

**FACTORS INFLUENCING UPTAKE OF SCREENING CERVICAL CANCER AMONG
WOMEN OF REPRODUCTIVE AGE IN VIHIGA COUNTY, KENYA**

BY

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**A Research Report Submitted in Partial Fulfillment of the Requirements for the Award of the
Degree of Master of Art in Project Planning and Management of the University of Nairobi**

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DECLARATION

This research report is my original work and has not been presented elsewhere for a degree or any other award in this or any other university.

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DEDICATION

This research report is dedicated to my loving wife Lizz Mukami for her unwavering support, both morally and financially and her tireless encouragement to keep on working hard even in extreme difficulties.

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ABBREVIATIONS AND ACRONYMS

DNA:	Deoxyribonucleic Acids
HPV:	Human Papilloma Virus
MOH:	Ministry of Health
PATH:	Program for Appropriate Technology in Health
VIA:	Visual Inspection with Acetic Acid
VILI:	Visual Inspection with Lugol's Iodine
WHO:	World Health Organization
NHS:	National Health Service
GP:	General Practitioners
NGO:	Non-Government Organizations
PHC:	Primary Health Care
NCD:	Non-Communicable Diseases
WRA:	Women of Reproductive Age
VCT:	Voluntary Testing and Counseling
DHIS:	District Health Information system

ABSTRACT

Cervical cancer is the second most common cancer among women. It is the leading cause of deaths among women worldwide. It is estimated that 493000 new cases and 274000 deaths occur every year due to this preventable disease (Ferlay et al, 2002). Though it has high mortality there is a potential of preventing it when detection is done early. This study sought to establish the factors influencing the uptake of cervical cancer screening in Vihiga County. The objectives of study were: To determine how education and accessibility to health facilities influences uptake of screening cervical cancer, To assess how awareness influences uptake of screening cervical cancer, To investigate the social cultural factors that influence uptake of screening cervical cancer, and To establish how cost influences uptake of screening cervical cancer. To address these objectives, the study adopted a descriptive survey research design employing both qualitative and quantitative on a target population of 83193 respondents who are women in reproductive age in Vihiga County. The sample size was 380 respondents who are women of reproductive age residents of Vihiga County utilizing health services. Primary data was collected by use of questionnaires. The questionnaires had both open and close ended questions. Open ended questions were desirable so as to encourage the respondents to give an in depth response without feeling constrained. On the other hand, close ended questions were used because they save on time and are easy to fill and analyze. Data was coded, entered and analyzed using SPSS 11.5 for frequency tables, and categorical responses within indicators were established using cross-tabulation. Inferences on the analyzed data was then made from the findings and the results presented in tables (both frequencies and percentages and cross tabulation results). Basing on the objectives of the study, it was found that 68.2% of respondents said that accessibility to health facility largely influenced the decision of up taking cervical cancer screening among women of reproductive age in Vihiga County. On education and awareness 36.4% respondents said that it influences the uptake of cervical cancer screening among women of child bearing age in Vihiga county, social factors such as religion viewed 51.4% that this factor did not influence the uptake of cervical cancer. On affordability 56.7% said they cannot afford the treatment expenses that come with diagnosis with cervical cancer in advanced stage. Uptake of cervical cancer screening was cross tabulated along all indicators in effort to establish categorical responses among all indicators that influenced the decision to uptake cervical cancer screening.

CHAPTER ONE

INTRODUCTION

1.1. Background to the study

Cervical cancer is the second most common cancer in the women worldwide and the leading cause of cancer deaths among women in developing countries (GLOBOCAN 2008). Cervical cancer is the easiest gynecologic cancer to prevent, with regular screening tests and follow-up. Two screening tests can help prevent cervical cancer or find it early—The Pap test (or Pap smear) looks for pre-cancers, cell changes on the cervix that might become cervical cancer if they are not treated appropriately. The Pap test is recommended for all women between the ages of 21 and 65 years old, and can be done in a doctor's office or clinic. The HPV test looks for the virus (human papillomavirus) that can cause these cell changes (Centers of Disease Control and prevention 2006).

In USA, American Cancer Society (ACS) inaugurated a yearly report on its cancer screening guidelines in California: A Cancer Journal for Clinicians. The report, and subsequent annual reports, has provided a summary of ACS cancer screening guidelines, about testing for early cancer detection for tests that are increasingly used by the public. In order for guidelines to reflect the most current scientific evidence, the guidelines have been updated more frequently as new evidence or the emergence of new technologies have warranted more frequent updates in guidance to health professionals and the public (<http://cajournal.org>). The age-adjusted annual incidence rate of cervical cancer is 6.6 cases per 100,000 women, according to data from National Cancer Institute; 2011. An estimated 12,200 new cases of cervical cancer and 4210 deaths occurred in the United States in 2010. Cervical cancer deaths in the United States have decreased dramatically since the implementation of widespread cervical cancer screening. Most cases of cervical cancer occur in women who have not been appropriately screened. Strategies that aim to ensure that all women are screened at the appropriate interval and receive adequate follow-up are most likely to be successful in further reducing cervical cancer incidence and mortality in the United States (US preventive services task force, 2012).

In Britain, cervical cancer screening started in the mid-1960s. Although many women were having regular smear tests, there was concern that those women at greatest risk were not being tested, and that those who had positive results were not being followed up and treated effectively. Because of these reasons the National Health Service (NHS) Cervical Screening Programme was set up in 1988 when the Department of Health instructed all health authorities to introduce computerized call-recall systems and to meet certain quality standards. This programme has invited about 4.5 million women for screening in 2010/11 and 3.4 million women screened in 2010/11 in England (Office for National Statistics. Cancer survival in England: 2011). Invitation by the woman is done by the NHS call and recall system which invites women who are registered with a general practitioners (GP). It also keeps track of any follow-up investigation and recalls the woman for screening in three or five years' time if there is no abnormality. Within the NHS Cervical Screening Programme women should receive their first invitation for routine screening at age 25 as it is national policy. This has reduced health care costs for NHS in UK in consideration of tight government budgets (cancer screening center, 2012).

In Nigeria, the national incidence of cervical cancer is 250/100,000 (Adewole et al., 1997). Oguntayo et al., (2011) reported that cervical cancer was the leading cause of gynecological cancers in Northern Nigeria, accounting for 65.7% of all gynecological cancers. This high incidence was also observed in Ibadan and Maiduguri (Nigeria) with 62.7% and 72.6% respectively (Pindiga et al., 1999; Adelusi, 1978; Rafindadi et al., 1999). While awareness of cervical cancer remains low in Nigeria and mortality figures are among the highest in the world, there are many signs that positive changes are afoot. Several successful pilot schemes, funded by Non-Government Organizations (NGOs) and private enterprises are currently underway for cervical cancer prevention and treatment (Goldie SJ, et al. 2005).

In South African, Cancer of the cervix is the second most common form of cancer amongst women. Approximately one in every 41 women will, within their lifetime, develop this form of cancer. According to the South African Medical Research Council (MRC, 2008) cervical cancer was responsible for the deaths of 3498 South African women during 2000. Accurate statistics about the

number of South African women diagnosed with and dying from cervical cancer annually in South Africa are unknown due to the failure to maintain the pathology-based cancer registry (Denny, 2010:70). In 1999, the South African National Department of Health (CANSA, 2008) adopted a National Cancer Control Policy which includes a national programme for cervical cancer screening. This programme targets women aged 30 and older, and enables asymptomatic women to have three free Pap smears at nurse-led primary healthcare (PHC) clinics during their lifetime (Department of Health, 2000).

In Kenya, cancer is one of the major non-communicable diseases (NCDs) which together with cardiovascular, diabetes and chronic respiratory diseases. It is estimated that the annual incidence of cancer is about 28,000 new cases with an annual mortality of 22,000 cases. Over 60% of those affected are below 70 years while the risk of getting cancer before 75 years of age is 14% and the risk of dying of it is estimated at 12%. The leading cancers in women are breast, cervical and oesophagus. In men, esophagus, prostate cancer and Kaposi's sarcoma are the most common (Cancer Burden in Kenya, 2010).

Cervical cancer is the second most frequent cancer among women and the leading cause of cancer deaths in women of reproductive age (WRA). Currently, the estimated annual number of cervical cancer cases is 2454 while the annual number of deaths due to cervical cancer is 1676 in Kenya. It is projected that by the year 2025, the number of new cervical cancer cases annually in Kenya will reach 4261. Data from hospital-based registries in Kenya indicated that cancer of the cervix accounted for 70-80% of all cancers of the genital tract and 8-20% of all cancer cases for the 10-year period of 1981 to 1990. It has been reported that there are 10 to 15 new cases of cervical cancer in Nairobi each week. (Kenya Cancer Registry, 2012) Despite the magnitude of the problem in Kenya and the fact that it is easily preventable, the cervical cancer screening coverage in Kenya for all women 18 to 69 years of age is only 3.2% (National Cervical Cancer Prevention Program, 2012).

Cervical cancer screening methods available in Kenya, which were part of the Ministry of Health's National Cervical Cancer Prevention Strategic Plan from 2002 to 2006, include the Papanicolaou (Pap) test, visual inspection with acetic acid, and visual inspection with Lugol iodine; however, uptake of these methods remains very low and haphazard. A previous study on Knowledge, Attitude and Practices (KAP) carried out in Kenyatta National Hospital revealed a past Pap smear screening rate of 22%, while in a different study performed in Voluntary Testing and Counseling (VCT) centers in Nairobi, Kenya, an uptake rate of 14% was described. These demonstrate a relatively low level of uptake of cervical screening. To reach these other women as well, the government of Kenya has integrated cervical cancer screening into the routine services that the majority of women are exposed to. These routine services are offered at MCH clinics. Although about 300 sites provide screening services, only about 30 (10%) have outpatient treatment services (National Cervical Cancer prevention, 2012).

In Vihiga County, accurate statistics about the number of women diagnosed with and dying from cervical cancer are unknown due to the failure to maintain the pathology-based cancer registry. Most of the research done on cervical cancer screening is carried out in National referral hospitals and the hence minimal researched data on county hospitals. Cervical cancer screening 2013 and 2014 were 7.9% and 5.9% respectively in Vihiga County Hospital (DHIS 2014). The Kenya National Cervical Cancer Prevention Program- a Ministry of Health initiative focus on achieving at least 70% coverage of women in the age group with the highest risk-benefit ratio; involving communities to build awareness and support; using low cost screening and treatment approaches for pre-cancer; and assuring appropriate management to overt cervical cancer patients within available resources. Vihiga County is way below in achieving this target. However this reports and statistics provide a perfect ground for carrying out research on factors influencing uptake of screening cervical cancer.

1.2. Statement of research problem

Cervical cancer is the leading cause of death from cancer among childbearing women (WHO, 2007). Though it is preventable, screening practice of both health workers and clients is limited and little documentation is available. Health workers are important in preventing this disease; however their knowledge, attitude and practices have been not established (Mmiro et al, 2006). It is important to describe the differences among women and their perceived risk of cervical cancer to determine target groups to increase cervical cancer screening (Sudenga et al 2013).

Kenyan women above 15 years are at risk of developing cervical cancer. Currently, cervical cytology reduces cervical cancer incidence, since it allows for early diagnosis and treatment. Studies conducted in African countries, like Kenya, Botswana and Nigeria showed that women have limited knowledge towards screening of cervical cancer, which contribute to their non-participation in screening programs and even though some were screened, they do not present themselves for follow up care (Nganwai, 2008). Central to the success of any screening programme is its ability to identify, reach out and screen the defined target population. Cervical screening coverage in Kenya is currently at 3.2% (NCCP, 2012).

Vihiga county is a populous county, the number screened for cervical cancer is low (averagely 1/day). Cervical cancer cases normally present at advanced stages forcing health seekers to seek health attention in referral hospitals (Onywany, 2012). Several factors may contribute to the underutilization of screening, including lack of awareness, lack of funds, women's worry about examination discomfort, fear of finding cancer, and inability to establish effective follow-up treatment. Therefore this study will identify factors influencing uptake of cervical cancer screening in the county.

1.3. Purpose of the study

The purpose of this study was to investigate factors influencing uptake of screening cervical cancer among women of reproductive age.

1.4. Objective of the study

The objectives of the study were

1. To determine how accessibility to health facilities influences uptake of cervical cancer screening.
2. To assess how education influences uptake of cervical cancer screening.
3. To investigate the social cultural factors that influences uptake of cervical cancer screening.
4. To establish how cost of service influences uptake of cervical cancer screening.

1.5. Research questions

The research questions used in addressing the objectives were;

1. How does accessibility to health facilities influence uptake of cervical cancer screening?
2. To what extent does education influence uptake of cervical cancer screening?
3. To what extent does social cultural factors influences uptake of cervical cancer screening?
4. How does cost of screening influence uptake of cervical cancer screening?

1.6. Significance of the study

This research would be significant to the health care industry, other researchers and public at large. First, the health care industry, more so Vihiga County Hospital, would benefit from the findings of this study by using it to lay strategies to position itself as a leading health care facility in provision of screening and treating cervical cancer in the region. Secondly, other researchers and academicians, it is hoped, would benefit by using the findings of this study for training and further research, as the study would lay the platform on which further research on the topic can be undertaken. The finding of this was built on scholarly work done on factors influencing the uptake of screening cervical cancer among women of reproductive age. Lastly, it is hoped that the general public especially women would benefit through embracing screening cervical cancer.

1.7. Limitation of the study

This study encountered some challenges. First, there were cases of uncooperative respondents. This was surmounted by directly engaging with the clients and also seeking the permission of hospital management to allow a member of staff to accompany me to the field. Secondly, there were cases where respondents gave socially acceptable responses for fear of victimization. To overcome this problem, the researcher assured the respondents that information so given would only be used for research purposes. In addition, some tools of collecting data like questionnaires were difficult to use because some respondents were illiterate. This limitation was overcome by engaging assistants who helped to interpret the questionnaire to the respondents.

1.8. Delimitation of the study

This study focused on factors influencing uptake of screening cervical cancer among women of reproductive age. It confined itself to Vihiga County, hospital staff and clients. Vihiga County was settled on because of the researcher's familiarity with the screening service and the proposed locality. Further, the researcher had worthy contacts and good working relationships with Vihiga County Hospital staff and clients and thus they fully cooperated.

1.9. Basic assumptions of the study

The study assumed that the respondents would cooperate in responding to questions asked; that the respondents would correctly and truthfully answer the questions as posed orally and in the questionnaire. It is also assumed that that the respondents would fully understand the questions asked in the questionnaire, hence would be able to respond accordingly. In addition, it is assumed that the sample size would be representative of the entire women in reproductive age in regards to uptake of screening cervical cancer. Further to this, it is assumed that that the respondents would be available in the given time to participate in the study.

1.10 Definition of significant terms

Accessibility: This is the approachability, ease of use and convenient location of the health care workers to the advantage of clients.

Security: It is the freedom from danger, risk or doubt that encompasses ability of health care workers to assure clients physical safety and their confidentiality.

Client satisfaction: This refers to a customer's feeling of pleasure because they have something or have achieved something in the best way possible

Screening: Test carried out on healthy people to separate those who may have a specific disease and would benefit from further testing from those probably do not.

Cancer: A serious disease resulting from a malignant growth or tumor, caused by abnormal and uncontrolled cell division.

1.11 Organization of the study

Chapter one of this study dealt with background of the study with a view to understanding uptake of screening cervical cancer historically, conceptually and contextually. The chapter also presented the statement of the problem, the objectives of the study, research questions derived from the objectives, limitations and delimitation of the study, basic assumptions of the study and definition of significant terms. Chapter two looked at the literature review, giving the concept of uptake of screening cervical cancer, discussion of themes and theoretical framework. A conceptual framework was also presented. Chapter three focused on research methodology, the research design used, the target population and sample size, data collection and analysis and ethical considerations.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter first looked at the concept of screening cervical cancer. Secondly, it addressed accessibility to health facilities and the uptake of screening cervical cancer, in terms of reduced distance and availability of facilities offering that service. Additionally, it looked at education and uptake of screening cervical cancer in terms of awareness. Moreover, it investigated the social cultural factors and influence uptake of screening cervical cancer in terms of culture and traditions. It also presented the conceptual framework, gaps in literature reviewed and operationalization of variables.

2.2. The concept of screening cervical cancer

Cervical cancer screening is a way of preventing cancer by finding and treating early changes in the neck of the womb (cervix) (Bosch et al, 2002). These changes could lead to cancer if left untreated. The screening uses a test called cytology, which many people know as the Pap smear test (Gustafsson et al 2007). A Pap test is a procedure to collect cells from the surface of the cervix and vagina. A piece of cotton, a brush, or a small wooden stick is used to gently scrape cells from the cervix and vagina. The cells are viewed under a microscope to find out if they are abnormal (National Cancer Institute, 2015). There are several methods available for detection of several forms of pre cancers and these include direct visual inspection of the cervix aided by chemicals like 5 percent acetic acid and iodine (visual inspection with acetic acid [VIA] and visual inspection with Lugol's iodine [VILI]), which cause recognizable color changes (Bosch et al., 2002; Smeltzer & Bare, 2004).

A new method of collecting and viewing cells has been developed, in which the cells are placed into a liquid before being placed on a slide. In some cases, samples are also tested for a virus called human papilloma virus (HPV) that increases the risk of cervical cancer. A nurse or doctor takes a sample of cells from the cervix with a small brush. Testing cervical specimens for DNA of oncogenic (high-risk)

types of human papillomavirus (HPV), the causal agents of cervical cancer, has entered clinical practice, but this test is used mainly to triage for colposcopy those women with Pap smears labeled as “atypical squamous cells of undetermined significance” They send the sample to a laboratory to be checked for abnormalities (Marie-Helene et al, 2007).

2.2.1. Expectancy theory of motivation

Victor Vroom developed this theory in 1964 as an alternative to the content theories of motivation. It refers to any situation or context where people have expectations from whatever they do. It states that “motivated behaviour is increased if a person perceives a positive relationship between effort and performance – i.e. the outcome. Based on this theory, extrinsic financial motivation works only if the link between effort and reward is clear and the value of the reward is worth the effort. Vroom separates effort (which arises from motivation), performance and outcomes. Vroom, hypothesizes that in order for a person to be motivated effort, performance and motivation must be linked. He proposes three variables to account for this, which he calls Valence, Expectancy and Instrumentality.

When women in reproductive age know the importance of going for cervical cancer screening; will be motivated to take up the screening service. The importance will include; detection of cancerous cells in early stages and treatment will be initiated to cure and eliminate complications that could have a raised if left untreated. The effort made by these women will be of importance to their own health. The outcome will be good reproductive health which will reduce development of reproductive cancers, increase in productivity in terms of reduced time wasting in search of medical care is minimized and economic improvement as the funds that could be used in treatment is saved and diverted to more productive projects. Therefore, an individual is likely to take up screening if: he/she is motivated highly about his/her health; believes he/she is susceptible to develop cancer; understands the seriousness of getting cancer; and believes the benefits of the taking time off work to take up screening far outweigh the cost of lost pay. These conditions need to be triggered by an internal (physical symptom) or external

(health screening letter) cue to action. Hence this motivation theory is best suited for this study and its significance to the uptake of cervical cancer screening.

2.3. Accessibility to health facilities and uptake of cervical cancer screening

In Kenya, Cervical cancer screening occurs, but only in a few selected sites and in disjointed projects rather than a full-fledged national-level program. This explains why screening coverage is still negligible. Furthermore there is lack of additional diagnostic and treatment options at the secondary levels of care. Additionally, the link between screening and treatment has been dysfunctional (NCCPP, 2006). The main challenges to increasing access to cervical cancer screening services include inadequate equipment and supplies; lack of treatment facilities when there is pre-cancer or cancer diagnosis; inadequate monitoring and evaluation – especially data collection and management. The HPV vaccine that could be used in primary prevention is also not provided as part of the national vaccine and immunization program (Morema et al, 2014).

National Reproductive Health policy (2006) recommends that, the government to avail cervical cancer screening services at the primary health care level where the majority (80%) live. This primary health care to include: district hospitals, health centers, dispensaries and faith based facilities also to provide the services. Inadequate equipment and supplies (despite the fact that these are inexpensive for visual screening methods), the government should provide in all the institutions to increase the screening of cervical cancer. Were (2011) argues that Strengthen referral system for cervical cancer program (linkages); Improve facility and community Health information system (general records and referral forms); Improve/strengthen communication system between the different levels; Establish a referral directory will enable access to uptake of screening cervical cancer.

According to Nyaberi (2007), Availability of trained health personnel at all levels to provide cervical cancer screening and treatment services; Provision of facilitative supervision, refresher training and on job certification by the Reproductive Health Training and Supervisory Teams to enable them to

maintain or enhance their skills. Retain and schedule trained staff to ensure service availability will enhance the uptake of screening cervical cancer. There is a need to strengthen patient advocacy in international settings to build a global grassroots movement [that portrays] accurate perceptions of cancer; prevent stigma from inhibiting people in their cancer control efforts; help people affected by cancer receive the support, services, and information they need, all of which will help in decreasing the global cancer burden, (Ngau, 2014). A call/recall system based on personal invitations is considered to be a key element of an organized programme in Europe. For this purpose, an accurate list of the target population with names and addresses is needed. Sources of such lists vary between countries and include population registries, health service registers, general practitioners' (GPs) medical files, electoral registers and others.

Usually, only women who are not registered as having had a cytological test within the recommended interval are invited. This 'integrated' approach is applied with the intention of saving resources by avoiding re-screening of recently tested women (Coleman et al., 2003). It requires comprehensive registration of cytological testing, including opportunistic tests, at the population level. In some Italian programmes, all women are invited independently of their screening history (Ronco et al., 2008). This approach may be used if cytology registration is incomplete or if it is hoped to modify the spontaneous frequency of screening. In Finland, the organized programme invites all women (Nieminen et al., 2009); until the 1990s, all smears from the organized programme were analyzed in laboratories run by the Cancer Society of Finland (Nieminen et al., 2002).

PATH Report (2004) carried out in western Kenya, argues that cervical cancer prevention to be integrated into existing MCH/FP services, Comprehensive care clinics, and routine gynecology services. This is because cervical cancer prevention services use personnel and other resources, such as materials, space, equipment, supplies, and reporting systems, similar to those in these service areas. The result will be a more cost-effective, more efficient to manage, more convenient and acceptable service

for clients. However to increase the chances of reaching the 70% coverage, organized mass screening activities should also be undertaken.

To further this augment, a single visit see and treat (SVA) approach is recommended. Where SVA is not possible due to unavailability of supplies, equipment or trained personnel, or in cases where other screening methods e.g. cytology are used, the recommended service model will be a screen- re-evaluate/diagnose -and-treat approach for pre-cancerous lesions (sometimes referred to as “see, see, and treat”). This involves screening routinely at the primary level followed by referral of screen-positive clients to the secondary level where specially trained providers can reevaluate or perform diagnosis and offer pre-cancer treatment or further referral as needed (NCCP, 2012).

Reproductive Tract Cancer Programme (2010), designed model to give women complete care in one visit, and to minimize the number of visits for screen-positive women within a safe and efficient treatment strategy. Cervical cancer screening will also be integrated into other RH outreach activities e.g. during integrated RH/FP camps, and campaigns during the cancer awareness month in order to reach more women especially in hard to reach areas (Buziba et al 2011). Accessibility is a variable that should be investigated to determine how it affects the uptake of cervical cancer screening in Vihiga County. From various studies examined shows that accessibility affects the uptake of screening and in Kenya screening is done in few selected sites in disjointed projects rather than full-fledged national level program. With this kind of information on accessibility within the country it is necessary to investigate this indicator and how it affects the uptake of cervical cancer screening in Vihiga County.

2.4. Education and awareness uptake of cervical cancer screening

Several qualitative studies have revealed that, women’s perceptions and limited knowledge about the importance of cervical screening influence uptake of cervical cancer screening (Fylan, 1998; Neilson, 1998; Nicky et al., 2005; Merchant, 2007). Women do not have a clear understanding of the interpretation of the screening outcome results. Many believe that an abnormal screening result means

that a woman already has cancer, so they have fear and distress in case they screen and end up with an abnormal result. These studies also showed that, cultural norms of secrecy that bar women from discussing issues of reproductive health has made women not gain knowledge about the importance of cervical cancer screening (Nakalevu, 2009).

The main challenges to increasing access to and improving the quality of cervical cancer screening services include: lack of updated National guidelines on cervical cancer prevention and control, low level of community awareness on the importance of screening coupled with low knowledge of common symptoms of cervical cancer and inadequate skills among service providers (NCCP, 2012). Reasons for women not screening include perception of not being at risk and fear that abnormal test results mean existing cancer. Women with low educational achievement, low awareness of the risk factors for cervical cancer, and who do not have support from their husbands may also have poor uptake of screening services (Were et al, 2011).

Cervical cancer is yet to be recognized as an important public health problem in sub-Saharan Africa. Several studies have shown poor knowledge of the disease in Africa, which even cuts across different literacy levels (Wellensiek et al, 2002). Among 500 attendees of maternal and child health clinic in Lagos Nigeria only 4.3% were found to be aware of screening cervical cancer, (Anorlu et al, 2000). Similar studies in Kenya and Tanzania also reported very poor knowledge of the disease in patients (Anyia et al, 2005). Lack of knowledge about screening of cervical cancer in the population and among health care workers is a prime for access to cervical cancer prevention (Tebua and Major, 2008). Other reports from the region show that women with HIV develop cervical cancer at an earlier age than women who are HIV negative (Gichangi et al, 2003).

An assessment of women's knowledge of cervical screening showed 92% of those dying from this form of cancer have never been tested (Neilson and Jones, 1998). It has been noted also that some women lack the knowledge about Pap smear and its indications. Many women do not have a clear

understanding of the meaning of an abnormal smear or the concept of pre-cancerous changes and many believe that the purpose of Pap smear test is to detect cancer (Fylan, 2008). It has been seen that 10% of women in Queensland and 13% in Victoria with cervical cancer had a previous abnormality which was not treated. Women need full information about treatment if they are to be fully protected.

A behavior change communication strategy developed to increase awareness of cervical cancer prevention so that health personnel, other relevant government staff, community leaders and eligible women and their male partners understand the need for cervical cancer prevention services and support utilization of available services (African Cancer Registry, 2009). The major findings of a study in Nigeria to female health workers showed that their cervical cancer screening utilization was very low and there was a wide gap between their personal knowledge and uptake of cervical cancer screening (Ikeanyi, 2006). Similar picture as above have been observed in Uganda where 19% of their female health workers have ever had a cervical cancer screening and reasons for this include not feeling at risk, lack of symptoms, carelessness, fear of vaginal examination, lack of interest and test being unpleasant. It is unlikely that these medical workers would feel motivated to screen others or advise them accordingly (Mutya et al, 2006).

Study carried out in Ibadan, showed that despite knowledge on cervical cancer and its prevention by screening via Pap smear, attitudes and practices towards screening were negative (Decherny et al, 2005). The knowledge is poor and practice non-existence. This collaborate a study carried out in Nnewi, south-eastern Nigeria which revealed that the knowledge of the cervical cancer screening is high, the uptake is abysmally poor (Udigwe, 2006). Practice of the prevention of cancer of the cervix should be a reflection of the knowledge and attitude of the members of the community towards the disease. Even among those aware of the disease, practice is low and this could be as a result of the wrong attitude of screening exercises and processes.

A study carried out on influencing uptake of Cervical Cancer Screening among Women in India shows that knowledge was low among the participants regarding cervical cancer and Pap smear screening. There are no awareness campaigns and programs regarding disease prevention similar to effective enthusiastic campaigns against the HIV/AIDS, malaria and tuberculosis. Older ladies and family are still being the major reservoir of the health knowledge in Indian society (Singh et al, 2012). To increase knowledge on screening cervical cancer one should do the following; raising awareness among men on cervical cancer prevention and control through media, workplace programs, religious and other social activities. Use Media and ICT to improve awareness. Development and dissemination of IEC/BCC materials, Provision of health talks in facilities and communities, Use of community role models/champions and Integrate cancer prevention and control into the CHW training and roles (Eldoret Cancer Registry, 2009).

The education component should therefore be included in this study to find out if the community as a whole understands the cancer screening procedure and its importance. Health workers too should understand the importance of the service and if the information given to the clients is appropriate and implemented to increase the uptake of cancer screening service. Education as a variable will give clear picture how the communities perceive cervical cancer screening and this will help to take appropriate measures in improving the uptake of screening service moving forward. Other researchers studied this variable were not conclusive and hence this research will go deep to find out how the education affect the uptake of cervical cancer screening and make the necessary recommendations.

2.5. Social cultural factors and uptake of cervical cancer screening

Several studies in UK and South Asia show that cultural beliefs and perceptions influence uptake of cervical cancer screening (Scanlink, cited in Nicky, 2005; Cox, 2010). These studies revealed that black minority ethnic groups in United Kingdom and South Asian women consider cervical cancer as being caused by promiscuity; therefore it is considered a taboo, or a just punishment from God. As a result of these beliefs, a big proportion of women shy away from screening because they do not want to be

associated with such a disease that is considered a curse from God. Many other studies have also reported embarrassment when seen seeking care for cervical cancer, stigma, and lowered self-esteem when one receives a negative result (International Agency for Research on Cancer, 2005; Kitchener et al., 2006; Cann, 2008).

Additionally, a UK based study reported that women had fear of receiving abnormal screening results because of anxiety associated with such results (Fylan, cited in Nakalevu, 2009). The women claimed that abnormal results would have severe effect on day to day functioning leading to depressed mood, decreased libido and feeling of less attractive, tarnished, defiled or contaminated and dirty feelings. Correspondingly, Nicky (2005) reported an interesting finding of a cultural/religious belief that Muslim women can only be seen naked by their husbands; which influenced their preference for female general practitioners especially for cervical smears. Also in this study, it was revealed that Pakistani Muslims were not comfortable attending to a doctor from the same cultural background they would only go along for a smear test if the doctor was not of the same cultural background for fear of being “found out”.

Studies that explored culture show that cultural gender roles and behaviors of women, may also affect the uptake of cervical cancer screening (Engender Health, 2002; Katahoire et al., 2008; Markovic et al., 2005; Cox, 2010). For example, an exploratory study that was conducted in Uganda revealed that cervical cancer being a condition affecting women’s sexual and reproductive health was likely to be shrouded in silence since these are issues that are socially and culturally perceived to be private and cannot be openly discussed in public (Katahoire et al., 2008). Therefore, women found difficulty in accessing information even when they experienced cervical cancer like symptoms.

Singh and Badaya, (2012), study carried by the two said some respondents perceived cervical cancer illness as a “traditional” disease. On describing symptoms like excessive vaginal bleeding many explained it as a normal phenomenon of menstruation with some bleeding excessive and some less. On inquiring for late reporting to the hospital some participants argued “illness in females is “traditional”

which every woman has to face and elderly women in community says that it could be get rid by self-medications prepared at home so what's the need to go to doctor to waste money and time.”

In South Africa, a formative research uncovered the Xhosa belief that the health of a woman's womb reflects the health of the woman as a whole and that healthy wombs are associated with virginity, pride, and motherhood (Engender Health, 2002). Research results of this study also indicated that gender norms among the Xhosa people inhibited women who had undergone treatment for precancerous lesions from negotiating the recommended four weeks of sexual abstinence after treatment. Unlike previous studies that acknowledged lack of knowledge and information as a strong determinant in the uptake of screening, the authors of this study among Xhosa community, stress that since cervical cancer is caused by a sexually transmitted disease and involves open discussion about the female reproductive organs, even when women are adequately informed about risks of cervical cancer, they may not participate in screening. Similarly, a study carried out in Kisoro district among Bafumbira tribe in Uganda, revealed that Bafumbira lack a local word for cervix, and the word vagina is a shameful / embarrassing word (Cox, 2010). “Female private parts” is replaced during translation, so in this case women would rather not take part in screening to avoid being embarrassed mentioning that they have come to screen a condition related to their private parts.

Other cultural gender roles and behavior's that hindered cervical cancer screening include inability to leave house-hold chores, pre-occupation with family problems and lack of approval from husbands (Fylan, 1998). However, Nakalevu (2009) argues that, if women and communities were educated and understood the importance of having a cervical cancer screening, and the importance of further follow up, culture would not be a bigger hindrance since the results of her study showed that, women's general attitude was positive towards cervical cancer screening. It is important to note though that in this study, participant recruitment happened at health facilities among patients who could already be having a positive attitude towards seeking health. Therefore, the sample population may not be representative of

the women population that could be targeted since this education awareness program would be targeting “the already converted ones”.

A behavior Change communication strategy should be developed to increase awareness of cervical cancer screening so that health personnel, other relevant government staff, community leaders and eligible women and their male partners understand the need for cervical cancer prevention services and support utilization of available services (NCCCP, 2012).

2.6. Cost and uptake of cervical cancer screening

The decision to have cervical cancer screening has been shown to be mainly influenced by economic factors. Qualitative studies conducted in India, South Africa and Uganda found that older women who were of low economic status and unemployed, were less likely to participate in cervical cancer screening (ACCP, 2004; Bradley et al., 2004; Kaku et al., 2008; Satija, 2009; WHO, 2010).

In the USA, Garner (2003) found that women in minority, socio-economically disadvantaged, and rural populations have not equally benefited from Papanicolaou test (Pap smear) screening. Other studies in South Africa reported that women without partners were less likely to participate in screening (Bradley et al., 2004; WHO, 2010), while in the Netherlands, a big number of participants in a study did not view cervical cancer as a big problem (Earker, 2001). Thus, to improve uptake of cervical cancer screening, it is crucial that organized screening programs take services nearer to the communities, and this needs to be coupled with information on its importance, and increased efforts to understand (and positively change) women’s perception of the disease (Earker, 2001).

In a qualitative study done in Uganda, Mutyaba et al. (2007) assert that having money increases the probability of utilizing cervical cancer screening and access to information and utilization of health care services, while Satija (2009) and Kaku et al. (2008) find that low socio economic status interferes with adherence and follow up of treatment leading to further morbidity and mortality from the disease. Kagumire (2010) found that large proportions of women in Uganda cannot afford transport costs to the

regional referral hospitals which provide cervical cancer screening services. Similar results are found in the United States of America (USA), South Africa and the Netherlands.

In Latin America, many uninsured and under insured Latino patients are in survival mode. Basic needs, such as keeping food on the table and paying for housing consume their daily lives. Many are on the edge of being homeless and some are, in fact, homeless. Cervical cancer screening is viewed as a luxury and as one Latina health care provider stated, “If you don’t have money for treatment, you don’t want to know if you’re sick.” This attitude may be reinforced by past experiences in Latin American countries, where treatment for cancer was unavailable due to lack of financial resources. For many people, healthcare in Latin America was inaccessible and unaffordable, and many experience the same situation in the U.S ((Salazar et al, 2006).

A cross-sectional study conducted by Gianfranco Damiani (2007) using data from the 2004-2005 national health interview survey in Italy, indicated that Socio-economic factors were shown to be strongly related to the use of preventive services. Disparities in the utilization of cervical cancer screening were widely identified. Comparative studies on the use of preventive services in Europe showed inequalities in the participation to screening programs, although the size of the inequality varied among countries. Women with lower health literacy are less likely to carry out routine cancer screening. Low socioeconomic status is all accompanied by a low chance of undergoing cancer screening procedures (Bruno Federico et al, 2007).

African settings confirms that integration of screening services into the existing health-care systems is the only way that high participation rates could be achieved (JHPIEGO, 1997). Other research is attempting to find technological solutions (screening methods that are cheaper, that do not require laboratory back-up, or that allow immediate treatment, with low technology and low-cost treatment options) to address some of the health system inadequacies that are prevalent in Africa and some research is looking at other treatment options (Adewole et al., 2008; Darwish & Gadallah, 1998).

2.7. Government policies and uptake of cervical cancer screening

Government policy and Guidelines reflect best practice in the management of cancer in Kenya and beyond. The interpretation and use of the information contained in this publication is highly recommended to guide practice, however, the clinical judgment of a certified healthcare professional, in consultation with relevant specialists, may be exercised in certain circumstances. The regular and consistent use of the guidelines by clinicians countrywide, will improve the management of cancer in Kenya, and thus help reduce the morbidity and mortality attributed to cancers (National Cancer Treatment Guideline, 2013).

The cervical cancer screening guidelines (2013) recommends Public health education as a primary prevention; which involves raising public awareness on the risk factors for cancer and providing education on ways of reducing these risks. This should result in behaviour change, which often occurs over a long period of time and may be difficult to quantify. Education on the benefits of early diagnosis, ways of detection and screening should also be provided. These preventive measures should be highly promoted. Increased awareness of warning symptoms and signs of cancer and taking prompt action, by the general public as well as physicians, nurses and other health care providers, can have a great impact on the disease through early diagnosis and hence more effective management (Mueke et al, 2012).

National Cervical Cancer Prevention Plan (2012), advocates for increasing accessibility by; informing the public of available services and where to get them. Involvement of community leaders to provide valuable support for outreach efforts and in adequate allocation of local resources for essential screening and treatment services. Male partners and other community members must support women's decisions to seek screening and to go for treatment when it is needed. Multi-sectorial involvement by governmental and nongovernmental agencies should be imperative for the success of this strategy.

National Cancer Treatment Guidelines (2013) recommends options for financing screening and treatment should include insurance through the N.H.I.F, private insurance or Out of Pocket,

expenditure. The latter is usually not sustainable. Health providers should educate clients on these options and guide them on how best to access financing. Odongo (2012) , suggests that in view of the fact that the Government has limited resources to effectively implement the Cancer Control Strategy, a multi-sectorial approach, embracing Public Private Partnerships (PPP), will be effected. Several areas of cancer management are amenable to implement PPP e.g. prevention strategies, capacity building, optimizing diagnostic facilities, pharmaceutical firms for subsidized costs of health products etc. Other modalities, such as placement of equipment's in the public sector by the private sector, will be employed (national guidelines for cancer management, 2013)

2.8. Theoretical framework

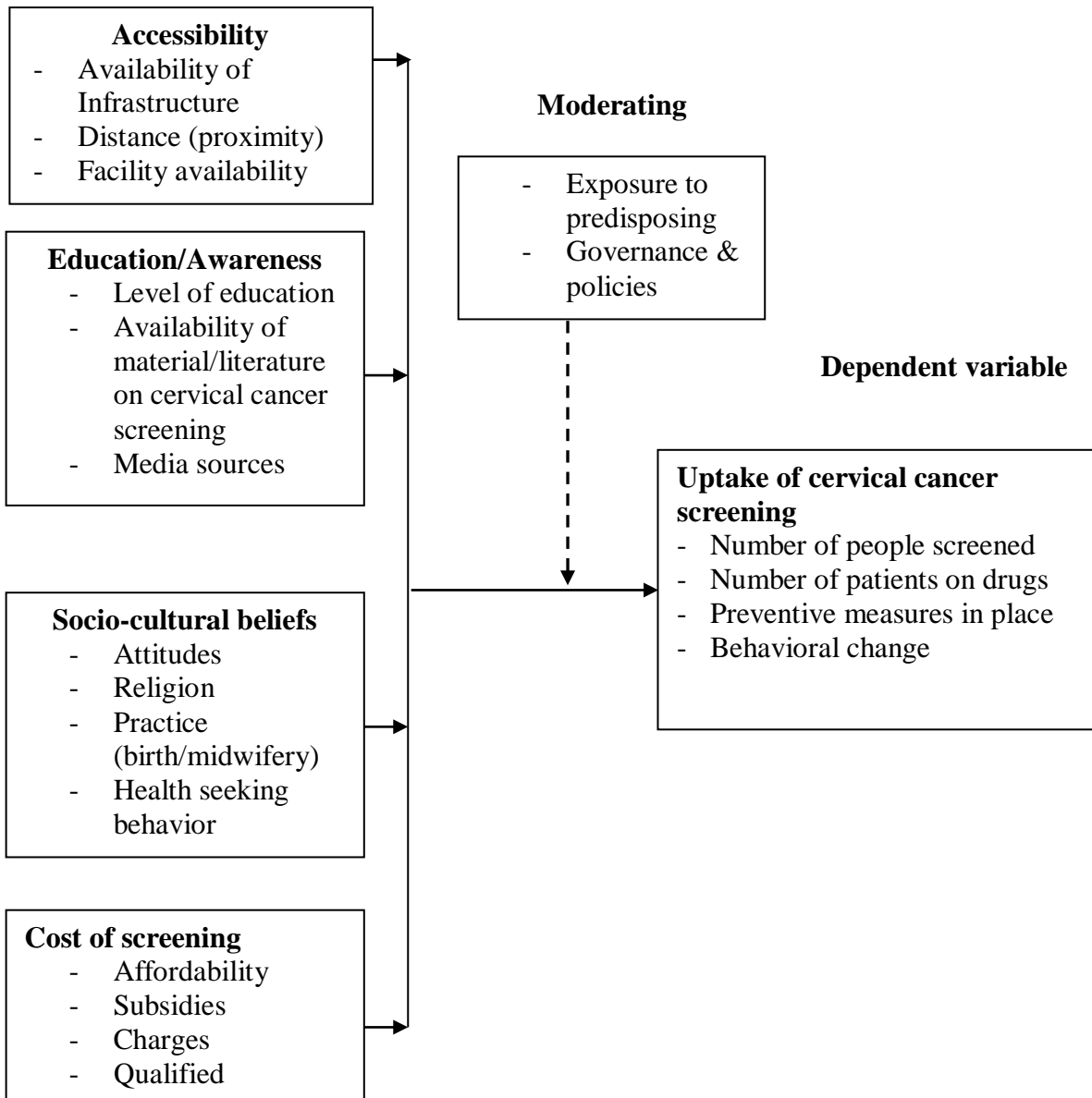
The Health Belief Model (Rosenstock, 1974) has been the model in health psychology applied most widely. It suggests that an individual's decision to take up cancer screening is determined by a number of psychological factors; Demographic characteristics, like age, race and ethnicity and gender; psychosocial variables such as social class, personality, social pressure and Structure variables such as knowledge and prior contact. The factors influence a person's view of the threat associated with cancer. In addition, people need cues to put into action, such as health promotion advice, mass-media campaigns, and screening invitation letters. However, the actual likelihood of a person taking up screening depends on the perceived benefits minus the perceived costs (Rosenstock, 1974).Therefore, an individual is likely to take up screening if: he/she is motivated highly about his/her health; believes is susceptible to develop cancer; understands the seriousness of getting cancer; and believes the benefits of the taking time off work to take up screening far outweigh the cost of lost pay. These conditions need to be triggered by an internal (physical symptom) or external (health screening letter) cue to action.

2.9. Conceptual framework

The conceptual framework examined and explained the influence of Education on uptake of screening cervical cancer. It examined the influence of Social-cultural factors in terms of beliefs and traditions, perceptions of people and religion vis-à-vis their contributions to uptake of screening cervical cancer. It also looked on how cost of screening and accessibility to health facilities, availability of the service and expertise, contributed to uptake of screening cervical cancer. While the independent factors are internal to screening, there is an external or intervening variable such as government policy. The study determined the influence of independent variables on the dependent variable in order to assess the factors influencing uptake of screening cervical cancer.

Figure 2.1: Conceptual Framework

Independent variable



2.10 Gaps in literature reviewed

On accessibility to screening services, this research only addressed itself to service availability, distance and familiarity. It did not however be make a comparative study on uptake of other health services and their availability but rather client's perception of the screening thus establishing whether they are aware or not. Further, it did not delve into issues of whether health providers are locals or non-locals and the impact this has on uptake of screening cervical cancer among women in reproductive age.

For social-cultural factors and uptake of screening cervical cancer, the research addressed itself to beliefs, traditions and attitudes. The research did not concern with specific belief and attitudes of the clients but rather whether they perceive belief, traditions and attitudes contribute to the uptake of screening cervical cancer. Similarly, on cost of screening and uptake of screening cervical cancer, the research did not delve on how much each individual pay for screening but rather whether the service is affordable or out of reach. Further, it did not consider challenges clients face to raise the funds for the screening service

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter presented the research design that was used by the researcher in establishing factors influencing the uptake of screening cervical cancer. It specifically discusses the research design used, the target population, the sample size and sampling procedure used, the research instrument employed and the procedure for collecting and analyzing data. It also addresses itself to the issues of validity and reliability of the research instrument and finally addresses the ethical consideration that was borne in mind while conducting the research.

3.2. Research design

A mixed approach survey design was conducted to facilitate a broad understanding of knowledge and women's perception, social economic and cultural factors that hinder the uptake of cervical cancer screening among women. This type of design was chosen in order to obtain a comprehensive summary of an experience formed by the women's own social world and interaction with others (Grimes, 2002). A mixed approach design also enabled the researcher to guarantee that data collected from the respondents are not just descriptions of a neutral and stable reality but descriptions of a reality that is constructed by the respondents themselves (Green & Thorogood, 2004).

3.3. Target population

The target population of this research was 83193 women in reproductive age in 129947 households within Vihiga County which includes:

Table 3.1 Households Distribution in Sub Counties within Vihiga County

Sub counties	Target Population	No. of Households
Emuhaya	24183	43996
Hamisi	17725	34334
Sabatia	22797	30227
Vihiga	19088	21390
Total	83193	129947

The research targeted women in 129 947 households within the county; by virtue of them being residents of the county, were better placed to give unbiased information than non-residents. According to Mugenda and Mugenda (2003), population refers to an entire group of individuals, events or objects having a common observable characteristic, in other words it refers to an aggregate of all that conforms to a given specification.

3.4. Sample size and sampling procedure

This section described the sample size and procedure of selecting sample.

3.4.1. Sample size

The Sample size for this study was 382 respondents. This was in line with Krejcie and Morgan's (1970) table of determining sample size where a sample size of 382 was good representation of a target population of between 75000-1000000 respondents.

3.4.2. Sampling procedure

According to Orodho & Kombo (2012), sampling is the process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group. The study used non - probability and probability sampling procedures. Purposive sampling was used to select women within the age of 15-65 years due for cervical screening. Stratified sampling enabled the researcher to identify the households from the county where these women reside.

3.5. Data collection Method

The study employed the use of both quantitative and qualitative methods of data collection. Primary data was collected through field work using various methods. A questionnaire and face to face interview guide was used since they were the best tools for this Study that aims at establishing the uptake of cervical cancer screening in Vihiga County. Data collection tools were piloted hence suggestions made were incorporated in the final questionnaire. The study utilized a self-administered questionnaire and an in-depth interview schedule and equally referred to the existing secondary data.

3.6. Instruments

The data collection technique was the use of questionnaires targeting women of reproductive age. The questionnaire was both structured and semi-structured in order to collect the required information adequately, research assistants helped in distribution and this took 3 days.

To collect qualitative data, Key Informant Interview Guide was developed to facilitate the researcher in undertaking in-depth interviews with the selected health officer. The Guide constituted a series of open-ended questions that seek to determine the uptake of cervical cancer screening on their knowledge and experience concerning the Process. The interview schedule was conducted by the researcher.

Secondary data was collected from published cervical cancer screening reports and other available documents and journals from the Ministry of Health and WHO website, and other authentic materials.

3.7. Pilot testing

Pilot testing involved actual data collection on a small scale to get feedback on whether or not the instrument is likely to work as expected. According to Gall and Borg (1996), the total number of respondents for the pilot study should be between 9–10% of the sample population. In this study, a total of 38 respondents, regular women attending clinics, were used for the pilot study. This gave the researcher an opportunity to revise the instrument and the process of collecting data. Piloting of the instrument was seeking to correct errors in questions such as questions that respondents did not

understand, ambiguous questions, questions that combine two or more issues in a single question and questions that made respondents uncomfortable.

3.8. Validity of the instrument

According to Mugenda and Mugenda (2003), validity is the accuracy and meaningfulness of inferences, which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. Content validity was determined by pilot testing the instrument. This involved actual data collection on a few respondents to get feedback on whether or not the instrument was likely to work as expected. Piloting of the instrument was seeking to correct the following; questions that respondents were likely not understanding, ambiguity in questions, questions that combine two or more issues in a single question and questions that made respondents uncomfortable.

3.9. Reliability of the instrument

According to Mugenda and Mugenda (2003), reliability is a measure of the degree to which a research instrument yields consistent results. In this research, reliability will be assessed for internal consistence by use of test - retest technique. Test-retest reliability is the degree to which scores are consistent over time. It indicates score variation that occurs from testing session to another testing session to check for errors which occur as a result of errors of measurement. Reliability was improved by standardizing the conditions under which measurement takes place. Time taken between the first set of test and the next was short so as to ensure a high reliability co efficient.

3.10. Data collection procedures

The researcher acquired a permit from the County Health Committee and relevant authorities to undertake research. The County health committee was contacted in advance and informed that the study will take place in the area. Appointments to the sampled hospitals and offices were arranged prior to the visits to avoid any inconveniences to the respondents. The researcher emphasized confidentiality of the

information given and assured them that it is for academic purposes only. Also the researcher secured an introductory letter from the University of Nairobi and a permit from the National council of Science and Technology.

3.11. Data analysis techniques

According to Dawson (2002) data analysis involves examining what has been collected in a study and making inferences and deductions. Data analysis is undertaken for the purpose of summarizing the collected data and organizing these in a manner that they answer the research questions (objectives). The researcher ensured that all questionnaire/checklist forms were kept safely throughout the data collection period. At the end of each day, all completed questionnaire/checklist forms were re-visited and corrections done before losing such valuable information. After this, the researcher developed a coding system. The core function of the scheme was to create codes and scales from the responses which were then summarized and analyzed in various ways. Preliminary data entry was done using statistical package for social sciences (SPSS).

3.12. Ethical considerations

The following ethical considerations were observed. First, voluntary and informed consent of the respondents was sought and observed. Secondly confidentiality and privacy was observed, respondents were protected by keeping information provided confidential. If information was to be shared then the consent of the respondent was to be sought. To add on this, any work from any source other than mine was acknowledged. Lastly, the identities of individuals were protected by either using numbers or pseudo names to keep them anonymous.

3.13. Operationalization of Variables

Table 3.1: Operationalization of variables

OBJECTIVE	SOURCE	INDICATORS	MEASURING SCALE	TOOLS OF ANALYSIS
To determine how accessibility to health facilities uptake of cervical cancer screening	Women in reproductive age (childbearing age) Nurses (Midwives) Traditional Birth attendants Gynecologists	- Infrastructure - Distance (proximity) - Facility availability	- Ordinal	- Frequency tables and percentages - Cross tabulation
To assess how knowledge, attitude and practice influences uptake of cervical cancer screening	Women in reproductive age (childbearing age) Nurses (Midwives) Traditional Birth attendants Gynecologists	- Level of education - Availability of material/literature on cervical cancer screening - Media sources (availability of information)	- Ordinal	- Frequency tables and percentages - Cross tabulation
To investigate the social cultural factors that influence uptake of cervical cancer screening	Women in reproductive age (childbearing age) Nurses (Midwives) Traditional Birth attendants Gynecologists	- Attitudes - Religion - Practice - Health seeking behavior	- Ordinal	- Frequency tables and percentages - Cross tabulation
To establish how cost of service influences uptake of cervical cancer screening	Women in reproductive age (childbearing age) Nurses (Midwives) Traditional Birth attendants Gynecologists	- Affordability - Subsidies - Cost - Qualified personnel	- Ordinal	- Frequency tables and percentages - Cross tabulation

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents findings of the study which have been discussed under thematic and sub-thematic sections in line with the study objectives. The thematic areas include; demographic characteristics of respondents, accessibility to screening services, awareness, socio-cultural beliefs and cost of cervical cancer screening.

4.2 Questionnaire return rate

The researcher administered 382 questionnaires to the respondents and after 7 days 321 questionnaires were collected and fully signed.

Table 4.1: Sample population and response rate

Category	Sample size	Response rate	Percentage
Students	85	80	20.94
Civil servants	102	91	23.82
House wives	69	66	17.27
Professionals	37	25	6.54
Trading	20	10	2.61
Self employed	69	49	12.82
Total	382	321	84.03

Table 4.1 indicates that there was a return rate of 321 (84.03%). According to Werner (2004), results from surveys with response rates above 80% are considered reliable. The study therefore had a response rate of 321 respondents that constituted 84.03% of the total population. Categorical responses among the populations included; civil servants 91 (23.82%) who were the majority, followed by students 80 (20.94%), house wives 66 (17.27%), self-employed 49 (12.82%), professionals 25 (6.54%) and traders 10 (2.61%). Respondents who did not return the questionnaires were 61 (15.97%). Such a return rate was considered proper. A high turnout of responses from civil servants could be owed to their stations

and availability to the researcher, which accounted for 23.82% whom the researcher booked interviews with and a good number returned the questionnaires properly, students, had a relatively high response rate at 20.94%, they included students from technical institutions, universities, medical college among other institutions. civil servants represented a population of women who are affected in a way or the other by cancer of the cervix or any other cancer or who have prior or no knowledge about the same, housewives were targeted as they could be affected or are aware of the ailment, professionals in different fields such as pharmacists, teachers among others were targeted as they bear crucial and salient information about predisposition factors to cancer of the cervix while traders and self-employed were thought to either be affected or be at the risk of contracting cervical cancer. All these respondents were targeted with effort to dissect and understand their knowledge, attitude and practices regarding cervical cancer.

4.3 Demographic characteristics of respondents

The study was interested in the demographic characteristics of the respondents in order to ascertain the reflection to the uptake of cervical cancer screening. The following characteristics were explored: age, education, marital status, occupation and religion.

4.3.1: Age of the Respondents

The researcher was interested in establishing the age of the respondents and the respondents were asked to state their ages and the results are as shown in table 4.2.

Table 4.2: Distribution of responses according to age

Measurement scale	Frequency	Percent
between 10 - 20 years	69	21.5
20 - 30 years	105	32.7
30 - 40 years	62	19.3
40 - 50 years	42	13.1
>50 years	43	13.4
Total	321	100.0

Table 4.2 indicated that most respondents under study were between ages of 20 – 30 years 105 (32.7%) followed by 10-20 years 69 (21.5%), between 30 – 40 years 62 (19.3%), respondents above 50 years of age were 43 (13.4%) and 40 – 50 years 42 (13.1%). This implied that majority among the respondents were aged between 20 – 30 years represented by 32.7% and the least representation were women aged between 40 – 50 years represented by 13.1%.

4.3.2: Education Level of Respondents

The researcher sought to establish how the levels of education of the respondents and the respondents were asked to indicate their levels of education and results were depicted in table 4.3;

Table 4.3: Distribution of responses according to Level of education

Measurement scale	Frequency	Percent
Certificate	116	36.1
Diploma	83	25.9
Undergraduate	37	11.5
Post graduate	42	13.1
Others	43	13.4
Total	321	100.0

Table 4.3 indicate that majority of women in the study were certificate holders (O level) represented by 116 (36.1%), followed by 83 (25.9%) that were diploma holders, 43 (13.4%) respondents with postgraduate qualifications followed by respondents, 42 (13.1%) with other levels of education and

lastly undergraduate levels of education with 37 (11.5%). This implied that majority of respondents were certificate holders with a 36.1% representation. This could be due to the fact that they could be young with age and at the child-bearing age where the researcher was interested much.

4.3.3: Marital Status of respondents

The researcher further sought to establish how marital status related to uptake of cervical cancer screening among women of child bearing age in Vihiga and the results were as presented in table 4.4;

Table 4.4: Distribution of responses according to marital status

Measurement scale	Frequency	Percent
Single	87	27.1
Married	127	39.6
Separated	45	14.0
Widowed	41	12.8
Divorced	21	6.5
Total	321	100.0

Table 4.4 depict that majority of women were married at 127 (39.6%), followed by 87 (27.1%) who were single, separated at 45 (14.0%), widowed at 41 (12.8%) and lastly by divorced at 21 (6.5%). This implied that the study targeted most married women in wanting to establish uptake of cervical cancer screening in Vihiga County.

4.3.4: Occupation of the Respondents

The researcher was interested in establishing whether occupation of the respondents relate to their uptake of cervical cancer screening in Vihiga county and the results were as presented in table 4.5;

Table 4.5: Distribution of responses according to Occupation

Measurement scale	Frequency	Percent
Student	80	24.9
Civil servant	91	28.3
House wife	66	20.6
Professional	25	7.8
Trading	10	3.1
Self employed	49	15.3
Total	321	100.0

Table 4.5 indicate that civil servants were the majority, 91 (28.3%), followed by students at 80 (24.9%), house wives 66 (20.6%), self-employed who consist farmers and motor cyclists at 49 (15.3%), professionals at 25 (7.8%) and traders 10 (3.1%). This implied that majority of the responses were civil servants. This could be due to the fact that the researcher easily booked interviews with the civil servants in their stationed offices and their turn out in responses were as presented.

4.3.5: Religion of the Respondents

The researcher was interested in establishing the religion of respondents. The respondents were asked to indicate their religion and the results were as presented in table 4.6;

Table 4.6: Distribution of responses according to Religion

Measurement scale	Frequency	Percent
Christian	155	48.3
Muslim	106	33.0
Hindu	1	0.3
others (specify)	59	18.4
Total	321	100.0

Table 4.6 shows that majority of respondents were Christians supported by 155 (48.3%), followed by Muslims at 106 (33.0%), other religions were represented by 59 (18.4%) and the least were Hindus at 1 (0.3%).

This implied that Christians were the majority in Vihiga County while Hindus were the least represented. Religion as a factor was seen to relate strongly to uptake of cancer screening activities relating to the teachings given in congregational meetings and other practices such as sanctity encouraged in churches, mosques and the manner the human body is viewed with different religions.

4.4 Accessibility to uptake of cervical cancer screening among women of reproductive age in Vihiga County

This was the first objective of the study. Accessibility factors are very important in uptake of cervical cancer screening among women of reproductive age as it consists factors such as; infrastructure, proximity to the facility, and facility availability. They are discussed as follows;

4.4.1. Availability of health facilities and uptake of cervical cancer screening

The researcher was interested in establishing availability of screening facilities, special cancer clinic, Pap smear and in-house pathology services; management challenges and referral, reason for referral and patient's response to referrals. The researcher therefore asked the respondents for their opinions on infrastructure availability in terms of facility availability and uptake of cancer screening practices and results were as presented in table 4.7;

Table 4.7: distribution of responses on Health facility available

Health facility	Frequency	Percent
Vihiga county referral hospital	48	15.0
Emuhaya sub-county hospital	60	18.7
Sabatia sub-county hospital	61	19.0
Hamisi sub-county hospital	23	7.2
Dispensaries	24	7.5
Health Centre's	105	32.7
Total	321	100.0

Table 4.7 depict that a majority of respondents attended to Health Centre facilities, represented by 105(32.7%), Sabatia sub-county hospital 61 (19.0%) followed by 60 (18.7%) who attended Emuhaya sub-county hospital; 48 (15.0%) attended to Vihiga County referral hospital, Dispensaries were represented by 27 (7.5%) and the least accessed was Hamisi sub county hospital represented by 23 (7.2%).

This implied that the county was well equipped with facilities to enable screening of cancer of the cervix as it is represented by the frequencies of visits to facilities indicated. Hoque, et., al (2008) asserts that adequate coverage in terms of the number of and adequacy of health facilities is thus dependent on knowledge on the benefits of Pap smear, availability of the test at health facilities and proper functioning of health system (timely testing, receiving test results, referral of abnormal results to appropriate level of care), and perception and attitude of health care workers.

4.4.2 Proximity to health facilities

Referral networks for cervical cancer prevention will almost always require linkages between primary, secondary, and tertiary care facilities, or between public- and private-sector facilities. The researcher sought to establish proximity to health facilities as a component and the respondents were asked the distance covered to a health facility and the results were as presented in table 4.8;

Table 4.8: Proximity of a health facility to your home

Scale of measurement	Frequency	Percent
<1 km	83	25.9
1 - 5 km	147	45.8
5 - 10 km	53	16.5
> 10 km	38	11.8
Total	321	100.0

Table 4.8 indicate that most respondents resided between 1-5 kilometers away from the closest health facility that offered cancer screening services at 147 (45.8%), followed by less than a kilometer at 83

(25.9%), 5 – 10 kilometers represented by 53 (16.5%) and lastly 38 (11.8%) travelled as far as 10 kilometers and above to get to the nearest health facility where screening services are offered.

This implied that there was availability of levels of care within Vihiga County where screening of cervical cancer was conducted as indicated by the majority who accessed the services with the closest of proximity and only a few having to travel long distances, here being ten kilometers and above seeking for screening services.

The researcher also wanted to get an insight on the proximity of the health facility and its influence to the uptake of cervical cancer screening. Categorical responses were obtained and the results were represented as in table 4.9;

Table 4.9: Cross tabulation showing proximity to a health facility and uptake of cervical cancer screening services in Vihiga County

		proximity of a health facility to your home				Total	
		<1 km	1 - 5km	5 - 10km	> 10km		
uptake of cervical cancer screening	Influence	Count	57	100	35	27	219
		% within proximity of health facility	68.7%	68.0%	66.0%	71.1%	68.2%
	does not influence	Count	26	47	18	11	102
		% within proximity of health facility	31.3%	32.0%	34.0%	28.9%	31.8%
Total		Count	83	147	53	38	321
		% of Total	25.9%	45.8%	16.5%	11.8%	100.0%

Table 4.9 show that, respondents who resided further away from the health facilities 71.1% acknowledged that proximity to a health facility influences uptake of cervical cancer screening in Vihiga county while in the same category of response 28.9% within the respondents declined, 68.7% among respondents in the less than 1 km” proximity acknowledged influence of proximity to uptake of cervical cancer screening in Vihiga county while in the same category 31.3% declined its influence,

68.0% within the category of “1 – 5 km” acknowledge that proximity influences the decision to conduct cervical cancer screening whereas in the same category 32.0% declined the influence of proximity to uptake of cervical cancer screening, among respondents within the “5 – 10 km” category, 66.0% acknowledged that proximity influenced the decision of a woman of reproductive age to seeking cervical cancer screening while in the same category, 34.0% respondents were of the contrary opinion.

This implied that distance to a health facility influenced the decision by a client to visit the facility and have a cervical cancer screening test done. According to Baner (2001) Accessibility has also been identified in the research. Long distances to the cervical cancer screening services reduce the likelihood of women accessing screening. A cross-sectional, community-based survey revealed that poor transportation would be an additional problem. Lyimo (2012) purports women who knew the location of the nearest cancer screening facility were more likely to have screened for cervical cancer compared to those who did not. Further, participants who resided 2 to 5 km from the cancer screening facility were more likely to have had the screening compared to those who lived further away.

4.4.3 Cost Getting to Nearest Health Facility

The researcher sought to establish whether the cost of getting to nearest facility influenced the decision “to uptake cervical cancer screening” among women of reproductive age in Vihiga county and therefore the researcher asked the respondents to indicate the amount spend to get to the nearest facility where cervical cancer screening services are offered and the results were as presented in table 4.10;

Table 4.10: cost of getting to the nearest facility the cost of getting to a health facility

Scale of measurement	Frequency	Percent
Nil	146	45.5
Kshs. 10 – 50	69	21.5
Kshs. 50 – 100	33	10.3
> Kshs. 100	73	22.7
Total	321	100.0

Table 4.10 show that majority of the respondents in this category spent no cent in terms of fares to get to the nearest health facility offering screening services and this were represented by 146 (45.5%), followed by women who spent more than Kshs. 100” at 73 (22.7%), “Kshs. 10 – 50” 69 (21.5%) and lastly “kshs. 50 – 100” Who were represented by 33 (10.3%).

This implied that majority of women under study resided in areas where there was sufficiency of health facilities that offer cervical cancer screening. To further identify the influence the cost had on the uptake of cancer screening among women in Vihiga County in categorical responses, the researcher conducted a cross tabulation and the results were as shown in table 4.11;

Table 4.11: Cross tabulation showing cost of getting to a health facility’s influence on uptake of cervical cancer screening.

		The cost of getting to a health facility (KSH)				Total	
		nil	10 - 50	50 -100	>100		
uptake of cervical cancer screening	Influence	Count	105	46	21	47	219
		% within the cost	71.9%	66.7%	63.6%	64.4%	68.2%
	Does not influence	Count	41	23	12	26	102
		% within the cost	28.1%	33.3%	36.4%	35.6%	31.8%
Count		146	69	33	73	321	
Total % of Total		45.5%	21.5%	10.3%	22.7%	100.0%	

Table 4.11 show that respondents within the category that spent nothing reaching to the nearest health facility, 71.9% acknowledged the influence of cost of getting to ta health facility on uptake of cervical cancer screening, while in the same category 28.1% were of the contrary opinion, it does not influence, followed by 66.7% from within ‘Kshs. 10 – 50” who acknowledged that cost influences uptake of cervical cancer screening while in the same category, 33.3% declined; 64.4% among respondents within those who spent “more than Kshs. 100” acknowledged the influence of cost on uptake of cervical cancer screening while in the same category, 35.6% declined and lastly 63.6% within those who spent between “Kshs. 50 – 100” opined that cost of getting the nearest health facility it influences uptake of cervical cancer screening. While in the same category, 36.4% among the respondents declined its influence.

This implies that the uptake of cervical cancer screening cuts across all categorical responses within and without, with a perceived influence that is it that the cost of getting to the nearest health facility influences the decision to uptake cervical cancer screening among women of reproductive age. This

could be owed to the fact that, socio-economically disadvantaged, and rural populations have not equally benefited from Papanicolaou test (Pap smear) screening. Thus, to improve uptake of cervical cancer screening, it is crucial that organized screening programs take services nearer to the communities, and this needs to be coupled with information on its importance, and increased efforts to understand (and positively change) women's perception of the disease (Earker, 2001). Moreover, qualitative studies conducted in India, South Africa and Uganda found that older women who were of low economic status and unemployed, were less likely to participate in cervical cancer screening (ACCP, 2004; Bradly et al., 2004; Kaku et al., 2008; Satija, 2009; WHO, 2010).

4.5. Education and Uptake of screening Cervical Cancer

This was the second objective of study where the researcher sought to establish whether education and awareness as components influence the uptake of cervical cancer screening among women of reproductive age in Vihiga County. The researcher studied these objective in three indicators; availability outreach programs on cervical cancer screening, knowledge on health facility's cancer screening equipment and health workers attending to questions pertaining cervical cancer screening. They are discussed as follows;

4.5.1: Availability of outreach programs on cervical cancer screening

Outreach programmes serve to educate and create awareness among a population of the importance of an issue. The researcher studied the availability of outreach programs as a component of awareness and its influence on the uptake of cervical cancer screening among women of reproductive age and the results are as shown in table 4.12;

Table 4.12: Distribution of responses according to availability of outreach programs

Scale of measurement	Frequency	Percent
Yes	204	63.6
No	117	36.4
Total	321	100.0

Table 4.12 show that majority of women of reproductive age were aware of availability of outreach programs represented by 204 (63.6%) whereas a few 117 (36.4%) were not aware.

This implied that the respective organs of the ministry of health had done enough to ensure that information has been passed out through various channels to ensure women of the reproductive age gain knowledge on screening of cervical cancer services.

To further gain an insight into categorical responses within the decision to influence or not to influence the uptake of cervical cancer screening, the researcher conducted across tabulation and the results were as shown in table 4.13:

Table 4.13: cross tabulation showing availability of outreach program and its influence on uptake of cervical cancer screening among women of reproductive age in Vihiga County

		<u>Are there outreach programs on cervical cancer screening</u>		Total	
		Yes	No		
Uptake of cervical cancer screening	Influence	Count	138	81	219
		% within outreach on cervical cancer screening	67.6%	69.2%	68.2%
	does not influence	Count	66	36	102
		% within outreach on cervical cancer screening	32.4%	30.8%	31.8%
Total		Count	204	117	321
		% of Total	63.6%	36.4%	100.0%

Table 4.13 shows that responses within the “No” category, 69.2% acknowledged that outreach programs influenced the uptake of cervical cancer screening among women of reproductive age, whereas in the same category, 30.8% did not acknowledge the influence of outreach programs on cervical cancer and its uptake among women of reproductive age, 67.6% of women within the “yes” category acknowledge the influence of outreach programs on uptake of cervical cancer screening while in the same category, 32.4% did not.

This implied that outreach programs served as core to disseminating information about screening of cervical cancer within Vihiga County. Merleen (2006) asserts that most cervical cancer screening programmes in developing countries reach only a small fraction of the population, usually young urban women. This is the result of a lack of knowledge and awareness of the most-at risk population, as well as of the lack of accessible and acceptable screening services. As an example, private family planning clinics in Indonesia, Kenya, Thailand and Uganda offer cervical cancer screening services to their clients, generally in urban areas and for a fee.

4.5.2 Knowledge on cervical cancer screening equipment

The researcher was interested in establishing whether the respondents were aware that health facilities within Vihiga County had cancer screening equipment and the results were as presented in table 4.14;

Table 4.14: Awareness on cervical cancer screening equipment

Scale of measurement	Frequency	Percent
Yes	117	36.4
No	115	35.8
don't know	89	27.7
Total	321	100.0

Table 4.14 shows that a majority 117 (36.4%) were aware of health facilities being equipped by equipment to screen for cervical cancer, followed by 115 (35.8%) who were not aware of the facilities having cancer screening equipment while also 89 (27.7%) were not aware of such services in health facilities in Vihiga county.

This implied that dissemination of information on equipment's had been somehow carried out by the respective institutions in the effort of promoting cervical cancer screening among women in Vihiga County and thus why majority had knowledge of cervical cancer screening equipment's.

To further gain insight on categorical responses as regards the uptake of screening for cancer of the cervix, the researcher conducted a cross tabulation to establish the influence of awareness on facilities having equipment for screening of cancer of the cervix among women of reproductive age and its uptake among the subjects under study, a cross tabulation was conducted and the results presented as shown in table 4.15;

Table 4.15: cross tabulation showing awareness of facilities having cancer screening equipment and uptake of cancer screening among women in Vihiga County.

		Are you aware that health facilities have cancer screening equipment?			Total	
		Yes	No	don't know		
uptake of cervical cancer screening	Influence	Count % within awareness that health facilities have cancer screening equipment?	75 64.1%	82 71.3%	62 69.7%	219 68.2%
	does not influence	Count % within awareness that health facilities have cancer screening equipment?	42 35.9%	33 28.7%	27 30.3%	102 31.8%
Total		Count % of Total	117 36.4%	115 35.8%	89 27.7%	321 100.0%

Table 4.15 reveal that among the responses obtained from the women in Vihiga county, 71.3% among the respondents under the “no” category, those who purported not being aware of screening equipment in health care centers, acknowledged that availability of cancer screening equipment influenced in part the decision to uptake cervical cancer screening, while in the same category, 28.7% had a contrary opinion, it does not influence; followed by 69.7% responses among the “Don’t Know” category who thought availability of equipment influenced the decision to uptake or not to uptake cervical cancer screening while in the same category 30.3% were of the contrary opinion; responses among the “yes” category, 64.1% opined that knowledge on availability of cancer screening equipment in health centers influenced the decision to uptake screening whereas in the same category, 35.9% had a contrary opinion.

Hoque et al., (2008) asserts that success of the uptake of cervical cancer screening would largely depend on public awareness and knowledge on cervical cancer screening equipment by women and the screening program enabling women to make informed sexual and reproductive health choices including cervical cancer screening. Denny et al., (2006) point out that successful cancer screening in low-resource settings; screening, diagnosis and treatment provided on-site, or in clinics accessible to the majority of at-risk women; low-cost, low-technology screening test that can lead to immediate treatment of abnormalities; wide coverage of at-risk women; appropriate educational programmes directed towards health workers and women to ensure correct implementation and high participation; built-in mechanism for evaluation of the screening programme are essential.

Mwaka, (2013) asserts that respondents from the public hospital had more concerns with inadequate human resources for health, lack of equipment and supplies for proper diagnosis and management of cervical cancer while these concerns were not as strongly expressed by respondents from the missionary hospital where greater emphases were put on quality related challenges such as long waiting times, delayed histology results and other patients-related challenges.

4.5.3: Adequacy of information provided by health workers

Adequacy of information by health workers was tested as a component of awareness and education by the researcher and the researcher asked the respondent whether health workers are able to answer all questions pertaining cervical cancer screening anytime. The results presented as in table 4.16;

Table 4.16: Adequacy of information provided by health workers

Scale of measurement	Frequency	Percent
Yes	177	55.1
No	144	44.9
Total	321	100.0

Table 4.16 indicate that majority of respondents 177 (55.1%) acknowledge that health workers provided adequate information on cervical cancer screening whenever their support was called in, followed by 144 (44.9%) who purported that health workers did not disseminate adequate information as regards screening of the cancer of the cervix.

This implied that majority might have gotten their information from health workers during field and outreach programs while a few might have found information about screening of cervical cancer through media sources, e.t.c. to further ascertain categorical responses within the indicator, the researcher conducted a cross tabulation and the results were as presented in table 4.17;

Table 4.17: Cross tabulation showing adequacy of information provided by health workers and its influence on uptake of cervical cancer screening

		Are health workers able to answer all questions pertaining cervical cancer screening anytime?		Total	
		Yes	No		
uptake of cervical cancer screening	Influence	Count	124	95	219
		% within are health workers able to answer all questions pertaining cervical cancer screening anytime?	70.1%	66.0%	68.2%
	does not influence	Count	53	49	102
		% within are health workers able to answer all questions pertaining cervical cancer screening anytime?	29.9%	34.0%	31.8%
Total		Count	177	144	321
		%	55.1%	44.9%	100.0%

Table 4.17 indicate that a majority among the “yes” category felt that health workers ability to answer questions pertaining cervical cancer influenced their decision regarding uptake of cervical cancer screening, represented by 70.1%, whereas in the same category, 29.9% declined and had a contrary opinion. In “no” category, 66.0% respondents were found to acknowledge that the health workers ability to provide answers anytime influenced their decision to screen for cervical cancer, whereas in the same category, 34.0% had a contrary view.

This implied that sufficient knowledge about cervical cancer by practitioner improves or influences the patient’s health seeking behavior and motivation.

4.6. Socio-cultural beliefs and uptake of cervical cancer screening among women of reproductive age in Vihiga County

This was the third objective and the study sought to establish whether socio-cultural beliefs had an effect on uptake of cervical cancer screening among women of reproductive age in Vihiga County and this was studied under the following indicators; religion, practice and health seeking behavior.

4.6.1 Religious and cultural affiliation and cervical cancer screening

The researcher was interested in establishing whether religious and cultural beliefs influences the uptake of cervical cancer screening among women of reproductive age in Vihiga county and the results were as shown in table 4.18;

Table 4.18: Religious and cultural affiliation and uptake of cervical cancer screening

Scale of measurement	Frequency	Percent
Yes	156	48.6
No	165	51.4
Total	321	100.0

Table 4.18 depict that a slight majority's attitudes towards uptake of screening cancer of the cervix were influenced by religious and cultural beliefs, represented by 156 (48.6%) while 165 (51.4%) felt that religious and cultural beliefs do not influence their uptake of cancer of the cervix screening.

This implied that majority of women of child bearing age had knowledge about screening of cancer of the cervix and were properly educated about the same not even to allow cultural interferences on what they understood about cervical cancer screening.

The researcher conducted a cross tabulation to gain insight in categorical responses among the women with regard to the influence on uptake of screening services and the results were presented as in table 4.19;

Table 4.19: Cross tabulation showing uptake of cervical cancer screening and their religious affiliation

		Does your religious affiliation encourage women to go for cancer screening?			Total
		Yes	No		
uptake of cervical cancer screening	Influence	Count	109	110	219
		% within does your religious affiliation encourage women to go for cancer screening?	67.3%	69.2%	68.2%
	does not influence	Count	53	49	102
		% within does your religious affiliation encourage women to go for cancer screening?	32.7%	30.8%	31.8%
	Count		162	159	321
	Total %		50.5%	49.5%	100%

Table 4.19 indicate that, 69.2% among respondents who’s religious affiliation did not encourage women to attend cervical cancer screening acknowledge its influence on the uptake of cancer screening whereas in the same category 30.8% did not, followed by 67.3% among those who religious affiliation encouraged not to attend but somehow so its influence whereas in the same category 32.7% were of the contrary opinion.

This implied that even in the wake of stigma related to cancer of the cervix and its screening, women participated in the program. WHO (2004) asserts that some women choose not to attend health facilities because of a previous negative experience, concerns about privacy or confidentiality, cultural beliefs or traditions, or misinformation about the purpose and availability of services. Hard-to reach women also

include those who are marginalized by society, such as ethnic minorities, sex workers, intravenous drug users, and women known or thought to be infected with HIV (WHO and ACCP forthcoming).

4.6.2 Community awareness of cervical cancer severity

The researcher further studied the level of community awareness of the cancer of the cervix severity as a component within socio cultural beliefs under knowledge and its relation to the uptake of cervical cancer screening and the results were as presented in table 4.20;

Table 4.20: Community awareness of cervical cancer severity

Scale of measurement	Frequency	Percent
Yes	160	49.8
No	161	50.2
Total	321	100.0

Table 4.20 indicate that 161 (50.2%) majority of the community were not aware of the severity that comes along with cancer of the cervix followed by 160 (49.8%) who knew severity of cancer of the cervix.

This implied that slight majority of the respondents had no idea on what the cervical cancer can complicate to. This could be the main reason as to why stigma is attached to such patients from poor households that suffer due to cancer of the cervix and related complications.

To further establish categorical response with regard to the decision status, the researcher conducted a cross tabulation and the results were as presented in table 4.21;

Table 4.21: A cross tabulation on community aware of cervical cancer severity and uptake of cervical cancer screening?

			Is your community aware of cervical cancer?		Total
			Yes	No	
uptake of cervical cancer screening	Influence	Count	104	115	219
		% within is your community aware of cervical cancer?	65.0%	71.4%	68.2%
	does not influence	Count	56	46	102
		% within is your community aware of cervical cancer?	35.0%	28.6%	31.8%
		Count	160	161	321
		Total %	49.8%	50.2%	100%

Table 4.21 indicate that 71.4% among those whose community were not aware of cervical cancer severity acknowledged that as an influencing factor toward uptake of cervical cancer screening whereas in the same category, 28.6% did have contrary opinion as not influencing. 65.0% among whose community had prior awareness of the severity of cancer of the cervix acknowledged that influent on their decision to attend cervical cancer screening whereas in the same category, 35.0% had a contrary opinion.

This implies that knowledge of severity among community members was an essential motivation when it comes to behavior changes as to when to seek for medical attention. Vroom (1964) refers to any situation or context where people have expectations from whatever they do. It states that “motivated behavior is increased if a person perceives a positive relationship between effort and performance – i.e. the outcome.

4.6.3 Practices predisposing women to cervical cancer

The last indicator tested under socio cultural beliefs and practices was practice. This indicator was measured with reference to predisposing factors that included cigarette smoking and alcohol consumption. The results tested were presented in table 4.22;

Table 4.22: Practices predisposing women to cervical cancer (cigarette smoking and alcohol intake)

Scale of measurement	Frequency	Percent
Yes	158	49.2
No	162	50.5
don't know	1	.3
Total	321	100.0

Table 4.22 indicate that 162 (50.5%) among the respondents were not aware that cigarette smoking and alcohol consumption predisposed women to cervical cancer, this was followed by 158 (49.2%) who were aware that cigarette smoking and alcohol intake predisposes them while only 1 (0.03%) was not aware of predisposing factors.

This implies that majority of respondents did not know the predisposing factors to cancer of the cervix. This can also mean knowledge disseminated either by the media sources, health workers among other institutions does not cover the whole topic on cervical cancer screening.

The researcher sought to identify categorical responses as regard the influence of predisposing factors on uptake of cervical cancer. The results were presented in table 4.23;

Table 4.23: Predisposing factors on uptake of screening for cancer of the cervix

		Cigarette smoking and alcohol intake increase the risk of developing cervical cancer? (Practice)			Total	
		Yes	No	don't know		
Uptake of cervical cancer screening	Influence	Count	104	114	1	219
		% within does cigarette smoking and alcohol intake increase the risk of developing cervical cancer?	65.8%	70.4%	100.0%	68.2%
	does not influence	Count	54	48	0	102
		% within does cigarette smoking and alcohol intake increase the risk of developing cervical cancer?	34.2%	29.6%	.0%	31.8%
		Count	158	162	1	321
		Total %	49.2%	50.5%	0.3%	100%

Table 4.23 show that among respondents who were not aware of the influence of predisposing factors like cigarette smoking and alcohol consumption, 70.4% acknowledged the influence of predisposing factors on uptake of cervical cancer screening, whereas in the same category, 29.6% had a contrary opinion. This was followed by 65.8% among those who acknowledged the influence of predisposing factors on uptake of cervical cancer screening while in the same category, 34.2% were of a contrary opinion.

This implies that uptake of cancer of the cervix screening relates to predisposing factors like smoking and alcohol consumption. A minority of women exposed to HPV will develop persistent infection, probably as a result of an inadequate immune response. Persistent infections with high-risk HPV may progress invasive cancer and cofactors (such as smoking) may play role in this progression. Risk factors

for cervical cancer include socio-demographic factors, including sexual activity (lifetime number of sex partners, early age at first intercourse, frequency of sexual encounters) age and parity, as well as factors related to health behaviour such as smoking, nutrition and regular screening (Marleen, 2006).

4.7. Cost of screening and treatment

This was the fourth objective of the study where the researcher sought to establish costs of screening and treatment. This was studied in indicators that include; charges involved in therapy and insurance policies in covering treatment.

4.7.1 Affordability of charges involved in cervical cancer treatment

The researcher was interested in establishing if the cost incurred in cervical cancer treatment was affordable. The researcher therefore asked the respondents to indicate whether charges involved in cervical cancer treatment are affordable and the results were presented in table 4.24;

Table 4.24: Charges involved in cervical cancer treatment

Scale of measurement	Frequency	Percent
Yes	139	43.3
No	182	56.7
Total	321	100.0

Table 4.24 reveal that 182 (56.7%) among respondents indicated that treatment charges were not affordable while 139 (43.3%) felt the charges were affordable. This implies that the wellbeing of cancer of the cervix patients is crucially placed with this regard.

To further understand the categorical responses within which the responses were made, a cross tabulation was conducted and the results presented as in table 4.25;

Table 4.25: A Cross tabulation showing affordability of cost of treatment of cancer and uptake of cervical cancer screening among women of reproductive age

			Are the charges affordable?		Total
			Yes	No	
uptake of cervical cancer screening	Influence	Count	96	123	219
		% within are the charges affordable?	69.1%	67.6%	68.2%
	does not influence	Count	43	59	102
		% within are the charges affordable?	30.9%	32.4%	31.8%
Count			139	182	321
Total %			43.4%	56.7%	100%

Table 4.25 shows that among those respondents within the “yes” category, 69.1% acknowledged that affordability of the treatment charges influence uptake of cervical cancer screening while in the same category 30.9% declined with a contrary opinion. 67.6% among those who felt it was expensive to treat cervical cancer felt the affordability influenced uptake of cervical cancer screening while in the same category 32.4% declined with a contrary opinion.

This implied that despite high cost of treating already diagnosed carcinoma infections, uptake of the practice still influenced the uptake of the cervical cancer screening. Marleen (2006) asserts that the performance of a cone biopsy is a highly effective way of treating pre-invasive diseases and early stages of invasive cancer. The procedure is well known by gynecologists and special equipment is not required. Yet, it is a surgical procedure requiring inpatient treatment and general or spinal anesthesia.

4.7.2: Cancer screening and treatment insurance scheme

Due to the high charges involved in management of cancer related illnesses, the researcher sought to establish whether insurance policies did cover for treatment and management of cancer. This was as represented in table 4.26;

Table 4.26: Cancer screening and treatment insurance scheme

Scale of measurement	Frequency	Percent
Yes	133	41.4
No	167	52.0
don't know	21	6.5
Total	321	100.0

Table 4.26 show that majority of respondents 167 (52.0%) were not covered by their insurance policies on treatment and screening of cancer whereas 133 (41.4%) were covered. This might have been so due to the heavy bills that accompany therapies related to cancer of the cervix management especially when it reaches stage 2b. In this regard, the implication was that management therapies of cancer related illnesses are so expensive to be afforded either by common households or the insurance firms covering laborers such as AON, Britam, NHIF, and all other providing health schemes to their clients.

The researcher thereafter sought to identify categorical responses with regard to the dependent variable, to uptake cancer screening and the results were as presented in table 4.27.

Table 4.27: Cross tabulation Insurance scheme include cancer screening and treatment Uptake of cervical cancer screening

		Does your insurance scheme include cancer screening and treatment?			Total	
		Yes	No	don't know		
uptake of cervical cancer screening	Influence	Count	87	116	16	219
		% within does your insurance scheme include cancer screening and treatment?	65.4%	69.5%	76.2%	68.2%
	Does not influence	Count	46	51	5	102
		% within does your insurance scheme include cancer screening and treatment?	34.6%	30.5%	23.8%	31.8%
	Count		133	167	21	321
	Total %		41.4%	52%	6.6%	100%

Tables 4.28 reveal that categorically, and it was established that, among those who were covered by insurance policies in terms of screening and therapy, 65.4% acknowledged the influence of insurance on their uptake of cancer screening whereas in the same category, 34.6% had a contrary opinion. On the other hand, among those who were not covered, 69.5% acknowledged the efforts made by insurance companies as regard to uptake of cervical cancer screening and related therapies while in the same category, 30.5% declined with a contrary opinion. It was further established that among those who did not know, the influence of insurance schemes on screening and treatment of cancer, 76.2% acknowledged its influence on uptake of cervical cancer screening whereas in the same category 23.8% declined with a contrary opinion.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings, and the conclusions drawn from the data findings. In addition, it presents the recommendations of the study

5.2 Summary of findings

The study had a return rate of 321 (84.03%) where majority of respondents were aged between 20 – 30 years (32.7%). Majority of the respondents were certificate holders (O level) represented by 116 (36.1%) and were married majority of women were married at 127 (39.6%), majority were civil servants at 91 (28.3%). Majority of respondents were Christians supported by 155 (48.3%).

Accessibility as the first objective majority of respondents attended Health centers represented by 105 (32.7%) who resided a few kilometers away from the closest health facility that offered cancer screening services at 147 (45.8%), on proximity and cost of accessing a health facility, majority of the respondents in this category spent no cent in terms of fares to get to the nearest health facility offering screening services and this were represented by 146 (45.5%). On accessibility, majority of the respondents agreed that presence of the health facilities has enhanced access to cervical screening services by reducing costs incurred on treating the disease, they also acknowledged that proximity to a health facility influences uptake of cervical cancer screening in Vihiga County.

Education was the second objective and majority of respondents were aware of availability of outreach programs represented by 204 (63.6%). On equipment in health facilities, majority of respondents 117 (36.4%) were aware of health facilities being equipped by equipment to screen for cervical cancer while 177 (55.1%) acknowledge that health workers provided adequate information on cervical cancer screening whenever their support was called. Majority agreed that the respective organs of the ministry of health had done enough to ensure that information has been passed out through various channels to

ensure women of the reproductive age gain knowledge on screening of cervical cancer services, outreach programs influenced the uptake of cervical cancer screening among women of reproductive age as the County resident were aware of the screening services.

Religious beliefs depicted that a slight majority's attitudes towards uptake of screening cancer of the cervix were influenced by religious and cultural beliefs, represented by 156 (48.6%) while a majority 161 (50.2%) were not aware of the severity that comes along with cancer of the cervix, also worth noting is the fact that a majority of respondents were not aware of predisposing them to cancer of the cervix, this was represented by 162 (50.5%). They further said that cultural factors and religion do not the uptake of cervical cancer screening, This implied that majority of women of child bearing age had knowledge about screening of cancer of the cervix and were properly educated about the same not even to allow cultural interferences on what they understood about the same. Though the majority of were not affected by religion and cultural factors on uptake of cervical screening, majority of the same did not understand the severity of cervical cancer as a whole.

On the cost of cervical screening and treatment 182 (56.7%) respondents indicated that treatment charges were not affordable while 167 (52.0%) were not covered by their insurance policies on treatment and screening of cancer. majority of respondents said that cancer treatment is not affordable and in turn this affected the uptake of screening for it as people would prefer not knowing their status. Majority of respondents also claimed that most of health insurance schemes did not cover screening and treatment of cervical cancer and this affected their ability to go for the screening test.

5.3. Conclusions

Findings from this study reveal some of the salient challenges that undermine cervical screening and early help seeking for cervical cancer symptoms with subsequent late diagnoses of cervical cancer in Vihiga County. The use of quantitative and qualitative approach allowed explore in details the perspectives of operational level health professionals on the nature of the challenges that women

encounter when they seek care for symptoms suggestive of cervical cancer. The suggested remedies may guide policy makers on formulating targeted interventions to promote cervical screening, and early detection and prompt management of early cervical lesions and invasive cervical cancer.

It is also concluded that most women are awareness about cervical cancer and are unable to go for screening services. Although a few women perceive screening as important for cervical cancer prevention, some associate screening with pain, and an embarrassing procedure, while others are hindered from screening due to fear of the outcome (positive results).

The main socio economic factors that influence uptake to cervical cancer screening are busy work schedules while culture and religion has less influence on uptake of cervical cancer screening. To increase cervical screening uptake and encourage early help-seeking for symptoms of cervical cancer, health systems might need to consider socio-cultural beliefs about the sacredness of women's genitals and the degree of exposure during examinations as well as gender of the health professionals when planning cervical screening and gynecology services in low- and middle-income countries (LMICs) such as Kenya. Another critical barrier to care is the abandonment of cervical cancer patients by their relatives in the hospitals because of the bad smell of vaginal discharges from the patients, difficulty in keeping good hygiene for the patients who themselves are debilitated and helpless, and fatigue due to prolong hospital stay with associated depletion of resources. Abandonment of cervical cancer patients by relatives and poor attitudes of health professionals about cervical cancer patients were also reported by health professionals in Kenya. Public health education programs in communities may need to include accurate information about the causes, symptoms and prognosis of cervical cancer so that the negative attitudes and stigma associated with cervical cancer as well as patient abandonment may be reduced or prevented.

Cervical cancer patients perhaps present late in hospitals not because they had never had any contacts with health workers before but because lower level health workers did not suspect cancer and were

providing other treatments, e.g. for sexually transmitted infections (STIs). Health professionals' lack of clinical skills and associated late stage cervical cancer was reported in South Africa, Maree (2008). Chirenje et al also found that health care professionals lacked knowledge and the biggest barrier to the adoption of the HPV vaccines into national immunization programmes has been the high costs of the vaccines

The main facilitating factors to cervical cancer screening are availability of screening services, availability and affordability of cervical cancer drugs and community health education about cervical cancer screening. Lack of financial and emotional support and denial of permission for women to go to hospital for early help-seeking for symptomatic cervical cancer featured frequently in this study.

5.4 Recommendations

1. The public should be sensitized about the existence and severity of cervical cancer and the importance of early and routine screening. Information on the availability of cervical cancer treatment should be available to the public to reduce anxiety associated with the outcome of cervical cancer screening
2. Educate women about screening to reduce the negative attitude of embarrassment attached to the procedure. Cervical cancer screening services should be integrated with other health services so that women accessing various health services can also be able to access cervical cancer information and screening services.
3. It is important to promote spouse involvement in cervical cancer screening since men are decision makers in most homes and they provide financial support.
4. Organized cervical cancer screening services should be taken closer to the communities in order to reduce the costs women have to bear associated with transportation and distance. Health workers should also be trained in communication skills so that they can be courteous when relating to clients including women seeking cervical cancer screening services.

5.5. Recommendations for further studies

1. The study focused on the factors influencing the uptake of screening cervical cancer. The study concentrated on women of reproductive age in Vihiga County thus the findings of the study cannot be generalized. In future therefore, a study should be done across all Counties in the country so as to generalize the study.
2. This study recommends that a study should be carried out on the effectiveness of screening cervical cancer as a service in the health care industry.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE

Kindly fill in the questionnaire below. The information given will be treated with utmost confidence and will only be used for the purposes of this academic study.

SECTION A: BIO – DATA

i. Age (Tick as appropriate)

Between 10 – 20yrs [], 20 – 30yrs [], 30 – 40yrs [], 40 – 50yrs []

Above 50yrs []

ii. Marital status

Single [] Married [] Separated [] Widowed [] Divorced []

iii. Highest level of education

Certificate [] Diploma [] University [] Masters [] Other (specify).....

iv. Occupation

Student [] Civil servant [] House-wife [] Professional []

Trading [] Self-employed []

v. What is your religion?

Christian [] Muslim [] Hindu [] Others (specify)

vi. Number of children you have given birth?

SECTION B: ACCESSIBILITY TO HEALTH FACILITY

- I. How far is the nearest health facility from your home/ residence? (Tick as appropriate) Below 1 km [] 1 – 5 kms [] 5 – 10 kms [] Over 10 kms []
- II. How much does it cost you to reach the nearest Health facility?
Nil [] Kshs 10 – 50 [] Kshs 50 – 100[] Above Kshs. 100[]
- III. Do health facilities organize for outreach programs on cervical cancer screening?
Yes [] No []
- IV. If yes, how often?
Very often [] Often [] Rarely [] Never []
- V. Do health facilities have cancer screening equipment?
Yes [] No [] don't know []
- VI. If yes, are the equipment functioning?
Yes [] No [] don't know []

SECTION C: EDUCATION

- i. Are health workers able to answer all your questions regarding cervical cancer screening anytime (as and when you need clarification)?
Yes [] No []
- ii. Why is cervical cancer screening done on women?
Check for cancer or early changes of cancer in the cervix []

Check for infections passed on through sex

Don't know

iii. How would you judge your risk of developing cervical cancer?

High risk developing cancer Low risk of developing cancer Don't know

iv. How serious is cervical cancer compared to other forms of cancer?

More severe Similar to others Less severe Don't know

v. How often does a doctor/nurse recommend for a woman to come for cervical cancer screening test?

At least every 3 years from the age of 20

At least every 5 years from the age of 20

At least every 10 years from the age of 20

vi. Are the health workers skilled to perform cervical cancer screening?

Yes No Don't know

SECTION D: SOCIAL CULTURAL FACTORS

i. Do cultural beliefs hinder you from going for cervical cancer screening?

Yes [] No []

ii. If yes, what are some of the beliefs?

.....

iii. Does cigarette smoking and alcohol intake increase the risk of developing cervical cancer?

Yes [] No [] don't know []

iv. If yes, please explain how?

.....

v. Is your community aware of cervical cancer screening?

Yes [] No [] don't know []

vi. Does the religion affiliation you belong to encourage women to go for cancer screening?

Yes [] No []

vii. If yes, how do they encourage?

.....

SECTION E: COST OF SCREENING

i. Are women seeking for cervical cancer screening charged?

Yes [] No [] Don't know []

ii. If yes, is the charge affordable?

Yes [] No []

iii. Do you have a hospital insurance cover?

Yes [] No []

iv. If yes, do health insurance schemes include cancer screening and treatment?

Yes [] No [] Don't know []

v. Do health facilities provide free cancer screening?

Yes [] No [] Don't know []

vi. If yes, how often?

vii. To what extent do you agree with the following statements?

Use a scale of 1-4 where;

3 – Strongly agree, 3 - Agree, 2 - Disagree, 1 –Strongly Disagree.

	4	3	2	1
Cervical cancer screening gives you a sense of control				
It is worth to do cervical cancer screening				
Cervical cancer screening detects pre-cancerous cells before symptoms				
Cervical cancer screening is very painful				
It is embarrassing to have cervical screening				
The screening is not necessary if there are no signs and symptoms				
I am afraid to take cancer screening test				
I am not free to talk about cervical cancer				
I will be worried if I have early signs and symptoms of cervical cancer.				
It is difficult to go to cervical cancer clinic				

APPENDIX II: RESEARCH BUDGET

Item	Cost (Kshs.)
Binding and Photocopying	6,700
Printing and Typing	10,500
Transport and subsistence	15,000
Stationery and preparation of the copies	7,500
Miscellaneous	13,000
Total	52,700

APPENDIX III: TIME SCHEDULE

ACTIVITY	TIME
Proposal writing	March, 2015 – June, 2015
Defending proposal and corrections	June 2015
Data collection	2 weeks (July)
Data analysis report writing	August – October 2015
Report submission	October 2015

Appendix IV

LETTER OF TRANSMITTAL

**P.O BOX 1111 - 50300,
MARAGOLI,
22nd June, 2015.**

Dear Respondent,

RE: INTRODUCTION

I am a Master of Arts Project Planning and Management student at the University of Nairobi, currently undertaking my research on the topic “Factors Influencing Uptake of Screening Cervical Cancer among Women of Reproductive Age in Vihiga County, Kenya.”

I would like you to be one of my respondents and rest assured that information divulged to me will only be used for this research and I will uphold your informational and personal confidentiality.

I look forward to your cooperation. Thanks in advance.

Yours Sincerely,

ICHAMINYA ALLAN