & Broeck, D. V. (2012). Association between bacterial vaginosis and cervical intraepithelial neoplasia: systematic review and meta-analysis. *PloS one*, *7*(10), e45201.

GLOBOCAN: Cancer incidence and mortality worldwide database. Lyon. France:

Government of Kenya (2010). *Draft National Cancer Control Strategy 2010- 2015*. Nairobi; Government press.

Goldsbrough, E. & Cheelo, C. (2007). *Overview of Women's work and Employment to knowledge and use of Cancer Screening examinations*. Washington Blackwell Scientific Publications.

Gu C, Chan CW, Twinn S, Choi KC (2010). The influence of knowledge and perception of the risk of cervical cancer on screening behavior in main land Chinese women. Psycho-oncology. 21(12):1299-308

Gustafsson, S. Tram, F.K. & Lam, B.S. (1997) *Cancer Screening*. London: Sage Publications

Hay, J. L., Buckley, T. R. & Ostroff, J. S. 2005. The role of cancer worry in cancerscreening: a theoretical and empirical review of the literature. *Psychooncology,* 14**,** 517-34.

He, Y., Rajantie, I., Pajusola, K., Jeltsch, M., Holopainen, T., Yla-Herttuala, S. & Alitalo, K. (2005). Vascular endothelial cell growth factor receptor 3–mediated activation of lymphatic endothelium is crucial for tumor cell entry and spread via lymphatic vessels. *Cancer Research*, *65*(11), 4739-4746.

Hellen, I. Biswas, L. & Chang, D.Y. (1992). How Sources of Health Information relate Household Economy Analysis baseline assessment in the informal settlement of Kibera.

Hoque, M. E. (2010). Cervical cancer awareness and preventive behaviour among female university students in South Africa. *Asian Pac J Cancer Prev*, *11*(1), 127-30.

Hoque, M., Hoque, E., & Kader, S. B. (2008). Evaluation of cervical cancer screening program at a rural community of South Africa. *East African Journal of Public Health*, *5*(2).

Hubbar, D, Muffin, F.G & Poltan, J. (2006). *Sources of information about abnormal Pap test in Preliminary Report working internal draft*, Calverton: Macro International. Lusaka, Zambia.

Iliyasu, Z., Abubakar, I. S., Aliyu, M. H., & Galadanci, H. S. (2010). Cervical cancer risk perception and predictors of human papilloma virus vaccine acceptance among female university students in northern Nigeria. *Journal of Obstetrics & Gynaecology*, *30*(8), 857-862.

International Agency for Research on Cancer Press, (2004). Mortality and prevalence worldwide. No. 5 version 2.0. IARC, Lyon.

James, F. (2009). Cervical cancer awareness and uptake of pap-smear services among women above 18 years of age. *Medical Journal of Zambia*, *40*(1), 19-23.

Jo W, Bartosze M, Marlow L, Wardel J. (2009). Barriers to cervical cancer screening attendance in England: a population-based survey. *Journal of Medical Screening. 16:*199-204.

John, J. (2011). *The knowledge, Attitude, Practice and Perceived Barriers Towards Screening for Premalignant Cervical Lesions Among Women Aged 18years and Above, in Songea Urban, Ruvuma* (Doctoral dissertation, Muhimbili University of Health and Allied Sciences).

Kasule, J, Coulson, R, & Akino, V. (2001). Cancer of the cervix in Zimbabwe: a prospective clinic-epidemiological study of 211 patients. *Obstetrics and Gynaecology of East and Central Africa*, 8: 61-64.

Kenya cancer registry (2006). *Cancer incidence report*, Nairobi.

Kidanto, H. L., Kilewo, C. D., & Moshiro, C. (2002). Cancer of the cervix: knowledge and attitudes of female patients admitted at Muhimbili National Hospital, Dar-es-Salaam. *East African medical journal*, *79*(9), 467-475.

Kothari, C.R. (2004). *Research methodology: Methods & techniques* (2nd ed.). Delhi, India: New Age International Publishers.

Kumar, N. (2005). *Research Methodology. A step by step guide for beginners* (2nd ed.) London: SAGE Publications.

La Ruche, G., You, B., Mensah-Ado, I., Bergeron, C., Montcho, C., Ramon, R., ... & Orth, G. (1998). Human papillomavirus and human immunodeficiency virus infections: relation with cervical dysplasia-neoplasia in African women. *International journal of cancer*, *76*(4), 480-486.

Lewis, R. (2004). Cervical cancer prevention: safety, acceptability, and feasibility of a single-visit approach in Accra, Ghana. *American journal of obstetrics and gynecology*, *196*(4), 407-e1.

Lim, G.C.C. (2002). Overview of cancer in Malaysia, 2002; *International Journal of Nursing studies 32 (1)*: 37-42.

Livingstone General Hospital's. (2008). Health Information Management systems records, Analytical Report Volume 11 Lusaka.

Louie, J. K., Acosta, M., Winter, K., Jean, C., Gavali, S., Schechter, R., ... & Samuel, M. C. (2009). Factors associated with death or hospitalization due to pandemic 2009 influenza A (H1N1) infection in California. *Jama*, *302*(17), 1896-1902.

Loyva, M.U & Keith, N.Y. (2006). Attitude towards cancer of the cervix screening.

Lyimo FS, Beran TN. (2012). Demographic, knowledge, attitudinal, and accessibility factors associated with uptake of cervical cancer screening among women in a rural district of Tanzania: three public policy implications. *BMC Public Health, 12*: 22.

McFarland, D. M. (2003). Cervical cancer and Pap smear screening in Botswana: knowledge and perceptions. *International Nursing Review*, *50*(3), 167-175.

McGuire, B, (1969). *Theories of communication*. London: Blackwell Publishers.

Merriman, A., & Kaur, M. (2005). Palliative care in Africa: an appraisal. *The Lancet*, *365*(9475), 1909-1911.

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

MoPHS and MoMS. (2012): National Guidelines for Prevention and Management of Cervical, Breast and Prostate Cancers.

Moodley, M., Moodley, J., & Kleinschmidt, I. (2001). Invasive cervical cancer and human immunodeficiency virus (HIV) infection: a South African perspective. *International Journal of Gynecological Cancer*, *11*(3), 194-197.

Mugenda O.M., & Mugenda A.G. (2003). *Research methods: Qualitative and Qualitative approaches*. Nairobi: ACTS Press.

Mugenda, A.G. (2008). *Social Sciences research, theory and principles. Applied research and Training Services,* Nairobi: ACTS Press

Muñoz, N., Franceschi, S., Bosetti, C., Moreno, V., Herrero, R., Smith, J. S., ... & International Agency for Research on Cancer (IARC) Multicentric Cervical Cancer Study Group. (2002). Role of parity and human papillomavirus in cervical cancer: the IARC multicentric case-control study. *The Lancet*, *359*(9312), 1093-1101.

Muri, R, Franceschi, S, Ravizza,M, Flore, S, Bini, T, Mussini, C, Fasolo, M, Liuzzi, G, Ippolito, G, D'Arminio Monforte A. (2006). Acces s to gynaecological services and Papanicolau tests. *International Journal of Nursing studies* 2006; 18 (4): 376 – 378.

Mutyaba, T., Mmiro, F. A., & Weiderpass, E. (2006). Knowledge, attitudes and practices on cervical cancer screening among the medical workers of Mulago Hospital, Uganda. *BMC medical education*, *6*(1), 13.

Najem GR, Batuman F, Smith AM. (1996). Papanicolaou test status among inner-city adolescent girls. *Am J Prev Med*, 12(6):482-486.

National Cancer Institute. (2001). importance of early treatment of cancer of the cervix, *International Journal of Nursing studies*, USA.

National gender policy (2000). *Cervical cancer screening*; CSO, Lusaka.

Ndikom, C. M., & Ofi, B. A. (2012). Awareness, perception and factors affecting utilization of cervical cancer screening services among women in Ibadan, Nigeria: a qualitative study. *Reproductive health*, *9*(1), 11.

Neuwirth, G & Maurice, M. K. (1982). Predictors of cancer of the cervix and Pap smear screening. *International Journal of Nursing studies Scotland, 17*, 23-32.

Nieswiadomy, R.M. (2001). *Foundations of Nursing Research*. Upper Saddle River, New Jersey, U.S.A.

Okonofua, F. (2007). National Department of Health Systems Research Coordination and

Orbell, S., Crombie, I. & Johnston, G. 1996. Social cognition and social structure in the prediction of cervical screening uptake. *British Journal of Health Psychology,* 1**,** 35-50.

Owens, L. K. (2002). Introduction to Survey Research Design. *SRL Fall 2002 Seminar Series*.

Palacio-Mejía, L. S., Rangel-Gómez, G., Hernández-Avila, M., & Lazcano-Ponce, E. (2003). Cervical cancer, a disease of poverty: mortality differences between urban and rural areas in Mexico. *Salud pública de méxico*, *45*, 315-325.

Parham, G. P, Sahasrabuddhe V. V, & Mwanahamuntu, M. H. (2004). *Prevalence and predictors of squamous intraepithelial lesions of the cervix in HIV-infected women*. CIDRZ. Lusaka.

Parkin, D. M., Pisani, P., & Ferlay, J. (1993). Estimates of the worldwide incidence of eighteen major cancers in 1985. *International journal of cancer*, *54*(4), 594-606.

Parminter, T. G., Wilson J. A. (2003). Systemic Interventions into Biodiversity Management based upon the Theory of Reasoned Action. *Proceedings of the 1st Australian Farming Systems Association Conference*, p199

Paskett, E. D., Carter, W. B., Chu, J., & White, E. (1990). Compliance behavior in women with abnormal Pap smears: developing and testing a decision model. *Medical care*, *28*(7), 643-656.

Plan, J.F. (1993). *Women's attitudes and awareness of smear and cervical cancer.* McGraw Hill Publishing Co Ltd, London.

Polit, D.F, & Beck, C.T, (2003). *Nursing Research: Principles and Methods,* Lippincott Williams & Wilkins, Phildelphia.

Polit, D.F, & Hungler, B.P. (2001). *Nursing Research: Principles and Methods, 7th edition*, Lippincott Williams & Wilkins, Phildelphia

Povey, R., Conner, M., Sparks, P., James, R. & Shepherd, R. 2000. Application of the Theory of Planned Behaviour to two dietary behaviours: Roles of perceived control and self-efficacy. *British Journal of Health Psychology,* 5**,** 121-139

Powe, B. (2006, July). Perceptions of Cancer Fatalism and Cancer Knowledge: A Comparison of Younger and Older African American Women. In *The 17th International Nursing Research Congress Focusing on Evidence-Based Practice*.

Priscillar, D, Zanra, A, Anita, K & Korn, C. (2007). *Multi-ethnic women with abnormal Pap smears.* Jaypee Brothers Medical Publishers Ltd. New Delhi,

Pyatt, R., Chadwick, R. B., Johnson, C. K., Adebamowo, C., de la Chapelle, A., & Prior, T. W. (1999). Polymorphic variation at the BAT-25 and BAT-26 loci in individuals of African origin: implications for microsatellite instability testing. *The American journal of pathology*, *155*(2), 349-353.

Roberts, A. A., Ayankogbe, O. O., Osisanya, T. F., Bamgbala, A. O., Ajekigbe, A. T., Olatunji, B. S., & Inem, V. A. (2005). Knowledge of cervical cancer risk factors among refugee women in Oru camp. *Nigerian Medical Practitioner*, *46*(4), 67-70.

Rogo, K. O., Omany, J., Onyango, J. N., Ojwang, S. B., & Stendahl, U. (1990). Carcinoma of the cervix in the African setting. *International Journal of Gynecology & Obstetrics*, *33*(3), 249-255.

Roland, K.; Bernard, V.; Saraiya M.; Hawkins, N.; Brandit, H.& Friedman, A. (2009). Assessing cervical cancer screening guideline in patient education materials. *Journal of women´s Health*. 18 (1): 5-12

Romiro, P, Martin, L.M. (1999) *Knowledge on Pap Smear Services*. Churhill Livingston, Edingburgh.

Sahasrabuddhe, V. V., Mwanahamuntu, M. H., Vermund, S. H., Huh, W. K., Lyon, M. D., Stringer, J. S. A., & Parham, G. P. (2007). Prevalence and distribution of HPV genotypes among HIV-infected women in Zambia. *British journal of cancer*, *96*(9), 1480-1483.

Sankaranarayanan, R., Esmy, P. O., Rajkumar, R., Muwonge, R., Swaminathan, R., Shanthakumari, S., ... & Cherian, J. (2007). Effect of visual screening on cervical cancer incidence and mortality in Tamil Nadu, India: a cluster-randomised trial. *The Lancet*, *370*(9585), 398-406.

Samoff E, Laura E, Maya S, Mary K, David S, Carolyn M, Elizabeth R. (2005). Association of Chlamydia trachomatis with persistence of high-risk types of human papillomavirus in a cohort of female adolescents. *American Journal of Epidemiology* 162(7):668-675.

Schiffman, M. H., Bauer, H. M., Hoover, R. N., Glass, A. G., Cadell, D. M., Rush, B. B., ... & Stanton, C. K. (1993). Epidemiologic evidence showing that human papillomavirus infection causes most cervical intraepithelial neoplasia. *Journal of the National Cancer Institute*, *85*(12), 958-964.

Schmauz, R., Okong, P., De Villiers, E. M., Dennin, R., Brade, L., Lwanga, S. K., & Owor, R. (1989). Multiple infections in cases of cervical cancer from a high-incidence area in tropical Africa. *International Journal of Cancer*, *43*(5), 805-809.

Sepulveda, W., Rojas, I., Robert, J. A., Schnapp, C., & Alcalde, J. L. (2003). Prenatal detection of velamentous insertion of the umbilical cord: a prospective color Doppler ultrasound study. *Ultrasound in obstetrics & gynecology*, *21*(6), 564-569.

Singh, J. A., Furst, D. E., Bharat, A., Curtis, J. R., Kavanaugh, A. F., Kremer, J. M., & Bridges, S. L. (2012). 2012 Update of the 2008 American College of Rheumatology recommendations for the use of disease-modifying antirheumatic drugs and biologic agents in the treatment of rheumatoid arthritis. *Arthritis care & research*, *64*(5), 625-639.

Smeltzer, D & Bare, L. (2004). *Evaluation of screening programmes for gyanaecological cancer*. 6th Edition, Edinburg, Churchill Livingston.

Stjernsward, J, Serraino, D, Vacchia, C. (1995). Cancer care. *Journal of Cancer, 1*(1): 4 - 11 WHO, Geneva.

Suarez, L & Austin, I. M. (2006). Knowledge, behavior, fears concerning cancer of the cervix among older women in low income Mexicans. *International Journal of Cancer 16*(1), 162-183.

Suba, E. J., Murphy, S. K., Donnelly, A. D., Furia, L. M., Huynh, M. L. D., & Raab, S. S. (2006). Systems analysis of real-world obstacles to successful cervical cancer prevention in developing countries. *American journal of public health*, *96*(3), 480.

Sudenga SL, Rositch AF, Otieno WA, Smith JS. (2013). Knowledge, attitudes, practices, and perceived risk of cervical cancer among Kenyan women. *International Journal of Gynecological Cancer. 23(5*):895-9.

Sutton, S. & Rutherford, C. 2005. Sociodemographic and attitudinal correlates of cervical screening uptake in a national sample of women in Britain. *Soc Sci Med,* 61**,** 2460-5

Taylor, D., Bury, M., campling, n., carter, s., garfied, s., newbould, j. & rennie, t. 2006. A Review of the use of the Health Belief Model (HBM), the Theory of Reasoned Action (TRA), the Theory of Planned Behaviour (TPB) and the Trans-Theoretical Model (TTM) to study and predict health related behaviour change.

Temmerman, M., Tyndall, M. W., Kidula, N., Claeys, P., Muchiri, L., & Quint, W. (1999). Risk factors for human papillomavirus and cervical precancerous lesions, and the role of concurrent HIV-1 infection. *International Journal of Gynecology & Obstetrics*, *65*(2), 171-181.

Terefe Y , Gaym A, (2008). Knowledge, attitude and practice of screening for carcinoma of the cervix among reproductive health clients at three teaching hospitals. *Ethiopian Journal of Reproductive Health, 2*(1).

Thomas, J. O., Herrero, R., Omigbodun, A. A., Ojemakinde, K., Ajayi, I. O., Fawole, A., ... & Franceschi, S. (2004). Prevalence of papillomavirus infection in women in Ibadan, Nigeria: a population-based study. *British Journal of Cancer*, *90*(3), 638-645.

UNAIDS. (1997). AIDS epidemic update: Emerging issues and challenges for women, young people, 2nd Edition, Geneva, UNAIDS.

UNAIDS. (2006). Expanding the global response to HIV/AIDS through focused action: Reducing risks and vulnerability: definitions, rationale and pathways. *International Journal of Cancer, Geneva*.

Urasa, M., & Darj, E. (2011). Knowledge of cervical cancer and screening practices of nurses at a regional hospital in Tanzania. *African health sciences*, *11*(1).

UTH. (2008). Registry records. University Teaching Hospital. Lusaka.

Vail-Smith, K., & White, D. M. (1992). Risk level, knowledge, and preventive behavior for human papillomaviruses among sexually active college women. *Journal of American College Health*, *40*(5), 227-230.

Wabinga, H. R., Parkin, D. M., Wabwire-Mangen, F., & Nambooze, S. (2000). Trends in cancer incidence in Kyadondo County, Uganda, 1960–1997. *British journal of cancer*, *82*(9), 1585.

Waller, J., McCaffery, K., & Wardle, J. (2004). Beliefs about the risk factors for cervical cancer in a British population sample. *Preventive medicine*, *38*(6), 745-753.

Were, E., Nyaberi, Z., & Buziba, N. (2011). Perceptions of risk and barriers to cervical cancer screening at Moi Teaching and Referral Hospital (MTRH), Eldoret, Kenya. *African health sciences*, *11*(1).

WHO. (2004). HPV and cancer of the cervix in Zambia summary report. Geneva, WHO.

World Health Organization (WHO). (2006). Comprehensive Cancer of the cervix Control: A Guide to Essential Practice. Geneva: WHO

WHO/ICO (2010). Information Centre on HPV and Cervical Cancer. www.who.int/hpvcentre. accessed on [16th January, 2010]

WHO/ICO Information Centre on HPV and Cervical Cancer (HPV Information Centre). Human Papillomavirus and Related cancers in Kenya - Summary Report - 2010).

Wong, L. P. (2008) Knowledge on cancer of the cervix and Pap smear. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, *148*(1), 90-95.

World Health Organization. (2001). Effective screening programme for cancer of the cervix in low and middle income developing countries. *International Journal of Cancer, Geneva.*

World Health Organization. (2002). Control of cancer of the cervix uteri. *Geneva.*

World Health Organization. (2006). Risk of cervical cancer among women of reproductive age. *Geneva.*

Yang, B. H., Bray, F. I., Parkin, D. M., Sellors, J. W., & Zhang, Z. F. (2004). Cervical cancer as a priority for prevention in different world regions: an evaluation using years of life lost. *International journal of cancer*, *109*(3), 418-424.

Young et al (2001). Mc Phee, M.D, Lam, B.S. Awareness of cancer of the cervix. London Sage Publications.

APPENDICES

APPENDIX 1: CONSENT

Introduction

I am Mark Muasa, a Masters student at the Nairobi University School of Public Health. I am doing a research Knowledge, attitude and practices regarding cervical cancer and screening among women visiting primary health care in Kibera. I am going to give you information related to the survey and invite you to be part of this research. You do not have to confirm your participation today whether or not you will participate in the research. Before you decide, you can talk to anyone you feel comfortable with about the research. There are words that you may not understand. Please let me know by asking me to stop as we go through the information and I will take time to explain. If you have questions later, you can ask me.

Purpose of the research

The purpose of this study is to determine the knowledge, attitude, practice and the perceived barriers towards screening for cervical cancer among women visiting healthcare facilities in Kibera. The findings will be used by the policy makers to make decisions regarding cervical cancer prevention and treatment among women in Kenya.

Type of Research Intervention

This is a descriptive survey and will involve use of a questionnaire which will be administered by the investigator and the research assistants.

Participant selection

You were selected at random to participate in the study. Other participants were also selected randomly and they are women who are seeking healthcare at this facility.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. You may change your mind later and stop participating even if you agreed earlier.

Confidentiality

We will protect information that you provide about you and your decision to take part in the research to the best of our ability. A code will be used on the questionnaire and your name will not appear anywhere in the reports. After data collection all questionnaires will be securely stored and access will be to the research team only.

Sharing the Results

The results of this research will be shared with through feedback meetings with facility in-charge before it is made available to other people. Confidential information will not be shared.

Possible Risk and Benefits

There are no known risks that you will be exposed to by participating in this study. There will be no direct benefits to the participants. However, the findings will be communicated to key stakeholders in the health facility to be able to make key decisions in regards to cervical cancer prevention and early detection.

Right to Withdraw

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

Who to contact

This research has been reviewed and approved by University of Nairobi Ethics Review Committee (ERC), which is a committee mandated to make sure that research participants are protected from harm.

You can ask me any more questions about any part of the research study, if you wish to or contact principal investigator Mark Muasa on mobile number: 0721438575. Do you have any questions?

INFORMED CONSENT FORM

I confirm that the information above was read and explained to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I hereby consent to participate as a participant in this research.

Name of Participant_____

Signature of Participant/Thumb print _____

Date _____

      Day/month/year

Statement by the researcher

I confirm that the participant was given an opportunity to ask questions concerning the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Researchers Name:------------------------Signature:-------------------Date:-------------(D/M/Y)

MARK MUASA

UNIVERSITY OF NAIROBI

DEPARTMENT OF SOCIOLOGY AND SOCIAL WORK

PO BOX 30197

NAIROBI, KENYA

DATE:…………………

TO

THE FACILITY IN CHARGE,

Dear Sir/Madam

REF: <u>REQUEST FOR PERMISSION TO CONDUCT A RESEARCH</u>

The researcher is a student enrolled with the University of Nairobi and presently conducting a study whose project title is **Knowledge, Attitude and Practices regarding cervical cancer and screening among women visiting primary health care facilities in kibera informal settlement** as part of the requirement for the award of Masters Degree in Medical Sociology.

The researcher promises confidentiality on the information that will be provided by the respondents.

Thanking you in anticipation for a positive response.

Yours Faithfully

APPENDIX 3: QUESTIONNAIRE

Interviewer: circle the selected answer(s).Do not read responses.

Interview date ____/____/____(d-m-y) Interviewer code:_____	Facility name:_____ Questionnaire Number:_____

A: Individual Factors

1.Age of respondent (Must be 18 and above)	
2. Area of residence	[ ] 1. Kibera [ ] 2. Other (Outside Kibera)
3. Level of education	[ ] 1. no formal education [ ] 2.primary education [ ] 3.secondary education [ ] 4.college education [ ] other
4. Occupation	[ ] 1.Employed full time [ ] 2.Employed part-time [ ] 3.Unemployed [ ] 4.Self employed [ ] 5. Housewife
5. Marital status	[ ] 1. Single [ ] 2. Married [ ] 3. Divorced [ ] 4. Separated [ ] 5. Widowed
6. Years in Marriage *(only ask the married)	[ ] 1. 1–5 [ ] 2. 6–10 [ ] 3. 11–20 [ ] 4. > 20
7. Number of births/deliveries	[ ] 1. 1 [ ] 2. 2– 4 children [ ] 3. 5 and above children

B. Knowledge on Cervical Cancer

8. Have you ever heard about cervical cancer?	[ ] 1. Yes (go to 9) [ ] 2. No (go to 10)
9. How did you come to learn about it? (Check all that are mentioned.)	[ ] 1. Television/Radio [ ] 2. printed materials Brochures, posters and other [ ] 4. Health facility [ ] 5. Family, friends, neighbors and colleagues [ ] 6. Religious leaders [ ] 7. Community Health Workers [ ] 8. Other (please explain):
10. In your close circle of acquaintances, do you know someone who has had cervical cancer?	[ ]1.Yes [ ]2. No [ ]3.Dont Know
11. How did they come to know they had it?	[ ]1.Through screening in hospital [ ]2.They had symptoms suggestive [ ]3.Dont Know [ ]4. Other specify..
12. What are the signs and symptoms of cervical cancer?	[ ]1.Vaginal bleeding between periods [ ]2.vaginal bleeding after the menopause [ ]3.persistent vaginal discharge [ ]4.menstrual periods that are heavier or longer than usual [ ]5.discomfort or pain during sex [ ]6.persistent lower back pain [ ]7. Do not know [ ]7.Others
13. What are the causes of cervical cancer (risk factors)?	[ ]1. Having multiple sexual partners [ ]2.Early sexual intercourse [ ]3.Cigarette smoking [ ]4.Long-term use of contraceptive pill [ ]5.Not going for regular screening [ ]6.Do not know

C. Knowledge on prevention and screening uptake	
14. Have you ever heard of cervical cancer screening/test?	[ ] 1. Yes [ ] 2. No
15. If yes for 14 above, Where did you come to learn of it ?	[ ] 1. Television/Radio [ ] 2. printed materials Brochures, posters and other [ ] 3. Health facility [ ] 4. Family, friends, neighbors and colleagues [ ] 5.Community Health Workers [ ] 6. Other (please explain):
16. Is it possible to detect cervical cancer through screening/routine check up before symptoms appear?	[ ] 1. Yes [ ] 2. No [ ] 3.Dont Know
17. Is cancer of cervix treatable if detected early?	[ ] 1. Yes [ ] 2. No [ ]3.Dont Know
18. Name a health facility in Kibera that does offer screening and treatment service for cervical cancer? Y/N	[ ] 1 Do not know. [ ] 2.Ushirika [ ] 3. Shofco [ ] 4.Tabitha [ ] 5.Other specify:
19. Do you know how often it is recommended for adult women to do check up for Cervical cancer.	[ ] 1. Yearly [ ] 2. Every three years [ ] 3. Every 5 years [ ] 4. I don't know
20.What would be the best place to reach women with cervical cancer screening messages?	**Tick all appropriate.** [ ] 1. In women's groups [ ] 2.Places of worship (church/mosque) [ ] 3.Health facilities [ ] 4.At home [ ] 5.Markets [ ] 6.Others (Specify)

D. Attitude and Practice

21. Are you willing to regularly consult a health care provider for screening of cervical cancer?	[ ] 1. Yes [ ] 2. No
22. In your opinion, who should be screened?	[ ] 1.All women of child bearing age [ ] 2. Only women with symptoms suggestive of cancerous cervix [ ] 3.Only women with promiscuous life style [ ] 4. Don't know
23. Have you ever been screened for cervical cancer ?	[ ] 1. Yes [ ] 2. No
24. If yes to question 18 above, when was the last time screening was done?	[ ] 1. Less than 1 month ago [ ] 2. 3 months ago [ ] 3. Six months ago [ ] 4. 1 year ago- [ ] 5. 3 years ago [ ] 6. Over 5 years ago
25. What made you go for the screening?	[ ] 1. Friend/family encouraged me [ ] 2. Health care providers suggested [ ] 3. Community health workers encouraged me [ ] 4. The services was free of charge [ ] 5. Need to clear doubt [ ] 6. Had symptoms that made me want to screen [ ] 7. Age factor [ ] 8. Awareness that if found early it is treatable Others:
26. Are there reasons as to why women don't go for screening/check up for cancer of cervix?	[ ] 1. Yes [ ] 2. No
27. If Yes, for above, what are these?	Check all that apply [ ] 1. It is costly [ ] 2. Do not know where to get screening [ ] 3. Do not have time [ ] 4. I am healthy [ ] 5. Cervical cancer screening is painful [ ] 6.Fear of a positive outcome [ ] 7. Fear of the process of exam [ ] 8.Lack of husband/partner approval [ ] 8. Not allowed by religion/culture

	[ ] 9. Not suggested by the health care workers
	[ ] 10. Lack of female screeners at the health facility
	[ ] 11. Attitude of health care worker
	[ ] 12. Lack of convenient clinic time
	[ ] 13. It is embarrassing
28. Do you think Cancer of the cervix can be transmitted from one person to another?	[ ] 1. Yes [ ] 2. No [ ] 3. Do not Know
29. If yes, above, how is it transmitted?	[ ] 1. Sexually transmitted [ ] 2. Through contact with the sick [ ] 3. Through air [ ] 4. Don't know [ ] 5. Other specify………..
Health System	
30. Do you think our health system is well equipped to diagnose and treat cancer of cervix?	[ ] 1. Yes [ ] 2. No [ ] 3. Do not Know
31. If No above, what is missing?	[ ] 1. Lack of adequate personnel (Doctors/Nurses) [ ] 2. Lack of equipment for screening/treatment [ ] 3. Do not Know [ ] 4 Others
32. Do you know of someone who was diagnosed with Cancer of cervix?	[ ] 1. Yes [ ] 2. No [ ] 3. Do not Know
33. If yes above, were they able to get required treatment ?	[ ] 1. Yes [ ] 2. No [ ] 3. Do not Know
34. If No, what in your opinion were the reason it was not successful	[ ] 1. Diagnose late [ ] 2. Did not follow up for treatment [ ] 3. Did not have money for treatment [ ] 4. No services nearby for treatment [ ] 5. Don't know [ ] 6. Other…………………………………
35. What treatment option did they try?	[ ] 1. Modern treatment (In health facility/hospital) [ ] 2. Traditional treatment [ ] 3. Prayers [ ] 4. Do not Know

WE HAVE COME TO THE END OF THE DISCUSSION. THANK YOU FOR YOUR PARTICIPATION.