

**INFLUENCE OF ELECTRONIC MEDIA IN CREATING  
CERVICAL CANCER AWARENESS AMONG WOMEN  
SEEKING REPRODUCTIVE HEALTH SERVICES AT THE  
KENYATTA NATIONAL HOSPITAL NAIROBI, KENYA**

**RHOYDAH MOGOI OCHIENG'I NYAMBANE**

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**Influence of Electronic Media in Creating Cervical Cancer Awareness among  
Women Seeking Reproductive Health Services at the Kenyatta National Hospital  
Nairobi, Kenya**

**Rhoydah Mogoi Ochieng'I Nyambane**

**A thesis submitted in partial fulfillment for the degree of Doctor of Philosophy in  
Mass Communication in the Jomo Kenyatta University of Agriculture and  
Technology**

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## DECLARATION

This Thesis is my original work and has not been presented for a degree in any other university

Signature ..... Date.....

**Rhoydah Mogoi Ochieng'i Nyambane**

This thesis has been submitted for examination with my approval as university supervisors.

Signature ..... Date.....

**Dr. Hellen K. Mberia**

**JKUAT, Kenya**

Signature ..... Date.....

**Dr. Ndeti Ndati**

**University of Nairobi, Kenya**

## **DEDICATION**

This entire work is dedicated to my late father Mr. Hezron Ochieng'i Nyambane. My daddy without your hard work, steadfastness even in the midst of adversity, encouragement, strength, unconditional love and warmth, and support, we could all have gone down the drain as a family; but you made all the difference! Your words of encouragement when I joined form five made me pass my A- level examination to be the first ever girl to attain university entry in the history of that school to join the University of Nairobi to continue with the hard work as you had always taught me, up to where I am today. The same words have kept me this far even in your absence. Rest in peace daddy and celebrate me from whenever you are.

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## **ABBREVIATIONS AND ACRONYMS**

<b>ABE</b>	Association of Business Executives
<b>IBSCC</b>	International Biological Study on Cervical Cancer
<b>ACS</b>	America Cancer Society
<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>ARVs</b>	Antiretroviral Virus
<b>CCC</b>	Comprehensive Care Centres
<b>CIN</b>	Cervical Intraepithelial Neoplasiasis
<b>CTC</b>	Cancer Treatment Center
<b>DNA</b>	Visual Inspection of Cervix with Acid
<b>HBM</b>	Health Belief Model
<b>HBV</b>	Hepatitis B Virus
<b>HRHPV</b>	High Risk Human Papiloma Virus
<b>HIV</b>	Human Immunodeficiency Virus
<b>HPV</b>	Human Papilloma Virus
<b>GAVI</b>	Global Alliance for Vaccines and Immunization
<b>IARC</b>	International Agency for Research on Cancer
<b>IBSCC</b>	International Biological Study on Cervical Cancer
<b>IJG</b>	International Journal of Gynecology
<b>IRIN</b>	Independent Reporting Inspiring News
<b>LEEP</b>	Loop Electrosurgical Excision Procedure
<b>KCA</b>	Kenya Cancer Association
<b>KCS</b>	Kenya Cancer Society
<b>KNH</b>	Kenyatta National Hospital
<b>MC</b>	Male Circumcision
<b>NCCCI</b>	National Cancer Control Institute
<b>NCCPB</b>	National Cancer Control and Prevention Bill

<b>NCCPSP</b>	National Cervical Cancer Prevention Strategic Plan
<b>NCCS</b>	National Cancer Control Strategy
<b>PAP</b>	Papanicolau
<b>PATH</b>	Program for Appropriate Technology in Health
<b>SIC</b>	Squamous Intraepithelial Lesion
<b>SIL</b>	Quamous Intraepithelial Lesion
<b>SPSS</b>	Statistical Program for Social Science
<b>STDs</b>	Sexually Transmitted Diseases
<b>STIs</b>	Sexually Transmitted Infections
<b>TB</b>	Tuberculosis
<b>TV</b>	Television
<b>UoN</b>	University of Nairobi
<b>US</b>	United States
<b>VIA</b>	Visual Inspection with Acetic Acid
<b>WRA</b>	Women of Reproductive Age
<b>WHO</b>	World Health Organization



## **DEFINITION OF TERMS**

<b>Cervical cancer</b>	Cancer of the cervix
<b>Cryotherapy</b>	Method of cervical cancer treatment performed by nurses
<b>Cytology</b>	Cells that grow and cause cancer
<b>Colposcopy</b>	A close examination of the cervix, vagina and vulva for signs of disease
<b>Electronic media</b>	Radio and television
<b>Gynecologist</b>	A doctor who treats medical conditions and diseases that affect women and their reproductive organs
<b>Gynecology</b>	The type of medicine that deals with the study and treatment of medical conditions and diseases that affect women and their reproductive organs
<b>Health care providers</b>	Trained nurses who are specialized in the reproductive health issues about women
<b>Human Papiloma Virus</b>	The virus that causes cervical cancer
<b>Knowledge levels</b>	Information that the respondents were expected to have on issues on cervical cancer
<b>Pap smear</b>	A procedure used to detect cervical cancer cells in the uterus
<b>Reproductive health</b>	Women's reproductive and health issues
<b>Kenyatta National Hospital</b>	Largest referral public hospital in Kenya
<b>Women <i>chamas</i></b>	Women groups that have come together to raise funds for personal economic development
<b>Women of Reproductive Age</b>	women aged between 18 and 65 years that still seek health reproductive health services in a health facility

## **ABSTRACT**

The study set out to investigate the influence of electronic media in creating awareness about cervical cancer among women aged between 18 and 65 seeking reproductive health services at clinics 18 and 66 at the Kenyatta National Hospital in Nairobi County, Kenya. The objectives of the study were: to establish the knowledge levels about cervical cancer among the women; to investigate the influence of electronic media sources among the women; to determine the influence of the nature of information as presented by electronic media; and to establish the factors that hinder access to information and participation in screening programs. The study used the mixed method research design to collect both qualitative and quantitative data. The study used systematic random sampling to obtain sample size of 295 for quantitative data and 8,400. The average number of women who seek reproductive health services at the study site per year which is 8,400. For qualitative data, the researcher selected five health care givers and four gynecologists/oncologists at the reproductive health department who were selected using purposive sampling. The study used questionnaire as a tool for collecting quantitative data and interview guide to collect qualitative data. Quantitative data was analyzed using descriptive and inferential statistics to help describe the distribution of scores in line with the study objectives. One-WAY ANOVA was used to establish the relationship between knowledge levels and the socio-demographic characteristics of the respondents. Qualitative data was analyzed thematically and data presented in narrative form. The study findings indicated that knowledge levels on causes, symptoms, severity, treatment and prevention of cervical cancer were very low among the respondents. This was demonstrated by more than 65.0% of the respondents who reported to have never done pap smear test. The study findings also indicated that radio and television had not played a key role in creating awareness about cervical cancer as only less than 20.0% of respondents reported to have received their information on cervical cancer from radio and televisions while over 68.2% reported to have received their information from other

sources. This was in spite of the fact that more than 90.0% of the respondents reported to own a radio and/or a television. Majority of the respondents reported to have taken no step towards cervical cancer prevention as a result of television or radio messages. Another observation was that wrong information, myths and misconceptions hindered women's preventive measures. One WAY ANOVA was used to establish whether there was any relationship between the demographic characteristics and the correct information that the respondents had. The results showed that there was no significant relationship between correct information and socio-demographic characteristics of the respondents. The study concluded that cervical cancer was a leading killer among women in Kenya and the world over. Besides, several factors such as lack of proper information, myths and misconceptions further hindered women's efforts towards cervical cancer prevention. Radio and television are powerful mediums of communication but they have not done enough to create awareness towards cervical cancer prevention because most of the information that the respondents had was obtained from other sources and not from radio and television. The study recommended that a multi-sectoral approach be adapted towards cervical cancer prevention measures. The electronic media, especially the vernacular radio stations, stakeholders, health professionals and the government can combine efforts to come up with a spirited cervical cancer awareness campaigns in an effort to prevent to prevent the disease. There is need for further research to help fill in the knowledge gaps and wrong information that hinder women from cervical cancer prevention programs and initiatives.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Cancer of the cervix is the second most common cancer among women worldwide and the leading cause of cancer deaths in developing countries. According to (WHO 2010), in 2008, it was estimated that 529,409 new cases occurred globally, with 274,883 of the women (52% of cases) dying of cervical cancer. Of the total new cases each year, about 86% occur in developing countries, where, unfortunately, 80-90% of cervical cancer-related deaths occur due to, among other things, poverty, cultural beliefs and lack of awareness, myths and misconceptions. With the peak age of cervical cancer being 35-45 years of age, it claims the lives of women in the prime of their life when they may be raising children, caring for the family, and contributing to the social and economic life of their community (Williams *et al.*, 1994; Gatune & Nyamongo, 2005). It has been estimated that the average life years lost due to cancer of the cervix is 25.3 years,(Huchko *et al.*, 2011; McKenzie *et al.*, 2011). In 2002, an estimated 11 million new cancer cases and 7 million cancer deaths were reported worldwide and nearly 25 million persons were living with cancer, (Tiro, Meissner, Chollette 2007).

As high-income countries enjoy the benefit of early cancer screenings due to high awareness, policy enforcement, drug therapies and vaccines, the burden of cervical cancer is shifting to low-income countries in Africa and Asia where women are developing cervical cancer during their reproductive years, adding more pressure on societies already suffering from high rates of infectious disease and child mortality. The problem in developing countries is more compounded because of lack of awareness, policy enforcement and poverty (The Guardian, 2013).

Parkin, *et al.* (2003), ascertains that cervical cancer in Sub-Saharan Africa accounts for 22.2% of all cancers in women and it is also the most common cause of cancer deaths

among them. About 60–75% of women in sub-Saharan Africa who develop cervical cancer live in rural areas. Many of these women go untreated, mostly due to lack of access (financial and geographical) to health care facilities, lack of awareness on its symptoms and prevention, unlike in the developed world where awareness is high, coupled with health policies which are enforced and availability of medical care. Women in sub-Saharan Africa lose more years to cervical cancer than to any other type of cancer. Unfortunately, it affects them at a time of life when they are critical to the social and economic stability of their families (Parkin *et al.*, 2003).

According to Chokunonga *et al.*, (2002), the true incidence of cervical cancer in many African countries is unknown as there is gross under-reporting or misreporting. Only very few countries have functional cancer registries and recordkeeping is minimal or non-existent in many countries. And to compound the problem, it is only a small fraction of women who access medical facilities while majority cannot access hospital care and end up dying at home. This is a contrast of the developed world where mortality rates are low with successful screening programs seldom exceed 5 per 100,000 women, adequate knowledge and policy regulations ,(Chokunonga *et al.*, 2002). The problem in Sub-Saharan Africa is compounded by a number of reasons among them: not feeling at risk, lack of symptoms, carelessness, fear of vaginal examination, lack of interest and test being unpleasant while others have no reason at all for not going for screening but others are afraid of the procedure and others feared going for the test for fear of bad results, (Urasa Dar 2011). The problem is compounded by lack of proper information on major issues surrounding cervical cancer.

According to Arnolu (2007), some of the few women who have access to screening do not get themselves screened because they have wrong beliefs about cervical cancer. He further argues that there are very few cervical cancer screening services in Africa and many of them are based at secondary tertiary health care facilities located in urban centers where majority of women from the rural areas cannot access because of poverty.

Arrosi *et al* (2010) agrees with Arnolu (2007) that screening in most developing countries in Sub-Saharan Africa is characterized by an estimated low coverage, and an absence of quality control procedure makes the problem grave. Policies for cervical cancer screening in most countries vary and is, most often, non-existent. Formulation and ensuring compliance with national program guidelines is an essential step towards significantly reducing the burden of cervical cancer but this is not happening. Arrosi *et al* (2010, further asserts this type of service does not reach women most at risk such as those aged between 35 and 60 years especially those who live in the rural areas and who face various challenges like poverty, cultural beliefs, gender-based issues and who lack sufficient knowledge to help them make meaningful steps towards cervical cancer prevention. Cytology-based screening, which is used in developed countries, is resource intensive, and difficult to realize in very many countries in Sub-Saharan Africa because of poor health care infrastructure and lack of resources. Moreover, there are very few specialists in this area and some have inadequate training. Quality control is inadequate and screening services are extremely limited in many countries and it is compounded by lack of awareness (Arrosi, *et al.*, 2010).

However, Lewis (2004), observes that cervical cancer is fully preventable and curable, at low cost and at low risk, when screening to facilitate the timely detection of early precursor lesions in symptomatic women is available early enough, together with appropriate diagnosis, treatment and follow-up. This is usually a challenge in many developing countries in Sub-Saran Africa due to poverty, lack of adequate knowledge and resources. Other issues that compound the cervical cancer problems in many African countries include cultural beliefs, myths and misconceptions and poverty, lack of awareness, lack of policy and or enforcement, (Lewis, 2004). So any awareness strategies especially by the electronic media must ensure that such issues that hinder women from taking steps towards cervical prevention are addressed adequately for meaningful positive change to be realized. Unless this is done, we will continue to witness a situation where women continue to die of cervical cancer not because of lack

of awareness but because of other underlying issues that hinder their participation in screening programs.

In Kenya, cervical cancer is the second most frequent cancer among women and the leading cause of cancer deaths in women of reproductive age (WRA) with a rate of 39,000 reported cases per year, with 27,000 deaths. (Kenya Ministry of Public Health, 2009). Data from hospital-based registries in Kenya indicate that cancer of the cervix accounted for 70-80% of all cancers of the genital tract and 8-20% of all cancer cases. These statistics do not reflect the cases that go unreported and especially those in the rural areas. It has been reported that there are 10 to 15 new cases of cervical cancer in Nairobi alone each week, (Kenya Cancer Registry, 2009). What this means is that if all cervical cancer cases were captured and recorded, the statistics would reveal a very grim picture of prevalence of cervical cancer in Kenya.

Despite the magnitude of the problem in Kenya and the world over, and the fact that cancer is easily preventable once detected early, many women continue to die of cervical cancer. Moreover, cervical cancer screening coverage by the media more so radio and television in Kenya for all women 18 to 69 years of age is only 3.2%, (Gichangi *et al.*, 2003). Mitchell *et al.*, (2011) further argues that with the recognition that cervical cancer is a major cause of morbidity and mortality among HIV-positive women, there is need for significant efforts to integrate cervical cancer screening as part of the minimum comprehensive care package and also serious advocacy and awareness creation by relevant stakeholders targeted at this deadly disease, coupled with awareness creation especially by the electronic media, (Mitchell *et al.*, 2011). The study however failed to point out the reasons why awareness is so low but instead went ahead to recommend a policy framework where screening can be integrated into minimum comprehensive care package. Of concern should have been an investigation into low awareness levels and

recommendations made on how to increase the awareness before policy steps can be taken and hence making the current study relevant and timely.

Factors contributing to high risks of cervical cancer among Kenyan women include multiple pregnancies, early age of first intercourse, hormonal contraceptives, smoking and HIV infection Williams *et al.*, (1994); Gatune & Nyamongo, (2005). For a woman living with HIV, a Human Papilloma Virus (HPV) infection can develop into cervical cancer more quickly than for a woman who is HIV negative, (Yamada *et al.*, 2008). The relatively high incidence of HIV in Kenya is an important consideration when developing a strategy against cervical cancer. A Kenyan study conducted from 2007 to 2010 by Huchko *et al.*, (2011) and McKenzie *et al.*, (2011) found that in order to target vulnerable populations, it is effective to combine cervical cancer screening with HIV testing as a matter of policy. The study further noted that campaigns on awareness on facts about cervical cancer was minimal or non-existent, hence leading to poor responses towards its prevention and management and hence the many deaths which are being reported as a result of cervical cancer, (Huchko *et al.*, 2011; McKenzie *et al.*, 2011). That is the reason that necessitated the current study; to examine the role of electronic media in creating awareness about cervical cancer given that, radio and television are very popular channels among many households in Kenya and possess peculiar positive characteristics and therefore suitable and effective in creating awareness about cervical cancer (Synovate 2011).

Becker (2010) has further stated that in Kenya there are no pap smear programs. As a result, both the frequency and mortality from cervical cancer is high. Most Kenyan women are diagnosed at advanced stages of the cancer compared to North America. This is partly due to disparities in income levels, availability of medical care, awareness creation and policies that make screening for cervical cancer mandatory for the vulnerable ages in developed countries. For instance in the developed countries such as America and England, majority of the cases are diagnosed early, hence making treatment more effective, unlike in the third world, Kenya included, where there is an



extreme lack of resources to treat cervix cancer -- both medical equipment and physician experts, coupled with lack of awareness makes the situation grave, (Becker-Dreps, 2010).

Misconceptions, cultural beliefs, gender issues, poverty and negative attitudes have continued to expose women to cervical cancer infection and treatment in Kenya. For instance HIV-negative women believe cervical cancer only affects those who are HIV-positive and they miss the opportunity to go for screening because they believe they are not at risk, while HIV-positive women will at times decline to go for screening because they fear they will be found to be positive for cervical cancer, (IRIN, 2010). This is an indication that there is need for awareness creation more so by the electronic media to dispel these misconceptions and misinformation in order to empower the women with the right kind of information help them reach self-efficacy, and take the right kind of steps in order to prevent cervical cancer infection and its devastating effects.

The media, especially the radio and television have tremendous power to influence knowledge, attitudes, and awareness of an issue and can thereby influence behaviors and inform health policy. Electronic media-worthy events can create an opportunity for communicating public health messages and media coverage has been shown to increase public interest in a subject, such as disease risk factors, prevention and management, (Metcalf *et al.*, 2010). The radio can play an important role in communicating information about HPV and its link to cervical cancer as well as increasing awareness about the HPV vaccine, (Kaiser Daily Women's Health Policy, 2007). However, this is yet to be actualized in Kenya leading to high mortality rates as a result of cervical cancer and hence this formed the focus for this study. The various issues that put women at risk of cervical cancer infection need to be brought to the fore by the electronic media.

According to One TV World Booklet (2012), the television has tremendous strengths that can be harnessed to create awareness on any issue such as politics, government policies, and even cervical cancer. Its intrusive impact, audio-visual characteristic,

persuasively uses of sight/sound/motion, maximum reach, ability to target the consumer, and the fact that it can leave a lasting impact in the viewer's mind makes it relevant in creating awareness of on any issues and hence the suitable medium of choice for this study. The various strengths of radio and television are enormous and hence make a suitable medium of communication in awareness creation, making them relevant media channels in this study. The radio can target selective audience by station format; it is intrusive and local, it has a wide reach, it is cheap to acquire and hence nearly every household in Kenya has a radio set. The call-in ability and the various popular programs on radio and television are suitable when it comes to creating awareness on a salient issue such as cervical cancer. This is because listeners can participate in the discussions by way of seeking clarification on issues of concern. Furthermore some various radio and television programs have low production cost and can rely on the listener's mood or imagination to pass information, (CCAB, 2012). For instance, the program on 'doctors on call' that is aired on Family TV be a very effective in disseminating factual information about cervical cancer.

### **1.1.1 Knowledge Gaps in Awareness Creation on Cervical Cancer among Women**

Various knowledge gaps have been identified as major impediment to the fight against cervical cancer. According to Calloway *et al* (2006), information about and advertisements for the HPV vaccine, as well as stories reporting on the state HPV vaccination (the virus that causes cervical cancer), policies, have not been covered in the media adequately especially the traditional media e.g. newspapers and other print media such as bill boards, television and radio. Given the media's potential influence among the relevant audiences in Kenya in regard to issues such as HIV/AIDS, breast cancer, politics, family planning, it is important to examine how the electronic media is creating awareness about cervical cancer symptoms, mode of infection, prevention and management. As things stand now, news media coverage especially of radio and television on the issues surrounding cervical cancer is still low and some of the information is still riddled with misconceptions, fear, shame, culture and stigmas pointed

out by IRIN News (2010). Previous study by Calloway *et al* (2008) that analyzed U.S. on news coverage of the HPV vaccine and cervical cancer had demonstrated that the efforts made by the governments in terms of policy formulation and enforcement made reduced incidences of cervical cancer because of early detection due to screening. According to this study, there was deliberate and sustained awareness creation on issues that surround cervical cancer, (Calloway *et al*, 2006). However, when it comes to developing counties like Kenya, there are serious gaps on issues surrounding cervical cancer. There are no deliberate and sustained campaigns by the electronic media on issues surrounding cervical cancer and its prevention. That is the reason why current study sought to establish the knowledge levels about cervical cancer and identify knowledge gaps especially as created by electronic media and make recommendations that can help prevent the many incidences of cervical cancer. It is in the public domain that the electronic media has not put in as much effort to match the seriousness that cervical cancer poses to the vulnerable women and the general population in general because cervical cancer affects women who are in their reproductive ages,

Steele *et al.*,(2005) argues that any incidences on cervical cancer are only reported as news items, just like any news story with no particular aim of creating awareness targeted at any particular audience and with no particular anticipated responses. Unfortunately the implications of such acts may not have any meaningful impact on the vulnerable women in terms of awareness creation. Issues on vulnerability to cervical cancer infection and sexually transmitted diseases are never brought to the fore in the form of a media campaign strategy as witnessed in other areas such as family planning, HIV/AIDS, malaria, prostate cancer, and even breast cancer. When it comes to cervical cancer, there seem to be a serious silence by the media and other stakeholders, leading to high prevalence levels and mortality rates witnessed in Kenya today (Kenya Cancer Registry 2009). In spite of this grave situation affecting women due to cervical cancer, there is minimal deliberate effort by the radio and television, the government and other stakeholders to have spirited media campaigns targeted at creating awareness about

cervical cancer and issues surrounding its symptoms, presentation, prevention, management and control and the need for screening. This is what informed the focus of this study.

Furthermore, Anhang, Goodman, , and Goldie (2004) and Kelly *et al.*,(2009) have pointed out that it is unclear how the news media covers more recent issues surrounding HPV vaccination, especially controversial topics related to the cervical cancer vaccine and sexuality. Dixon *et al.*, (2009) have also argued that research has shown that media coverage of controversial topics can not only raise awareness of an issue but can also create public uncertainty which may lead to undesired responses based on misconceptions, (Steele *et al.*, 2005; Dixon *et al.*, 2009). Attitudes and beliefs toward vaccination at individual level towards the prevention of cervical cancer can also influence attitudes toward legislation and policies. The impact of the electronic media is yet to be felt the way it is in other issues such as family planning and HIV/AIDS, and that is what the current study focused on.

Gichangi *et al* (2003), has pointed out that studies in Kenya report very poor knowledge of cervical cancer among patients. He further regrets that low knowledge is not limited to patients alone but to health care workers as well and those with knowledge on cervical are few and majority of them have no knowledge about symptoms, presentation, prevention and management of cervical cancer. This assertion agrees with what the current study sought to investigate; low knowledge levels and what can be done about it. For instance, Kidanto (2002) and Anarlu (2004) have pointed out that mass media awareness and advocacy on the various issues of concern about cervical cancer among women is limited and not proportionate to the gravity of the situation. There are specific gaps in knowledge about risk factors and screening intervals. Women do not know what is expected of them in so far as their responsibility towards cervical cancer prevention is concerned. For instance, Kidanto *et al* (2002) pointed out that although the relationship between sex and cervical cancer was known, less was known about other risk factors like their partner's prior sexual experiences and very little was known about the link between HPV and cervical cancer, (Kidanto *et al.*, 2002) and Anarlu *et al.*, 2004). The other gaps revolve around myths and misconceptions as discussed by Bradley, Tewari, Monk and Krishnansu, (2007). Any meaningful awareness efforts by the electronic

media must look beyond knowledge gaps or what is not known to unmask wrong information because wrong information leads to wrong decisions which are more often than not counterproductive, and hence the focus of the current study in which the electronic media needs to be central in creating awareness about cervical cancer.

## **1.2 Statement of the Problem**

Cervical cancer has been a leading killer among women in the recent years after HIV/AIDS-related deaths and maternal mortality rates, (WHO, 2010). According to the Kenya Cancer Registry, cervical cancer is the second most frequent cancer among women in Kenya and the leading cause of cancer deaths in women of reproductive age (WRA). Currently, the estimated annual number of cervical cancer cases worldwide is 300,000 while the annual number of deaths worldwide due to cervical cancer is over 200,000. It is projected that by the year 2025, the number of new cervical cancer cases annually in Kenya will reach over half a million. Data from hospital-based registries in Kenya indicate that cancer of the cervix accounted for 70-80% of all cancers of the genital tract and 8-20% of all cancer cases. It has been reported that there are 10 to 15 new cases of cervical cancer in Nairobi each week, (Kenya Cancer Registry, 2009). According to the Kenya Network of Cancer Organization, it is estimated that the country has an estimate of 39,000 reported new cases of cervical cancer in Kenya with more than 27,000 deaths per year. It can be noted that these are the only reported cases mostly in Nairobi and other urban settings. The figures could be much higher if all cases especially those in the rural areas were captured as well but this is yet to happen due to various logistical challenges such as lack of awareness, inadequate diagnostic facilities, lack of treatment facilities, high cost of treatment and high poverty index (Kenya Network of Cancer Organization 2015). The electronic media has unique characteristics that can be harnessed to make a major difference when it comes to issues surrounding cervical cancer with tremendous positive impact in as far as its prevention is concerned, but as things stand now, this is yet to be realized and hence the focus of this study.

Statistics on cervical cancer morbidity and mortality rates at the Kenyatta National Hospital too paint a grim picture about the devastating effects of the disease. For instance, between 2009 and 2014, the hospital handled 1425 cases with a mortality rate of 534 or 38% percent within the same period. In 2014 alone, there were 259 cases handled at the facility with a mortality rate of 144 which was a whopping 56% of the total cases handled at the facility. The figures show a grim picture of the cervical cancer prevalence among women and unless preventive measures are put in place, cancer of the cervix poses a greater danger to women than any other infectious disease, (Health Information Department KNH, 2014).

Despite its devastating effects, cervical cancer has not been recognized as an important public health problem in Sub-Saharan Africa where priority is given to infectious diseases such as malaria, tuberculosis, leprosy, diarrheal diseases, acute respiratory infections and HIV/AIDS; all of which have preventive and management strategies unlike cervical cancer which cannot be controlled or treated once detected in the late stages. One of the major reasons why cervical cancer is affecting many women is poor knowledge of facts about cervical cancer in Africa, and Kenya in particular in terms of its causes, symptoms, prevention and treatment. These knowledge gaps cut across different literacy and socio-economic levels, leading to the devastating effects of the disease among women; (Suba, *et al.*, 2011). In addition, low level of community awareness on the importance of screening coupled with inadequate skills among service providers; inadequate equipment and supplies, lack of treatment facilities; inadequate monitoring and evaluation and low prioritization of cervical cancer among policy makers and opinion leaders make the prevalence of cervical cancer very high, (National Cancer Prevention Plan 2012).

The electronic media can facilitate positive behavior change among women to reach self-efficacy and take steps towards positive change such as going for routine screening in an effort to prevent and control cervical cancer. It should be noted that the electronic media can play a key role in agenda-setting in terms of what is discussed

and known at the personal level as well as the societal level (IRIN, 2010). This is because the electronic media has tremendous power and potential to change people's attitudes, beliefs and behavior towards a pertinent issue such as cervical cancer prevention. However, cancer prevention and awareness creation by the electronic media are largely lacking or minimal in Kenya leading to devastating effects of cervical cancer among women of reproductive ages. It is important to note that the radio and television channels have not taken deliberate efforts to create awareness campaigns towards cervical cancer prevention. Any information on radio television about cervical cancer is disseminated as a news item or an advertisement and not necessarily as a deliberate campaign strategy as witnessed in cases such as malaria, polio, HIV/AIDs, all of which have cure unlike cervical cancer which cannot be cured once detected in late stages.

In a study that was carried out in 64 districts of Bangladesh to explore the role of print materials and electronic media to improve cervical cancer screening in the present socio-cultural context of Bangladesh, from January to August 2011 at two upazilas of Bangladesh (Singair with screening facility and without screening facility), it was established that the population was aware of "cancer" and a notable number knew about cervical cancer. However, baseline awareness on prevention and VIA was low and it was negligible where screening services were unavailable. Awareness was increased fourfold in both upazilas after interventions and half of the women and the majority of the community people became aware of screening and available facilities. Cable line advertisement (25.5%), microphone announcement (21.4%), and discussion sessions (20.4%) were effective for awareness creation on VIA. Television was mentioned as the best method (37.4%) of awareness creation. The study concluded that television should be used for nation-wide awareness creation. For local awareness creation, cable line advertisement, microphone announcements and health education sessions can easily be adopted by the government, (Nessa *et al* 2013). This is an indication that awareness on any issue surrounding cervical cancer is key, if the fight against the disease is to be won

and that is what informed the focus of this study. Awareness by suitable media channels such as television is key in any prevention initiatives.

In another study that was carried out to investigate the awareness of cervical cancer screening, and factors associated with women's preparedness to be screened, it was established that lack of awareness of cervical cancer and of understanding of the concept of screening were the key barriers to screening uptake in women at midlife in Bangladesh. The study recommended that targeted educational health programs are needed to increase screening in Bangladesh with the view to reducing mortality (Islam *et al* 2015) . The study however failed to point out the reason for the lack of awareness and how that knowledge gap can be addressed and that is the knowledge gap that the current study sought to address.

A cross sectional study was conducted with a sample of 354 women aged 18 to 69 years residing in Moshi Rural District Tanzania to establish the demographic, knowledge, attitudinal, and accessibility factors associated with uptake of cervical cancer screening among women in a rural district of Tanzania. Issues that were significant in screening uptake included: husband approval of cervical cancer screening, women's level of education, women's knowledge of cervical cancer and its prevention, women's concerns about embarrassment and pain of screening, women's preference for the sex of health provider, and women's awareness of and distance to cervical cancer screening services. The study concluded that information about cervical cancer must be presented to women; public education of the disease must include specific information on how to prevent it as well as screening services available and it is important to provide cervical cancer screening services within 5 km of where the women live ( Lyimo 2012). It is important to note that the study failed to point out how the information should be presented to the population and the role of the media in creating awareness and hence the relevance of this study.



The purpose of the current study therefore was to investigate the influence of electronic media increasing awareness about cervical cancer among women in Kenya with special focus on women seeking reproductive health services at the Kenyatta National Hospital, Nairobi, Kenya. The study also sought to identify the knowledge levels/gaps that exist in the prevention, management and control of cervical cancer with the aim of making recommendations towards a concerted, focused electronic media campaigns aimed at reducing cervical cancer prevalence rates and mortality rates in Kenya.

### **1.3 Objectives**

The general objective of the study was to examine the influence of electronic media messages in creating awareness about cervical cancer among women seeking reproductive health services at the Kenyatta National Hospital in Nairobi County.

#### **1.3.1 Specific objectives:**

1. To establish the influence of knowledge level on cervical cancer awareness as disseminated by electronic media among women seeking reproductive health services at Kenyatta National Hospital.
2. To investigate the influence of electronic media sources on cervical cancer awareness among women seeking reproductive health services at Kenyatta National Hospital, Nairobi.
3. To determine the influence of nature of information as presented by the electronic media on cervical cancer awareness and prevention among women seeking reproductive health services at the Kenyatta National, Nairobi County.
4. To establish the factors that hinder access to information about cervical cancer and participation in screening programs among women seeking reproductive health services at the Kenyatta National, Nairobi County.

## **1.4 Research Questions**

This study was guided by the following research questions in line with the study objectives:

1. What is the influence of knowledge level of cervical cancer awareness among women seeking reproductive health services at the Kenyatta National, Nairobi County?
2. What is the influence of electronic media messages on cervical cancer awareness among women seeking reproductive health services at Kenyatta National Hospital, Nairobi?
3. What is influence of the nature of information as presented by the electronic among women seeking reproductive health services at the Kenyatta National Hospital, Nairobi?
4. What are the factors that hinder access to information about cervical cancer and participation in screening programs among women seeking reproductive health services at the Kenyatta National, Nairobi County?

## **1.5 Justification of the Study**

Cervical cancer is a major health problem in Kenya with devastating effects unless it is detected early enough when it can be managed or treated, with 300,000 deaths reported every year (Daily Nation March 7, 2014). Studies have shown that cervical cancer has affected women in their productive ages to very high proportions because lack of proper information, coupled with other underlying issues that are beyond their control such as cultural, social, biological and economic; which undermine their proper uptake proper information, hence subjecting them to negative consequences of cervical cancer. The radio and television have tremendous power to change behavior due to their audio-visual impact and the fact that the two mediums are owned by majority of households in

Kenya. However, as things stand now, there are minimal deliberate spirited electronic media campaigns towards creating awareness about cervical cancer in an effort to reduce its prevalence rates in Kenya. This study therefore sought to examine the influence of electronic media in creating awareness about cervical cancer.

The study was relevant in that the findings will help health professionals, policy makers, advocates and other stake holders and government agencies to appreciate and understand the gravity of cervical cancer and its socio-economic devastating impact among vulnerable women and help re-focus their preventive and management strategies on prevention, treatment, and control of cervical cancer through provision of relevant knowledge that can help foster positive change. The study findings will also act as a basis for further research. The recommendations also will help government agencies, the media, health professionals and other relevant stakeholders come up with combined efforts and strategies that can help prevent cervical cancer in Kenya.

### **1.6 The Scope of the Study**

The study was conducted at the Kenyatta National Hospital's reproductive health department. The researcher obtained quantitative data from 295 women aged between 18 and 65 seeking reproductive health services at clinics 18 and 66. The sample size for quantitative was calculated using Fisher *et al's* (1983) formula for populations which are less than 10,000, thus  $(n = \frac{n_1 + n_2}{1 + n/N})$ . The study also obtained qualitative data from four gynecologists and five health care givers at the facility who were chosen using purposive sampling. Kenyatta National Hospital was chosen as the suitable study site for various reasons. First, it is the largest referral public facility in Kenya that receives referral cases from all over the country and beyond, hence giving a true picture and representation of cervical cancer situation in the country. Second, the Hospital is a public facility that is subsidized by the government and hence, the cost of treatment and care is low compared to what is offered in private facilities, hence attracting more patients than the private hospitals because of its affordability to majority poor who are

affected by cervical cancer. Third, the hospital is home to the country's most qualified gynecologists and oncologists but who can be accessible at relatively cheap cost as opposed to those in their private practice, in private hospitals who are beyond the reach of the majority due to poverty and other logistical challenges.

The age bracket, 18-65 years, was appropriate for the study because women at this age are still sexually active and therefore vulnerable and likely to be infected with the HPV virus that causes cervical cancer. This is because it is assumed that women in this age bracket are still sexually active and hence vulnerable to cervical cancer infection. Besides, that is the age bracket which catered for at the reproductive health clinics, 18 and 66 cater for. It has been proven that post-menopausal women are also vulnerable to cervical cancer infection due to low immunity and lifestyles hence the age bracket.

The study's main objective was to assess the influence of electronic media in creating awareness about cervical cancer among women in Nairobi Country. Two theories of behavior change i.e. transtheoretical (Stages of change) Model, (1998), and the Health Belief Model, (1994), were used in this study. The two theories demonstrated people's various stages of awareness viz a viz behavior change towards the prevention of cervical cancer. The theories demonstrate how people perceive their own susceptibility, vulnerability and severity of the problem and get convinced that a recommended response would prevent the threat from happening and their ability to perform recommended response i.e. self-efficacy and response efficacy. In other words, the electronic media messages can help the women identify their own peculiar problems, perceived vulnerability due to lack of awareness, the severity of the problem, in this cervical cancer and the need to go for routine screening as a way of preventing cervical cancer infection; in other words, action or response efficacy as pointed out by the two theories of behavior change that have been used in this study.

## **1.7 Limitations and delimitations of the Study**

There were several limitations experienced by the researcher during the study. For instance the researcher had expected to finish data collection during the first quarter of the year 2015. However, this did not happen due to a number of logistical challenges. The process took longer than was anticipated due to bureaucracy at the study site. First, obtaining formal approval from the Ethics and Research Committee of the Kenyatta National Hospital/University of Nairobi to allow the researcher to collect data was a tedious process. It took the researcher more than six months of intensive consultation with the Committee to satisfy their requirements and adhere to the set standards and guidelines before the approval letter could be issued. This delayed the data collection process. Another hurdle that delayed the process further was obtaining research permit from the National Commission for Science, Technology and Innovation because no data collection could commence without the necessary approval from the County offices. Despite that, the researcher was able to adhere to the guidelines set out by the Ethics and Research Committee in order to be allowed to collect data but not within the anticipated time line which had been set out in the action plan.

Collecting data from a hospital setting can be a gruesome process. Some of the respondents were actually unwell especially those who had come for cervical cancer screening, fistula and ante natal clinics, meaning that they were patients who were waiting to be treated. So giving them questionnaires to fill was a big challenge. Some took longer than necessary to complete filling the questionnaires hence slowing down the data collection process further. A lot of patience was needed to undertake the process. And the data collection was interrupted from time to time as the respondents were called in to the various consultation rooms. These particular challenges were overcome by employing a lot of patience and excellent public relations and communications skills.

Getting appointments with the gynecologists too proved an uphill task. For one, these are very busy people who could not be reached easily. In some cases it took the researcher more than four months to get an appointment with some of them. When it proved difficult to get hold of them, the researcher resorted to telephone interviewing which was quite a limitation in data gathering process. The nature of their work also made data collection process difficult. For instance, there were instances where a doctor could be called to attend to an emergency in the middle of an interview. This interrupted the flow of thoughts and the process had to start all over again and this was time consuming. The researcher had to be patient and persistent until the job was done. Where it proved difficult to get hold of the gynecologist, the researcher resorted to telephone interview to collect data.

Lack of sufficient finances limited the amount of information that the researcher would have wished to gather like covering a wider area and so on. The challenges were overcome by a lot of patience and focus on what the researcher set out to achieve.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews the literature that is related to the main objective of the study, that is, the influence of electronic media in creating cervical cancer awareness among women seeking reproductive health services at the Kenyatta National Hospital in Nairobi County and identifies the information gaps that exist in the topic of study. The study also analyzed the level of awareness of cervical cancer among women and tried to establish the source of the information, whether the information has influenced their behavior change in an effort to address the factors that hinder access to information and participation in screening programs on cervical cancer awareness in terms of symptoms, prevention, management and control. The literature also identified the knowledge gaps that existed in the topic of study with a view to making recommendations for further research to fill those gaps. The chapter discussed among other sub topics, global, regional and local statistical representation of cervical cancer; risk factors about cervical cancer; lack of facilities and equipment to treat cervical cancer in Kenya; myths and misconceptions about cervical cancer; women's vulnerability to cervical cancer; obstacles to participation in cervical cancer screening programs; insufficient awareness and knowledge of cervical cancer; cervical cancer prevention strategies in Kenya; need for screening procedures; policy implications of improved HPV screening; addressing knowledge gaps, attitudes and behavior in cervical cancer prevention; electronic media landscape in Kenya; the role of radio and television in creating awareness about cervical cancer; electronic media strategies and cervical cancer awareness; theoretical framework; conceptual framework; review of variables. Empirical review; critique of existing empirical literature relevant to the study; research gaps and summary.

### **2.1.1 Global Statistical Representation of Cervical Cancer**

The cervical cancer statistics point a very grim picture of the prevalence of the disease. For instance, worldwide, there are over 10 million new cases of cervical and more than 6 million deaths from cancer annually. Two decades ago, these figures were 6 million and 4 million respectively compared to the situation today, (Zomatis *et al.*, 1990). Of the ten million cancer cases each year, 4.7 million are in the less developed countries. Although the disease has often been regarded as a problem of the developed world, in fact, more than half of all cancers occur in the developing countries, where it is reported that cancer is the second most common cause deaths, and epidemiological evidence points to the emergency of similar trend in developing countries. Cancer is currently the cause of 12% of all deaths worldwide, (WHO Report, 2001).

In approximately 20 years' time, the number of deaths annually due to cancer will increase from about 6 million to 10 million, (WHO, 2001). Among women, the most common cancers worldwide are breast and cervical cancer although cervical cancer is primarily becoming more common among women in developing countries, (WHO, 2000).

### **2.1.2 Cervical Cancer in Sub Sahara Africa**

Cervical cancer occurs worldwide but the highest incidence and mortality rates of cervical cancer are in Eastern, Western, and Southern Africa, as well as South-Central Asia and South America. Whereas the burden of cervical cancer is quite low in the developed countries of the world, the situation is quite the reverse in developing countries where it constitutes a major health problem. While the incidence is decreasing in the former, it is on the increase in the later. This is partly due to high awareness levels, policy formulation and enforcement, and better medical care, unlike in developing world where these facilities are limited or non-existent especially in the rural areas where majority of the cases occur and are never reported. This is a source of great concern considering the fact that cervical cancer is preventable and curable at low cost



with currently available methods if detected in its early stages,(Parkin *et al.*, (2003). Unfortunately, this is not the case due to low knowledge gaps due to limited awareness levels as a result of lack of media campaigns, misconceptions and cultural beliefs that inhibit screening efforts.

Louie *et al* (2009) also points out that Sub Saharan Africa is the region with the highest incidence of cervical cancer in the world with concomitant high mortality affecting women at their prime age. He agrees that there are no or minimum screening programs for early detection of precancerous lesions within the countries in this region. Most screening activities are done as pilot or research projects which are discontinued on completion. South Africa is the only country in the region with a national cytology based screening program since 2001 but then coverage remains poor and the impact on invasive cervical cancer is unknown. The onset of HIV/AIDS epidemic that is highest in the sub region has elevated the problem of cervical cancer to a serious level because many of the HIV positive women have also tested positive to cervical cancer. To compound the problem is the widespread lack of resources and awareness associated with the region. Majority of the women have no knowledge about cervical cancer symptoms, prevention and management. The limited knowledge or lack of it has seen many women present themselves for diagnosis when disease has developed and therefore cannot be managed and cured, leading to high deaths due to cervical cancer, (Louie *et al.*, 2009).

In sub-Saharan Africa cervical cancer accounts for 22.2% of all cancers in women and it is also the most common cause of cancer deaths among women (Parkin *et al.*, 2003). Cervical cancer is however the second common cancer among women after cancer of the breast in some areas like Ibadan in Nigeria (Adebamowo *et al.*, 1999). About 60–75% of women in sub-Saharan Africa who develop cervical cancer live in rural areas. Many of these women go untreated, mostly due to lack of access (financial and geographical) to health care and awareness on its symptoms, prevention and management. The electronic media has not particularly focused its attention towards creating awareness about

cervical cancer among women. This situation has led to low levels of knowledge about cervical cancer and/or misconceptions leading to very high mortality rates due to cervical cancer as witnessed currently. Women in sub-Saharan Africa therefore lose more years to cervical cancer than to any other type of cancer. Unfortunately, this affects them at a time of life when they are critical to the social and economic stability of their families (Parkin *et al.*, 2002).

Chokunonga *et al.*, (2002) further argues that the true incidence of cervical cancer in many African countries is unknown as there is gross under-reporting. The underreporting has led to low knowledge levels, wrong information leading to wrong decisions; for example HIV positive women do not bother going for screening because they assume they will test positive for cervical cancer, hence lose the opportunity to prevent cervical cancer if detected early. Only very few countries have functional cancer registries and where they exist, recordkeeping is minimal or non-existent in many countries. And to compound the problem, it is only a small fraction of women who access medical facilities while majority cannot access hospital care and die at home. A mortality rate of 35 per 100,000 is reported in Eastern Africa. The reported mortality rates in developed countries with successful screening programs seldom exceed 5 per 100,000 women. This is due to high knowledge levels, policy enforcement on mandatory screening and hence reducing mortality rates (Chokunonga *et al.*, 2002).

### **2.1.3 Cervical Cancer in Kenya**

In Kenya, as in most parts of Africa, cancer of the cervix is a very common disease, accounting for 70- 80% of all cancers of the genital tract. Where cancer registers exist, cancer of the cervix represent up to 37% of all histological proven cancers in women, (Lowe *et al*(1981). Unfortunately, most data available in Africa are derived from central hospitals and this may not reflect the true situation of cervical cancer in the country as a whole because many of the cases go unreported. Many women experience symptoms that are a pointer to the possibility of cervical cancer infection but they fail to report them to a healthy professional because of lack of proper information about the

manifestation of the disease. Inadequate and non-accessible health facilities in the rural areas, coupled with taboos and cultural barriers, stigma contribute to the inevitable under-reporting of cases in many African countries, Kenya included. Rural women tend to shy away from reporting symptoms related to the genital tract such as vaginal discharge and post-coital bleeding. They are also most reluctant to submit to pelvic examination as a result of fear and stigma. This situation points to lack of correct information, misconception that leads to low levels of knowledge leading to wrong decisions i.e. women go to health facilities when the disease has advanced to late stages where it cannot be prevented or cured. The electronic media has a role to play to create awareness about cervical cancer in terms of symptoms, prevention and treatment in a bid to reduce cervical cancer deaths. However, this is yet to be done in acceptable proportions. As a result, cancer of the cervix in Africa is diagnosed at an advanced stage and consequently leading to high rates of mortality (WHO, 1984).

According to the Kenya Cancer Registry (2009), cervical cancer is the second most frequent cancer among women in Kenya and the leading cause of cancer deaths in women of reproductive age (WRA). Currently, the estimated annual number of cervical cancer cases worldwide is 300,000 worldwide while the annual number of deaths due to cervical cancer is over 200,000. In Kenya, it is estimated that there are 39,000 reported cervical cancer cases with 27,000 deaths per year (Kenya Cancer Society 2015). It is projected that by the year 2025, the number of new cervical cancer cases annually in Kenya will reach over half a million. Data from hospital-based registries in Kenya indicate 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, 2009). This situation points to the possibility of low knowledge levels about cervical cancer symptoms, presentation, prevention, management and control among the women, meaning that the electronic media is yet to play its key role

of creating awareness that would lead to right steps in the effort to reduce the incidences of cervical cancer in the country.

The World Health Organization (WHO, 2009) and International Agency for Research on Cancer (IARC) identify cervical cancer as the leading cause of cancer death for women in Kenya. Cervical cancer ranks as the most frequent cancer among women in Kenya, and is also the most common cause of death from cancer among Kenyan women. The World Health Organization corroborates this by ascertaining that cervical cancer in particular is the second most prevalent cancer among women in the country, after breast cancer, and its incidence is increasing (WHO, 2010). Despite the magnitude of the problem in Kenya and the fact that cancer of the cervix is easily preventable once detected in its early stages, the cervical cancer screening coverage by the electronic media in Kenya for all women 18 to 69 years of age is only 3.2% (Williams *et al.*, 1994). According to this author, the small percentage of the women who show up for screening is paltry 3.2 percent. Meaning that if the women had the right knowledge, the situation could be different because the knowledge could help them make the right choices like going screening or reporting symptoms that would point to the possibility of cervical cancer infection. However, this this is not happening and hence presenting the grim picture of cervical cancer in Kenya. Therefore the current study sought to identify these knowledge gaps and make recommendations for further research. For instance, the electronic media has the power to disseminate information about cervical cancer and foster positive behavior change.

Gichangi *et al* (2005) argues that cervical cancer is closely related to HIV infection. However, with HIV positive women receiving ARVs and living longer, cervical cancer becomes not only life defining but a disease that affects the quality of life. The prevalence of HIV in invasive cervical cancer patients in Kenya is 15%. This is double the national average of 7%. According to one study conducted among HIV-positive women attending HIV care clinics in Kenya, 43% of the women had abnormal cervical cytological results, which was much higher than what is found in the general population

(3.6%). With the recognition that cervical cancer is a major cause of morbidity and mortality among HIV-positive women, there is need for significant efforts in integrating cervical cancer screening as part of the minimum comprehensive care package and also serious advocacy by relevant stakeholders targeted at this deadly disease, coupled with serious awareness creation, can help change the situation (Gichangiet *al.*, 1994); (Gatune & Nyamongo, 2005). However, awareness by the electronic media on cervical cancer is limited and hence leading to wrong information, or misconceptions that aggravate the already bad situation as witnessed in the country today. The objective of this study was to assess the levels of knowledge, as created by electronic media, the source of such knowledge and the effect of the knowledge among the vulnerable women. Right knowledge about cervical cancer, created by the electronic media can significantly reduce the incidences of cervical cancer among women. However, as things stand now, the situation is different; there low knowledge levels, misinformation, myths and misconceptions that hinder the fight against cervical cancer and that was the focus of this study. The electronic media messages can certainly help change behavior b communicating the right information to the vulnerable women. This can be done through campaigns, programs such as talk shows, features, local drama, advertisements and cover news-worthy events on cervical cancer.

Chokunonga *et al* (2002) further agrees that cervical cancer in Kenya affects women in their prime and productive ages (35-45 years). Secondly, because the diagnosis is made late, the scope for successful treatment is very limited, so that mortality is high among the affected women. The treatment of choice in all but those diagnosed in stage 1 (who can be surgically treated), is radiotherapy, the facilities for which are currently very limited in Kenya. Most of the reports from Kenya are based on those cases seen at the Kenyatta National Hospital, obviously a most selective group of patients(Rogo *et al* (UoN, University of Antwerp 1994). As a result, there is the sad situation where cancer patients are placed in long waiting lists, the situation being compounded by the often non- functional equipment. This is further supported by Chokunonga *et al.* (2002) who

agrees that efforts towards prevention of cervical cancer are hampered by lack of equipment and many other logistical problems (Chokunonga *et al.*, 2002).

#### **2.1.4 Risk Factors about Cervical Cancer**

Several risk factors have been isolated as major impediments towards the fight against cervical cancer. For instance, Human papilloma virus (HPV) has been isolated as a major cause of cervical cancer in all parts of the world. Epidemiologic studies have shown that the association of genital human papilloma virus (HPV) with cervical cancer is strong, independent of other risk factors, and consistent in several countries. The International Biological Study on Cervical Cancer (IBSCC) Study Group led by Bosch, in 1995 reported that HPV DNA was detected in 93% of the tumors, with no significant variation in HPV positivity among countries. HPVs, which are transmitted sexually, as the central etiologic factor in cervical cancer worldwide with the report which concluded that the results confirm the role of genital HPVs, which are transmitted sexually, as the central etiologic factor in cervical cancer worldwide (Bosch *et al.*, 1995). It should be noted that information about the HPV as the main cause of cervical cancer infection is largely lacking among the vulnerable women. This knowledge should be out there among the vulnerable women; the women should have the knowledge that any sexually active woman, regardless of the age is at risk of contracting cervical cancer and hence the need to go for routine screening.

Human papillomavirus (HPV), the necessary cause of cervical cancer, is endemic in Africa. In a study to investigate the prevalence of and the risk factors for cervical infection with human papillomavirus (HPV) in an inner-city area of Ibadan, Nigeria, Thomas *et al.* (2004) interviewed and obtained a sample of cervical cells from 932 sexually active women aged 15 years or older. Unlike most populations studies so far, HPV prevalence was high not only among young women but also middle and old age over 50 years. Single women and illiterate women also showed increased HPV positivity (Thomas *et al.* 2004).

Schmauz *et al.* (1989) has argued that various factors that increase both HPV acquisition and promote the oncogenic effect of the virus are also very widespread in Africa (Schmauz *et al.*, 1989). These include: early marriage, polygamous marriages and high parity. Polygamy is reported to increase the risk of cervical cancer two-fold and the risk increases with increasing number of wives, according to Bayo *et al.* (2002). This is part of the male factor in addition to prostitution that leads to the high prevalence of HPV in Sub Sahara Africa. High parity, which is the norm in some cultures in Africa, is also a recognized, HPV-related co-factor for the development of cervical cancer (Brinton *et al.* 1989).

The prevalence of HPV has been shown to be higher in uncircumcised men than in circumcised men, in a study to investigate the association between male circumcision (MC) and high risk human papilloma virus (HR-HPV) prevalence, Auvert and colleagues (2009). So women who have sex with uncircumcised men are at greater risk of being infected with cervical cancer.

#### **2.1.4.1 Socio-economic factors**

Various socio-economic factors have been known to expose women to cervical cancer infection. Palacio-Mejia *et al.* (2003) has pointed out that worldwide women of low socio-economic status have a greater risk of having cervical cancer than those who enjoy better living standards. Cervical cancer is often referred to as a disease of poverty and of poor women. In 1996, a case-control study sponsored by Stanford University documented that the Vietnam War had contributed substantially to the problem of cervical cancer in contemporary Vietnam, and the Vietnam/American Cervical Cancer Prevention Project was established as an all-volunteer non-profit organization, to address the above risk factors to cervical cancer (Suba *et al.*, 2006). It is critical to note here that whereas the socio-economic factors may not be a major factor in developed countries, the fact that cervical cancer is associated with HPV, and sexual activity, there is need for awareness to focus all sectors of the economic strata.

Another study that was done in Mali in West Africa to establish the causes of cervical cancer showed that within a population widely infected with HPV, poor social conditions, high parity and poor hygienic conditions were the main cofactors for cervical cancer, (Palacio-Mejia *et al.*, 2003). Many countries in Sub Sahara Africa have widespread conditions that encourage substandard living conditions. These include wars, political chaos, internal conflicts, natural disasters, famine and drought. These often lead to large populations being displaced externally and internally for long periods of time. Under this refugee- like conditions, social vices like rapes, prostitution and multiple marriages and cohabitation prevail encouraging the transmission of HPV. War is associated with male sexual promiscuity, which in turn contributes to the development of cervical cancer among sexually monogamous women. Most countries of Sub Sahara Africa are located within the Tropical Rain Forest with difficult terrain as there are lots of swampy areas and thick and mountainous forests. This makes access to screening, health education and treatment difficult. Poverty and logistical challenges make cervical cancer cases grave especially in developing economies (Suba *et al.*, 2005). The above socio-economic factors are very common in many countries in Sub-Saharan Africa, hence making the cervical cancer situation worse compared to the developed world. However, the situation can change with awareness creation and provision of the right information that can help empower the women to seek for help.

#### **2.1.4.2 Biological factors**

Various biological factors have been known to aggravate the cervical cancer infection. They include age, HIV/AIDS, nutrition and other reproductive health issues. For instance poor nutritional status and infections, such as malaria, HIV and TB, are ravaging sub-Saharan Africa and have made many people immune-compromised and hence exposing them to cervical cancer infection. Wright *et al.* (1994) pointed out that HIV-positive women are more likely to have persistent HPV infections than HIV-negative women. In a study of 2,198 women who attended gynecological clinics in Abidjan, Côte d'Ivoire, it was established that HIV-positive women had a significantly higher prevalence of



squamous intraepithelial lesion (SIL). In another study that was carried out in Kenya, by La Ruche *et al.* (1998) and Temmerman *et al.* (1999) reported a five-fold increased risk of high-grade SIL among 513 HIV-positive women in a family planning clinic in Kenya. Other reports from the region show that women with HIV develop cervical cancer at an earlier age than women who are HIV-negative, (Moodley 2001). Gichangi *et al.* (2003) also found that young women under the age of 35 who had invasive cervical cancer are 2.6 times more likely to be HIV positive than controls of similar age. A recently published study from Tanzania showed that the prevalence of HIV-1 was much higher among the cervical cancer patients (21.0%) than among the controls (11.6%). HIV-1 was a significant risk factor for cancer of the cervix (Moodley *et al.*, 2006). Sub-Saharan Africa harbours 67% of the world's population of people living with HIV and AIDS, (Buga, 1998).

Williams *et al.*, 1994; Gatune and Nyamongo, (2005) have also pointed out that reproductive health issues have also been known to contribute significantly to cervical cancer infection among women in Kenya. Such factors include multiple pregnancies, early age of first intercourse, hormonal contraceptives, smoking and HIV infection (Williams *et al.*, 1994; Gatune & Nyamongo, 2005). This means that all women who use any reproductive health services are at a risk of cervical cancer infection and need such knowledge to help them make informed decisions about cervical cancer prevention and hence the focus of the studies.

Yamada *et al.*, (2008) has also pointed out that the relatively high incidence of HIV in Kenya is an important consideration when developing a communication strategy against cervical cancer because there is a close correlation between HIV and cervical cancer. A Kenyan study conducted from 2007 to 2010 found that in order to target vulnerable populations it is effective to combine cervical cancer screening with HIV testing (Huchko *et al.*, 2011; McKenzie *et al.*, 2011).

Age is another important consideration that should never be ignored when dealing with risk factors on cervical cancer. For example, information published in Park Plaza Hoospital (2005), points out that most women are diagnosed with cervical cancer between 50 and 55 years old, although it is a disease that is also seen in younger women. This large group of sexually transmitted viruses is the most important risk factor for cervical cancer. Women with HPV are at increased risk. Smoking: Women who smoke are nearly twice as likely to develop cervical cancer as non-smoking women. Diets low in fruits and vegetables have been linked to cancer, these are likely to affect women of low socio-economic factors (La Ruche *et al.*, 1998).

Oral contraceptives have shown a slight risk of developing cervical cancer for women who have used birth control for more than five years. So there is need for women who have used oral contraceptives for long periods to be encouraged to go for cervical cancer screening on a regular basis. Family History of Cervical Cancer: Women with a mother or sister with cervical cancer may be at a higher risk for developing the cervical cancer as well (Park plaza hospital, 2015).

#### **2.1.4.3 Lack of Facilities and Equipment to Treat Cervical Cancer in Kenya**

In Kenya, there is an extreme lack of resources to treat cervical cancer; both medical equipment and physician expert in Kenya. In Kenya Pap smear programs are very limited. Reports of breakdown of radio therapy machines at Kenyatta National Hospital have been rampant, hence subjecting cancer patients to untold suffering and pain and even early deaths which could otherwise have been prevented. As a result both the frequency and mortality from cervical cancer is high. Most Kenyan women are diagnosed in advanced stages of the cancer compared to North America, where most are diagnosed early when treatment is more effective. This is due to high knowledge levels, policy formulation and enforcement and superior medical facilities. According to (WHO 2006), cervical cancer ranks as the second most frequent cancer among women in Kenya; about 39 percent of women in the general population are estimated to harbor a

cervical HPV infection at any given time, although they may not be aware of it, (IRINE, 2010). Whereas the situation may be aggravated by lack of equipment and logistical challenges, the major impediment to cervical cancer prevention in Kenya is low knowledge levels, or wrong information coupled with logistical challenges. Therefore any meaningful efforts towards cervical cancer prevention must incorporate all factors, knowledge levels, physical limitations, lack equipment, biological, logistical and other challenges. Awareness creation must take into consideration all the factors that compound the issues surrounding cervical cancer and that formed the focus of the current study.

### **2.1.5 Myths and Misconceptions about Cervical Cancer**

Several myths and misconceptions have greatly hampered the war against cervical cancer. All the myths that the women have are based on wrong information that often leads to wrong actions, often with negative consequences. Krishnansu *et al.* (2007), has discussed some of the myths. For instance, many women think that cervical cancer is a death sentence. So they stay away from being screened or reporting any symptoms to a doctor because they know they will die anyway. So they would rather stay away without knowing their status rather than be told that they have cervical cancer. So by the time they show up for screening, the disease has progressed to stage 3 or 4 where it cannot be cured, leading to high mortality rates as witnessed in Kenya today. There is therefore need for correct information by the electronic media that can help the women understand that having cervical cancer doesn't mean one's life is coming to an end. There is need for all women to know that cervical cancer is not a death sentence. Positive steps need to be taken to prevent its devastating effects. Although cancer of the cervix – or any type of cancer for that matter – can be difficult to overcome, this does not mean it's incurable. The earlier the cancer is detected (before it has spread to other parts of the body, the higher one's chances of survival are. This makes regular and adequate screening extremely important, (Krishnansu *et al.*, 2007). And this is the focus of this study; that the right kind of information about cervical cancer should be disseminated by the

electronic media in order to change the state of affairs and help reduce the incidences of cervical cancer.

A major myth that has contributed to the gravity of cervical cancer is that ‘no symptoms, no cervical cancer. This applies to all women of socio-economic levels (rich and poor; educated and uneducated). This myth is so dangerous that it affects even the medical professionals themselves. Many women stay away from screening because they have no symptoms. However, the truth is that there are no symptoms linked to the early stages of cervical cancer, but once the cancer becomes invasive, one may experience pain in the pelvis, an unpleasant vaginal discharge, abnormal vaginal bleeding, which may occur after sexual intercourse, between menstrual periods, or after menopause. As the cancer becomes more invasive, one may also encounter leg and back pain, swelling of the leg, bleeding from the rectum, and blood in the urine. Once the cancer has spread throughout and outside of the pelvic region, one may experience all of the symptoms mentioned above, as well as the coughing up of blood. The bottom line women need to get tested whether or not they are experiencing any symptoms because early detection and treatment can cure or could stop the cancer from developing and spreading. All these symptoms must be reported to the health care provider for proper diagnosis but this is usually not done because of wrong information (Plus News, 2010). Radio and television can play a big role in communication correction information to dispel these myths and misconceptions that hinder the fight against cervical cancer.

Another myth many women harbor is the impression that, when it comes to medical tests, more is better. This isn't always the case. Extra tests don't only mean additional costs (for both patient and the health care provider) but they may also cause unnecessary concern, have side effects, and lead to health complications (Wright, 2008). Misconception and negative attitudes are a major impediment and have continued to expose women to cervical cancer infection and treatment. For instance HIV-negative women believe that cervical cancer only affects those who are HIV-positive and so they fail to go for screening because they believe they are not at risk, while HIV-positive

women will at times decline screening because they fear they will be found to be positive for the disease, (IRIN News, 2010). And due to these misconceptions, screening levels remain low thereby exposing women to cervical cancer infection which could otherwise have been prevented if they had the right information that could lead to proper steps towards cervical cancer prevention, (IRIN, 2010).

Another myth is that cervical cancer only affects older women. This is probably the most common myth about cervical cancer among younger women who lose an opportunity to go for screening because they feel that they are not at risk by virtue of their young age, and in the process expose themselves to cervical cancer infection. The truth is that cervical cancer can affect women of any age especially if they are sexually active. The average age at diagnosis for precancerous changes of the cervix (known as dysplasia) is 29 years, and for invasive carcinoma is 47 years (Monk, 2007). What this means is that so long as a woman is of reproductive age and is sexually active, even if faithful to one partner, must go for cervical cancer screening test. This information should be out there in the public domain and hence the relevance of the current study.

While it's rare for a woman to develop cervical cancer in her 20s, anything is possible and prevention is better than cure. This is why going for regular screening from the age of 21 is extremely important for any sexually active woman. Even if one is not having sex yet, or is not experiencing any symptoms of HPV or cervical cancer, it is important that all women of reproductive age get tested – at least once every three years. The same can be said for older women. Pap smears and HPV tests should be done religiously, even after menopause. A woman's risk for cervical cancer doesn't decrease with age (Monk, 2007). Awareness on such issues must also be done religiously to help women and girls prevent to take steps towards prevention of cervical cancer.

Another myth is that cervical cancer cannot be prevented. In most cases, cervical cancer can be prevented, and one of the best ways to do this is to go for regular screenings. In total, there are about 40 types of genital HPV. Some can cause genital warts (which your

doctor might see with a visual inspection); others can cause cell changes in the cervix that can cause cervical cancer. An HPV test, which looks for HPV on the cervix, can identify whether the virus is present(CDC,2011).

The myth that only promiscuous women are at risk of developing cervical cancer has hindered the fight against cervical cancer prevention. It's strongly believed that only women who have had multiple sexual partners can get cervical cancer and so women who do not engage in sex with multiple partners fail to go for screening because they feel they are not at risk. The fact of the matter is that *anyone* who has had sex, even if it was with just one partner, is at risk for cervical cancer infection. This is because HPV, the sole cause of cervical cancer, is spread easily through sexual contact, regardless of the number of sexual partners. While having more than one sexual partner is a major risk factor for the disease, it isn't the only risk factor in the development of cervical cancer. The above myths and misconceptions have greatly hampered women's participation in steps and activities that can help prevent cervical cancer infection. Therefore any meaningful awareness creation initiatives must take into account the wrong information that is out there in order to help the women overcome them so as to take positive steps towards the prevention of cervical, cancer, (American Cancer Society 2014). And that is where the role of electronic media comes in; to create awareness about all issues surrounding cervical cancer to help women take the right steps towards cervical cancer prevention.

#### **2.1.6 Women's Vulnerability to Cervical Cancer**

Worldwide women of low socio-economic status have a greater risk of having cervical cancer. Cervical cancer is often referred to as a disease of poverty and of poor women. A recent study that was carried out in Mali West Africa found out that within a population widely infected with HPV, poor social conditions, high parity and poor hygienic conditions were the main cofactors for cervical cancer (Palacio-Mejia *et al.*, 2003). Sub-Saharan Africa also has widespread conditions that encourage substandard living conditions. These include wars, political chaos, internal conflicts, natural disasters,

famine and drought. These often lead to large populations being displaced externally and internally for long periods of time. Under these refugee-like conditions, social vices like rapes, prostitution and multiple marriages and cohabitation prevail encouraging the transmission of HPV. War is associated with male sexual promiscuity, which in turn contributes to the development of cervical cancer among sexually monogamous women. In 1996, a case-control study sponsored by Stanford University documented that the Vietnam War had contributed substantially to the problem of cervical cancer in contemporary Vietnam, and the Vietnam/American Cervical Cancer Prevention Project was established as an all-volunteer non-profit organization. High rates of invasive cervical cancer were noted in coastal areas of Costa Rica and this was attributed to difficulties in having access to treatment. Most countries of Sub-Saharan Africa are located within the Tropical Rain Forest with difficult terrain as there are lots of swampy areas and thick and mountainous forests. This makes access to screening, health education and treatment difficult (Suba *et al.*, 2006).

Women and girls are particularly vulnerable to sexually transmitted diseases, HIV and cervical cancer included due to a combination of biological factors and gender-based inequalities particularly in cultures that limit women's knowledge about sexually transmitted diseases and their ability to protect themselves and negotiate for safer sex. Violence is an additional significant risk factor to women's sexual and reproductive health and other chronic health problems. Lack of access to information and services, social norms and values that undermine their ability to protect themselves is a major hindrance to women's health and cervical cancer prevention. Women's vulnerability may increase during humanitarian crises and emergencies when economic hardships can lead to increased risk of exploitation such as trafficking and increased reproductive health risks related to the exchange of sex for money and other necessities and sexual abuse, (WHO 2009).

A combination of social and biological factors make women more vulnerable to HIV/AIDS and other sexually transmitted infections and cervical cancer due to having

multiple sexual partners coupled with the non-availability of protection. Because the symptoms tend to be less evident in women than men, and because women overall have more limited access to diagnosis and treatment services, women's infections are detected late and thus go longer without treatment. This, coupled with women's greater biological vulnerability to complications from untreated infection, result in women suffering far greater morbidity due to sexually transmitted infections which expose them to the risk of cervical cancer infection. Majority of the cases are reported at an advanced stage when cure cannot be guaranteed and thus leading to multiple deaths that could otherwise have been prevented if the cases were detected early enough (WHO, 2009).

Other consistently reported risk factors include cigarette smoking, long-term oral contraceptive use and dietary factors such as low carotene or low vitamin C intake and folate intake efficiency (International Journal of Cancer, 2005). Sexual risk factors for cervical cancer include sexual activity at an early age, history of sexually transmitted infections, multiple sexual partners or engaging in sexual activity with promiscuous men have also known to aggravate the problem of cervical cancer (Agarwal *et al.*, 1993).

According to World health Organization (2009), there are typical cases in low-income countries where access to cervical cancer screening and prevention are almost non-existent. However, a highly effective vaccine against cervical cancer, which is now available is too expensive to majority of affected women and therefore limit its use in less developed countries. Cervical cancer can also be prevented through regular screening, coupled with treatment but this is rarely available in developing countries and therefore women continue to die of cervical cancer which could otherwise be prevented if detected early, (Women and Health, 2009).

### **2.1.7 Obstacles to Participation in Cervical Cancer Screening Programs**

Major obstacles towards cervical cancer prevention are have been witnessed. Despite increased efforts to encourage women to attend for regular cervical smears, many have never been screened Austoker, (1994). Since these women have an increased risk of



developing invasive cervical cancer, it is important to identify the causes of their nonparticipation. Factors that influence screening behavior can be classified as health service- related, patient centered, or factors related to colposcopy (Mcgregor *et al.*, 1994).

Reasons women give for not participating in a cervical screening program include lack of knowledge about the test and its indications; considering the test unnecessary or of no benefit, or considering oneself not to be at risk of developing cervical cancer as pointed out by Wathoove, 1998; Doyle *et al.*,(1996) and fear of embarrassment or pain, (Summers & Fullard, 1995; Peters, Moyare *et al.*, 1989). In addition, certain groups of women may experience particular problems. Furthermore, women of low socio-economic status may be less likely to have been screened. This is partly due to poverty so many cannot afford to pay for the procedure, transport and socio-economic hindrances. There is some evidence that ethnic-minority women, particularly those of Asian origin and Africa, are less likely to participate, (Health Education Authority,1994; McAvoy& Raza, 1991). Finally, postmenopausal women are less likely to be screened regularly and non-participation may be a result of uncertainty as to whether the smear test is appropriate for their age group Murray and Mcmillan (1993).

Estimates of the percentage of women who do not attend for colposcopy varies widely, between around 12% and 50%, depending on centre and patient population. There are two likely explanations of this non-compliance (Lesmanet *al.*, 1991; Paskett *et al.*, 1990). First, as compliance is related to the patient's perception of the severity of the disorder or the risk of possible infection, women may not consider the receipt of an abnormal smear as sufficiently serious to comply with health advice. Alternatively, women may be too distressed to attend (Becker ,& Maiman, 1980). Support for the latter explanation comes from studies that examine women's understandings of, and reactions to, an abnormal cervical smear result. Many women believe they have cancer and the fear of cancer remains high throughout subsequent investigations. Indeed, those women who do not attend for colposcopy show higher levels of anxiety and greater impairment

in daily activities than women who do attend (Wardley *et al.*, 1995; Zaiskeret *et al.*, 1997). Fear and anxiety, are major impediments to the fight against cervical cancer. Vulnerable women fear abnormal results and hence stay away and choose to stay away from screening because they would rather stay without knowing their status than being told that they are infected. Some women end up dying of fear rather than the disease itself ( Dr Amin, Kenyatta National Hospital, 2015).

The receipt of an abnormal cervical smear result, and of referral for colposcopy, causes anxiety, fear and distress in a large number of women, although the degree of anxiety experienced varies, (McDonald *et al.*, 1993). The most distressing period appears to be the receipt of the abnormal smear result; however, women's anxieties diminish following colposcopy and treatment. The primary cause of distress appears to be fear. Many women are frightened of medical procedures, believe that the abnormal smear is indicative of cancer and that their reproductive ability will be threatened, (Kavanagh & Broom, 1997; Miller, 1995). The resulting anxiety and fear can have severe effects on day-to-day functioning; for example, depressed mood and decreased libido. The result can cause changes in self-perception, including impaired body image and lowered self-esteem; women report feeling 'less attractive', 'tarnished', 'let down by their bodies', 'defiled', 'contaminated', and 'dirty' (Bennet *et al.*, 1995). As the majority of abnormalities will be borderline or indicative of mild dyskaryosis both of which carry a relatively low risk of progression to invasive cervical cancer. It may be that women react in this way as they do not understand the meaning of their result. In order to identify information that women require it is important to examine their understanding of cervical screening procedures (Gash *et al.*, 1995; Miller, 1995).

Women, world over, tend to demonstrate very little understanding of the meaning of an abnormal cervical smear result or the reason for colposcopy. Many women do not have a clear understanding of the meaning of an abnormal cervical smear, or the concept of pre-cancer and many believe the purpose of the smear test to be the detection of existing cervical cancer. This misconception may explain the high numbers of women who, on

receiving notification of an abnormal smear result, believe they have cancer. This lack of understanding persists in women referred for colposcopy, with many women unaware of the main reason for colposcopy and therefore shy away from screening as a result endangering their lives to the risk of cervical cancer infection (Nugent&, Tamlyn-Leaman, 1992; Massad *et al.*, 1997). If the women had the right kind of information, the situation would be different from what it is today. The women need to take the right positive steps towards cervical cancer prevention based on the right kind of information, and hence the relevance of the current study.

Women also have little knowledge of the risk factors associated with cervical cancer. The accumulation of evidence of a causative link between human papillomavirus (HPV) and cervical cancer may serve to increase women's feelings of resentment towards their partner and of being tarnished. Indeed, the fear of moral judgment may result in some women being unable to tell anyone of their abnormal smear; the resulting lack of social support may lead to increased distress, (Bellet *et al.*, 1995).

Women therefore report a need for additional, clear and factual information on the meaning of both the cervical smear result and the colposcopy and all other issues surrounding cervical cancer and the reason why this study was conducted to try and establish the role the electronic media can play to create awareness about cervical cancer. Women who perceive the information provided to be adequate are less distressed, less likely to fear they have cancer, and more likely to attend for future cervical screening. The most common source of information used by women is usually a friend who had previously experienced a colposcopy, although, given that knowledge does not appear to increase following colposcopy, it is unlikely that women receive correct information by this route, (Zeisker.,*et al* 1997). That is why this study set out to examine the role the electronic media can play in creating awareness about cervical cancer to help women make informed decisions.

Moreover, women may be highly anxious during consultations and so unable to absorb fully what is being said or to ask questions. Therefore, there is need for information to be provided clearly so that women do not misunderstand and or forget what they have been told. Although information leaflets are provided by many colposcopy clinics, some leaflets may be difficult to read particularly as there may be a preponderance of women with low educational attainment among the women with abnormal smears. Indeed, information leaflets do not generally take into account that English may not be the first language of many women. That is why the current study sought to examine the influence of electronic media in creating awareness about cervical cancer because the two mediums of study transcend illiteracy levels and hence suitable for creating awareness about cervical cancer. Women's fears and misconceptions can be addressed by health professionals either in person or by telephone; both methods significantly increase attendance. Alternatively, the provision of audio-visual educational material in women's preferred language has been shown to improve attendance among ethnic-minority women, (Miller *et al.*, 1997; Cuzick & Singer, 1990). Therefore any advocacy efforts by the electronic media should not only create awareness about cervical cancer but also target the issues that prevent women from going for screening such as fear and anxiety. Vernacular radio stations especially have been instrumental in reaching diverse audiences especially those in the rural areas majority of whom may not be able to read or write but information can reach them in the language that they can comprehend information.

Limited communication between doctor and patient may underlie the reports of poor participation of women from ethnic minorities, particularly of Asian and African origins. This is supported by findings of unscreened Mexican-American women being less likely to speak English or to be aware of cancer signs, symptoms, risk factors, and screening guidelines than Mexican-American women who are screened regularly, (Suarez *et al.*, 1997). Indeed, non-English-speaking women are enthusiastic about the cervical screening program when the nature of the test is explained in their own language. It is of

particular importance to determine ethnicity-related reasons for non-participation in the screening program. Although compliance decreases when cultural norms contradict health advice, this can be countered if health care providers are aware, and show understanding, of possible health care and cultural conflicts (Ley, 1989; Parazzini,*et al.*,1989). The current study sought to establish the knowledge levels about cervical cancer especially as created by the electronic media. In this study, electronic media referred to radio and television. So according to (Suarez *et al.*, 1997), vernacular radio stations may be very instrumental in creating awareness about cervical cancer by preparing messages about cervical cancer in languages that the women can understand and relate with. This may yield positive results as the women will respond better to information that is disseminated in a language they understand than if a foreign language which they may not understand.

Other factors reducing the participation of women in the cervical screening program are: poor awareness of the indications and benefits of the cervical smear test; lack of knowledge of cervical cancer and its risk factors; fear of embarrassment, pain, or cancer stigma; lack of female screeners or convenient clinic times; anxiety caused by receiving an abnormal cervical smear result; poor understanding of cervical screening procedures; and a need for additional information (British Journal of Gynecology, 2008).

Very few women in sub-Saharan Africa are ever screened for cervical cancer. Some of the few women who do have access to screening do not get themselves screened because they have wrong beliefs about cervical cancer (Anorlu *et al.*, 2007). Moreover, there are very few cervical screening services in Africa and many of them are based in secondary and tertiary health care facilities located in urban areas where majority of women from the rural areas cannot access because of poverty. Moreover, screening in most developing countries like the countries within the sub region is mainly opportunistic, characterized by an estimated low coverage, coexisting with over-screening of women with access to health services, and an absence of quality control procedures. Policies for cervical cancer screening in most countries vary and, most often non-existent.

Formulation and ensuring compliance with national program guidelines is an essential step toward significantly reducing the burden of cervical cancer (Arrosi *et al.*, 2010). This type of service does not reach women most at risk, i.e. older women aged 35–60 years, especially those who live in rural areas.

The cervical cancer situation in Kenya could be different if all women were sensitized enough to enable them undergo a pap smear test once every year. Although readily detectable in its premalignant stage, cervical cancer remains the second most common women's cancer worldwide, killing women in their reproductive ages (Black *et al.*, 1997). It is therefore of prime importance that cervical cancer screening is effective in targeting at-risk populations, and that, once an abnormality has been identified, follow-up screening and treatment are provided with the minimum distress to women and increase patients' participation in the screening program and minimize the distress experienced by women who require secondary screening and treatment, (Doherty *et al.*, 1991). With provision of correct information, women will get the courage to overcome the fear of unknown fears and go for screening in a bid to reduce the mortality and morbidity of cervical cancer.

#### **2.1.8 Insufficient Awareness and Knowledge of Cervical Cancer among Women**

The main limitation to cervical cancer screening is the lack of awareness of cervical cancer as a significant health threat to women in the general public and in the healthcare sector. It is also recognized that about 80% of HIV-positive clients in Kenya are not aware of their HIV status and this is a population that is vulnerable to cervical cancer infection. This means that the majority of the at-risk population, an estimated 10-plus million WRA, do not benefit from the cervical cancer screening program when the comprehensive care centers (CCCs) are used as the only entry point for screenings. To reach these other women as well, it is important that cervical cancer screening is integrated into the routine services that the majority of women are exposed to, regardless of their knowledge of HIV status, (The National RH Strategy, 2015).

Studies in Kenya report very poor knowledge of the disease in patients (Gichangi *et al.*, 2003; Kidanto *et al.*, 2002). The unfortunate aspect is that poor knowledge is not limited to patients alone but health care workers as well who are supposed to be better informed but have no good knowledge of the disease either. In Lagos Nigeria, for example, delay by primary health care providers in referring cases of cervical cancer to specialized treatment was found to be an important cause of women presenting with late stage disease because of late diagnosis and management, (Anarlu *et al.*, 2004).

Awareness on screening is lacking in many African countries. Among barriers to screening include beliefs about the disease; there are those who believe that screening cannot help detect it, others believe that their partners will not allow them to go for screening so they do not attempt to go, compounding the matter more. Other barriers to cervical cancer screening include the cost; majority of women are poor, striving to put a meal on the table, bearing in mind that most cervical cancer screening facilities are in urban areas, many may not afford even fare to travel there, leave alone paying for the procedure. Majority of women too may not know where to go for the screening. Some fear stigma e.g. if they were seen going for the screening people would think they are sexually active or promiscuous, while there are others who think the pap test is painful; while others believe there is no cure for cervical cancer, so need of trying; others are so busy, they have no time to go, others think it is embarrassing to expose themselves to the process and so on (Apochie & Colleague, 2009).

Mass media awareness and advocacy on the various issues of concern about cervical cancer is lacking or is in very minimal proportions. Although there is good awareness of the issues related to screening, there are specific gaps in knowledge about risk factors, symptoms and screening intervals. There are specific factual information about cervical cancer such as its presentation and screening procedure that are largely lacking among the vulnerable women. Such information should be able to help them to take positive steps towards prevention of cervical cancer but it is largely lacking, leading to the gravity of the disease as witnessed in Kenya today hence the focus of this study. For

instance, in a study that was done by Denny *et al.* (2006), it was found that although the relationship between sex and cervical cancer was known, less was known about other risk factors like the partner's prior sexual experiences and very little was known about the link between HPV and cervical cancer (Denny *et al.*, 2006). What this means is that if the main cause of cervical cancer is not known, then there will be no deliberate efforts put towards its prevention and women will continue to engage in unprotected sex for example oblivious of the risks they are exposing themselves to because of lack of proper information. This study therefore sought to establish those knowledge gaps and make recommendations on how they can be filled with a view to reducing the incidences of cervical cancer in Kenya.

### **2.1.9 Cervical Cancer Prevention Strategies in Kenya**

Many researchers have shown that most cases of cervical cancer are caused by an HPV infection (Walboomers *et al.*, 1999). HPV infections are very common and affect many sexually active men and women. According to the World Health Organization (2010), 39 percent of Kenyan women have harbored an HPV infection at some time in their lives. An HPV infection can trigger changes within cervical cells that lead to cervical cancer. A vaccination has been developed that prevents infection from some strains of HPV, and thus contributes to the prevention of cervical cancer. However, awareness of this vaccine, its effectiveness in cervical cancer prevention, side effects are largely lacking. Moreover, the uptake of this vaccine has been met with misconceptions and misunderstanding. For instance, there is a belief that the vaccine can cause bareness among the girls. This is a major issue of concern that should be addressed by provision of the right information about the vaccine but this is yet to happen. Furthermore the success of the vaccine has been hampered by wrong information and misconceptions which the media should address by providing the correct information but as things stand now, this has remained a mirage. Furthermore the prohibitive cost of this vaccine makes it unattainable to majority of poor women especially those in the rural areas, (Medical News Today, 2007).



The Kenya Pharmacy and Poisons Board approved the use of the HPV vaccination in 2007, but its purchase is not economically feasible for most Kenyans. Two vaccinations, Cervarix and Gardasil, currently cost around \$300 and \$150 respectively, which is an equivalent of Kshs 30600 and 15300 respectively (Medical News Today, 2007). This amount is way above reach for an average Kenyan poor woman who is striving to make ends meet especially those in the rural areas. Until the cost of these HPV vaccination is brought low or other options made available, inoculation is not viable in Kenya without substantial subsidies by the government and other stakeholders. As things stand now, the vaccine is not accessible to majority of women and thus it is not a solution to cervical cancer prevention. Meanwhile, women will continue to die of cervical cancer (Medical News Today, 2007). Furthermore, information on the benefits of the HPV is very scanty and more often riddled with controversy and misconceptions on the effects of the HPV vaccine.

For instance, the Bill and Belinda Gates Foundation through global development introduced the cervical cancer vaccine among 9 to 13 year-old girls in Kitui County, (globaldevelopment.org, 2010), in collaboration with GAVI (Global Alliance for Vaccines and Immunization [a] 22.03.2014. According information given by sister Mavindu, the senior nursing officer at the Kitui District Hospital, the number of girls who turned up to be given the vaccine exceeded the doses that were available. Besides, the cost of the vaccine was prohibitive and beyond the reach of the common poor rural women. For instance, one doze of the vaccine costs \$ 50 (over Kshs, 5,000) per vaccine, which majority of the women were unable to pay for privately. Besides the cost, the uptake of the injection was hampered by misconceptions about the negative effects of the vaccine on the girls. For instance, it was believed that the vaccine could cause barrenness among the girls and therefore mothers were not willing to let their daughters get be given the vaccine. The misconceptions surrounding the vaccine are yet to be addressed adequately by the electronic media. It is important to note that the role of the electronic media is not only to provide useful information about cervical cancer but to

also dispel fears and weed out myths and misconceptions surrounding the whole issue about cervical cancer and hence the focus of this study (Global Alliance for Vaccines and Immunization, 2014).

Another challenge that faces cervical cancer treatment, according to the chief nurse at Kitui hospital, was that most patients ‘disappeared’ along the way in the course of treatment,“ ; nearly half of the women being treated in Kenya “disappear” from their program which is a growing concern. According to the results of a recent survey published in the in the Journal Plus One News (2010), majority of patients can only afford treatment at public cancer treatment centers as most of them cannot afford the treatment in the private sector. Another research conducted at the Manchester University and which is now based at the Kenyatta National Hospital, the major problem at Kenyatta National Hospital is the waiting time for first appointment which can take up to six months; meanwhile the cancer is not waiting. In six months, the cancer can grow from stage two to stage four, drastically reducing the chance of survival of the patient, (The guardian2015).

From screening to diagnosis and treatment, best practice in Kenya is impeded at every stage. Persuading the women to get screened is an upward task. Besides, majority cannot afford medical care so they do not want to know their status while others do not like the procedure and are scared so they stay away. Many of the women have wrong information to the effect that once diagnosed, the cancer would kill them and that there is no treatment, so they shy away all together. The health care providers realize that because of this wrong information, many women avoid being screened because they believe they will die anyway, (The guardian2015). There is therefore need for awareness creation that helps provide the right information to help to dispel the misconceptions about cervical cancer and help the women go for screening which is the surest way to reduce incidences of cervical. However, the electronic media has not focused its attention towards this end and hence the focus of this study.

According to the health workers at the Kitui District Hospital, even when the women start experiencing the symptoms, they will not often seek treatment because of fear and wrong information. Some women think that cervical cancer is a result of witchcraft so they prefer to see a traditional medical practitioner because they are more affordable than modern medical care and in the meantime, they lose a lot of time and by the time they come to seek conventional treatment, majority of the cases are late stage when treatment is remote and hence resulting high mortality rate (The Gardian, 2014).

PATH (an international non-profit global health organization) implemented a free HPV vaccination program in nearby Uganda, intending to simulate a national program on a small scale to provide a basis for funding and inclusion in policy making. It found that an HPV vaccination program in Uganda was feasible, and attained high coverage (PATH, 2004). This study, along with a recent survey in Kenya however found out that 95% of women were not willing to have their daughters vaccinated because of misconceptions surrounding the vaccine uptake (Becker-Dreps, 2010). In addition, other urogenital cancers such as anal, vulvar, vaginal and penile cancer, as well as other sexually transmitted diseases, can also be caused by HPV. Thus, any preventative strategy surrounding the control of HPV can also contribute to decreasing the incidences of other disorders. However, this strategy is yet to be publicized, actualized and operationalized due to policy and logistical challenges.

### **2.1.10 Need for Improved Screening Procedures**

An effective screening strategy is important in order to capture those affected by HPV, the virus that causes cervical cancer. Fedha (2011) states that the three biggest barriers to screening for cervical cancer from a patient's perspective are; ignorance, accessibility and cost. A study conducted at Kenyatta National Hospital in Nairobi reaffirmed Fedha (2011)'s account that only 31% of the women surveyed knew what cervical cancer was, 32% knew what a Pap smear test was and just 22% had experienced one before (Gichangi *et al.*, 2012). Another study carried out by Were (2011) found out that major

common barriers to screening included fear of abnormal results, wrong information, stigma, limited screening facilities, misinformation and lack of finances. This is what formed the focus of study, i.e. to investigate knowledge levels, the effect of the nature of information and the consequences of that information among the vulnerable women as created by the electronic media.

Screening for cervical cancer is resource and time intensive. Another study published in 2005 by the New England Journal of Medicine found that screening of 35-year-old women would reduce the lifetime risk of cervical cancer by 25-36 percent if done in good time, (Goldie, 2005). It was also found that in Kenya it is more effective to use screening strategies such as visual inspection of the cervix with acetic acid (VIA) or DNA testing for HPV, which requires less clinic visits and are less dependent on laboratory infrastructure. Eighty percent of women in a Ugandan study were willing to collect their own cervical samples for HPV testing as the first part of a screening program, indicating that this could be a successful method in low-resource settings but a number of women were uncomfortable carrying out physical examination on themselves. However, misconceptions, fear and lack of proper knowledge tended to hamper the success of this initiative, (Mitchell *et al.*, 2011). So there is need for knowledge surrounding these initiatives to be communicated to the target audience. There is therefore need for health professionals to work hand in hand with media professionals to create awareness about cervical cancer.

Screening strategies such as “screen-and-treat” or the “single-visit approach” may also be appropriate in low-resource settings such as Kenya. These require women who test positive for HPV to be treated immediately without further diagnostic confirmation to decrease the further use of resources. Unfortunately, at present most women are not screened until the disease is in its advanced stages and symptoms become obvious. Screen-and-treat is also a contentious strategy and currently under scrutiny due to potential false positives being treated superfluously (Suba *et al.*, 2011). More investigation on this method of addressing cervical cancer prevention needs to be

conducted before a decision on its implementation in Kenya is made,(Mitchell *et al.*, 2011).

The above strategies create a window for vulnerable women in Kenya, but unfortunately awareness on the same is minimal or non-existent, and hence the burden of cervical continues to persist and this formed the focus of this study.

### **2.1.11 Policy Implications of Improved HPV Screening**

With widespread implementation of screening, there would likely be an increase in the detection of early-stage cervical cancer cases that would require treatment for this group of women. Most women, however, are in advanced stages of cervical cancer when diagnosed because of lack of awareness, making curative treatment difficult and at times impossible. Kenyatta National Hospital in Nairobi is currently the only public center in the country treating cancer and is overburdened with current caseloads, with a two to six-month waiting list for new patients. In order to address these issues, the hospital has recently drafted a comprehensive proposal for the expansion and establishment of cancer services, and creating other cancer centers in the country, to help ease the burden of cervical cancer management and treatment at the Kenyatta National Hospital (Kenya Departmental Committee on Health, 2011).

A fundamental component of a strategy to control any cancer, including cervical cancer, is the creation of a national cancer surveillance and registration system. Determining the incidence and prevalence of cancer cases is paramount to controlling the disease. Currently, there is no cancer registry in Kenya. The National Cancer Control and Prevention Bill (NCCPB) is in the advanced stages of being tabled in Parliament and spells out strategies for the government on how to control cancer, create a National Cancer Control Institute (NCCI) and provide a legal framework for cancer control issues. The bill would also ensure that patients have access to affordable screening and would make it illegal for cancer treatment to be omitted from insurance coverage.

However, this is yet to be actualized and until this is done, cervical cancer prevention in Kenya remains a mirage (Ayodo, 2011).

Kenya's Ministry of Public Health and Sanitation and Ministry of Medical Services are also in the process of implementing their National Cancer Control Strategy, which began in 2010 and was to run until 2015. The success or failures of this initiative should form a basis for further research. The strategy aims to build strong cancer prevention and control capacities both in public and private sectors through investment in awareness creation, human resources, equipment, surveillance and research. Specifically addressing cervical cancer, the strategy outlines a tobacco control intervention, advocates for the control of biological agents that cause cancer, and commencing HPV screening and vaccination (Kenya Ministry of Public Health and Sanitation and Ministry of Medical Services, 2009).

Among the international forums addressing cervical cancer in Kenya is the 2009 conference, Towards Prevention of Cervical Cancer in Africa, at Oxford University, which assembled health professionals from across Africa, the WHO, representatives from the pharmaceutical industry, international oncologists and many different cancer organizations and charities. The conference delegates issued the "The Oxford Delegation" calling for global support to reduce the prevalence of cervical cancer in underdeveloped regions, particularly in Africa. However, the resolutions of this conference are yet to be implemented in many African countries due to logistical, financial and other challenges (Kerr, 2009).

At the community level, the Kenyan group '*Maendeleo Ya Wanawake*' is an organization that aims to empower women as a means "to alleviate poverty and create a better environment and quality of life for all." The organization coordinates community health workers to perform cervical cancer screening and actively implements projects to prevent cancers. This women's group joined up with the Kenyan Ministry of Health and Sanitation, the Kenya Cancer Association and PATH to implement the Western Kenya

Cervical Cancer Prevention Project, which looked at developing a model prevention program for low-resource communities. This project found that a strategy based on VIA and cryotherapy (a method of treatment performed by nurses), was able to be established and sustained in a rural setting in Kenya. However, awareness creation on the strategy was largely lacking and/or minimal. Another challenge was the replication of the program to other rural areas in the country due to limited resources and lack of capacity (PATH, 2004).

Beyond early efforts to address the disease, there are significant gaps that require attention in the fight against cervical cancer in Kenya. For instance, additional resources at the government level are desperately needed to facilitate subsidized services for patients and provide appropriate screening and treatment. Community health care workers, local leaders and community members are primary sources of communication; strengthening their awareness of the urgency of cancer management and prevention would be invaluable. However, they too are challenged when it comes to possessing the right information that they can pass to the women seeking medical services in the health facilities in the rural areas. In addition, building capacity for community-based actions, particularly through strengthening and supporting established women's groups, would assist in controlling cervical cancer in Kenya but this has not been actualized and hence formed the basis for this study (PATH, 2004).

### **2.1.12 Addressing the Knowledge Gaps, Attitudes and Behavior in Cervical Cancer Prevention**

Many studies have demonstrated that one major impediment to cervical cancer prevention in Kenya is lack or insufficient information. In a study that was carried out among women seeking reproductive health services in Kisumu, Kenya to assess their perceived risk of cervical cancer and risk factors influencing cervical cancer screening in 2013, it was established that only one third of the women who were surveyed had heard of cervical cancer (Sudenga *et al.*, 2013). Most of the women (67 %) had never had a single message from any media outlet either. Majority had received their information

from health care workers. Yet, few women, (6%) had ever been screened for cervical cancer and cited barriers such as lack of knowledge about cervical cancer, fear, stigma, cost and time, (International Journal of Gynecology 2013). This study however failed to point out how the knowledge gaps could be addressed more so by the electronic media, which was the focus of this study.

According to the report by Kenya Cancer Society (2010), advocacy on prevention, treatment and care by the media (radio and television) on women's vulnerability is minimal or non-existent in Kenya. As a result of this, many women continue to die in their productive ages because of lack of proper and adequate information. Besides, there is no clear government policy on cervical cancer as of 2011. Besides, Kenyatta National Hospital is the only facility in the country where cancer cases are referred, hence overstressing the facility (Report on Media Workshop on Cancer Awareness, 2010).

Steele *et al.*, (2005) argues that analysis of news media coverage of HPV and the HPV vaccine is limited. Previous studies that analyzed U.S. news coverage of the HPV vaccine included a narrow time frame and were limited to quantitative analyses (Calloway *et al.*, 2006; Anhang *et al.*, 2004; Kelly *et al.*, 2009). Thus, it is unclear how the news media covers more recent issues surrounding HPV vaccination, especially controversial topics related to vaccine mandates and sexuality. Research has shown that media coverage of controversial topics can not only raise awareness of an issue but can also create public uncertainty, (Steele *et al.*, 2005).

Controversial media messages about vaccines can erode parents' trust in immunization and can lead to a decline in vaccine acceptance and uptake, (Forster *et al.*, 2010; Marlow *et al.*, 2007; Mason & Donnelly, 2000). Attitudes and beliefs toward vaccination on an individual level can also influence attitudes toward legislation and policies regarding HPV vaccination. An analysis of news media coverage of HPV vaccination may have broader implications for compulsory vaccination programs in general and news media coverage of other public health issues. The media's messages can contribute to one's



perceptions of HPV susceptibility and severity and thus influence health behaviors (Dixon *et al.*, 2009).

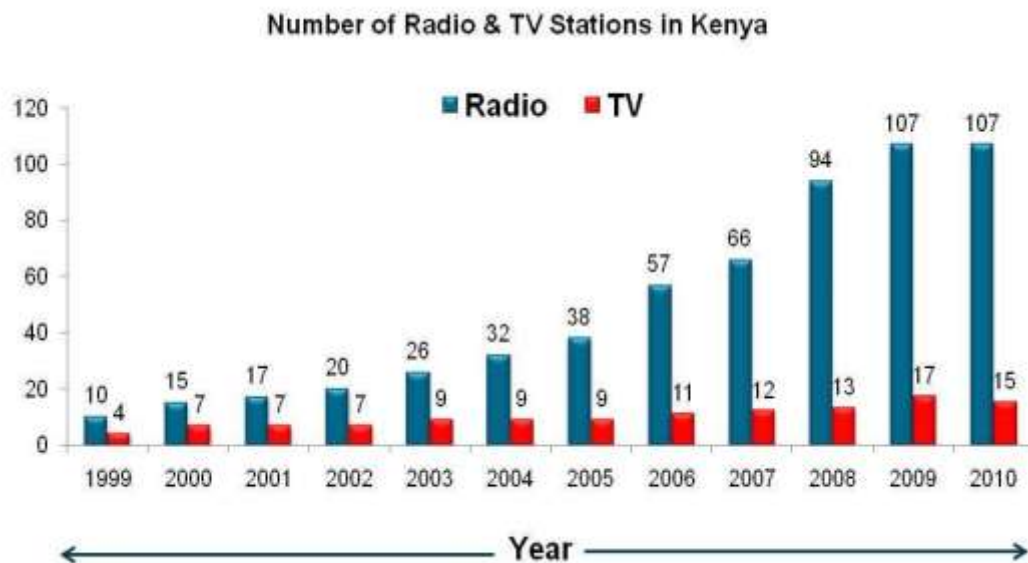
Clarke & Everest, (2006) have also argued that news media targeted messages can certainly affect attitudes toward cervical cancer prevention based on what messages are reported and how such messages are framed. Subjective norms influence one's behavioral intention through the social environment: the beliefs of other people in one's social environment, as well as the importance that one attributes to such beliefs, can impact behavioral intention positively or negatively. However, the fact that many women continue to die of cervical cancer or fail to go for screening shows that the radio and television messages on prevention, care and management are limited, or have not addressed the very core issues to which women are vulnerable to cervical cancer and to facilitate positive behavior change and therefore are not effective enough to create positive change. The conflict and contradictions need to be addressed by the electronic media. Thus, individuals might be less likely to take action or to perform a behavior change due to knowledge on the subject matter. This is in agreement with the arguments fronted by the two theories that were used in this study. The Health Belief Model (Rosenstock 1994) that states that women are likely to perform a behavior based on their perceived vulnerability to a health risk. The media plays a role in agenda-setting in terms of what is discussed and known at the personal level as well as the societal level. However, there have not been concerted efforts to tailor messages that are clear and targeted at their vulnerable groups and addressing their vulnerability in particular, (Clarke& Everest, 2006).

Messages about vaccine mandates suggested compulsory vaccine legislation was premature and generated controversy. Articles focused on legislative controversy may mean a missed opportunity for education about vaccination and cancer prevention. Messages about sexual behaviors also revealed conflict but tended to provide support for HPV vaccination. To achieve public health objectives of reducing cervical cancer morbidity and mortality, there is need for radio and television messages that are more

clearly communicated to the target audience on cervical cancer screening, in addition to HPV vaccination in cancer prevention. Incidence of cervical cancer may be much decreased through educational programs aimed at behavioral change if this were to be enforced (Casciotti, 2011).

### 2.1.13 Electronic Media Landscape in Kenya

The medial landscape in Kenya has changed beyond recognition over the last decade. This has had a profound impact on the way people consume information and by extension, advertising trends. Radio in particular has exploded with the latest data from Synovate showing that radiostations have increased tenfold over the last decade from 10 in 1999 to 107 in 2010. TV stations quadrupled from four to 15 over the same period. This implies that the Kenyan audiences have more access through the radio and television now than was the case ten years ago. This made the two media channels suitable choice for the study because of their availability and easy disseminators of information with maximum reach.



**Figure 2.1: Number of radio and TV stations in Kenya**

*Source: Synovate research, 2011*

The media landscape is now dominated by regional vernacular radio stations which are very popular and unique to each region. These stations have overshadowed radio stations with national reach. The popularity of vernacular radio stations can be explained by the fact that 81 per cent of Kenyans aged 15 years and above use vernacular as their main language while in the home. This is higher in rural areas. The popularity of vernacular stations cuts across all social classes and age groups.

The Synovate survey also shows that nearly all Kenyans aged 15+ listen to the radio at least once every four weeks. Technology has also played a role in increasing access to this channel. Radio is now more readily available everywhere because people can listen to it on their cell phones, cars, and computers. The cost of receivers has also come down enabling many urban and rural poor to have access to the medium. Whereas growth in radio has been driven by vernacular and community radio stations, growth in TV viewership has been driven by rural electrification and cheaper TV sets, (Synovate 2011). This makes the choice of the mediums suitable for creating awareness given their popularity among Kenyans and due to their availability and easy to acquire.

According to another research that was conducted by Strategic Public Relations and Research Limited (2011), it was established that the media has, over the last decade, ranked among the fastest growing sectors in Kenya. The research further found out that demand for media products had continued to increase with consumers showing increased trust in the institutions that form part of the fourth estate. Statistics from the Communications Commission of Kenya (2011) also indicate that there are 98 licensed radio stations in the country, more than 20 TV stations and newspapers as well as numerous magazines catering for various niches among Kenyan consumers. These numbers have since shot up since the country has switched to digital.

In another research that was done by Audiences Scapes (2010), it was established that Kenya media is largely dominated by news and entertainment, and little on other type of content: The media prioritized news and entertainment (largely shallow content) at the

expense of other development issues. While nearly half of the study respondents felt that matters of national interests were covered sufficiently well by the media, there were feelings expressed that the nationalistic interest is undermined by commercial interests. Only 28% of the survey respondents were happy with the coverage of national issues (Audience Scapes, 2010). This is an indication that Kenyan media consumers prefer to listen to news stories or to be educated on the goings on in the country as contained in the news items. Therefore any awareness messages should be crafted as news items or slotted in between news bulletins.

The Media Council of Kenya (2008) has pointed out that the media landscape in Kenya is largely dominated by commercial media, driven by commercial interests and part of a large business, but there is a small but growing component of community media and social media. Local content gaining ground: Although local content is still outnumbered by foreign programs, there is a growing trend towards local programs, and a number of respondents thought that the Kenyan media is supporting local programming. Nearly 38% are of the opinion that the media in Kenya is supportive of local programs. Kenya media is largely dominated by news and entertainment, and little of other types of content: According to some stakeholders, and a research that was done by the Media Council of Kenya, the media in Kenya prioritized news and entertainment (largely shallow content) at the expense of other development issues. While nearly half of the study respondents felt that matters of national interests are covered sufficiently well by the media, there were feelings expressed that the nationalistic interest is undermined by commercial interests. Only 28% of the survey respondents were happy with the coverage of national issues (MCK, 2008).

### **2.1.14 Electronic Media Platform and Creation of Awareness in Kenya**

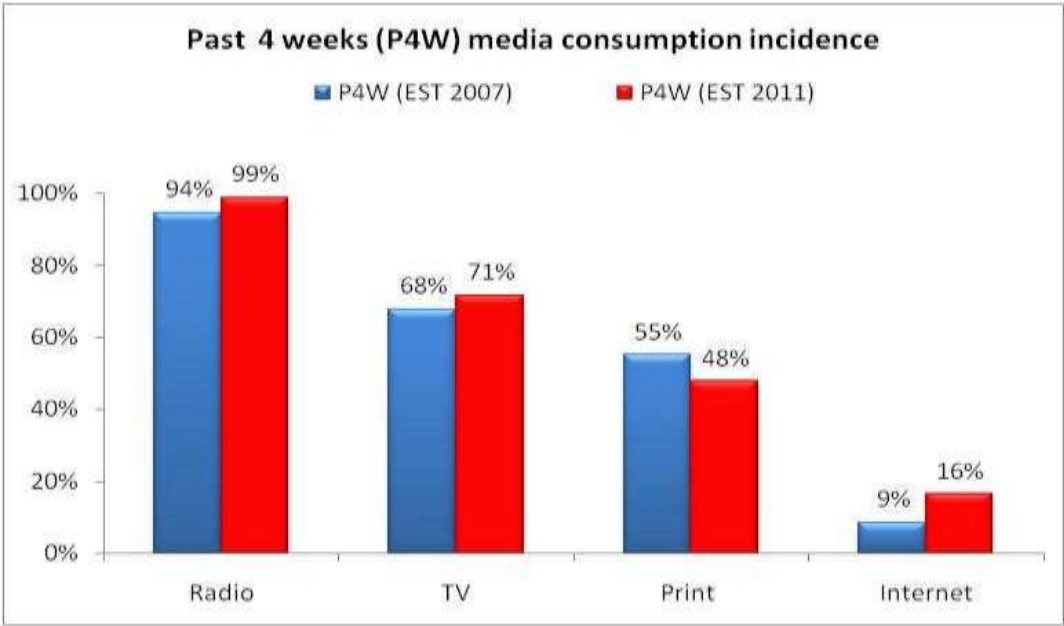
In this study, two electronic media platforms were looked at. These were the radio and television. The study was interested in suitability of the two platforms in creating awareness about cervical cancer. As pointed out in previous studies (Synovate 2011), radio and television are very popular media channels among Kenyan audiences. This is because the two media channels under focus in the current study possess unique characteristics that make them preferred channels to majority of Kenyans, both in the rural and urban areas; and hence are suitable for creating awareness about cervical cancer. Both transcend geographic barriers, illiteracy barriers, are readily available

### **2.1.15 The Role of Radio in Creating Awareness about Cervical Cancer**

The various strengths of radio are enormous and hence make it a suitable medium of communication in awareness creation and relevant to this study. The radio can target selective audience by station format; it is intrusive and local, it has a wide reach, it is cheap to acquire and hence nearly every household in Kenya has a radio set. Current radio programs have the call-in ability and listeners can therefore participate in the discussions to get clarification on issues of concern. Besides, it has low production cost and can rely on the listener's mood or imagination to pass information. Given its availability, low cost and therefore easy to acquire, even its availability in mobile phones, the number of households in Kenya, both in urban and rural areas own radio sets. This has been enhanced by the fact many FM stations are now broadcast in vernacular languages and hence giving the radio an edge over other mediums of communication in awareness creation (CCAB, 2012).

Radio has tremendous power to influence knowledge, attitudes, and awareness of an issue and can thereby influence behaviors and inform health policy. Media-worthy events can create an opportunity for communicating public health messages and media coverage has been shown to increase public interest in a subject, such as awareness on disease presentation, prevention and control, (Metcalf *et al.*, 2010). However, studies

have shown that radio, despite its much positive strength, it has not played an important role in communicating information about HPV and its link to cervical cancer infection. Further, it has not created awareness about the HPV vaccine and more so addresses the misconception surrounding the vaccine. As a result, there are still many incidences of cervical cancer being reported late and high mortality rate as a result of lack of information or wrong information. Information about and advertisements for the vaccine, as well as stories that touch on the status of HPV vaccination policies, have not been covered adequately in the electronic media programming. Given the media's potential influence, it is critical that it communicates messages around cervical cancer symptoms, prevention and control to create awareness and help reduce the burden of cervical cancer in Kenya (Kaiser Daily Women's Health Policy, 2007).



**Figure 2.2: Media Consumption Patterns in Kenya**

*Source: Synovate 2011*

It is important to note that the proliferation of radio stations has created more fragmented audiences with people's

watching stations more frequently in a day with the very 30 minutes being the average according to Synovate Research, (2011). The average Kenyan tunes into at least 4 radio stations in a given week and this has changed the way advertising is bought and sold. Advertisers keen to maximize their returns on investment have increasingly spread their spending to the regional vernacular stations which are popular in part because they cover local issues and news in a way that national broadcasters cannot, (Synovate 2011). This may appear negative but the flipside of it is that this practice may have more people listen to a message by tuning in to more radio stations within a given period than if they were just tuning in to one radio station for a longer period.

Unlike a decade ago when radio played second fiddle to TV and print when it came to share of advertising revenue, today radio accounts for the lion's share of advertising revenue (50%). Vernacular and Kiswahili stations have benefited the most from this spending shift. Companies today have to spread their money among more media channels in order to reach a national audience and this has raised the overall cost of advertising. Advertising spend - excluding discounts - grew exponentially over the last decade from Sh3.2 billion in 1999 to Sh49.2 billion last year. Although economic growth contributed to the increase especially during the boom years between 2003 and 2007 when it hit its highest level of 7.1 per cent, fragmented audiences were a key factor (Synovate 2011).

#### **2.1.16 Television and Awareness Creation**

Television has tremendous strengths that can be harnessed to create awareness on any issue such as politics, government policies, and even cervical cancer. Its intrusive impact, audio-visual characteristic, persuasively uses of sight/sound/motion, maximum reach, ability to target the consumer, and the fact that it can leave a lasting impact in the viewer's mind makes it relevant in creating awareness of on any issues and medium of choice for this study (One TV Booklet 2012). Television has been known to be a credible source of information because of its audio-visual impact.

However, some television messages about cervical have information have confused its audiences instead of giving them accurate information to help them make positive choices like going for screening. For instance, there is an advert by that Kamirithu Herbs that appears on Citizen Television which relays messages to the effect that traditional medicine can cure cervical cancer. Such an advert can cause confusion in that women who had started receiving conventional medicine in hospital can abandon it and go for the traditional herbs hence complicating their cases further and can even lead to death because of wrong information. However, well-crafted factual information about cervical cancer can have a greater impact on television than any other medium. This is an on-going advertisements on major television channels such as Citizen, KTN and NTV from 2014 to-date (2016).

In a talk show program on cervical cancer that was aired on Citizen Television on September 25<sup>th</sup> 2014, the panelists who included Dr Maranga, a leading gynecologist/oncologist and the head of the reproductive health department at the Kenyatta National Hospital, pointed out a number of issues that are an impediment to the fight against cervical cancer infection among women. For instance, he pointed out that majority of women who go for screening usually are ignorant of cervical cancer symptoms and therefore come when the cancer is at an advanced stages and cannot be cured, and hence the high mortality rates being witnessed in the country as a result of cervical cancer. Dr Maranga, lamented that cervical cancer can be treated if detected in early stages but majority of the women come when the cancer has progressed. This was due, among other things, lack of proper information, fear, poverty and myths and misconceptions.

Dr Maranga further pointed out that there was need for awareness to be created on cervical cancer symptoms such as abnormal bleeding, bleeding after sex, abnormal discharge, lower abnormal back pain, having many children, having multiple sex partners and having sex at a very young age. Any woman who experienced any or all of these symptoms should seek medical help immediately. He further stressed that any



sexually active woman should go for cervical cancer screening because they are at risk of contracting HPV. Long use of contraceptives can also cause cervical cancer. There are many myths about cervical cancer that the television should address but it is not being done adequately. Dr Maranga a paper he published in the Guardian (2015) also pointed out that cervical cancer can also be cured by ARVs in its early stages and all HIV positive women should go for cervical cancer screening (Citizen TV, 2014).

Education and information as relayed on radio and television can, on the long term, ensure that men and women get more information about cervical cancer. There is need to introduce young girls in schools and colleges to the importance of screening and the danger of late diagnosis. On the short term the public can be informed by means of media channels like TV, radio, newspapers and even posters but this is not happening. Health information sessions like “*barazas*” are also useful channels of information. This is according the televised TV program facilitated by Dr Maranga on Citizen TV on September 25<sup>th</sup> 2014. Interpersonal communication is another important means of communication. When women tell others or their neighbors and friends about the importance of pap smear, this can be very effective way of passing information about cervical cancer but the women need to be equipped with the right of information and hence the current study. The role of interpersonal communication should be employed on a large scale, which is the step in the fight against cervical cancer and control. And this should be enforced by radio and television in up-scaling the initiative. However, despite the danger and seriousness posed by cervical cancer there has not been a deliberate effort towards its prevention, diagnosis, treatment and management (Citizen TV, 2014). This is why the current study is relevant given the seriousness of cervical cancer.

### **2.1.17 Electronic Media Strategies and Awareness Creation**

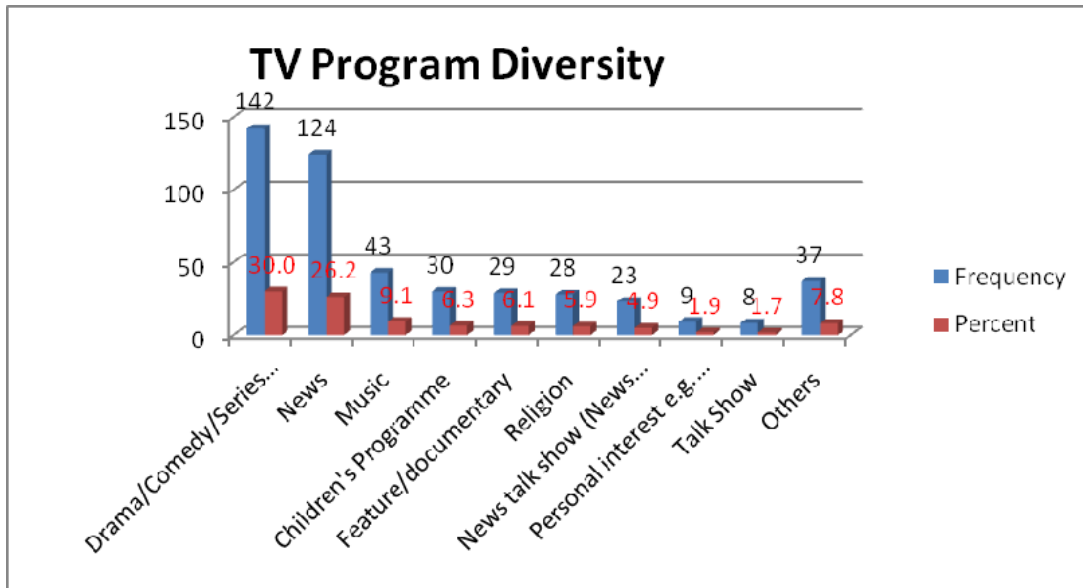
Several strategies can be used to reach women with the correct information about cervical cancer to enable them make choices towards its prevention. Radio has been regarded as the most pervasive and most effective medium in reaching the country's

widely dispersed heterogeneous audience. It is reputed worldwide for being the cheapest, simplest and most portable medium of mass communication for reaching people. Soola (2009) has reasoned that the radio is not limited by electricity, which is hardly available and epileptic in its supply when available. In addition, the radio is as extremely mobile: people could listen to a radio program in their car, home, or office. Soola (1999) has also observed that radio sets and batteries are not very expensive in many African countries, and given the small size of the portable radios, they can therefore be easily purchased. He also added the batteries of these radio set are becoming less long-lasting. Nevertheless, it is important to note that the radio, being ubiquitous in nature, can be regarded as a powerful source of information.

Television, on the other hand possesses the unique characteristics of sound, sight, and motion, which it combines with simultaneity. It also transcends the bounds often imposed by illiteracy on information and knowledge acquisition. In addition, its status conferral on individuals or demonstrated practices is unrivaled (Soola, 2009; 1999). In other words, television has the capacity of audio-visual presentation of programs and, by virtue of its ownership and operational structure, can be regarded as an urban and rural medium. In addition, television has the ability to reach a heterogeneous audience in both rural and urban settings. However, television has its limitations in many African countries, Kenya included. Soola (1999) has argued that television stations in many Africa countries suffer from poor production capability, declining economic fortunes, and cheap foreign alternatives. He also observed that a stocktaking of a typical evening program offering on most television stations reveals that most of the programs are entertainment-centered. It is pertinent to note that most of the limitations of the electronic media are man-made and systemic and not a creation of electronic technology. It is believed that all these limitations can be overcome, when the government, media owners and managers are committed to socio-economic development and growth of a nation (Soola, 1999). The author further argues that this type of programming can be

useful in creating awareness about cervical cancer; in other words, any entertaining program can be used to pass information successfully.

There is wide agreement that awareness leads to knowledge, and knowledge leads to behavior modification. Various theories and models acknowledge the importance of the electronic media in creating awareness in society. One such theory is the agenda-setting theory, which holds that the media have the ability to advise or tell audiences what issues are major and relevant, thus setting the agenda. They can achieve this by choosing what stories to consider newsworthy and how much prominence and space they give those stories (Folarin, 1998). In other words, this theory explains that electronic media through their presentations of event(s) and other kinds of information selected for publication ascribe prominence to the stories selected. The underlying assumption is that the electronic media can force attention to certain issues; they build up public images of infected and affected women by cervical cancer, they can constantly present objects, suggest what people should think about, know about, have feelings about, agitate about, and eventually call for legislation about prevention of cervical cancer (McCombs & Shaw, 1972; Folarin, 1998; Anaeto et al., 2008). In sum, electronic media has the influence to pre-determine issues that people should be aware of in society. And that is why any strategy aimed at creating awareness about cervical cancer should use the radio and television for greater success given the suitability of the two mediums of communication.



**Figure 2.3: TV Program Diversity**

Source: Strategic Public Relations 2012

The *precaution adoption* model also recognizes that the electronic media plays a major role in disseminating information and raising awareness through its various programs. According to this theory, awareness is an essential component that moves an individual in various stages. For example, stage one stresses when an individual becomes aware of a health issue; stage two focuses on when an individual decides to act or not to act. In stages three and four, the individual either acts or does not (Weinstein & Sandman, 2002). This theory's argument is in agreement with the trans theoretical theory, which has been used in this study and which outlines the six stages of change within which an individual is expected to make a decision towards a certain positive behavior change as a result of having watched a television program or listened to a programme or a message over the radio. Likewise, The Health Belief Model looks at the realization of a health problem, risk that leads to a cue to action, i.e. self-efficacy. These are the two theories that have been used in this study.

The electronic media not only informs individuals about health issues, but its messages can also be used to influence individuals to take a positive action (Rosenstock, 1974). The diffusion of innovation theory holds that the mass media can be a crucial component in influencing beliefs and attitudes that will eventually lead to a behavior change. Similarly, one of the major constructs of the *health belief* model is the cue to action that helps trigger a particular behavior. A cue to action is something that helps move someone from wanting to make a health change to actually making the change. These cues to action range from bodily events to environmental factors that stimulate an individual to act. The *health belief* model recognizes media campaign and promotion as one of the effective environmental cues to action (Janz *et al.*, 2002). It should be noted that the *knowledge gap* theory proposes that there can be appreciable differences in learning as a result of exposure to media information. Individuals with distinct backgrounds frequently demonstrate differential learning from the mass media. Individuals with prior information to media and higher education frequently learn more when exposed to media information. In contrast, individuals with lower education and less prior information tend to learn less, thus representing an increase in the knowledge gap and hence the focus of this study. The study findings have further alluded to this fact; that the education levels close positive correlation between one's reception of information and application of the same. The more one is more learned, the more their knowledge- processing ability.

### **2.1.18 Electronic Media Programing**

Effective broadcast media use requires that both program type and time of airing be given due consideration. In other words, radio and television use for cervical cancer awareness must be targeted at peak periods or "primetime," when most targeted audience members stay tuned to their television sets or tuned to their radios after a day's work. In essence, the electronic media can apply its agenda-setting function by spearheading a campaign that would create the awareness of cervical cancer in Kenya. For example, television can be used to set an agenda by creating awareness of cervical

cancer through scrolling messages on primetime news bulletins and other programs such as features, documentaries, talk shows, drama, advertisements and so on. Furthermore, the television can be used to create cues to action by showing documentaries that focus on the nature, causes, and consequences of cervical cancer. Also, a program could feature an episode in which a character gets cervical cancer, which could help to enlighten and educate persons on the nature and causes of cervical cancer. The radio can also be used to set an agenda by introducing musical commercials about cervical cancer during prime-time periods.

Various radio and television programs can be used to pass information about cervical cancer. Majority of Kenyans own radio especially those in the rural areas; and television in urban areas or both (MCK 2011). Other radio programs that can be effective in creating awareness about cervical cancer may include news, drama, documentaries, call-in programs and others that focus on development, (Rimal 2000). Majority of women watch news, local dramas, features, advertisements, and documentaries. Information on cervical cancer can be passed as a press release to national and local media especially the vernacular stations. Radio stations can also make announcements in between news or any serious program. Awareness and education that could be accomplished if each state had a story or feature placed in major media venues & radio and television). Message on risk factors, symptoms and treatment of cervical cancer can also be aired during the cancer awareness month and the importance of early detection. To help spread the message as widely as possible, through radio and television, health or medical editor should be sensitized to craft messages to be aired in form of news or adverts in local television and radio stations, (Solomon, 2014).

Therefore there is need to strive to introduce elements of local interest to a well written story that can attract the viewers' or listeners' interest (Shoemaker & Reese, 1996). Documentaries or features of available local cervical cancer survivors for instance with local human interest "angles" can always be very popular with reporters and their

listeners or viewers, and this can be very instrumental in creating awareness about cervical cancer.

News about innovative research on cervical cancer/HPV that is going on at a local research university, or suggest local physicians can be interviewed to shed more light on facts about cervical cancer. A local event can be organized to raise awareness on cervical cancer/HPV research and invite media to cover the event as hard news or develop a feature of a documentary on the event. Announcements should be sent out to popularize the event at least a week in advance to ensure the greatest amount of interest and attendance, (Shoemaker & Reese, 1996).

## **2.2 Theoretical framework**

The study was guided by two theories of behavior change communication. They are the Trans theoretical Stages of Change Model by Marshall and Biddle (2001). The Health Belief Model (HBM) by Rosenstock (1974). The two theories look at the various stages of behavior among the population in relation to knowledge levels. This is important in that for awareness to be effective, there is need to understand the reasons why the women fail to take certain actions or steps towards cervical cancer prevention and identify what can be done to help them take appropriate steps to prevent the health problem. The two theories were relevant in this study because the problem statement of the study was that women are dying of cervical cancer because of lack of awareness as created by the electronic media. Besides, the main objective of the study was to examine the role or electronic media in creating awareness about cervical cancer among women in Kenya, with special focus on Kenyatta National Hospital. The other objectives were to identify the role of electronic media in creating awareness, the nature of information communicated and the factors that hinder women from participating in cervical cancer screening programs and the intervening variables.

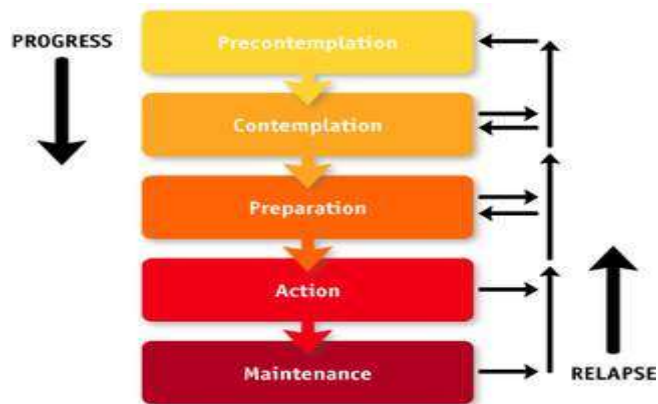
The two theories try to explain the various stages of action or inaction by the relevant audiences and what can be done to help the women move through the stages to prevent

the occurrence of a health problem by realizing their own vulnerability and the consequences of not taking action towards the eradication of a health problem; self-efficacy, response efficacy, action and termination.

### **2.2.1 Transtheoretical (Stages of Change) Model**

The theories of behavior change try to look at patterns of behavior that predict actions or inactions towards certain direction. In other words, examine factors that explain why people fail to take certain act of behavior. Transtheoretical (Stages of Change) Model by Marshall and Biddle (2001) is one of the theories used in behavior change communication. According to this theory, behavior change is a process of six stages: the first step is pre-contemplation, the stage in which people are not intending to make a change in the near future (often defined as the next 6 months) because of one reason or the other. The second stage is contemplation, the stage where people intend to change (within the next 6 months) as result of being prompted by some stimuli, say awareness creation. People in this stage are aware of the pros of changing but also can identify the cons and hence leading to a certain action. The third is preparation, stage where people have a plan of action and intend to take action in the immediate future (within a month) because of being convinced to take action. This is followed by action stage in which people make the behavior change. The fifth stage is maintenance, where people work to prevent relapses. The last stage is termination stage where individuals have 100 percent efficacy and will maintain their behavior. This stage is the most difficult to maintain, so many people remain a lifetime in maintenance. The Transtheoretical stages are as presented in figure 2.4





**Figure 2.4: Transtheoretical stages**

*Sources: Prochaska (2013)*

It is essential to match behavior change interventions to people's stages. For example, if an individual is in the pre-contemplation stage it is important to raise their awareness about an issue in order for them to contemplate making a behavior change. Without a planned intervention, people will remain stuck in the early stages due to a lack of motivation to move through the stages. Prochaska (2013) suggest a series of activities that have received empirical support, which help individuals progress through the following stages: the first stage is consciousness raising; increasing awareness of the causes (providing educational materials, confrontation, media campaigns, feedback, etc.). The second stage is dramatic relief; producing an emotional experience which is followed by a reduced affect if some action can be taken (personal testimonies, media campaigns, drama). The next stage is self-reevaluation which involves inviting individuals to make cognitive and emotional assessments of their self-image (clarify values; provide healthy models, using imagery). The last stage is environmental reevaluation which involves assessments of how the presence or absence of a behavior might impact one's social environment (documentaries, personal stories, family interventions).

Any theories of behavior change aim at achieving certain steps being taken towards a certain desired behavior change. Any steps towards awareness creation must go through the six stages as proposed by the Transtheoretical (Stages of Change 1998) Model. The main assumption of the study was that women were dying of cervical cancer because of lack of proper knowledge and hence were not taking steps towards cervical cancer prevention because of inadequate information and misconceptions about the disease, more so as created by the electronic media. As a result, many women are diagnosed with cervical cancer at late stages when the disease cannot be cured and end up dying when they can actually be cured or the disease can be treated. The electronic media has the role to communicate the right information about cervical cancer to enable the women take the right steps towards its prevention. Majority of the targeted women could be at any of the six stages as pointed out in the Transtheoretical theory e.g. precontemplation, contemplation, preparation, action, maintenance and termination. In the first stage, the women are not taking any step towards going for screening because of inadequate information, misinformation, fear, stigma, cultural beliefs and so on. So the status quo remains the same; failing to go for screening or reporting any abnormal symptoms to the health care facility.

In the second stage (contemplation), the women are contemplating going for screening within six months or so because of being prompted by some stimuli, say, messages on the pros and cons has been communicated by radio and television. But six months is a long time for one to make a decision because the once infected, the disease spreads fast. The next stage is preparation whereby the women have a plan of action and are getting ready to perform behavior within a month as a result of being convinced by radio and television messages about symptoms, prevention, management and control. Here, the women are planning to go for screening within month because proper information has been communicated and they have been convinced to see the need to go cervical cancer screening. The next stage is action where the women are expected to make a behavior change. The next stage is maintenance whereby they agree to go for routine screening

periodically as a result of adequate provision of right information by radio and television. Lastly is termination whereby the women will reach 100 percent efficacy and will maintain behavior i.e. go for routine screening or report any symptoms to a health care provider in an effort to prevent cervical cancer. This theory therefore is appropriate to the study because the main objective of the study was to establish out the influence of electronic media in creating awareness about cervical cancer among the women seeking reproductive health services at Kenyatta National Hospital. The other objectives were to determine the role of electronic media sources in creating awareness about cervical cancer, the nature of information and obstacles to participating in cervical cancer prevention programs. In other words establish source and effect of the messages on their behavior change; in other words establish the stages at which the women were in terms of taking the right steps and change their health behavior and respond appropriately. The theory therefore was relevant in that it tries to look at the various stages of information at which the women are and points out what the electronic media can do to provide information that can help the women move from the stage of inactivity and take action towards the prevention and recurrence of the problem; action, termination and maintenance

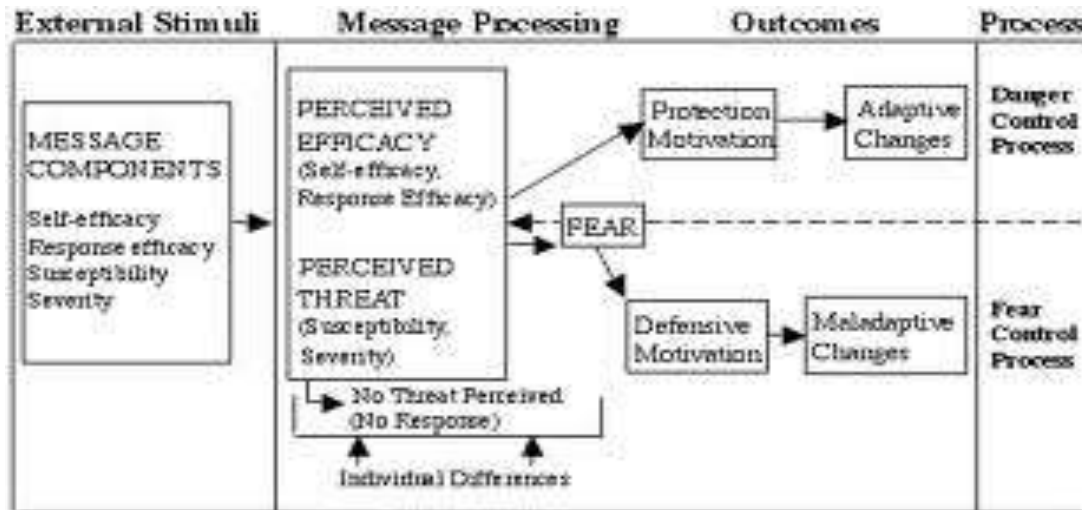
### **2.2.2 Health Belief Model (HBM)**

The Health Belief Model (HBM) by Rosenstock (1966; 1974), and Becker, (1974) is another theory that guided this study. The Model is one of the first theories of health behavior change. It was developed in the 1950s by a group of U.S. Public Health Service social psychologists who wanted to explain why so few people were participating in programs to prevent and detect disease.

The Health Belief Model hypothesizes that health-related action depends upon the simultaneous occurrence of three classes of factors: the existence of sufficient motivation (or health-related concern) to make health issues salient or relevant, the belief that one is susceptible (vulnerable) to a serious health problem or to a sequence of that illness or condition. This is often termed as a perceived threat and a belief that following a particular health recommendation would be beneficial in reducing the perceived threat, and at a subjectively-acceptable cost. Cost refers to a perceived barrier that must be overcome in order to follow the health recommendation; but it is not restricted to financial outlays; the health motive is related to the value reduction of perceived threat.

Health Belief Model specifies that cues to action influence an individual's intention to perform a health behavior. In this case, electronic media messages about cervical cancer prevention not only serve as a cue, or reminder, about vaccination, screening and other relevant preventive measures against cervical cancer but also influence knowledge and attitudes by communicating information, facts or opinions (Janz & Becker, 1984). The HBM holds that perceived susceptibility to a health problem and the perceived severity of that problem influences one's likelihood of engaging in a health behavior. The electronic media would create awareness among women about cervical cancer and demonstrate the consequences and their own susceptibility to the disease if it is not detected early so that it can be managed and cured. This will influence their intention to

perform a health behavior, in other words, start going for routine cervical cancer screening for early detection, to help in prevention, control and/or management.



**Figure 2.4: The Health Belief Model (HBM) diagram**

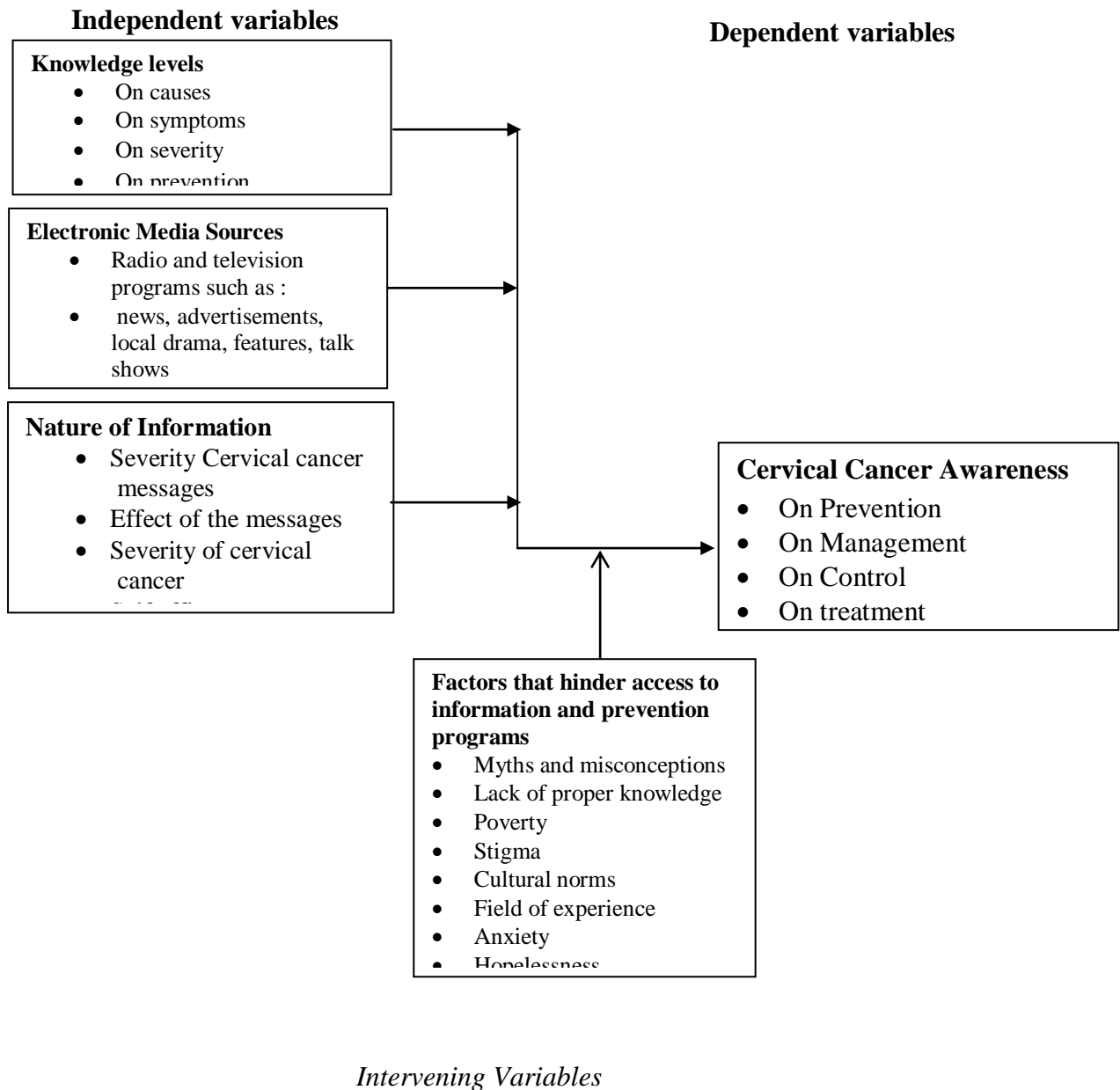
*Source: Rosenstock (1966)*

This theory is relevant to this study in that cervical cancer infection is the perceived threat and the women are vulnerable to its serious implications if they do not follow a health recommendation i.e. going for routine screening or reporting any symptoms to a health care providers well in advance to help reduce the perceived threat.

The radio and television messages can contribute to one's perceptions of HPV and cervical cancer susceptibility and severity and thus influence health behaviors. In this case, the women can be influenced to take action based on messages and information given to them in the electronic media to help see their own susceptibility and severity of that problem i.e. cervical cancer infection which then can lead a cue to action. In other words urge them to go for routine screening or having protective sex as a means of preventing the infection of HPV, the virus that causes cervical cancer. The theory also points to the nature of the messages and the effect of those messages on the women's

behavior; in other words, gives them a cue to help them perform a health behavior. This can be made possible if the right information is disseminated and the right facts given about cervical cancer such as its presentation, symptoms, severity and prevention repeatedly on the electronic media. The women can be convinced to take relevant action i.e. go for screening and treatment where applicable and follow the process until they are fully cured. The right information may also include dispelling any misconceptions and misinformation that they might have about cervical cancer and that may hinder them from taking the right steps towards the prevention of cervical cancer. So radio and television is expected to raise and increase awareness by providing relevant information towards cervical cancer prevention, which will lead to dramatic relief (reduced effect) and invite self-re-evaluation, clarify values while bearing in mind the environment in which the women live and how it affects their decisions and actions and take appropriate steps towards going for routine checkups and following proper instructions as directed by the doctor or health care givers.

## 2.3 Conceptual Framework



**Figure 2.5: Conceptual Framework**

This section provides the conceptual framework as spelt out in the theories that were used in this study in line with the objectives that set out to answer the problem statement of the study; which stated that cervical cancer was killing many women in Kenya because of lack of proper information. The study also hypothesized that the lack of information was a result of electronic media failing to create awareness around issues that surround cervical cancer despite the fact that the electronic media has tremendous potential to change behaviour. The specific objectives were: knowledge levels in terms of causes, symptoms, severity and prevention. The other objective was electronic media sources of information in terms of radio and television programs such as talk shows, local drama, advertisements, features and news. The nature of information is closely related to the Health Belief Model, which argues that women will make decision based on the realization of their own vulnerability towards the severity of a problem and the fact that taking appropriate action will help alleviate the problem. Finally, the study ought to identify factors that hindered access to information and from participating in cervical cancer prevention programs. Intervening variables compounded the cervical cancer problem in that myths such as fear, stigma and cultural norms interfered with the way women responded to the information they received about cervical cancer. All issues of concern, if addressed effectively would lead to cervical cancer awareness on prevention, management, control and treatment.

Thus, individuals might be less likely to take action or to perform a behavior change based on the stage of information at which they are. The electronic media plays a role in agenda-setting in terms of what is discussed and known at the personal level (Clarke & Everest, 2006). The agenda-setting theory holds that the amount of media attention given to a particular topic determines public perception about the importance of that topic (McCombs & Shaw, 1972). When people are asked to identify the most important problems facing them and the source of that information individuals refer to events or issues reflected in the news (Iyengar & Simon, 1993). News coverage influences public concern as opposed to public concern dictating news coverage. A number of



characteristics may mediate the agenda-setting impact of news coverage. Additionally, agenda-setting impacts may vary based on local vs. national media coverage. Hester & Gibson (2007) found that local media coverage of a nationwide issue is highly correlated with national media coverage, but the correlation between local and national coverage is smaller when the issue is also a local issue. Thus, local events can alter patterns of media coverage and local media may have a stronger agenda-setting impact when an issue is both local and national (Hester & Gibson, 2007). Some key elements of a frame include the language used, sources cited, opinions represented, background information given, and the context provided (Taylor & Sorenson, 2002). Message framing can not only influence how we think about a problem, but how we attribute responsibility for the problem and thus, solutions to the problem. Therefore, dissemination of information about cervical cancer by the electronic media can lead to cervical cancer awareness by the women in terms of symptoms, prevention, management, control and treatment, and that is what informed the current study.

## **2.4 Review of variables**

The variables that were being measured in the study were the independent variables which were

messages as presented by the electronic media; radio and television and their effect on cervical cancer awareness, which was the dependent variable. The study hypothesized that cervical women were dying of cervical cancer because lack of proper information more so as communicated by the electronic media. The independent variables were therefore measured in terms of knowledge levels, electronic media sources, the nature of information and factors that hindered access to information and participation in prevention programs. The dependent variable were cervical cancer awareness in terms of prevention, management, control and treatment.

### **2.4.1 Knowledge levels**

According to Sudenga *et al* (2013), knowledge levels about cervical cancer can be measured in terms of causes, risk factors, main symptoms of cervical cancer, treatment options, early detection, prevention, management and control. Sudenga further argues that knowledge levels can also be measured in terms of whether women have knowledge of what cervical cancer is, what the HPV virus is or whether they know the importance of a pap smear. Cervical cancer prevention efforts can only be achieved if knowledge levels about the disease are sufficient enough to lead to positive behavior change. However, many studies have demonstrated that one major impediment to cervical cancer prevention in Kenya is lack of or insufficient knowledge. In a study that was carried out among women seeking reproductive health services in Kisumu, Kenya to assess their perceived risk of cervical cancer and risk factors influencing cervical cancer screening in 2013, it was established that only one third of the women who were surveyed had heard of cervical cancer (Sudenga *et al.*, 2013). Most of the women (67 %) had never had a single message from any media outlet either. Majority had received their information from health care workers. Yet, few women, (6%) had ever been screened for cervical cancer and cited barriers such as lack of knowledge about cervical cancer, fear, stigma, cost and time, (International Journal of Gynecology 2013).

The main limitation to cervical cancer screening is the lack of knowledge of cervical cancer as a significant health threat to women in the general public and in the healthcare sector. It is also recognized that about 80% of HIV-positive clients in Kenya are not aware of their HIV status and this is a population that is vulnerable to cervical cancer infection. This means that the majority of the at-risk population, an estimated 10-plus million WRA, do not benefit from the cervical cancer screening program when the comprehensive care centers (CCCs) are used as the only entry point for screenings. To reach these other women as well, it is important that cervical cancer screening is integrated into the routine services that the majority of women are exposed to, regardless of their knowledge of HIV status, (The National RH Strategy, 2015). And this can only

be achieved if there is sufficient knowledge about causes of cervical cancer, symptoms, prevention efforts, treatment and control.

Gichangi *et al.*,(2003 and Kidanto *et al.*, (2002) have also pointed out that very poor knowledge of the disease in patients has continued to hamper the fight against cervical cancer. The unfortunate aspect is that poor knowledge is not limited to patients alone but health care workers as well who are supposed to be better informed but have no good knowledge of the disease either. In Lagos Nigeria, for example, delay by primary health care providers in referring cases of cervical cancer to specialized treatment was found to be an important cause of women presenting with late stage disease because of late diagnosis and management, (Anarlu *et al.*, 2004).

In Kenya, as in most parts of Africa, cancer of the cervix is a very common disease, accounting for 70- 80% of all cancers of the genital tract. (Lowe *et al* (1981). This situation points to lack of correct information, misconception that leads to low levels of knowledge leading to wrong decisions i.e. women go to health facilities when the disease has advanced to late stages where the disease cannot be prevented or cured, leading to high rates of mortality as currently is the case, (WHO 2000).

#### **2.4.2 Electronic media sources**

Electronic media sources here refers to information as presented by radio and television in various programs such as news advertisements, talk shows, local drama, soap operas and movies. Several strategies can be used through the various programs to reach women with the correct information about cervical cancer to enable them make choices towards the prevention of cervical cancer. Electronic media sources which referred to the major programs as presented by the electronic media such as news, local drama, advertisements, features, soap operas and talk shows. The way the information is presented can be key because this will depend on whether it create cervical cancer awareness or not. Radio and television were chosen as suitable mediums for the study because majority of the population, over 80%, both in rural and urban areas own either

one or both of the media channels (Syovate 2011). Moreover, over 81% of Kenyans, aged 15 and above use vernacular as their main language of communication. Furthermore the popularity of vernacular radio stations transcends illiteracy levels and hence making radio a suitable medium in this study. There is wide agreement that awareness leads to knowledge, and knowledge leads to behavior modification. Various theories and models acknowledge the importance of the electronic media in creating awareness in society. One such theory is the agenda-setting theory, which holds that the media have the ability to advise or tell audiences what issues are major and relevant, thus setting the agenda. They can achieve this by choosing what stories to consider newsworthy and how much prominence and space they give those stories (Folarin, 1998). In other words, this theory explains that electronic media through their presentations of event(s) such as news, local advertisements, talk shows and other kinds of information selected for publication ascribe prominence to the stories selected can have a great positive impact on cervical cancer awareness. The underlying assumption is that the electronic media can force attention to certain issues; they build up public images of infected and affected women by cervical cancer, they can constantly present objects, suggest what people should think about, know about, have feelings about, agitate about, and eventually call for legislation about prevention of cervical cancer, (McCombs & Shaw, 1972; Folarin, 1998; Anaeto *et al.*, 2008).

### **2.4.3 The Influence of the Nature of information**

The Health Belief Model(Becker, 1974; Becker,1987) points out that screening behavior depends on motivation, beliefs about susceptibility to illness and the severity of the illness, and beliefs that the benefits of screening outweigh the costs of participation. Women have perceived susceptibility to cervical cancer, and perceived obstacles to participation, to predict cervical screening behavior. Furthermore, patients with a high health-locus-of-control; i.e. those who believe that their health is controlled by themselves rather than by others or by chance, are more likely to participate in the screening programs as pointed out by Garner *et al.*,(1985 and Wallston, Wallstone (1982). These models of health behavior suggest that informing women of their susceptibility to cervical cancer, and encouraging a belief that active participation can minimize the likelihood of developing invasive cervical cancer, will be effective in increasing attendance. Women should therefore be encouraged to take responsibility for their own health and be an active participant in the cervical smear programs rather than a passive attendee on the bequest of their personal beliefs. This shift from a model of patient compliance (passive attendance) to one of patient adherence (active participation) involves a change in the way in which health care is provided, with the clinician and patient establishing a health care plan to which the patient can readily adhere, (Murray McMillan, 1993). All these would lead to cervical cancer awareness among the women. However. Some of the electronic media messages have women more fearful than when did not know. The HPV vaccine represents a significant advancement in cancer prevention, but vaccination against a sexually transmitted infection and possible vaccine mandates have received negative publicity. Media coverage can influence attitudes toward vaccination and cancer prevention, and controversy can negatively affect vaccine acceptance (Buga, (1998).

Analysis of health behavior messages revealed that articles generally dismissed concerns that vaccination would encourage sexual behavior but may have overstated the impact of

HPV and the vaccine on cervical cancer in the U.S. The study concluded that media messages about the vaccine were generally positive but the majority of articles contained conflicting information and many of them ended up confusing women instead of giving them accurate information. Messages about vaccine mandates suggested compulsory vaccine legislation was premature and generated controversy. Articles focused on legislative controversy may mean a missed opportunity for education about vaccination and cancer prevention. Messages about sexual behaviors also revealed conflict but tended to provide support for HPV vaccination. To achieve public health objectives of reducing cervical cancer morbidity and mortality, media messages should more clearly communicate the role of cervical cancer screening, in addition to HPV vaccination in cancer prevention (Calloway *et al.*, 2006; Anhang *et al.*, 2004).

The electronic media has tremendous power to influence knowledge, attitudes, and awareness of an issue and can thereby influence behaviors and inform health policy. Media-worthy events can create an opportunity for communicating public health messages and media coverage has been shown to increase public interest in a subject, such as disease prevention (Metcalf *et al.*, 2010). The media has played an important role in communicating information about HPV and its link to cervical cancer as well as increasing awareness about the HPV vaccine (Kaiser Daily Women's Health Policy, 2007). Information about and advertisements for the vaccine, as well as stories reporting state HPV vaccination policies, are all covered in the media—newspapers and other print media, television news and other television programming, internet, and radio. Given the media's potential influence, it is critical to examine how the media communicates messages around cancer prevention and control and the effects of those message.

Analysis of news media coverage of HPV and the HPV vaccine is limited. Previous studies that analyzed U.S. news coverage of the HPV vaccine included a narrow time frame and were limited to quantitative analyses (Calloway *et al.*, 2006; Anhang *et al.*, 2004; Kelly *et al.*, 2009). Thus, it is unclear how the news media covers more recent

issues surrounding HPV vaccination, especially controversial topics related to vaccine mandates and sexuality. Research has shown that media coverage of controversial topics can not only raise awareness of an issue but can also create public uncertainty (Steele et al., 2005; Dixon *et al.*, 2009). Controversial media messages about vaccines can erode parents' trust in immunization and can lead to a decline in vaccine acceptance and uptake (Forster et al., 2010; Marlow *et al.*, 2007; Mason & Donnelly, 2000). Attitudes and beliefs toward vaccination on an individual level can also influence attitudes toward legislation and policies regarding HPV vaccination. An analysis of news media coverage of HPV vaccination may have broader implications for compulsory vaccination programs in general and news media coverage of other public health issues. The media's messages can contribute to one's perceptions of HPV susceptibility and severity and thus influence health behaviors which was a major focus of this study.

#### **2.4.4. Factors that hinder access to electronic media information and screening programs**

Among the factors that hindered women from seeking information or participating in cervical cancer prevention programs were diverse. They included fear, stigma, and poverty, lack of proper information, myths and misconceptions. Reasons women give for not participating in a cervical screening program include lack of knowledge about the test and its indications; considering the test unnecessary or of no benefit, or considering oneself not to be at risk of developing cervical cancer as pointed out by Wathoove, 1998; Doyle *et al.*, (1996) and fear of embarrassment or pain, (Summers& Fullard, 1995; Peters, Moyare *et al.*, 1989). In addition, certain groups of women may experience particular problems. Furthermore, women of low socio-economic status may be less likely to have been screened. This is partly due to poverty so many cannot afford to pay for the procedure, transport and socio-economic hindrances. There is some evidence that ethnic-minority women, particularly those of Asian origin and Africa, are less likely to participate, (Health Education Authority, 1994; McAvoy& Raza, 1991). Finally, postmenopausal women are less likely to be screened regularly and non-participation

may be a result of uncertainty as to whether the smear test is appropriate for their age group (Murray & Mcmillan, 1993).

The receipt of an abnormal cervical smear result, and of referral for colposcopy, causes anxiety, fear and distress in a large number of women, hinders the women from participating in screening programs and taking preventive measures although the degree of anxiety experienced varies, (McDonald *et al.*, 1993). The most distressing period appears to be the receipt of the abnormal smear result; however, women's anxieties diminish following colposcopy and treatment. The primary cause of distress appears to be fear. Many women are frightened of medical procedures, believe that the abnormal smear is indicative of cancer and that their reproductive ability will be threatened, (Kavanagh & Broom, 1997; Miller, 1995).

Other major obstacles that hinder women's participation in screening programs include, lack of access to proper information and services, social norms, fear, anxiety and socio-economic circumstances. All these undermine women's ability to protect themselves from circumstances negatively affect their health and cervical cancer prevention, (WHO 2009). Therefore any meaningful awareness campaigns provide proper information that, apart from merely creating awareness, but also address the underlying issues that may hinder women's positive response to cervical cancer prevention. Otherwise the war against cervical cancer prevention may prove a mirage unless the intervening variables are also addressed in the awareness programs.

The provision of information and the subsequent effect of the information may be hampered by other intervening variables such as myths and misconceptions, stigma, cultural norms, fear and poverty. According to WHO (2009), women and girls are particularly vulnerable due to sexually transmitted diseases due to a combination of biological and gender-based inequalities particularly that limit women's knowledge and their ability to protect themselves and negotiate for safer sex. Violence is an additional



significant risk factor to women's sexual and reproductive health and other chronic health problems.

#### **2.4.5 Cervical cancer awareness**

In this study, cervical cancer awareness was measured in terms of knowledge on prevention, control, management and treatment. The information that was to be provided by the electronic media to make the women take steps towards cervical cancer prevention based on proper information. The effects of the information are a central to measure the awareness levels among the respondents which should be motivated by realizing self-efficacy and realizing their own vulnerability and take appropriate steps towards cervical cancer prevention such as start going for routine screening, being faithful to one partner and reporting any abnormal symptoms to a health care facility. Provision of proper information could also help in cervical cancer management; how one may manage the disease once diagnosed and follow up on treatment. The electronic media messages therefore can help deal with the issues by giving the right information through various programs such as news, features, drama, documentaries, advertising, talk shows and so on that may lead to cervical cancer awareness, in terms of prevention, management, control and treatment, ((Beardo, Derton & Victor, 1989). Solomon, (2014) has pointed out that majority of women watch or listen to news, local dramas, features, advertisement and documentaries hence making the programs suitable for carrying information about cervical cancer awareness.

Therefore women reported a need for information on the indications, benefits, and procedures of cervical screening; such information is effective in increasing attendance for primary screening, (Campbell, McDonald & Mckieman, 1996). Women's high levels of anxiety on the receipt of an abnormal smear result may originate in a lack of understanding of the meaning of cervical abnormalities, and that the provision of the right information may reduce that anxiety. Although women have different coping strategies, and as a consequence require different amounts of information to help them reduce the anxiety and fear and make informed decisions towards cervical cancer prevention, (Stewart, Lickrish, Sierra, & Parkin, 1993). So there is need for provision of the right information, from the right and credible sources, such as the electronic media

and the nature of information should be clear, credible and comprehensible and one that causes anxiety, fear or confusion but one that empowers the women to know that they are in charge of their own health behaviors. As a result reach self-efficacy; get motivated and engage in adoptive behaviors.

Women also have little knowledge of the risk factors associated with cervical cancer. The accumulation of evidence of a causative link between human papillomavirus (HPV) and cervical

cancer may serve to increase women's feelings of resentment towards their partner and of being tarnished. Indeed, the fear of moral judgment may result in some women being unable to tell anyone of their abnormal smear; the resulting lack of social support may lead to increased distress, (Bellet *al.*, 1995).

## **2.5 Empirical review of the study**

A number of existing literature on cervical cancer prevention has left many glaring gaps that should be addressed by the electronic media. Prevention strategies of most common female cancers each year that the American Cancer Society (ACS) publishes summarizes its recommendations for early cancer detection, data and trends in cancer screening rates, and selected issues related to cancer screening have left glaring gaps. For instance, Biamonte & Piccione (2009) have pointed out that screening for cervical cancer should begin approximately 3 years after first vaginal intercourse, but no later than age 21. Until age 30, women at average risk should receive either annual screening with conventional cervical cytology smears or biennial screening using liquid-based cytology. After age 30, a woman who has had 3 consecutive technically satisfactory Papanicolaou (Pap) tests with normal/negative results may choose to undergo screening every 2 to 3 years. This is very important information that should be communicated by the electronic among vulnerable women but such information is limited to a few who may have access to such information. That is why this study sought to examine the

influence of electronic media in creating awareness about cervical cancer among women in Nairobi country.

In a study that was performed from January to August 2011 at two upazilas of Bangladesh (Singair with screening facility and Sonargaon without screening facility) several uses of concern came to the fore. Data were collected by focus group discussion (FGD) with women, husbands and community people before and after intervention. Information on cervical cancer screening and VIA camps was disseminated using advertisement through local cable line of the television, microphone announcement, service providers and leaflet throughout the week prior to a VIA camp. Three-day VIA camps were organized at the upazila health complex (UHC) of both upazilas. Quantitative data was gathered from women at the camps on source of information on VIA and the best method of awareness creation. It was established that the population was aware of "cancer" and a notable number knew about cervical cancer. However, baseline awareness on prevention and VIA was low and it was negligible where screening services were unavailable. Awareness was increased fourfold in both upazilas after interventions and half of the women and the majority of the community people became aware of screening and available facilities. Cable line advertisement (25.5%), microphone announcement (21.4%), and discussion sessions (20.4%) were effective for awareness creation on VIA. Television was mentioned as the best method (37.4%) of awareness creation and therefore it should be used for nation-wide awareness creation (Nessa *et al* (2013) and this is in agreement with the current study.

In another study that was carried out in Zimbabwe to assess the rural women's knowledge, constraints and perceptions on cervical cancer screening: the case of two districts in Zimbabwe, it was revealed that cervical cancer is a disease that is of concern among health practitioners and women. 95.78% of the interviewed women had never gone for screening and had little knowledge about the various aspects of the disease in terms of causes, prevention and treatment. The study made four recommendations: the need for national screening policy and program to be put in place, health education to

women about cervical cancer, use of VIA in low resource settings and sensitization of women about the availability of screening facilities in the districts where programs are in place (Mangoma, 2006).

According a paper published by Dickens *et al.* (2014), to establish the policy implication on screening of sexually transmitted diseases, it was established that screening for syphilis was compulsory while, it was voluntary screening for cervical cancer among the vulnerable women in Kenya. This was a major challenge or a policy lapse because screening for syphilis, which has cure, was compulsory whereas it was voluntary for cervical cancer which has no cure once detected in late stages. Integrated screening, including for both syphilis and cancer of the cervix, is a core component of the national reproductive health program in Kenya. It is of great interest to note that screening for syphilis is compulsory while it is voluntary for cervical cancer yet cervical cancer is more deadly and severe when detected in late stages than syphilis. It is important to note that awareness should not just be targeted at vulnerable women but there is need for advocacy and lobbying of policy makers to make policies that make cervical cancer screening compulsory.

In another study that was carried out by Sivro *et al.* (2013) among prostitutes in Nairobi aged 20 and 65, to establish women's immunity to sexually transmitted diseases when weighed against one's age, it was found out that aging of the immune system, known as immunoscience, is associated with profound changes in both innate and adaptive immune responses, resulting in increased susceptibility to infection and a decreased ability to respond to vaccination. The purpose of this study was to investigate the effect of age and menopause on the expression of 22 different plasma and cervical lavage samples from female sex worker cohorts from Nairobi, Kenya (age range 20–65). The study demonstrated that women over 50 years and above and who were sexually active with multiple partners were more likely to be infected with HPV virus than younger women less than 30 years. The study however failed to address the issues of knowledge gaps surrounding cervical cancer and perhaps being a major cause why women,

especially the elderly ones fail to go for routine screening so as to prevent cervical cancer given the nature of the women's vocation.

Further, information on the myth that cervical cancer only affects younger women and therefore older women fail for screening is a major knowledge gap that needs to be addressed by the electronic media messages. So there was need for the study to recommend awareness initiatives targeting older women who fail to go for screening for cervical cancer because they think they are not at risk yet this study showed they are more susceptible due to their low immunity and sexual activity.

Janice and Mishra (2011) have also published an article on challenges of implementing HPV virus, in which it was observed that implementation for vulnerable girls and women faced multiple barriers. They include high vaccine costs, inadequate delivery infrastructure, and lack of community engagement to generate awareness about cervical cancer and early screening tools. There was therefore need for all facts about the HPV vaccine and its benefits to be made public. Besides, there is need for advocacy initiatives by electronic media to lobby governments to address the high cost of the HPV virus and come up with way of subsidizing it so that it can be affordable to the poor and vulnerable women (Franco *et al.*, 2006).

Gichangi *et al.* (2003) and Kidanto *et al.* (2002) have also pointed out that studies in Kenya report very poor knowledge of cervical cancer in patients. The authors further argue that the unfortunate situation is that poor knowledge is not limited to patients alone but health care workers who are supposed to be better informed so that they can help the women, do not have good knowledge of the disease either. In Lagos Nigeria, delay by primary health care providers in referring cases of cervical cancer to more specialized treatment was found to be an important cause of women presenting with late stage disease because of late diagnosis. This is a result of the health care givers failure to identify cervical cancer symptoms and presentation (Anarlu *et al.*, 2004). Therefore

there is need for awareness not to be confined to patients and vulnerable women alone but also it should be targeted at health care givers as well.

## **2.6 Critique of the Existing Empirical Literature Relevant to the Study**

Various studies have been carried out to establish knowledge levels of cervical cancer among women, the studies were unanimous that cervical cancer is a healthy concern was lack of sufficient knowledge on cervical cancer symptoms, causes, prevention and treatment Nessa *et al* (2013); Mangoma (2006). The studies however failed to point out the root causes of the lack of knowledge and the role of electronic media in creating awareness about cervical cancer prevention. It is a fact that awareness on screening is lacking in many African countries. Among barriers to screening include beliefs about the disease; there are those who believe that screening cannot help detect it, others believe that their partners will not allow them to go for screening so they do not attempt, compounding the matter more. Other barriers to cervical cancer screening include the cost, majority of women not knowing where to go for the screening; some fear stigma e.g. that if they were seen going for the screening people would think they are sexually active while there are others who think the pap test is painful; while others believe there is no cure so need of trying; others are so busy, they have no time to go, others think it is embarrassing to expose themselves to the process and so on (Apochie & Colleague, 2009). The many issues that make the cervical cancer situation grim is because the electronic media has not taken up the challenge of cervical cancer as it has done in other diseases such as diarrhea, cholera, syphilis all of which have cure unlike cervical cancer which cannot be cured once detected in late stages.

Despite the grim picture of the disease in Kenya and Africa in general mass media, more so electronic media, awareness and advocacy on the issues of concern is lacking. And not many researches are being done by various stakeholders to address the issues of concern surrounding cervical cancer. Although there is good awareness of the issues related to screening, there are specific gaps in knowledge about risk factors, symptoms

and screening intervals and hence the focus of this study. For instance, Denny *et al.* (2006) found out that although the relationship between sex and cervical cancer was known, less was known about other risk factors like their partner's prior sexual experiences and very little was known about the link between HPV and cervical cancer infection (Denny *et al.*, 2006). These are the knowledge gaps that the current study sought to establish and make recommendations on the areas that should be focused on by future interventions.

Furthermore, many researchers have shown that most cases of cervical cancer are caused by an HPV infection (Walboomers *et al.*, 1999). HPV infections are very common and affect many sexually active women. According to the World Health Organization (WHO), 39 percent of Kenyan women have harbored an HPV infection at some time in their lives (World Health Organization, 2010). An HPV infection can trigger changes within cervical cells that lead to cervical cancer infection. However, awareness of this vaccine, its effectiveness in cervical cancer prevention, side effects are largely lacking. Moreover, the uptake of this vaccine has been met with misconceptions and misunderstanding. For instance, there is a belief that the vaccine can cause bareness among young girls who are given the vaccine. This is a major issue of concern that should be addressed by provision of the right information about the vaccine but this is yet to happen. Furthermore the success of the vaccine has been hampered by wrong information and misconceptions which the electronic media should address by providing the correct information but has not been given the due attention it deserves. Furthermore the prohibitive cost of this vaccine makes it unattainable to majority of poor women especially those in the rural areas who can hardly afford a meal let alone the cost of the vaccine (Medical News Today, 2007).

Beyond early efforts to address the disease, there are significant gaps that require attention in the fight against cervical cancer in Kenya. For instance, additional resources at the government level are desperately needed to facilitate subsidized services for patients and provide appropriate screening and treatment. Community health care



workers, local leaders and community members are primary sources of communication; strengthening their awareness of the urgency of cancer management and prevention would be invaluable. However, they too are challenged when it comes to possessing the right information that they can pass to the women accessing medical services in the health facilities. In addition, building capacity for community-based actions, particularly through strengthening and supporting established women's groups, would assist in controlling cervical cancer in Kenya but this has not been actualized and hence forms the basis for this study (PATH, 2004).

In a study that was carried out among women seeking reproductive health services in Kisumu, Kenya to assess their perceived risk of cervical cancer and risk factors influencing cervical cancer screening in 2013, it was established that only one third of the women who were surveyed had heard of cervical cancer (Sudenga *et al.*, 2013). Most of the women (67 %) had never had a single message from any media outlet either. Majority had received their information from health care workers. Yet, few women, (6%) had ever been screened for cervical cancer and cited barriers such as lack of knowledge about cervical cancer, fear, stigma, cost and time, (International Journal of Gynecology 2013). This study however failed to point out how the knowledge gaps could be addressed more so by the electronic media and hence the basis for this study.

According to the report by Kenya Cancer Society (2010), advocacy on prevention, treatment and care by the media (radio and television) on women's vulnerability is minimal or non-existent in Kenya. As a result of this, many women continue to die in their productive ages because of lack of proper and adequate information. Besides, there is no clear government policy on cervical cancer as of 2011. Besides, Kenyatta National Hospital is the only facility in the country where cancer cases are referred and the facilities are overstretched (Report on Media Workshop on Cancer Awareness, 2010).

Steele *et al.* (2005) argues that analysis of news media coverage of HPV and the HPV vaccine is limited. Previous studies that analyzed U.S. news coverage of the HPV

vaccine included a narrow time frame and were limited to quantitative analyses (Calloway et al., 2006; Anhang, Goodman, & Goldie 2004; Kelly *et al.*, 2009). Thus, it is unclear how the news media covers more recent issues surrounding HPV vaccination, especially controversial topics related to vaccine mandates and sexuality. Research has shown that media coverage of controversial topics can not only raise awareness of an issue but can also create public uncertainty (Steele *et al.*, 2005). Therefore the results of the study may not be used to draw inferences on the actual situation on the ground because quantitative data should also have been included to give a balanced picture of the cervical cancer situation. Besides, the study was given a narrow time frame and failed to point out how the media would cover the controversial issues that can help women make positive decisions based on acute information. This is what the current study sought to establish.

## **2.7 Research Gaps**

Many researches on cervical cancer have been carried out by various researchers but many of them have failed to point out the key role the media can play in creating awareness on prevention, management and treatment of cervical cancer. This is in spite of the fact that cervical cancer ranks as the most frequent cancer among women in Kenya, and is also the most common cause of death among women (Kenya Ministry of Health and Sanitation 2009).

According to one study conducted among HIV-positive women attending HIV care clinics in Kenya, 43% of the women had abnormal cervical cytological results. It was established that the presence of abnormal cervical cytological results in HIV-positive women was also much higher than what was found in the general population (3.6%). With the recognition that cervical cancer is a major cause of morbidity and mortality among HIV-positive women, there is need for significant efforts in integrating cervical cancer screening as part of the minimum comprehensive care package and also serious advocacy by relevant stakeholders targeted at this deadly disease, coupled with serious

awareness creation, to help change the situation,(Gichangi *et al.*, 1994; Gatune & Nyamongo, 2005). It should be pointed out that for any meaningful results to be achieved in any health issues of concern, cervical cancer included, the role of electronic media in creating awareness cannot be underestimated. It is when people get the right information that they can make positive change towards a health behavior. Therefore the studies only point out the findings but fail to underscore the need for knowledge provision and this is what the current study sought to investigate and make recommendations for future research.

## **2.8 Summary**

Cervical cancer is proving to be more deadly than any other life-threatening diseases the such as HIV/AIDS but there has not been a deliberate effort by the media to give it the attention that it deserves given its serious implications and many more women continue to die every day as a result of the disease. There is need for all national control programs to direct their efforts toward the prevention cervical cancer because its effects are more devastating than any other terminal illnesses. There is need for cervical cancer managerial guidelines for screening programs to be provided, accompanied by appropriate, well sustained awareness campaigns targeted at the vulnerable groups, (Hemisphere, 1998; Hakana, 1982).Screening with the cervical smear plus adequate follow-up therapy can achieve major reductions in both incidence and mortality rates, (Miller *et al.*, 1990). However, this s yet to be actualized more so in developing countries.

Resource-poor settings in developing countries, however, often lack primary physicians, screening equipment (e.g., colposcopes), trained laboratory personnel (e.g., cytotechnicians), and necessary expertise and capacity for screening quality assurance,(Jones *et al.*,2000). The lack of effective screening programs is often combined with inadequate knowledge about cervical cancer (causes, symptoms, progression and treatment), even among healthcare workers (Sankaranarayanan *et al.*, 2008).

Poverty, inadequate insurance, linguistic barriers, insufficient knowledge of health needs and risks, lack of trust in health services, and shame regarding gynecological consultations (conversation) and examination, hamper cervical cancer screening and hence its prevention, (Scarinci *et al.*, 2010; Inadequate networks, personnel and expertise inhibit public education, low knowledge levels, disease surveillance and follow-up monitoring in resource-poor settings, hence aggravating the situation. Although new and cheaper HPV tests are being developed, they are not yet available for widespread use in developing countries such as Kenya, (Kitchener, 2006). Women in remote rural areas are at greater risk of cervical malignancies because they have limited access to cervical screening, inadequate knowledge and appropriate treatment. Further, they frequently present for the first examination at late stages when the disease cannot be cured leading to high mortality rate due to cervical, (Chirenje *et al.*, 2001).

Despite the existence of a previous National Cervical Cancer Prevention Strategic Plan – NCCPSP- (2002 -2006), implementation of the national screening program in Kenya is still low and haphazard. Cervical cancer screening occurs, but only in a few selected sites and in disjointed projects rather than a fully-fledged national-level program. 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. This situation is aggravated by inadequate knowledge, misconceptions and misinformation about facts about cervical cancer (NCCPP, 2015).

There is therefore need for cervical cancer managerial guidelines for screening programs to be provided, accompanied by appropriate, well sustained awareness campaigns targeted at the vulnerable groups, (Hemisphere, 1998; Hakana, 1982). Furthermore, screening with the cervical smear plus adequate follow-up therapy can achieve major reductions in incidence and mortality rates (Miller *et al.*, 1990). Underlying all these concerns and strategies is the provision of the right information that will help in the right decisions and decision making and hence the focus of this study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The chapter applies the methodology that sought to gather information using appropriate method in order to answer the main research question; that was the role or influence of electronic media in creating awareness about cervical cancer among women in Kenya with special focus on Kenyatta National Hospital in Nairobi Kenya. The study combined two research designs to help obtain data from the respondents to answer the research question. The study used mixed method as pointed out by Cresswell (2012) which was useful in giving the study an interdisciplinary perspective and to provide an expanded understanding of the research problem. This chapter therefore outlines the methodology that was applied in line with study objectives and the type of data that was generated to help achieve those objectives. The chapter also describes the research design, the research site, the sampling procedures and the methodology that was used to collect the data and points out data analysis procedures in order to generate the information inline with the topic under objectives.

#### **3.2 Research Design**

Given the type of information the researcher sought to gather, it was imperative that the study adopts the mixed method to gather balanced information. The study therefore used mixed method design which utilizes the strengths of both qualitative and quantitative approaches to collect data (Cresswell 2012). Cresswell (2012) further points out that mixed methods are a powerful way of enhancing the validity of results. This view is supported by Herbert & Shepherd (2001) who argue that mixed methods are used to research same issue with the same unit of analysis, thus cross checking one result against another and thereby increasing reliability of the result. A mixed methods research design is a procedure for collecting, analyzing, and “mixing” both quantitative and qualitative

research. It is a method used in a single study to understand a research problem, (Cresswell, 2012). Creswell argues that this paradigm takes the strong points of each of the approaches, giving a study an interdisciplinary perspective, and this provides “an expanded understanding of research problems” as well as drawing of inferences to the entire population. Further, Bryman (1988) and Punch, (2005) also argue that for a justification as to why a study may combine two paradigms, as each offers its strength in addressing the research questions, (Cresswell, 2012). Further, Bryman (1988) and Punch (2005) also argue that for a justification as to why a study may combine two paradigms, as each offers its strength in addressing the research questions. The arguments point out the core issue that the current study sought to establish; i.e. identify the knowledge gaps from the respondents’ perspective by gathering quantitative data and from the health care professionals by collecting qualitative in order to help make inferences on the situation on the ground to serve as a basis for policy formulation and enforcement and further media campaigns and research.

Nachmias and Nachmias (1992) concur with the scholars above that data produced by combined methods enhances the validity and reliability of research findings. The use of mixed methods in this study was therefore meant to get a confirmation of findings through convergence of different perspectives. As a result of this combination, the study benefited from the advantages of sample survey and statistical methods (quantification and representativeness and the advantages of the qualitative and participatory approaches. Mixed methods were also used to find new perspectives and to add scope to the study and hence relevant to the study.

### **3.3 Study Population**

Mugenda and Mugenda (2003) define a population as an entire group of individuals, events or objects having a common observable characteristic. In other words, population is the aggregate of all that conforms to a given specification. Indrayan (2008) agrees with Mugenda & Mugenda (2003) that a population is an entire group about which some

information is required to be ascertained. A particular population has some characteristics that differentiate it from other populations (Mugenda & Mugenda, 2003). Paul (2008) further defines the target population as the units, for which the findings of the study are to be generalized. Therefore the target population for this study was women aged between 18 and 65 out of the 8,400 women who come to seek reproductive health services at the two clinics 18 and 66 at the Kenyatta National Hospital, Nairobi (KNH Information 2015). The figure was arrived at based on the daily attendance for the various reproductive health services: 300 pap smears; 32 colposcopies and 16 LEEPS. This target group was suitable for the current study because it shares some characteristic or a health condition in that they are all seeking reproductive health services at the clinics. Besides, this group fall within an age group that is assumed to be sexually active therefore in need of reproductive health services and they are therefore vulnerable the HPV, the virus that causes cervical cancer and which is transmitted through sexual contact. Furthermore, this is the age bracket that is catered for at the study reproductive health clinics at the study site and hence appropriate to provide information on cervical cancer and hence suitable target for this study.

### **3.3.1 Study Site**

The study site was the Kenyatta National Hospital reproductive health department, at clinics 18 and 66. The department handles walk-in patients and referral cases from other health facilities from across the country to receive diverse reproductive health treatment and observation such as fistula, family planning, post and ante natal services. Besides, the clinics offer cervical cancer screening services, treatment, management and follows up and hence appropriate site for this study. Besides, Kenyatta National Hospital Cancer Treatment Center (CTC) is the only health facility in Kenya where the poor can obtain advanced comprehensive treatment for cervical cancer and other reproductive health services. Kenyatta National Hospital has a capacity of 2,000 beds and has over 6,000 staff members. It covers an area of 45 acres. Out of the many patients that are attended at the facility on a yearly basis whose numbers are more than 100,000, more than 8,400

seek reproductive health services with more than 300 seeking cervical cancer services. The University Of Nairobi Medical School, and several government agencies are located within the premises (Kenyatta National Hospital Strategic Plan 2014).

There are nine hospitals that offer cervical cancer screening services in Nairobi Country. The Kenyatta National Hospital in Nairobi was chosen as the most suitable study site because it is the oldest public hospital in Kenya whose services are subsidized by the government and hence making it affordable and accessible to majority of Kenyans who cannot afford to pay for health care services in private facilities. It is also a walk-in facility where patients can walk in to access treatment without necessarily being referred from other facilities. The hospital also handles referral cases from across the country and hence a true representation of the cervical cancer picture in the country. This made it a suitable study site because it reflects the true face of Kenya when it comes to reproductive health issues more so cervical cancer, which was the focus of the study.

### **3. 4 Sampling Frame**

According to Fisher *et al* (1983), a sampling frame is a list of the population from which the sampling units are drawn. The completeness of a sampling frame is critical to the “representativeness” of a sample chosen from the frame, (Fisher *et al.*, 1983; Cooper & Schinder 2003). Wretman (2003) also points out that a sampling frame is the source material or device from which a sample is drawn. It is a list of all those within a population who can be sampled, and may include individuals, households or institutions. In that regard, the sampling frame for this study was obtained from a list of all the women aged 18 and 65 seeking reproductive health services at clinics 18 and 66 at the Kenyatta National Hospital for quantitative data who comprised of an average of 8,400 per year who come to seek the various reproductive health services. For qualitative data, the study focused on a list of all gynecologists, who number 37 and all the nurses and health care providers who are 160, in total at the reproductive health department at Kenyatta National Hospital, Nairobi. The focus was for the study to obtain both



quantitative and qualitative data and hence the sampling frame (Kenya National Hospital Records 2015).

### **3.5 Sample and Sampling Techniques**

The purpose of sampling is to secure a representative group which will enable the researcher to gain information about a population, (Mugenda & Mugenda, 2003). Fisher (1983) also agrees with that a sample can be thought of as a model of a larger population. A sample consists of a relatively small number of individuals or other units that are selected from a larger population according to a set of rules (Fisher *et al.*, 1983). Kothari (2004) further argues that sampling enables for a more accurate measurement and besides it saves time (Kothari, 2004). Other scholars who agree with Fisher (1983) on the sample size (if the target population is less than 10,000) are (Moser & Kalton 1979; Mulusa 1990; Mugenda & Mugenda, 2003). So for purposes of the current study, the population was based at an average number of population that accesses reproductive health services at the study site which was an average of 8,400 per year at the reproductive health clinics. For qualitative data, the study sought obtain data from the 37 gynecologists and 160 health care givers. The sample sizes for both quantitative and qualitative data were calculated using appropriate formulae that were suitable for each target audience as demonstrated in 3.5.1 and 3.5.2 below:

### 3.5.1 Sample size for quantitative data

According to Mugo & Kosgei (2011), in the report that was presented at during the commissioning of Kenyatta National Hospital Strategic Plan up to 2014 pointed out that Kenyatta National Hospital's clinics 18 and 66 were started by Legal Notice No. 109 on 6<sup>th</sup> April 1987). The clinics offer three major reproductive health services: pap smears, post and ante natal services and fistula treatment. On average, the clinics receives 300 pap smear cases, 32 colposcopies, 15 LEEPS and 35 family planning cases per day which translates to an average of 8,400 cases per year. And this is what formed the target population for quantitative data (KNH information/Records 2014).

Therefore based on the target population indicated above of 8400, a sample of 295, (3% more than the actual calculated sample size of 286 respondents), was determined for quantitative data in line with the arguments advanced by Fisher *et al.* (1983) as explained below on populations below 10,000. The level of confidence selected for this study was 95% which corresponds to z value of 1.96, as pointed out by Robert *et al* (1999). The study allowed a margin of error of 0.05. The high level of confidence and the small allowance error made the researcher to come up with a fairly large sample size that can yield a fair and accurate information. The third factor used to determine the size of the sample was the estimate of the population proportion of 8,400. A sample size for proportion was therefore given by the following formula for population that is less than 10,000:

Proportion was given by

$$n = \frac{p(1-p)Z^2}{e^2} \text{ where}$$

Where

P is proportion of the target population with the desired characteristics.

Z is standard normal deviation at 5% confidence

E is the degree of precision

( $nf = n/1+n/N$ ), (Fisher *et al* 1983).

Where  $nf$  is the desired sample size when  $N < 10,000$ .

$N$  = the estimate of the population size.

Therefore the required sample size was arrived at as follows:

$$300/1 + (384/8400) = 286$$

However, the researcher carried more questionnaires about 10% more than the anticipated 286 according to the calculated value, to the field and ended up with a sample of 295, which was 3% more than the actual calculated sample size of 286. This happened because the researcher carried more questionnaires to the field and ended up with more information than initially envisaged and decided not to discard the data but include it in the analysis and hence the extra nine questionnaires reflected in the data analysis. The respondents were picked using systematic random sampling where the researcher picked the first five respondents who were seated randomly in the queues on a first come- first served basis. It is important to note that the respondents did not sit based on the specific service they had come to access but rather sat randomly and were separated later on to be attended to in the specific consultative clinics based on their peculiar reproductive needs.

### **3.5.2 Sample Size for Qualitative Data**

The study used purposive or convenient sampling to identify gynecologists and health care givers at the reproductive health department at the Kenyatta National Hospital for qualitative data. A purposive sample, also commonly called a judgmental sample or convenient sample is one that is selected based on the knowledge of a population and the purpose of the study. The subjects are selected because of some characteristic. A

convenience sample is arrived at based on what kind of information the researcher wishes to obtain. So the researcher uses the technique that will ensure a sample obtained using the most suitable method and hence, the purposive sample; which refers to any subjects that are available and willing to participate in the research study (Mason, 2010). For example, this method does not allow the researcher to have any control over the representativeness of the sample. Guest *et al.* (2006) also argues that studies with a high level of homogeneity among the population, a sample of six interviews may be sufficient to enable development of meaningful themes and useful interpretations.

According to the Kenyatta National Hospital's records, (2015), there are two types of gynecologists who work at the reproductive Health Department: those employed directly by the Hospital who are 19 in number; and those employed by the University of Nairobi Medical School who are 15 in number, making the total number of gynecologists at Kenyatta National Hospital 34. Then there are 3 who are employed under special arrangements by the Hospital, making the total number of gynecologists 37. And at any given time, an average of 15 gynecologists are on leave, working on night duty or attending conferences and trainings outside the work station, leaving an average of 22 gynecologists on duty, who again work on shifts, besides being called to attend to emergencies given the nature of cases handled at the clinic within the hospital such as maternity, fistula, cervical cancer and mother and child care, some of these cases may be handled on emergency basis, making their movements very fluid. Some gynecologists operate from their private clinics, (Kenyatta National Hospital Records 2015).

In the two reproductive health clinics, there are a total of 160 nurses and health care providers. Out of this, those who have been trained to handle cancer cases are 7 in clinic 18 and 8 in clinic 66 and 3 in ward B and 2 in ward 1D ( the wards that offer palliative care), making the total number of cancer trained health care givers 20. Like the gynecologists, at one given time, an average of 8 nurses is on leave, working on night duty or attending training or some activity outside the work station, leaving an average of 12 nurses on duty. So it is from this number that the researcher had to obtain the

sample for data collection because these are the ones who can be available to participate in a research, (Kenyatta National Hospital Records, 2015).

On the basis of the above, and using the argument of Guest *et al.* (2006), who points out that in studies with a high level of homogeneity among the population, a sample of six interviews may be sufficient to enable development of meaningful themes and useful interpretations, the researcher therefore collected data from 4 gynecologists and 5 health care givers at the reproductive health department at the Kenyatta National Hospital for qualitative data. The respondents were the ones who were available and willing to participate in the study.

### **3.5.3 Sampling techniques for quantitative data**

The researcher used systematic random sampling to pick the sample for quantitative data. In a systematic sample, the elements of the population are identified and then every  $k^{\text{th}}$  element in the target population is chosen (systematically) for inclusion in the sample, (Castillo, 2009). Indrayan (2008) further points out that systematic sample can be drawn from a queue of people or from patients ordered according to the time of their attendance at a clinic. In order for systematic sampling to work, it is essential that the units in the population be randomly ordered, at least with respect to the characteristics the researcher is measuring. The main advantage of using systematic sampling is its simplicity and allows the researcher to add a systematic element into the random selection of subjects and yet it is very easy to do. The researcher therefore selected every first five respondents to be seated in the queues to be attended to at clinics 18 and 66 for the various reproductive health services. This allowed for representativeness because the respondents sat randomly on the queues on first come, first served basis. There was no particular order in which the respondents came in or were arranged in the queues; they simply sat randomly as they came in and hence making systematic random sampling the best suited to pick the respondents who were seated randomly to fill the questionnaires.

### **3.5.4 Sampling Technique for Qualitative Data**

The study used convenient or purposive sampling to collect qualitative data. According to ABE (2011) study manual, convenience sampling is a non-probability sampling method in which the sample members are selected because of their availability and willingness to participate in the study. Therefore this made convenient sampling the most appropriate and convenient method of collecting data for this study because the respondents were selected based on their willingness and availability to participate in the study, ABE, (2011).

Shulman (1988) also points out that the major strength of qualitative interviewing is that it gives the researcher an opportunity to learn more about the other's beliefs and meaning about the research topic. Guest *et al.* (2006), points out that in studies with a high level of homogeneity among the population, a sample of six interviews may be sufficient to enable development of meaningful themes and useful interpretations. The researcher therefore selected four gynecologists out of the total number of 37 gynecologists and five health care givers at the department of reproductive health out of the total number of who were available and willing to participate in the interview schedule.

The researcher therefore collected data from 4 gynecologists and 5 health care givers at the reproductive health department at the Kenyatta National Hospital for qualitative data making the total of 9 for qualitative data supported by arguments Guest *et al* (2006). The respondents were the ones who were available and willing to participate in the study. The researcher made prior arrangements e.g. calling or going physically to book appointments with the gynecologists and health care givers on the appropriate day and time they would be available for the interview schedule which took longer than expected given the nature of their work.

### **3.6 Research Instruments**

The study employed the use of questionnaire to collect quantitative data and interview schedule to collect qualitative data.

### **3.6.1 Self-administered Questionnaire**

Quantitative data was collected using structured questionnaire or closed-ended questionnaires from the respondents from women accessing reproductive health services at clinics 18 and 66 at the Kenyatta National Hospital. The lead researcher and four research assistants arrived early at the study site. Then using systematic random sampling as outlined above, questionnaires were given to every first 5 respondents (seated randomly in the benches waiting to be attended to) to fill. Care and guidance was given to ensure the questionnaires were filled properly to the end and any issues that needed clarification were addressed by the lead researcher and the research assistants.

### **3.6.2 Interview Guide**

Interview guides refers to a set of open-ended questions that the interviewer asks the interviewee when gathering information. An interview guide makes it possible to obtain data required to meet specific objectives of the study. Interview schedules are also used to standardize the interview situation so that interviewers can ask the same question in the same manner, (Mugenda, 2003). Interview schedule was therefore used as an instrument to collect qualitative data from 4 gynecologists and 5 health care givers at the Reproductive Health Department at the Kenyatta National Hospital. The researcher therefore selected 4 gynecologists out of the total number of 37 gynecologists and 5 health care givers at the department of reproductive health out of the total number of 20, who were available and willing to participate in the study.

### **3.7 Data Collection Procedures**

Data was collected using mixed methods approach with the aid of structured questionnaires and interview schedule. Both quantitative and qualitative data was collected one after the other and then the two data bases were triangulated to determine if there was convergence, differences of some combination, (Cresswell, 2009). The purpose of using this strategy was to offset the weakness inherent within one method

with the strengths of the other. The quantitative data was necessary to guarantee a generalization of results and to statistically test the problem statement and study objectives. Complimentary qualitative data was collected to provide plausible explanation for quantitative data, (Creswell, 2009). Using both the structured questionnaire and interview guide to collect data also served as a mutually validating procedure. According to Campbell *et al* (1999), while the survey is useful for measuring the incidence of a specified behavior, it is often unsatisfactory for full investigation, beliefs and values that may have a major influence on behavior. Therefore it was imperative that the researcher utilized qualitative research method to obtain data that would bring different perspectives to the research question.

### **3.7.1 Survey**

The survey method was used to assess incidences of behavior among the target group. A structured questionnaire was used to obtain data from the respondents at the study site. According to ABE (2011), when collecting quantitative data, the interviewer uses a set of prepared questions i.e. questionnaire in which most of the questions are “closed” i.e. each question had a pre-determined set of options for the response, such as a box to be ticked i.e. Self-completion questionnaires in line with the study objectives,(ABE, 2011).

Closed-ended questionnaire have several advantages of in that they are easier to analyze since they are in an immediate usable form, they are easier to administer because each item is followed by alternative answers and they are economic to use in terms of time and money, (Mugenda 2003).Because the study used systematic random sampling to pick the sample, the questionnaires were therefore given to every first 5 respondents seated in the queue waiting to be attended to in order to fill while seated in the benches. The researcher supervised the exercise assisted by the research assistants.

### **3.7.2 Interview Guide**



Qualitative data was collected using interview schedule. According to Fisher *et al*(2011) qualitative method uses open-ended interviews to obtain data on the topic under study. The main advantage with this method is that details can be sought using follow-up questions to give different perspectives of an issue (Fisher *et al* 1983).

Therefore, the researcher sought appointments with the gynecologists and health care givers who were available and willing to participate in the study to collect qualitative data to. This was to enable the researcher get more subjective and objective information from the respondents to help in analysis and draw conclusions in line with the study objectives. Each question in the interview schedule was read out to the respondents and answers given. Whenever necessary, the interviewer sought for clarification and additional information from the respondents to ensure accurate information was gathered to help make meaningful conclusions.

### **3.8 Pilot test**

Piloting was carried out in clinics and 18 and 66 at the Kenyatta National Hospital where a sample of ten women was selected through a simple random sampling. The purpose of the test was to check content validity of the questionnaire; whether the questions were well framed, comprehensible and could give desired answers. It also provided an opportunity for feedback on the wording of the questions. After piloting, the researcher made changes to the questionnaire to remove ambiguity and double meanings. In addition, the researcher adjusted the questionnaire and removed unnecessary information to tighten it since the respondents complained that the questionnaire was too long. The choice of site for pilot site was informed by the fact that the study site handled different types of patients on a daily basis and therefore chances of a respondent appearing during the actual data collection period were almost minimal.

### **3.9 Data processing and analysis**

According to Kombo & Tromp (220), data analysis refers to examining what has been collected in a survey and making deductions and inferences. It involves scrutinizing the required information and making inferences.

#### **3.9.1 Quantitative data**

The quantitative data collected was analyzed using descriptive and inferential statistics to help in describing the distribution of scores or measurements using indices or statistics. The data was given in summary tables, figures and charts, and was analyzed in line with the study objectives. Statistical Package for Social Sciences (SPSS) was used to aid in the analysis. Data was given in ordinary tables, multiple response tables, descriptive, mean and standard deviation. One way ANOVA was conducted to establish whether the amount of correct information obtained from the various sources depended on socio-demographic characteristics such as age, marital status, education levels and economic levels.

#### **3.9.2 Qualitative data**

For qualitative data, pieces of data was carefully labeled and organized in such a way that eased ongoing analysis. The qualitative data produced from the gynecologists and health care givers were described interpreted using thematic analysis. A narrative report enriched with quotations from key informants was written and triangulated with quantitative responses in order to capture convergence of differences in order to enhance the reliability and validity of the results (Creswell 2009).

### **3.10 Ethical considerations**

The respondents were treated with confidentiality and the information given was not doctored or changed in any way. The researcher also ensured that, unless absolutely required, information that was sensitive or potentially harmful was not collected from

respondents. Whenever possible, coded numbers were used instead of names. The researcher also ensured that information obtained from the respondents was kept confidential and not to be used by other people because it could be damaging to the respondent. The researcher had an obligation to protect the confidentiality of the respondents in the study.

The purpose and importance of the study was explained to the participants so that they could understand the why they needed to participate in it. Ethical clearance for the study and permission to collect data was sought from the Ethics and Research Committee of the Kenyatta National Hospital and the College of Medicine and Health Sciences, University of Nairobi and communication was made through formal letter obtained from the department, (attached at the appendix). Further permission to collect data was obtained from the Ministry of Science and Technology after fulfilling mandatory requirements as required in order to collect data within the Nairobi County.

Data were collected after full informed verbal and written consent was obtained from the respondents. Confidentiality of the information was maintained throughout by excluding names as identification in the questionnaire and keeping their privacy during the interview by allowing them fill the questionnaires individually and separately.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter presents the key findings of the study. It presents the data collected and analyzed in order to facilitate understanding through its presentation in tabulated format. The key presentation of the findings is followed by a more detailed discussion of the specific data collected within selected questions as outlined in the questionnaire in line with study objectives. The study used mixed method design to collect both qualitative and quantitative data. The information collected using the method was analyzed qualitatively and quantitatively. For each answer given, the respondents were also expected to indicate the source of that information. The instrument return rate for both quantitative data was more than 100% as the researcher ended up with 295 questionnaires as opposed to the calculated 286, an additional 3% responses. Or qualitative data, all the targeted respondents participated in the study, making the response 100% accurate,

#### 4.2 Socio Demographic Characteristics of Respondents

The demographic characteristics were captured and showed a direct correlation between risk factors and demographic characteristics. For quantitative data, a total of 295 women aged between 18 and 65 were included in the study making the response rate 100%. A sample size for proportion was given by the following formula for population less than 10,000: proportion was given by  $n = \frac{p(1-p)Z^2}{e^2}$  for quantitative data. For qualitative data, interview schedule was used to obtain data from 4gynecologists and 5 health care givers who were chosen using purposive sampling. In total, the number for qualitative data , for gynecologists and health care givers was 9, and this was supported by Guest et al (2006),

who points out that for a homogenous population, a total of six respondents was sufficient to give meaningful information. Out of the 20 health care givers, its only 5 who were available and willing to participate in the study. And out of the 37 gynecologists at the hospital, its only 4 who were available to participate in the study. This made the total number of participants in the qualitative data to nine; in line with Guest et al (2006) that in homogeneous population, a total of six cases is sufficient enough to give accurate information.

#### 4.2.1 Age Distribution of Respondents

The study sought to establish the respondent’s distribution by age. The results were as presented in table 4.1.Below:

**Table 4.1: Distribution by Age (%)**

		<b>Frequency</b>	<b>Percent</b>
<b>Age Category</b>	18-28 yrs	121	42.2
	29-39 yrs	121	42.2
	40-59 yrs	42	14.6
	60-69 yrs	3	1.0
	<b>Total</b>	<b>287</b>	<b>100</b>

From table 4.1, majority of the respondents were aged between 18 and 28 and 29 and 39 at 42.2.0% respectively. This was followed by those aged between 40 and 59 at 14.6%, while those aged 60 and above comprised of only 1.0% and the numbers reduced with age. This shows that fewer older women turned up for reproductive health services which include cervical cancer yet according to the study that was carried out by Sivro *et al.*, (2013), among prostitutes in Nairobi aged 20 and 65, it was found that aging of the immune system, known as immunoscience, is associated with profound changes in both innate and adaptive immune responses, resulting in increased susceptibility to cervical cancer infection and a decreased ability to respond to vaccination. The study demonstrated that women over 50 years and above and who were sexually active with multiple partners were more likely to be infected with HPV virus than younger women

less than 30 years of age. So this is a demonstration that women of all ages and who are sexually active need to go for cervical cancer screening because they are vulnerable to cervical cancer infection. This corroborates with Park (2005) assertion that most women are diagnosed with cervical cancer between 50 and 55 years although it is a disease that is also seen in younger women. This is a clear demonstration that women of all ages are vulnerable to cervical cancer infection and awareness efforts should therefore target women of all ages and those who are older need to be particularly targeted by radio and television messages because they are the ones who fail to report symptoms to health care providers yet they are at risk of cervical cancer infection.

#### 4.2.2 Marital Status of Respondents

The study sought the respondents' marital status. The findings were as presented in table 4.2. below:

**Table 4.2: Marital Status**

<b>Marital status</b>		
	<b>Frequency</b>	<b>Percent</b>
Married	230	80.4
Single	45	15.7
Widowed	8	2.8
Separated	3	1.0
<b>Total</b>	<b>286</b>	<b>100.0</b>

From table 4.2, majority of the respondents were married at 80.4%, while those who were single comprised of 15.7%, widowed, 2.8% and separated 1%. The distribution shows that majority of the respondents were sexually active by virtue of being married and sexually active, and hence vulnerable to HPV infection, which is sexually transmitted and a major cause of cervical cancer and hence the need for them to go for routine screening. The fact that single women were also seeking for reproductive health

services was an indication they were also sexually active and were therefore potentially at risk of cervical cancer infection. Williams *et al* and Gatune and Nyamongo (2005) have pointed out the factors that contribute to cervical cancer infection include sexual activity, multiple pregnancies, hormonal contraceptives and HIV infection. So what this means is that whichever reproductive health service that was being sought by the respondents puts them at risk of cervical cancer infection because all of them are contributing factors to cervical cancer infection. There is therefore need for concerted efforts by the electronic media to reach them with messages of cervical cancer prevention.

#### 4.2.3 Number of Children of Respondents

The findings on the number of children of respondents were as presented in table 4.3 below:

**Table 4.3: Number of Children**

Category	Frequency	Percent
1	78	42.2
2	60	32.6
3	28	15.2
4	12	6.5
5	3	1.6
7	2	1.1
10	1	0.5
<b>Total</b>	<b>184</b>	<b>100.0</b>

From table 4.3, majority of the respondents (42.4%) reported to have one child while 32.6% had two children, 15.2% had three children, 6.5% had four children, (1.0%) had five children, while (1.1%) had seven children and one respondent (0.5) had 10 children with a mean of 2 children per respondent. The distribution of the number of children may be a pointer to a number of issues. One, it can be an indication that their economic status may not allow them to have many children because they may not afford to bring them up. On the other hand, their age bracket where majority fell between 18 and 39 (42.2%) means that they are still young within child-bearing age so they may still get more children. Meaning that they are also accessing hormonal contraceptives which are a risk factor to cervical cancer as pointed out by Williams *et al* (2004); Gatume and Nyamongo (2005). Another key factor to note is the fact that there were respondents who had more than seven children with one having 10 children. This is a pointer to the low socio-economic status of women; or they do not use family planning methods or do engage in unprotected sex, meaning that they are exposed to the possibility of HPV infected. So whichever lifestyle the respondents have, it affects their sexuality and hence the need to expose them to messages of cervical cancer prevention.

#### 4.2.4 Education Level of Respondents

The distribution of respondents according to level of education is presented in table 4.4 below:

**Table 4.4: Education Levels**

<b>Level of Education</b>	<b>Frequency</b>	<b>Percent</b>
Primary and below	31	11.0
Secondary	92	32.6
College/University	153	54.3
Postgraduate	6	2.1



<b>Total</b>	<b>282</b>	<b>95.6</b>
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As presented in table 4.4, the study findings indicated that those who attained primary school level of education and below was 11.0%. Those with secondary education were 32.6% while more than half, 54.3% had college or /university education and only 2.1% had attained post graduate training. The distribution shows that majority of the respondents had the ability to comprehend a simple message on awareness creation given the fact that radio and television, which are the main mediums under study transcend illiteracy levels (sound/sight) and therefore can target the population with appropriate message with remarkable positive outcomes. However, the fact that there is section of the respondents 11.0% who had attained primary level education and below indicates that the group may not have the ability to comprehend information and hence the need to tailor messages using the medium that can be easily comprehended by people of that education level. Therefore radio especially the vernacular radio stations can be the most effective medium to reach such a group and vernacular radio stations are increasing in Kenya. This fact is corroborated by CCAB, (2012) who point out that the Kenya media landscape in Kenya is being dominated by vernacular radio stations and hence making vernacular radio stations a suitable medium of creating awareness about cervical cancer and therefore a chosen medium for the study.

#### 4.2.5 Distribution by employment

The findings on the distribution of respondents by employment were as presented in table 4.5

**Table 4.5: Distribution by employment**

<b>State</b>	<b>Frequency</b>	<b>Percent</b>
Employed	161	57.3
Unemployed	120	42.7
<b>Total</b>	<b>281</b>	<b>100.00</b>

From table 4.5, above, the study findings showed that more than half of the respondents, at 57.3% were not in any gainful employment as shown in the distribution table 4.5 above and only 42.7% were gainfully employed. This corresponds with education levels where a big percentage at 43.0% had attained secondary school level of education and below. Even those that indicated that they had some college/university training; majority may have attained some middle level college training as opposed to university education and this is demonstrated by salary range on table 4.6 below where more than 52.0% earned less Kshs 20,000 and below per month. Also this could be an indication that majority of the respondents were of low socio-economic status; and again the group that is affected by cervical cancer as pointed out by Palacio-Menjaet *al* (2003) who point out that worldwide, women of low socio-economic status have a greater risk of having cervical cancer. He further argues that cervical cancer is often referred to as a disease of poverty and poor women who are likely to be infected by cervical cancer and hence the need to target them with right information on its prevention. Also by accessing reproductive health services at Kenyatta National Hospital attests to their low socio-economic status because the facility is a public subsidized by the government, otherwise

they could have accessed the services at private facilities which are out of reach for majority poor.

#### **4.2.6: Distribution by Salary Range**

The distribution of respondents based on salary range was as presented in table 4.6

**Table 4.6: Distribution by Salary Range (%)**

<b>Salary range</b>	<b>Frequency</b>	<b>Percent</b>
0	1	0.8
Kshs 10,000-20,000	65	52.8
Kshs 30,000-40,000	33	26.8
Kshs 50,000-60,000	17	13.8
Kshs 70,000-80,000	4	3.3
Kshs 90,000-100,000	3	2.4
<b>Total</b>	<b>123</b>	<b>100.0</b>

Table 4.6 above shows that 53.6% of the respondents earned less than Kshs 20,000 per month, and 26.8% earned between Kshs 30,000 and 40,000 per month. Only a small percentage (17.1%) earned a salary of between Kshs. 50,000 and 80,000 per month and only less than 2.4% earned between Kshs 90,000 and 100,000. The study findings indicated that majority of the respondents were women of low socio-economic status as demonstrated by the income levels. The range of income levels given today's economic situation in the country with high inflation is an indication of high poverty levels among the respondents. This corresponds with 54.6% who reported to have no formal employment and hence again, corroborating with Palacio-Mejaet *al*, (2003)'s assertion that worldwide, women of low socio-economic status have a greater risk of contracting cervical cancer. The author further argues that cervical cancer is often referred to as a disease of poverty and of poor women.

In a study that was conducted in Mali in West Africa, it was shown that within a population widely infected with PHV, poor social conditions, high and poor hygienic conditions were the main co-factors for cervical cancer, (Palacio-Mejia *et al*, 2003). Sub-Sahara Africa also has widespread conditions that encourage substandard living

conditions. This include wars, political chaos, internal conflicts, natural disasters, famine and drought. These often lead to large populations being displaced external and internally for long periods of time. Under this refugee-like conditions, social vices such as rapes, prostitution and multiple marriages and cohabitation prevail, hence encouraging the transmission of HPV through sexual activity. War is associated with male promiscuity, which in turn contribute to the development of cervical cancer among sexually monogamous women. What this implies is that such women of low socio-economic levels with low education levels are less likely to access information and apply it in their day-to-day lives as opposed to those who have higher education and better income levels. This corresponds with what the gynecologists at the reproductive health department at the Kenyatta National Hospital reported in the study findings; that majority of the women they see at the clinics are of low socio-economic status and they come for consultation when the disease has advanced and so cannot be cured and end up dying early.

#### 4.2.7: Other Sources of Income

Table 4.7 below presents the findings on other sources of income

**Table 4.7: Response on Other Sources of Income**

Sources of Income	Frequency	Percent
	290	98.3
Less than 4000	1	0.3
Business lady	1	0.3
Farmer	1	0.3
Less than 5000	1	0.3
Over 100,000	1	0.3
<b>Total</b>	<b>295</b>	<b>100.0</b>

Table 4.7 reveals that less than 10% of the respondents had other sources of income apart from salaried employment. The vocations included personal businesses and farming whose income again demonstrates very high poverty levels among the respondents. For instance, there was only one respondent (0.3%) who made over Kshs 90,000 in a month while the rest (98.3) made less than Kshs 5,000 per month. This demonstrates the low economic status of the women, a population that is vulnerable to cervical cancer infection. Among the risk factors to cervical cancer infection is poor diet and deficiency of vitamin C as pointed by a paper that was published in the International Journal of Cancer, (2005). The paper pointed out that dietary factors such as low carotene or low vitamin C intake and folate intake deficiency are major risk factors to cervical cancer. It is a fact that women whose income is less than kshs 5,000 per month cannot afford a diet rich vitamin C. Meaning that they are at risk of getting cervical cancer because of poor diet and hence their immunity is low; hence should be targeted with cervical cancer prevention messages.

#### 4.2.8 Living with family members

Table 4.8 presents the findings on the respondents living with their family members

**Table 4.8: Living with Family Members (%)**

	<b>Frequency</b>	<b>Percent</b>
No	92	32.9
Yes	188	67.1
Total	280	94.9
<b>Total</b>	<b>295</b>	<b>100.0</b>

Table 4.8 shows that more than half of the respondents, 67.1% lived with relatives, and only 32.9% did not live with relatives, who included, siblings, parents and other distant

relatives such as uncles, aunts, cousins, in laws and friends. Other people who lived with the respondents included aunt 1(3%), brother 1 (3%), brother in law 1 (3%), cousin 3(1.0), niece 3 (1.0%), uncle 1 (1%) house help 5 (1.7%) and in laws 1 (1%). This implies that majority of the respondents came from lower to lower middle level income in society because such kind of living arrangements is a characteristic of people from poorer backgrounds compared to those from more affluent families. Those from middle to upper social strata rarely live with relatives, save for domestic workers. Again this is a pointer to the type of social cadre that is vulnerable to cervical cancer infections due to poverty levels, (Kenya Bureau of Standards 2009).

### **4.3 Knowledge Levels about Cervical Cancer**

A series of questions regarding what cervical cancer is, what HPV is, and whether one had ever done a pap smear were asked in order to establish the knowledge the respondents had about cervical cancer. The questions were also meant to establish the respondents' knowledge levels in terms of risk factors, main symptoms, treatment options and prevention and early detection measures of cervical cancer. The section was also meant to establish whether the respondents had the correct information about cervical cancer or they had misleading information, based on myths and misconceptions. And for every answer given, the respondents were expected to state the source of that information; whether they obtained it from radio, television or other sources. This was done to establish whether radio and television have played a key role in creating awareness about cervical cancer, which was the main objective of the study. *Table 4.9* below gives the breakdown of the responses given:

#### **4.3.1 General Knowledge of Cervical Cancer**

Response on general knowledge about cervical cancer was as presented in table 4.9

**Table 4.9: General Knowledge of Cervical Cancer**

<b>What is cervical cancer?</b>	<b>Frequency</b>	<b>Percent</b>
Reproductive women disease	17	7.6
I don't know	80	35.6
Cancer that affects the cervix	102	45.3
It's a hormonal growth that grows in the cervix	3	1.3
It is a dangerous disease	11	4.9
An infection that affects the urine wall	1	0.4
It is a condition caused by human papilloma virus	5	2.2
A disease from the devil	1	0.4
It is a sexually transmitted disease	4	1.8
Cancer that affects the urinary tract	1	0.4
<b>Total</b>	<b>225</b>	<b>100.0</b>

The study findings in table 4.9 showed that, of the 225 women who responded to the question, only about 34.6% had an idea of what cervical cancer was; even the correct answers they gave were not quite accurate but at least they had an idea of what the disease is. Nearly half of the respondents, 35.6% did not know what cervical cancer was by responding “I don’t know” or they gave wrong answers. From the responses, it can be demonstrated that majority of the respondents did not know what cervical cancer is. On top of that, the right knowledge is largely missing. For instance, it is only 2.2% who knew that Human Papiloma Virus was the main cause of cervical while the majority did not know. This corroborates with Gichangi *et al*, (2003) and Kidanto, (2002) who point out that knowledge levels about cervical cancer are very low among the population. They add that unfortunately this lack of knowledge is not limited to patients alone but also to health care workers too, who do not have correct information about cervical cancer. This makes the situation dare because the health workers keep treating the



patients who visit their health facilities for wrong ailments instead of referring them for further treatment if they were in a position to tell that the symptoms the patients present could be associated with cervical cancer.

Louie *et al* (2009) has also argued that the problem of cervical cancer in Sub-Saharan Africa is compounded by a number of factors including HIV. To compound the problem further is the widespread lack of resources and awareness associated with the region. Majority of the women have no knowledge about cervical cancer symptoms, prevention and management. This leads to many women presenting themselves for diagnosis when the disease has developed and cannot therefore be cured, leading to high mortality rates as a result of cervical cancer, (Louie *et al* 2009). Therefore for any meaningful prevention strategies to bear fruit there is need to create awareness on the causes, symptoms and prevention of cervical cancer to be made among the vulnerable groups and hence the focus of this study.

#### **4.3.2 Knowledge of HPV Virus**

The study had questions to test respondents' knowledge on HPV virus; the findings were as presented in table 4.10

**Table 4.10: Knowledge of HPV Virus**

<b>Have you ever had of HPV</b>	<b>Frequency</b>	<b>Percent</b>
No	171	63.1
Yes	100	36.9
Total	271	100.0

From table 4.10, more than half of the respondents, 63.1% reported that they have never heard of HPV (Human Papilloma Virus), which is the main cause of cervical cancer and only 36.9% had heard of HPV. However, even those that had heard about it, is not known what they had done with that information, because a large percentage reported to have never done a pap smear as demonstrated with the answers they gave on whether they have ever done pap smear as shown in table 4.11 below. This is corroborated by Bosch F. *et al*, (1995), who points out that HPV, which is transmitted sexually, is the main cause of cervical cancer worldwide. So what this means is that the women are not likely to take positive steps towards cervical cancer prevention when they do not know its main cause. HPV is a sexually transmitted disease. From the socio-demographic information, 78.0% were married and more than 98.0% reported to have children, meaning that nearly all the respondents were sexually active. Now, if they are sexually active, it means that they are exposed to HPV virus which is transmitted sexually. This means therefore that if they have no idea that HPV is the main cause of cervical cancer infection, then it means that they will be exposed to HPV infection through their sexual activity yet fail to take steps towards cervical cancer prevention because of lack of proper information on the main cause of cervical cancer and hence making cervical cancer a leading cause of cancer deaths among women in Kenya

**Table 4.11: Ever Done a Pap smear**

	Frequency	Percent	Valid Percent
No	193	65.4	68.2
Yes	90	30.5	31.8
Total	283	95.9	100.0
	295	100.0	

When asked whether they have ever done a pap smear, more than half of the respondents 193 (68.2%) reported that they had never done a pap smear and only 90 (31.8%) reported to have done a pap smear. This is an indication that majority of the respondents had not taken the right steps towards the prevention of cervical cancer which a major impediment towards the prevention of cervical cancer. Without doing a pap smear, one may never know whether she is infected with the disease or not and at what stage is the disease. Doing a pap smear is a sure way to prevent or control cervical cancer. So when nearly 70.0% of the respondents report to have never done a pap smear, it means that many women will continue to die as a result of cervical cancer because lack of proper information. That is why cervical cancer is the second most frequent among women in Kenya and the leading cause of deaths in women of reproductive age according to Kenya Cancer Registry (2009). The situation is made worse by lack of correct information.

This is confirmed by the sisters in charge of clinics 18 and 66 at the Kenyatta national Hospital who reported that majority of the patients they see at the clinics have very little knowledge about cervical cancer and its causes. Each had the following to say: *\*Note\* the respondents were numbered S1, S2,S3,S4 and S5, to indicate responses from the health care givers. And for the gynecologists, the responses were numbered K1,K2, K3, and K4*

*S 1: “The general information as gathered from health care givers indicates that there exist knowledge gaps among the patients seen at clinic 18 and 66 at KNH. For instance, it’s a small percentage that has the knowledge about the causes of cervical cancer and therefore they come for screening. Those who do not have are asked if they have done a pap smear. If they have not, then they are encouraged to do a pap smear test. Most of them have no idea that cervical cancer is a sexually transmitted disease. The women need to know that every sexually active woman need to be screened for cervical cancer. the major hinder to screening is socio-economic factor; lack of finances hinder the screening. There is need to empower the women economically so that they can travel to the health facility and also be able to pay for the services, which is done every year. Majority have no knowledge of what HPV is.*

*S2: There is also need for awareness about the issues surrounding cervical cancer. For instance the women need to have the knowledge that for those who are 35 years and above, once they do 2 to 3 normal pap smears in two consecutive years, then the procedure can be repeated after two or three years. If they have this knowledge, then they can plan and they can also know that the procedure is not so expensive after all because it is done after every 2 to 3 years.*

*S3: Majority of the patients seen in the two clinics do not have information about cervical cancer in terms causes, symptoms, treatment and prevention from the electronic media. Most of the scanty information that they have has been obtained from health care providers as they come to access other reproductive health services. Others, upon being questioned about presentation of symptoms by health care givers, are advised to for cervical cancer screening and unfortunately some test positive for cervical cancer. Such women are not normally aware that they had cervical cancer while coming to the clinics for other services like family planning and fistula. The information is largely lacking in the social media and on television. The sister said that if the information can be put out there in local language, then it can go a long way to help the rural woman come for screening.*

The gynecologists/oncologists at the Department of the Reproductive Health of the Kenyatta National Hospital also agree that the knowledge levels among the patients they handle are very low:

**K1:**“*Knowledge levels are very low but now it has improved. Not very high but moderate awareness but what they do with that knowledge is the problem. We get to establish these gaps by asking questions, and we assess about the symptoms, from the time they started experiencing the symptoms and the time they take to come for care etc will point out to what they know or they don't know. Some do not associate the symptoms with cancer. Most of the patients come very late because of not knowing the symptoms. This, again, depends on social economic strata. Majority cannot associate the symptoms with cervical cancer while others have been failed by the health systems which continue treating the wrong ailments such as typhoid and hepatitis. And given that is a disease that mostly affects the older women average of 50/51 years and above, culturally they don't expect to get STDs because they are not sexually active and so they don't associate the symptoms with sexual activity especially those who are premenopausal; they do not report any symptoms associated with sexual activity because they don't expect to be diagnosed with cervical cancer and hence fail to report to the health facility until the disease has progressed to late stages where it cannot be cured. The first time they are ever being seen is the first time they are diagnosed with cervical cancer and by this time the disease has advanced because of not knowing, the symptoms have been there for a while.. Culturally, basically the more learned someone is the easy access they have to information and bargaining power for care that could be preventive is higher than someone who illiterate is less learned who end coming to hospital when are really sick; it has to pain them and associated with lower economic strata and so they cervical cancer does not start by paining you that would influence their coming later”.*

Another gynecologist at the facility who has practiced for over 35 years, agrees that knowledge levels are very low and this hinders the efforts towards the prevention of cervical cancer.

*K2: Kenyatta National Hospital being a referral hospital, majority of the patients who are referred there from all over the country have no idea what they are suffering from. They get to learn that the symptoms they had been experiencing all along were a pointer to cervical cancer.*

*The uneducated may not have even the wrong information leave alone myths about cervical cancer. The educated ones may have some knowledge, but not sufficient enough to make them take positive steps towards cervical cancer prevention. They do not have any knowledge on risk factors either and therefore may not seek medical intervention whenever they experience symptoms that may point to the fact that they could be having, making the cancer situation in the country very grave.*

The head of the reproductive health department also states that knowledge levels are very low. Citing a paper he had published in 2013, he says that the knowledge levels are very low at 15.0%:

*G3: "It's pretty low, we have done a research on this and published a paper in 2013, it looked at among other issues cervical cancer awareness. Awareness was about 15-20%, they hadn't heard about it the awareness levels were very low".*

Myths and misconceptions have further affected the response to seeking treatment for cervical cancer.

*Continued: "Sexuality and values placed especially the older women becomes difficult for them to open up especially the older women mostly when they start to experience signs like bleeding. The fact there is reduced knowledge, it's assumed that after menopause, they stop having children and hence it has nothing to do with the birth canal. They don't come out to say that they are sick because they are perceived as being*

*promiscuous and therefore they might be having STDs hence they keep it to themselves. That is why 80% of our patients are presented to us late with advanced diseases. The same goes to their partners who might run away saying that they have not been faithful to them hence gender issues come in”.*

### **4.3.3 Knowledge on Causes of Cervical Cancer**

The findings on the causes of cervical cancer were as presented in table 4.12

**Table 4.12: Knowledge on Causes of Cervical Cancer**

	<b>Got it wrong</b>		<b>T.V.</b>		<b>Radio</b>	
	<b>Count</b>	<b>%</b>	<b>Count</b>	<b>%</b>	<b>Count</b>	<b>%</b>
Cervical cancer is a sexually transmitted disease	185	71.2	20	7.7	20	7.7
HPV virus is the main cause of cervical cancer	74	35.7	33	15.9	29	14.0
HPV virus is sexually transmitted just like HIV/AIDS	152	70.7	13	6.0	10	4.7
If you are HIV positive then you also have cervical cancer	37	15.8	35	15.0	25	10.7
Having multiple sexual partners can cause one to get cervical cancer	109	43.3	28	11.1	30	11.9
Cervical cancer is caused by witchcraft	20	8.2	39	16.0	34	13.9
Anyone who is sexually active can get cervical cancer even if you had sex with only one partner	120	47.1	34	13.3	29	11.4
All women are potentially at risk of developing cervical cancer at one time in their life	80	30.9	42	16.2	32	12.4
Early age of first intercourse may cause cervical cancer	132	53.0	25	10.0	20	8.0
Having a weekend immune system can cause cervical cancer	143	60.3	22	9.3	16	6.8
Women who have reached menopause can also get cervical cancer	66	26.6	29	11.7	36	14.5
Cervical cancer is a hereditary disease	174	68.5	17	6.7	8	3.1
Prolonged use of oral contraceptives can cause cervical cancer	134	54.9	15	6.1	16	6.6
Having many children can cause one to have cervical cancer	36	15.5	20	8.6	36	15.5

From the study findings in table 4.12, it can be demonstrated that correct information about causes of cervical cancer was largely lacking among respondents. For instance, a big percentage of more than (71.2%) did not know that cervical cancer is a sexually transmitted disease. Another 70.7% did not know that HPV virus is a sexually



transmitted disease, and it is the main cause of cervical cancer. This information can be corroborated with what Walboomers *et al* (2009) has pointed out that HPV is the main cause of cervical cancer yet more than 70% of the respondents did not have this information. What this implies is that when people do not have the correct knowledge about main cause of a disease, cervical cancer in this case, they will not take appropriate steps towards its prevention and treatment. Another 68.5% were not aware that cervical cancer can be a hereditary disease. Another 60.3% did not know that having a weak immune system can subject one to cervical cancer infection. Another 54.9% did not know that prolonged use of oral contraceptives can cause one to be infected with cervical cancer and another 50.0% did not know that early age of first sexual intercourse is a major risk to cervical cancer infection and another 47.1% had no idea that anyone who is sexually active, even if it is with one sexual partner is at risk of cervical cancer infection. While 43.3% did not know that having multiple sexual partners is a risk factor to cervical cancer infection. The study findings further showed that 30.9% did not know that all women are potentially at risk of contracting cervical cancer. This is in agreement with Gichangi *et al* and Kidanto *et al*(2002) who point out that there is very poor knowledge of cervical cancer among the women out there. Bell *et al* (1995) also alludes to the fact that women have little knowledge of the risk factors associated with cervical cancer. What this implies is that the women will not take any steps towards cervical prevention, because they have no idea of its risk factors and hence making the cancer situation in the country very grave.

**4.3.4 Knowledge on Symptoms of Cervical Cancer**

The findings on knowledge of the symptoms of cervical cancer were as presented in table 4.13

**Table 4.13: Knowledge on Symptoms of Cervical Cancer (%)**

Symptom	False	True	Total
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Abnormal vaginal discharge may suggest that one has cervical cancer	33.6	66.4	100.0
Any abnormal bleeding means one may have cervical cancer	52.9	47.1	100.0
If you bleed after periods then you have cervical cancer	82.0	18.0	100.0
Bleeding between periods may mean you have cervical cancer	74.0	26.0	100.0
Discomfort during intercourse may mean you have cervical cancer	58.4	41.6	100.0
If you have reached menopause and you start bleeding it means you have cervical cancer	68.5	31.5	100.0
A woman can have cervical cancer even when they don't have any symptoms	32.1	67.9	100.0

From table 4.13, correct information regarding symptoms of cervical cancer is largely lacking or minimal. Questions regarding knowledge of symptoms, such as abnormal vaginal bleeding, painful sexual intercourse, and postmenopausal symptoms were asked and many respondents reported to have no knowledge of the symptoms that can be a pointer to cervical cancer infection. For instance, 82.0% reported that they did not know that any abnormal bleeding could be a pointer to cervical cancer infection. Another 74.0% reported that they did not know that bleeding between periods may mean one may be at risk of cervical cancer infection and therefore the need to report the symptoms to a health care provider or doctor. Another big percentage, 68.5%, reported that they did not know that bleeding after menopause is a danger sign and one should seek medical attention. Another 52.0% did not know that any abnormal bleeding is a pointer to a possibility of cervical cancer infection. Compared to those who got correct information, there is a big disparity between those who have the correct information and those who have wrong information. For instance, a majority of those who got correct information on some of the questions were less than 50. % except for 66.4% who knew that abnormal bleeding could mean a possibility of cervical infection and 67.9% who reported correctly that one can have cervical cancer even when they do not have any symptoms. These knowledge gaps can be corroborated by Bell *et al* (1995) who points

out that women have little knowledge of risk factors associated with cervical cancer. So many the women fail to report any abnormal symptoms to health care providers because they do not have any knowledge of symptoms that can be associated with cervical cancer. This was pointed out by the chief nurse at the reproductive health department:

*SI: Majority of the women do not know of the risk factors so very few turn up for a pap smear voluntarily. Once they test positive, hopelessness comes in, fear and stigma. Majority feel like since they have come, the doctors must cure them. Majority of the patients come with symptoms that point to the fact that they have cervical cancer but unfortunately they are not aware. Such symptoms include, heavy bleeding, painful sex and severe lower back pain. Such women are usually screened to rule out the possibility of having cervical cancer but unfortunately majority turn out positive. The electronic media should sensitize the public about screening that should take place every year.*

She goes on to say that majority of patients are ignorant of the symptoms:

*SI: Very few patients handled at the clinic know about the risk factors/symptoms. Majority have no idea about risk factors such as early age of first sexual contact, multiple sexual partners and so on. Some think it sexually transmitted disease and so don't see the need to come for a pap smear. Information about risk factors, symptoms, treatment and management should be out there but unfortunately it is lacking and hence high mortality rates as a result of cervical cancer.*

*The electronic media should highlight the symptoms and risk factors to make the women come for screening once they experience any of the symptoms; report to a health facility as a matter of urgency. Unfortunately majority do not know of the symptoms; for instance, they may not associate lower back pain with cervical cancer. So they end up coming for diagnosis*

*when the cancer has advanced and hence the high mortality rate as a result of cervical cancer.*

Another nurse in clinic 66 also agrees that radio and television have not done their role effectively as far as the fight against about cervical cancer is concerned.

*S2: Radio and television have played some role in creating awareness but there are no corresponding actions to accompany the efforts by the two media channels. There is need to incorporate the health professionals in the health sector to give correct facts about the whole issue of cervical cancer treatment and management. For instance when the procedure should be done and how it is done.*

*S2:Majority of cancer patients confuse it with other ailments. They have no idea about symptoms. Cervical cancer is confused with other ailments such as AIDS or any other sexually transmitted disease. Right information is largely lacking out there.*

*S2:HPV virus is associated with multi sex partners. Women should be sensitized about this fact and the risks involved and avoid such behavior. The media should also sensitize women and mothers about the cervical HPV vaccine and where they can get them. The vaccine is usually given to girls between the ages 9 and 14 years who are virgins. Side effects associated with the vaccine, misconceptions and misinformation should be made public by the media but unfortunately this has not been done. There are knowledge gaps out there that should be addressed by the media.*

This information can be corroborated with a gynecologist at the department who has served there for the last ten years. She said:

*K3:Knowledge levels are very low but what they do even with the little knowledge is the problem. We get to establish these gaps by asking*

*questions, and we assess about the symptoms, from the time they started experiencing the symptoms and the time they take to come for care etc will point out to what they know or they don't know. Some do not associate the symptoms with cancer. Most of the patients come very late because of not knowing the symptoms. That is the reason why mortality rates due to cervical cancer are very high in the country.*

When asked about the source of their information, more than 60.0% of the respondents reported to have received their information from other sources other than radio and television, only a smaller percentage, less than 19.1% on each item that was being measured, reported to have received their information from radio and television. This finding demonstrates what Gichangi *et al*(2003) points out that cervical cancer knowledge about symptoms and presentation by radio and television in Kenya for all women aged 18 and 69 is less than 3.2%. This is in spite of the magnitude of the problem. The situation is a pointer to the fact there is need for awareness creation to correct the status quo by the electronic media and hence the relevance of the current study.

The sister in clinic 18 agrees that the main source of information about cervical cancer is the health care givers:

*S5: The major source of information about cervical cancer are the health workers, who sensitize them about the health status of women and what they should know and the steps they should take as a result of the knowledge. The health care givers give the women pamphlets containing facts and symptoms about cervical cancer. Another source of information is friends and relatives who are sick or who have died of cervical cancer. Women chamas can serve as another important source of information about cervical cancer among the women. Therefore interpersonal*

*communication can be harnessed to serve as an important source of information among the women.*

*S5: The role of the media especially the vernacular radio stations is very crucial in highlighting issues surrounding cervical cancer. There is need for open forums during community activities to highlight issues about cervical cancer. There is need for social responsibility; community health workers and even the administrative arm should get concerned about the health wellness of women and sensitive them on how to live health lives and give them information on prevention and management.*

*S5: There is general consensus that the media has not done much in terms of sensitization and prevention of cervical cancer. Apart from the program 'doctors on call' aired on Family T.V. once a week, there is not much that has been done. And again, program is not dedicated to issues of cervical cancer per se but it is a program that handles diverse health issues that affect the general population and not specific on cervical cancer. Radio and television programs targeting on symptoms, signs and contributing factors are largely lacking and that is where was emphasis should be put.*

### 4.3.5 Knowledge on Severity of Cervical Cancer

Findings on severity of cancer were as presented in table 4.14

**Table 4.14: Severity of Cervical Cancer (%)**

<b>Statement</b>	<b>False</b>	<b>True</b>	<b>Total</b>
Cervical cancer is a dangerous disease	7.3	92.7	100.0
All women are at risk of getting cervical cancer	11.8	88.2	100.0
A woman can have cervical cancer even when they don't have any symptoms	24.7	75.3	100.0
The cervical cancer vaccine can cause barrenness among young women	57.0	43.0	100.0
If you do not go screening for cancer, you are at risk of dying of cervical cancer	31.4	68.6	100.0
Cervical cancer has no cure when detected at late stages	24.0	76.0	100.0
Cervical cancer has no cure if detected late	25.8	74.2	100.0
If i go for cervical cancer screening people will think i am immoral	79.0	21.0	100.0
Going for cervical pap smear is very shameful	76.9	23.1	100.0
If you are diagnosed with cervical cancer, then you will die	80.5	19.5	100.0
Screening for cervical cancer is very painful	70.2	29.8	100.0
If my mother or sister got cervical cancer, i am also at risk of contracting cervical cancer	70.7	29.3	100.0

Respondents were asked about what they thought about severity and danger of cervical cancer as shown in table 4.14 above. The information was meant to establish the severity

of cervical cancer and whether that information could prompt the respondents to take steps towards cervical cancer prevention. The information is related to what is outlined in the Health Belief Model by (Rosenstock, 1966; 1974, and Becker MH (ed) 1974) which has been used in this study. The model hypothesizes that a health-related action will depend on the realization of the severity of a health problem and gets a cue to action towards the eradication of the problem based on its severity. Of the respondents, cumulative percentage of 559.3% did not think cervical cancer was a dangerous disease while 640.7% thought cervical cancer was very a dangerous disease. For instance only 7.3% of the respondents did not think the disease was dangerous while a big percentage of 92% thought the disease was dangerous. But as to whether that realization has led them to take action remains to be seen because cervical cancer is a leading killer in women of reproductive ages in Kenya, (Kenya Ministry of Public Health, 2009). The issues of stigmatization come into play in the way the respondents answered the questions. For instance, 74% know that cervical cancer has no cure when detected late and 68.6% stated that failure to go for cervical cancer screening puts one at risk of death. Yet another 73.9% thought going for screening is very shameful or people will think one is immoral or is very painful. So this may cause women to shy away from going for screening and hence putting their lives at risk of cervical cancer infection.

Several authors have pointed out several reasons why women fail to go for cervical cancer screening. Estimates of the percentage of women who do not attend for colposcopy varies widely, between around 12% and 50%, depending on centre and patient population. There are two likely explanations of this non-compliance (Lesman G. Miller SM Scarborough et al 1991, Paskett, White, Carter, Chu 1990). First, is the patient's perception of the severity of the disorder or the risk of possible infection, women may not consider the receipt of an abnormal smear as sufficiently serious to comply with health advice so they stay away. Alternatively, women may be too distressed to go for screening, (Becker MH, Maiman LA 1980). Many women believe they have cancer and the fear of cancer remains high throughout subsequent



investigations and so they would stay without knowing their status rather than be told that they have the infection. Indeed, those women who do not attend for colposcopy show higher levels of anxiety and greater impairment in daily activities than women who do attend (Wardley, Pernet A, Stephens O 1995, Zaisker H, Mayer Hofer K, Joura EA *et al* 1997).

The sister in charge of clinic 66 also agrees that the severity of cervical cancer has proved counterproductive because the women fear going for screening or diagnosis because they fear the results could be positive and so they would rather stay without knowing their status rather than go for screening and be found to having cervical cancer:

*S2: Another major challenge is fear. Majority of the women fear going for screening because they do not want to know the truth about their health status; so they would rather stay ignorant rather than know the truth that they could be having the virus that causes cervical cancer. Another major cause of fear is the procedure; many women do not like the procedure at all. Unfortunately this fear is not confined to the patients alone; a number of the health care providers too have never gone for screening either because they do not want to be exposed more so to their colleagues. Nobody wants such a procedure to be done on them by a colleague because it is embarrassing and so they go without being screened thereby exposing themselves to the danger of being infected by cervical cancer.*

*S2: Cultural and misconception issues also come into play whereby the women are not screened because they associate cervical cancer infection to witchcraft and/or hereditary disease; " my mother died of a disease with such symptoms so I will also die anyway". So they fail to go for screening even when they have symptoms that could suggest that they could be having cervical cancer. However, once the women have been given the right information, they agree to come for pap smear. So provision of the*

*right information is key to control of and prevention of cervical cancer among women in the country.*

The doctor in charge of the reproductive health department agrees that the knowledge of the severity of cervical cancer has produced negative consequences. He states that:

***KI:** “A lot of misconception is paternalistic attitude among the women towards cancer. Generally when one is told that she has cancer, she gives up and so is the family because it’s like she’s going to die the next minute. There is reduced awareness of available treatment as much as we have constraints as a country in terms of availability of treatment centers. People should know that cervical cancer is a curable and a preventable disease. Ideally, no one should die from cervical cancer. Because there are no services for screening, the availability and affordability of the treatment for early stages is a problem. Others are too stigmatized to go for screening as. People need to know that early screening and detection is important because its curable if discovered early. It’s a tragedy when a woman dies of cervical cancer. Another challenge is the fact that symptoms of cervical cancer are rare during the early stages when it can be quickly treated, its only until there is bleeding, pains and discharge that one realizes that they could be sick and come for treatment. The women should know that cervical cancer can still be treated when detected early and hence the need for regularly pap smear.*

*Various factors which constitute to this is affordability, late screening and booking, interrupted treatment among others. The western world have well established cervical cancer screening centers which we lack locally; they can detect them early and have available treatment.*

This was corroborated with another gynecologist within the reproductive health department:

***K3:**Sexuality and values placed especially the older women becomes difficult for them to open up especially the older women mostly when they start to experience signs like bleeding. The fact there is reduced knowledge, it's assumed that after menopause, they stop having children and hence it has nothing to do with the birth canal. They don't come out to say that they are sick because they are perceived as being promiscuous and therefore they might be having STDs hence they keep it to themselves. That is why 80% of our patients are presented to us late with advanced diseases. The same goes to their partners who might run away saying that they have not been faithful to them hence gender issues come into play.*

On the sources on information, most of the respondents reported to have received their information from other sources and not radio and television. Those who received the information from radio and television were less than 20% and more than 67.0% received their information from other sources and another 18.7% did not indicate the source of their information. This shows that the two mediums (radio and television) have not done much to create awareness about cervical cancer which is the focus of this study and as pointed out in the statement of the statement.

This also confirms Zeisker H. Meyer Hofer K and Joura EA's (1997) argument that the most common source of information used by women on cervical cancer was a friend who had previously experienced a colposcopy, although, given that knowledge does not appear to increase following colposcopy, it is unlikely that women receive correct information by this route and hence the large numbers of women who do not turn up for routine screening (Zeisker H, Meyer Hofer K, Joura EA, *et al* 1997). That is the reason why the current study sought out to establish the influence of electronic media in creating awareness about cervical cancer. This is because electronic media is regarded as a credible source of information given that it operates under rules and regulations that govern the process of gathering and dissemination of information.

The gynecologist in the department also agrees that the source of information of information among the patients is from elsewhere and not electronic media:

*G2:Majority of the patients seen have received information from their peers in the village or within the estates where they live. Interpersonal communication can be a very important strategy to spread information about cervical cancer because the women can learn from each other more easily than may be a message that is aired on television that one may not see. But majority who come especially those from the rural areas already have the symptoms of cervical cancer, and just like any cancer, once the symptoms begin to manifest, the cancer is already at an advanced stage. Majority do not know the risk factors about cervical cancer.*

#### **4.3.6 Knowledge on Prevention and Treatment of Cervical Cancer**

The findings on the prevention and treatment of cervical cancer were as presented in table 4.15

**Table 4.15: Prevention and Treatment of Cervical Cancer (%)**

<b>Statement</b>	<b>False</b>	<b>True</b>	<b>Total</b>
Routine screening can help prevent cervical cancer	10.2	89.8	100.0
Having protected sex can help prevent cervical cancer	38.8	61.2	100.0
Sufficient knowledge can help women start going for routine screening	10.8	89.2	100.0
Awareness can help prevent cervical cancer	10.2	89.8	100.0
Cervical cancer can be cured if detected early	5.9	94.1	100.0
If you are HIV positive, then you need to go for cervical cancer screening	31.6	68.4	100.0
If your blood relative has died of cervical cancer, then you need to go for cervical cancer screening	47.4	52.6	100.0
If you avoid multiple sexual partners, you can prevent cervical cancer	32.5	67.5	100.0
I don't know how cervical cancer can be controlled	49.2	50.8	100.0
Cervical cancer has no cure	71.6	28.4	100.0
Traditional medicine can cure cancer	74.1	25.9	100.0
Cervical cancer is treated by doctor's medicine	33.2	66.8	100.0
Cervical cancer is treated by chemotherapy	23.4	76.6	100.0
Cervical cancer is treated by radiotherapy	37.8	62.2	100.0

From table 4.15, of the total number of respondents interviewed, cumulative percentage of 476.7% did not know preventive measures of cervical cancer while 923.3% knew preventive measures of cervical cancer. For instance a big percentage, 66.8% knew that cervical cancer has no cure. Another 76.6% knew that cervical cancer can be treated by chemotherapy while another 62.2% reported to know that cervical cancer is treated by radiotherapy. However, the knowledge of the prevention and treatment of cervical cancer does not necessarily translate to positive behavior change like going for screening

because a big percentage 64.7% reported not to have ever done a pap smear as shown earlier on table 4.12 in this chapter. So what the women do with the information they have is an issue of concern bearing in mind that cervical cancer is the second most common cancer among women,(WHO 2010) and the most common cause of cancer deaths among women in Africa, (Parkin *et al* 2003). It is important to note that but the high mortality as a result of cervical cancer is an issue of concern. Again, not all cancers can be cured by chemotherapy or radiotherapy; it depends on the stage the cancer was before the treatment commenced. Its only stages one and two that are treatable, but stage three and four, chances of cure are remote. Hence the need for provision of proper and factual information.

What the women do with the knowledge they have however little, remains an issue and that is what this study sought to explore and the findings can form a basis of future research.

A study carried out by Were (2011) found out that major common barriers to screening included fear of abnormal results, wrong information, stigma, limited or misinformation and lack of finances, (Were, 2011). This is what forms this study, i.e. to investigate awareness levels, type of information and the consequences of that information among the vulnerable women. Fear, stigma, anxiety, cultural norms and beliefs may hinder women's participation in screening although they may have some knowledge on cervical cancer prevention. Although compliance decreases when cultural norms contradict health advice, this can be countered if health care providers are aware, and show understanding, of possible health care and cultural conflicts, (Ley P. 1989, Parazzini K, Lavecchia C, Negri E *et al* 1989). This also calls for proper information among both the health providers and the vulnerable groups.

A majority of cervical cancer cases are detected at an advanced and symptomatic stage, at which time the possibilities of cure are very low. While lack of services is an important determinant of continually high rates of cervical cancer, another important

aspect is the apparent lack of knowledge and awareness about the disease. Myths and misconceptions surrounding the disease can lead to poor utilization of screening services wherever they exist, (Mcfarland MD, 2003).

The sister in charge of clinic 66 at the Kenyatta National hospital shares the same sentiments that whereas some women may know how cervical cancer can be prevented, majority do not go for screening because of fear, myths and misconceptions:

*S4: A major challenge to cervical cancer prevention is socio-economic; majority of the women cannot afford to go to the private hospitals for screening because they cannot afford the transport and cost of the procedure.*

*Another major challenge is fear. Majority of the women fear going for screening because they do not want to know the truth about their health status; so they would rather stay ignorant rather than know the truth that they could be having the virus that causes cervical cancer. Another major cause of fear is the procedure; many women do not like the procedure at all. Unfortunately this fear is not confined to the patients alone; a number of the health care providers have never gone for screening because they do not want to be exposed more so to their colleagues. Nobody wants such a procedure to be done on them by a colleague because it is embarrassing and so they go without being screened thereby exposing themselves to the danger of being infected by the disease.*

*S2: Cultural issues also come in whereby the women are not screened because they associate cervical cancer infection with witchcraft and/or hereditary disease; "my mother died of a disease with such symptoms so I will also die anyway". So they fail to go for screening even when they have symptoms that could suggest that they could be having cervical cancer. However, once the women have been given the right information,*

*they agree to come for pap smear. So provision of the right information is key to control of and prevention of cervical cancer among women in the country. Others fail to go for screening because they think it is painful while others are constrained by lack of finances.*

A gynecologist in the department also points out that other barriers to screening are caused by Misconceptions and myths about cervical cancer among women:

***K3:**“Older women are particularly at risk because it is assumed that after menopause, they stop having children and hence are not expected to be sexually active. Therefore they don’t come out to say that they are sick because they would be perceived as being promiscuous and could be having STDs hence they keep it to themselves. That is why 80% of our patients are presented to us late with advanced diseases. Such women are usually stigmatized even by their own spouses who accuse them of being unfaithful and may even abandon them and hence gender issues come in”.*

On the source of information, just as in other entries, radio and television have continued to score low as sources of information about cervical cancer. They stand at an average of 17.0% on each question asked while other sources stand at an average of over 60.0%. Those that did not indicate the source of their information stood at 33.4%.

#### **4.3.7 Got wrong answers from Electronic Media and Other Sources**

A number of the respondents got wrong information and claimed to have obtained it from radio and television as shown in table 4.16 below.



**Table 4.16: Got Wrong Answers from Radio and Television**

	Got it wrong		T.V.		Radio	
	Count	%	Count	%	Count	%
History of sexually transmitted infections can cause cervical cancer	97	40.1	28	11.6	28	11.6
Cigarette smoking can cause cervical cancer	139	56.0	23	9.3	23	9.3
Long term oral contraceptives can cause cervical cancer	145	61.2	12	5.1	19	8.0
Low carotene or low vitamin C intake can cause cervical cancer	169	73.5	8	3.5	14	6.1
I can get cured of cervical cancer if it is detected early as a result of routine screening	12	4.8	56	22.6	44	17.7

Table 4.16 above shows that a number of respondents got wrong answers to questions put to them to establish the causes of cervical cancer. A bigger percentage of those who had wrong information obtained it from other sources other than radio and television at more than 50.0% as opposed to radio and television which stood at less than 12.0%. For instance, on other sources of information, 40.1% reported not to know that a history of sexually transmitted diseases can put one at risk of cervical cancer infection. Another 56.0% did not know that cigarette smoking can cause cervical cancer. Some 61.2% had no knowledge that long use term oral contraceptives can put a woman at risk of cervical cancer while 73.5% did not know that poor diet can expose one to the risk of cervical cancer infection. It is important to note that the respondents indicated that they had received the wrong information from radio and television, although at a lower percentage. This again brings into question the nature of information that is out there among the vulnerable groups. If they claim to have got wrong information from radio and television, then it means that there is need for proper awareness to be done to dispel the notion that radio and television can channel wrong information to the public; this is

an issue that needs further investigation by relevant stakeholders. On the other hand, the credibility of the answers comes into question and therefore the need for further research to establish the actual situation on the ground as far as the type of the information that the women out there have. Myths, misconceptions and misinformation need to be addressed by all stakeholders involved in the fight against cervical cancer.

**Table 4.17: Those that Got Wrong Answers from Other Sources**

	Others		Total	
	Count	%	Count	%
History of sexually transmitted infections can cause cervical cancer	89	36.8	242	100.0
Cigarette smoking can cause cervical cancer	63	25.4	248	100.0
Long term oral contraceptives can cause cervical cancer	61	25.7	237	100.0
Low carotene or low vitamin C intake can cause cervical cancer	39	17.0	230	100.0
I can get cured of cervical cancer if it is detected early as a result of routine screening	136	54.8	248	100.0

Table 4.17 shows that a number of the respondents also had wrong information on causes of cervical cancer from other sources other than radio and television. This can be related to what Zeisker (1997) points out that the most common source of information that women have is obtained from a friend who had previously experienced a colposcopy. The author further argues that given the predisposition of many women, the knowledge may not necessarily increase after colposcopy therefore it is unlikely that the woman receive correct information from such sources. This may explain why a number

of women report to have wrong information about cervical cancer from other sources. That is why the current study sought to examine the role and influence of electronic media in creating awareness about cervical cancer.

#### 4.3.8 Those that Got Correct Information

The findings as to whether the respondents got correct information from radio and television were as presented in table 4.18

**Table 4.18: Got Correct Information**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Correct Pct.Others	272	.00	100.00	62.2345	35.23440
CorrectPct.TV	272	.00	100.00	19.5278	29.22546
Correct Pct. Radio	272	.00	100.00	18.2377	25.18969

From table 4.22, it can be seen that majority of those who got correct information obtained it from other sources and not from radio and television. The results show that 62.2% got correct answers from other sources with a standard deviation of 35.23% while correct information obtained from radio and television combined was less than 40%; 19.52% from radio and 18.23% from radio. The research went ahead to investigate whether the sources of information influenced by other demographic factors such as age, education level or income level as will be demonstrated by ANOVA which is discussed in detail later on in this chapter.

This is a clear demonstration that radio and television are not the main sources of information about cervical cancer that the respondents had. This agrees with Kenya Cancer Society (2010), which points out that advocacy on prevention, treatment and care

of cervical cancer by radio and television on women's vulnerability is minimal or non-existent in Kenya. As a result of this, many women continue to die in their reproductive ages because of lack of proper and adequate information, making cervical cancer the most common cause of cancer deaths among women as this is also pointed out by Parkin *et al*, (2003). This corroborates with a study that was carried out in Kisumu by Sudenga *et al* (2013). The study found out that 67.0% had never had never heard a single message from any media outlet, and majority had received their information from health care workers. Whereas radio and television are most preferred channels of information according to a research carried out by Solomon (2014) and Synovate (2011), the two channels have not made deliberate efforts to create awareness about cervical cancer and hence the focus of this study.

There are several reasons that make women fail to go for screening as way of preventing cervical cancer apart from having wrong information. They include the cost, majority of women not knowing where to go for the screening and besides, they may not have the money to pay for the procedure or even afford transport. While some fear stigma e.g. if they were seen going for the screening people would think they are sexually active, while there are others who think the pap test is painful; while others believe there is no cure so need of trying; others are so busy, they have no time to go, others think it is embarrassing to expose themselves to the process and so on, This is what makes morbidity and mortality of cervical cancer in the country very grave as pointed out by Apochie and Colleague, (2009).

Health care givers at clinics 18 and 66 gives the same picture of knowledge gaps among the vulnerable women. They agree that there exists serious knowledge gaps among the patients seen at clinic 18 and 66 at KNH:

**S4:** *“Majority of the patients we see here in the clinics have never heard of HPV virus. For instance, it's a small percentage that has the knowledge about the causes of cervical cancer and therefore they come for screening.*

*Many present with symptoms which they cannot associate with cervical cancer so we recommend that a pap smear be done on them and a good number test positive for cervical cancer. Sometimes we ask them randomly if they have had a pap smear test an majority report that they have never done one. Most of the women have no idea that cervical cancer is a sexually transmitted disease. The women need to know that every sexually active woman needs to be screened for cervical cancer. The major hindrance to screening is socio-economic factor; lack of finances hinders the screening. There is need to empower the women economically so that they can travel to the health facility and also be able to pay for the services, which is done once every year.*

**S4:** *Majority have no knowledge of what HPV is. There is also need for awareness about the issues surrounding HPV and cervical cancer. For instance the women need to have the knowledge that for those who are 35 years and above, once they do 2 to 3 normal pap smears in two consecutive years, then the procedure can be repeated after two or three years. If they have this knowledge, then they can plan knowing that the procedure is not so expensive after all because it can be done once every 2 to 3 years.*

**S3:** *Majority of the patients seen in the two clinics do not have information about cervical cancer in terms causes, symptoms, treatment and prevention from the electronic media. Most of the scanty information that they have has been obtained from health care providers as they come to access other reproductive health services. Others, upon being questioned about presentation of symptoms care givers, are advised to go for cervical cancer screening and unfortunately some test positive for cervical cancer and many get shocked at being given the results.. Such women are not normally aware that they had cervical cancer while coming to the clinics*

*for other services like family planning and fistula. The information is largely lacking in the social media, radio and on television.*

The sister said that if the information can be put out there in local language, then it can go a long way in helping the rural woman come for screening. The gynecologists/oncologist at the Department of the Reproductive Health of the Kenyatta National Hospital also agrees that the knowledge levels among the patients they handle are very low:

**K4:***“Knowledge levels are very low. Not very high but moderate but again what they do with that knowledge is the problem. We get to establish these gaps by asking questions, and we assess about the symptoms, from the time they started experiencing the symptoms and the time they take to come for care etc will point out to what they know or they don’t know. Some do not associate the symptoms they are experiencing with cancer. Most of the patients come very late because of not knowing the symptoms; which again depends on social economic strata. Whereas majority cannot associate the symptoms with cervical cancer while others have been failed by the health care systems which continue treating the wrong ailments such as typhoid and hepatitis. And given that is a disease that mostly affects the older women average of 50/51 years and above, culturally they don’t expect to get STDs because they are not sexually active and so they don’t associate the symptoms with sexual activity especially those who are premenopausal and are discharging does not voice the complain because they don’t expect to be diagnosed with cervical cancer and hence fail to report to the health facility until the disease has progressed to late stages where it cannot be cured. The first time they are ever being seen is the first time they are diagnosed with cervical cancer and by this time the disease has advanced because of not knowing, the symptoms. Its unfortunate majority come to hospital when are really sick; it has to pain them*

*cervical cancer, like any other cancer, does not start by paining once the pain manifests, one may not be helped because the cancer has advanced.*

Another gynecologist at the department, also agrees that knowledge levels are very low among the patients they handle and this hinders the efforts towards the prevention of cervical cancer.

***K2:** Kenyatta National Hospital being a referral hospital, majority of the patients who are referred there from all over the country have no idea what they are suffering from. They get to learn that the symptoms they had been experiencing all along were a pointer to cervical cancer infection.*

*The uneducated may not have even the wrong information leave alone myths about cervical cancer. The educated ones may have some knowledge, but not sufficient enough to make them take positive steps towards cervical cancer prevention. They do not have any knowledge on risk factors either and therefore may not seek medical intervention whenever they experience symptoms that may point to the fact that they could be having, making the cancer situation in the country very grave.*

The head of the reproductive health department also states that knowledge levels are very low. Among the patients. Citing a paper he had published in Pubmed (2013), on ‘Low Survival of Kenyan Women with Cervical Cancer, he says that the knowledge levels are very low at 15.%.:

***K1:** “It’s pretty low, we have done a research on this and published a paper in Pubmed 2013, it looked at among other issues cervical cancer awareness. Awareness was about 15-20%, they hadn’t heard about it the awareness levels were very low” leading to high mortality rates among those diagnosed with cervical cancer*

Myths and misconceptions have further affected the response to seeking treatment for cervical cancer. Many women fail to report symptoms that could be associated with cervical cancer because of having wrong information as to the cause of what they are experiencing. Cultural values and norms also come into play when it comes to issues to do with women's sexually:

***KI:** "Sexuality and values placed especially the older women becomes difficult for them to open up especially when they start to experience signs like bleeding. The fact there is reduced knowledge, it's assumed that after menopause, they stop having children and hence it has nothing to do with the birth canal. They don't come out to say that they are sick because they are perceived as being promiscuous and therefore they might be having STDs hence they keep it to themselves. That is why 80% of our patients are presented to us late with advanced diseases. The same goes to their partners who might run away accusing them infidelity hence gender issues come in when it comes to issues of reproductive health and sexuality".*

He further agrees that risk factors about cervical cancer are largely unknown:

***K1:** "Awareness is equally low and very few women know that cervical cancer is spread by Human Papilloma Virus (HPV) which is an STD. The fact that there is no terminology in Swahili for cervix makes it even difficult to explain its anatomy. Elderly women feel very embarrassed when they are attended to by younger doctors or nurses and therefore fail to open up and talk about the symptoms they are experiencing".*

A sister in clinic 18 also agrees with the gynecologist in charge of the reproductive health clinic that knowledge levels are very low. She laments that risk factors of cervical cancer are not known among the patients they see at the two clinics:



*KI: "Majority of the patients come with symptoms that point to the fact that they have cervical cancer but unfortunately they are not aware. Such symptoms include, heavy bleeding, painful sex and severe lower back pain. Such women are usually screened to rule out the possibility of having cervical cancer but unfortunately the results turn out positive. After diagnosis, some still don't believe and feel they have been bewitched by a relative or neighbor because they are ignorant of the symptoms of cervical cancer; hopelessness comes in, fear and stigma.*

Another problem that compounds the problem of cervical cancer is the issue of wrong information/misinformation. The sister in charge of clinic 66 confirmed this:

*SI "A number of patients have wrong information about cervical cancer. For example, majority cannot differentiate between cervical cancer and uterine cancer. They think any disease affecting their reproductive organs is cervical cancer. Majority do not know causes of cervical cancer or the symptoms. Some think screening is very painful, uncomfortable and causes bleeding because of wrong information and so they stay away thereby missing a chance to be helped".*

*Very few patients handled have suspected that they could be having cervical cancer. This is because cervical cancer has 97% chance of being treated if discovered in early stages when it is still localized and can be removed surgically. If this knowledge was in the public domain, then the cancer situation in the country could not be as grave as it is currently. Majority of the cases received are in stage 2b and 3b which is at a very advanced and cannot be cured.*

When asked about the source of information about the severity of cervical cancer, whether radio or television or other sources, most respondents reported to have received their information from other sources and only a small percentage reported to have

received the information from radio and television. As shown on the entries, in all the items that were being examined, less than 25% received their information from radio and television and only 16.3% had received their information from TV and another 16.4% got their information from radio as shown on table 4.14. Majority at 67.3% received the information from other sources. This relates to the statement of the problem, that the electronic media has not made deliberate efforts to create awareness about cervical cancer the responses from the study indicate so. (Caseciotti D.M. 2011) has also pointed out that electronic media has potential to create awareness about cervical cancer but very little effort has been put to that end.

The sister in charge of clinic 66 also agrees that electronic media has not put in enough effort as it ought to in creating awareness about cervical cancer:

*S4: Majority of the patients seen in the two clinics do not have information about cervical cancer in terms causes, symptoms, treatment and prevention from the electronic media. Most of the scanty information that they have has been obtained from health care providers as they come to access other reproductive health services. Others, upon being questioned about presentation of symptoms by care givers, are advised to for cervical cancer screening and unfortunately some test positive for cervical cancer. Such women are not normally aware that they had cervical cancer while coming to the clinics for other reproductive health services like family planning and fistula. The information is largely lacking in the social media and on television. The sister said that if the information can be put out there in local language, then it can go a long way to help the rural woman come for screening.*

She goes on to say that:

*S4: Radio and television have a big role to play to create awareness about cervical cancer by putting the information in the local language which the*

women can understand. Vernacular FM stations can particularly play a major role in creating awareness about cervical cancer. The sister in charge of clinic 66 stressed the need to empower the women with the right knowledge because poverty is not the absolute issue; if the women are aware that screening is only done once a year, and after thereafter once in two or three years, then they should be able to save money for the pap smear because it is not as expensive as envisaged. The hospital, through Eco bank used the Citizen radio to create awareness about free fistula treatment and the response was overwhelming. If the same can be done for cervical cancer, women will respond in the same manner.

#### 4.3.9 Sources of Information and Cervical Cancer Awareness

The study opted to establish the influence of sources of information and cervical cancer awareness. TV, Radio and other sources were considered in the study. The findings were as presented in table 4.19.

**Table 4.19: Sources of Information and Cervical Cancer Awareness**

	Source of Variation	SS	MS	F	P-value
TV	Between Groups	0.18285714	0.182857143	0.033926757	0.0269386
	Within Groups	64.6771429	5.389761905		
	Total	64.86			
Radio	Between Groups	9794.435	9794.435	9.088757871	0.0110812
	Within Groups	129.3171429	10.77642857		
	Total	9923.752143			
Other	Between Groups	14729.05786	14729.05786	1.707434048	0.5145141
	Within Groups	103.5171429	8.626428571		
	Total	14832.575			

From table 4.19, ( $F=0.033926757$ ,  $p=0.85693868 < 0.05$ ) reveal that TV as sources of information had significant influence on awareness about cervical cancer among women accessing reproductive health services at Kenyatta National Hospital. ( $F=9.088757871$  and  $p=0.0110812 < 0.05$ ) reveal that radio as source of information has significant influence on awareness about cancer among women accessing reproductive health services at Kenyatta National Hospital. Similarly, ( $F=1.707434048$  and  $p=0.5145141 > 0.05$ ) revealed that other sources do not have significance on awareness about cancer among women accessing reproductive health services at Kenyatta National Hospital.

#### 4.4 Electronic Media Sources of Information

The questions asked were to find out whether the respondents owned any or both radio and television, how long they had owned them. Questions were also asked to find out which three programs they watched or listened to most and which among the programs they listened to or watched had messages on cervical cancer. The questions asked in this section also sought to establish which, between the two media channels carried more information about cervical cancer than the other. Questions were also asked to establish sources of the information on cervical cancer apart from radio and television and the responses are computed in the tables below:

##### 4.4.1 TV and Radio Ownership

The researcher sought to establish whether the respondents owned a radio or television or both. Majority responded in the affirmative as illustrated in table 4.20 below:

**Table 4.20: Television and Radio Ownership**

	<b>N</b>	<b>Percent</b>	<b>N</b>	<b>Percent</b>
Television	284	96.3%	295	100.0%
Radio	279	94.6%	295	100.0%

Of the total respondents, 96.3% reported to own a television set while 94.6% reported to own a radio set. This shows that approximately more than 95% of the total respondents owned a radio and/or television and actively used one or both to listen to various programs. This confirms with the Media Council of Kenya research that indicated that more than 94% of Kenyans listened to radio or watched television (CCAB 2012).

This is probably due to its availability, low cost and therefore easy to acquire, even its availability in mobile phones, number of households in Kenya, both in urban and rural areas own radio sets or have access to radio and so listen to various programs. This has been enhanced by the fact many FM stations are now broadcast in vernacular languages and hence giving the radio an edge over other mediums of communication in awareness creation, (CCAB 2012). Radio and television are suitable mediums of advocacy and awareness creation on issues surrounding cervical cancer. This is an indication that radio and television are preferred channels of choice. This is in agreement with a study that was carried out by Synovate (2011), to establish the media habits and landscape in Kenya. The study found out that radio and television were the most preferred channels by Kenyan citizens. Radio was rated at more than 94.0% followed by television at 71.0% according to the study.

#### **4.4.2 Duration of Radio Ownership**

On the duration the respondents had owned radio, the results were as presented in table 4.21 below:

**Table 4.21: Duration You Have Owned a Radio**

<b>Duration</b>	<b>Frequency</b>	<b>Percent</b>
1-5	42	.22.1
5-10	62	29.0
8	7	3.3
9	2	.9
10	48	22.5
12	2	.9
15	9	4.2
16	2	.9
18	3	1.4
20	53	24.9
21	2	.9
22	1	.5
23	2	.9
24	1	.5
25	6	2.8
27	1	.5
28	3	1.4
29	2	.9
30	9	4.2
31	2	.9
35	6	2.8
40	2	.9
50	1	.5

Total	213	100.0
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When asked about the duration they had owned a radio, 22.1% responded to have owned a radio for an average of five years while 54.4% reported to have owned a radio for between 5 and 10 years. This shows that majority of the respondents had owned a radio for a longer period implying that radio was being used in most households for a long time. For instance, 22.5% reported to have owned a radio for more than ten years and another 24.9% have owned a radio for more than 20 years. Most households in Kenya own radio sets, according to a Synovate research carried out in 2011. According to Gazi (2011), majority of Kenyan listeners use radio for diverse reasons such as to get informed through news and public service announcements, entertainment through music, drama programs and for companionship while doing other chores, and hence making radio a suitable and convenient medium of source of information, (Starkey 2008) cited in Gazi (2011)

#### 4.4.3 Duration of Television Ownership

The respondents were asked how long they had owned TV. The results were as presented in table 4.22

**Table 4.22: Duration you Have Had a Television**

	Frequency	Percent
1	4	1.9
1.5	1	.5
2	9	4.2
3	7	3.3
4	12	5.6
5	15	7.0
6	4	1.9

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7	7	3.3
8	8	3.7
9	4	1.9
10	49	22.9
11	1	.5
12	4	1.9
13	2	.9
15	20	9.3
16	1	.5
17	1	.5
18	3	1.4
20	38	17.8
21	1	.5
23	1	.5
25	3	1.4
26	1	.5
27	1	.5
28	1	.5
29	1	.5
30	12	5.6
32	1	.5
35	1	.5
60	1	.5
Total	214	100.0

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On television ownership out of the responses, 22.5% reported to own a television for less than five years. Another 33.7% reported to have owned a television for between 6 and 10 years while the majority 42.9% reported to have owned a television for more than 20 years. A big number of respondents 22.9% reported to have owned television for ten years, followed by 38 (17.7%) who have owned television for 20 years. Another



7.1% reported to have owned television for more than 30 years. Like radio, more than 50% of the respondents have owned television for more than ten years, making it a suitable medium of passing useful information and hence appropriate for this study. Like radio, television has tremendous strength that can make it a medium of choice for many people. For instance, its intrusive impact, audio-visual characteristic, persuasive use of sight/sound/motion, maximum reach and the fact that it can leave a lasting impact in the viewer's mind makes it relevant and hence medium of choice to the consumer (One Booklet 2005).

#### 4.4.4: Other sources of information about cervical cancer

**Table 4.23: Other Sources of Information about Cervical Cancer**

<b>Statement</b>	<b>No</b>	<b>Yes</b>	<b>Total</b>
Health worker/nurse are a source of information on cervical cancer	41.2	58.8	100.0
Doctor is a source of information on cervical cancer	65.3	34.7	100.0
Religious leader is a source of information on cervical cancer	85.2	14.8	100.0
Newspaper is a source of information on cervical cancer	65.3	34.7	100.0
Billboard is a source of information on cervical cancer	90.5	9.5	100.0
Internet is a source of information on cervical cancer	63.2	36.8	100.0
Chief's <i>baraza</i> is a source of information on cervical cancer	95.4	4.6	100.0
Women <i>chamas</i> are a source of information on cervical cancer	79.6	20.4	100.0
Workplace is a source of information on cervical cancer	84.9	15.1	100.0
Friends are a source of information on cervical cancer	67.4	32.6	100.0

Table 4.23 indicates other sources of information that the respondents had about cervical cancer other than radio and television. A big percentage of 58.8% reported to have received their information from health workers/nurse. This was followed by 36.8% reported to receive information from the internet. Doctors and newspapers followed at 34.7% respectively. Friends and relatives were another source of information about cervical cancer at 32.6%. Others reported to have received their information from women *chamas* at 20.4% which is another important source of information about cervical that can be enjoined to create awareness about cervical cancer. Religious leaders were other source of cervical cancer at 14.8%, work place at 15.1% , followed by billboards at 9.5%and chief's *baraza*'s came in last at 4.6%. This is demonstration that whereas radio and television are most preferred channels of information according to a research carried out by Solomon (2014) and Synovate (2011), the two channels are lagging behind when it comes to creating awareness about cervical cancer as majority of the respondents (over 67%) reported to have received their information on cervical cancer from other sources and not from radio or television and that is what formed the focus of this study.

A nurse/health care giver in clinic 18 agrees that health care professionals are the main sources of information about cervical cancer although this should not be the case:

*“The major source of information should be available out there and not in the hospital. The information should be taken right where the women are and not wait until they come to hospital to get the information. This is because majority come when they are presenting symptoms which they cannot associate with cervical cancer and by that time, the cancer has progressed to stage 3 or 4, where it can only be managed and chances of cure are remote.*

*The television and radio have played their role but not adequately. They should team up with health care givers so that, together, they can give out right and professional information based on facts. The women should be informed about all facts about cervical cancer including the procedure, the positioning while the pap smear test is being carried out. There are those who come expecting to be removed blood to be tested for cervical cancer. So once they get to know exactly the procedure is done, some shy away and avoid all together. So provision of right information by radio and television is key to the fight against cervical cancer. As things stand currently, not much is being done by the two media channels. The information should result in action whereby the women act on the information given and come for screening but this has not been seen happening.*

#### **4.3.5 Electronic Media Programs**

The study sought respondents' feelings on the programs aired in Radio and TV and channel preference among respondents were as presented in table 4.24

**Table 4.16: More preferred channel between radio and television**

	<b>Frequency</b>	<b>Percent</b>
Television	207	74.2
Radio	71	25.4
Total	279	100.0

Table 4.24 shows the channel that is preferred by the respondents. When asked about which between radio and television the respondents preferred most, 74.2% reported that

they preferred television while 25.4% preferred the radio. This demonstrates that television was more preferred among the respondents than radio. This can be supported by Soola, (2009) who points out why majority of respondents prefer to use television compared to radio. Television possesses the unique characteristics of sound, sight, and motion, which it combines simultaneously. It also transcends the bounds often imposed by illiteracy on information and knowledge acquisition. In addition, its status conferral on individuals or demonstrated practices is unrivaled (Soola, 2009; Soola, 1999). In other words, television has the capacity of audio-visual presentation of programs and, by virtue of its ownership and operational structure, can be regarded as an urban medium but television has the ability to reach a heterogeneous audience in both rural and urban settings. He also observed that a stocktaking of a typical evening program offering on most television stations reveals that most of the programs are entertainment-centered and hence making a medium of relaxation especially after a day's work.

The author further argues that this type of programming can be useful in creating awareness about cervical cancer; in other words, any entertaining program can be used to pass information successfully. Therefore there is need for relevant stakeholders involved in creating awareness about cervical cancer to work together with radio and television program managers to ensure that information is slotted in programs that attract and entertain targeted audiences.

The head of reproductive clinic at the Kenyatta National Hospital agrees that television has a major role to play in creating awareness about cervical cancer:

*KI: Because of the advantages of reaching a wide audience, television can be a powerful avenue which, if put in correct use can reach many people as long as information is well packaged should be able to stamp out the misconceptions created by the cultural barriers. It should help people be aware of vaccination and help families to allow girls to go for*

*vaccination. I feel it is a very powerful tool which has not been fully utilized as far as cervical cancer is concerned.*

This is supported by the sister in charge of clinic 66 who also agrees that radio and television are appropriate mediums whose potential advantages can be harnessed to create awareness about cervical cancer:

*SI: "Radio and television have a big role to play to create awareness about cervical cancer by putting the information in the local language which the women can understand. Vernacular FM stations can particularly play a major role in creating awareness about cervical cancer. The sister in charge of clinic 66 stressed the need to empower the women with the right knowledge because poverty is not the absolute issue; if the women are aware that screening is only done once a year, and after thereafter once in two or three years, then they should be able to save money for the pap smear because it is not as expensive as envisaged. The hospital, through Eco bank used the Citizen radio to create awareness about free fistula treatment and the response was overwhelming. If the same can be done for cervical cancer, women will respond in the same manner".*

Another gynecologist agrees that there is need for television to create cervical cancer awareness because of its unique characteristics:

*K2: "Bringing awareness to the people that it concerns them and that there are real people who have this condition and they need hope. That will make people be positive about palliative care because even the ones who are very sick they just come for care. Electronic media should help those at home. TV is very powerful because it brings the message home by giving contexts more than radio though radio has good coverage and in all manner of tribes and languages".*

As demonstrated in the study findings, radio and television are not the main source of information about cervical cancer. The two media channels only account for less than 20% each in terms of information that provision while other sources account for more than 67.3%;an indication that the respondents have received very little information about cervical cancer from radio and television. This agrees with Sudenga *et al* (2013) in a study that was carried out in Kisumu to assess the knowledge levels among women. The study found out that 67.0% of the respondents had never heard a single message from any media outlet. Majority had received their information from health care workers. This is despite the fact the two mediums are the most preferred channels by many citizens according to Strategic Public Relations (2012). So there is need to exploit the strengths of the two media channels (radio and television) by relevant stakeholders and to create awareness about cervical cancer.

The study sought to establish the programs that were preferred most by the respondents in either radio and television and the resulted are as shown in table 4.25 and table 4.26

#### **4.3.6 TV Programs Watched Most**

The table below presents most watched program on TV

**Table 4.17: TV Programs Watched Most**

TV programs	N	Percent of Cases
News	255	89.8%
Local drama	94	33.1%
Features	17	6.0%
Advertisements	70	24.6%
Talk shows	76	26.8%
Programs on health	109	38.4%
Interviews	33	11.6%
Documentaries	30	10.6%
Soap operas	77	27.1%
<b>Total</b>	<b>761</b>	<b>100.0%</b>

Table 4.25 shows the frequency of television programs watched most by the respondents. From the results, news ranked highest at 89.8%, followed by programs on health at 38.4%, then local drama at 33.1%. Documentaries, talk shows and advertisements followed at 27.1% 26.8% and 24.6% respectively. This means that for effective awareness creation, information should be targeted at or slotted in between news bulletins or prepared as news items for them to be effective. Programs on health and local drama and soap operas should also be used to create awareness on cervical cancer as they are also rated moderately.

According to information by MCK (2014), majority of women watch news, local dramas, features, advertisements, and documentaries. Information on cervical cancer therefore can be disseminated through the above preferred programs. Radio and television stations can also make announcements in between news or any other serious program. Awareness and education that can be accomplished if a story or feature on cervical cancer can be placed in major media venues and radio and television. Message on risk factors, symptoms and treatment of cervical cancer can also aired during the cancer Awareness Month and the importance of early detection, Various radio and

television programs can be used to pass information about cervical cancer. Majority of Kenyans own radio especially those in the rural areas, especially the vernacular stations and television can be a suitable medium in urban areas or both (MCK 2014).

A gynecologist in the department agrees that radio and television programs can be effective in passing information about cervical cancer:

*K3: The radio and television should inform, educate and advocate for more resources to be allocated to fight cervical cancer. They should create platforms where people can share experiences, advocate for behavior change. News can be used to pass information on cervical cancer. The 'call in' morning programs can be a good time slot for people to ask important questions as opposed to the information on love and relationships which do not help anybody. Such talk shows can be a very helpful source of information. Vernacular radio stations have a very important role to play because they use a language that people can understand. Local leaders, politicians, women reps can use the various programs to pass information on cervical cancer prevention.*

*S4: Another nurse in the department also agrees that radio and television should team up to come up to come up with information on cervical cancer. Radio and television should team up with health workers to craft information that is factually correct, whether in advertisements, news, talk shows or documentaries. The media stations should not work in isolation because they are meant to err when it comes to giving factual information on health matters. There is need for multidisciplinary approach on the issue of cervical cancer awareness and prevention.*

#### **4.3.7: Radio Programs Tuned into Most**

The researcher sought to establish the type of programs listen to most by the respondents and the results are tabulated in table 4.26 below:



**Table 4.18: Radio Programs Tuned into Most**

	Radio Programs	N	Percent of Cases
\$RadioProgs <sup>a</sup>	News	230	82.4%
	Local drama	44	15.8%
	Features	28	10.0%
	Advertisements	83	29.7%
	Talk shows	131	47.0%
	Programs on health	144	51.6%
	Interviews	52	18.6%
Total		712	255.2%

Table 4.26 shows the programs that the respondents tuned into most in radio. Just like the case with television programs, majority of the respondents listened to news more than any other program at 82.4%, followed by programs on health at 51.6%, then talk shows at 47.0%, then advertisements followed at 29.7% . Interviews, local drama at 15.8% and features scored least at 10.0%. This corresponds with Audience Scapes (2010) that pointed out that Kenya media is dominated by news and entertainment and little other type of content, making news and entertainment the most suitable programs to slot in or to be used to create awareness about cervical cancer.

The Synovate survey (2011) also showed that nearly all Kenyans aged 15 and above listen to radio at least once every four weeks. Technology has also played a role in increasing access to this channel. Radio is now more readily available everywhere because people can listen to it on their cell phones, cars, and computers. The cost of receiving has also come down enabling many urban and rural poor to access the medium.

Between radio and television, most respondents reported to use television more at 74.2%, followed by radio at 25.4%. This implies that any advocacy and awareness

campaigns on creating awareness on cervical cancer should target to use television as the most suitable mediums of communication. This is because television has tremendous strength with its intrusive impact, audio-visual characteristics and uses sight, sound and motion and maximum reach and can also leave a lasting impact in the viewer's minds and hence making it a suitable medium of study, while radio can transcend geographical barrier, it is cheap to acquire and can be used simultaneously,(TV One Booklet 2012). This makes the two mediums the suitable choice of focus for the study. Whereas growth in radio has been driven by vernacular and community radio stations, television viewership has been driven by rural electrification and cheaper TV sets, (Synovate 2011).

#### **4.3.8: Programs with Messages on Cervical Cancer**

The study tried to establish which, among the programs watched, contained messages on cervical cancer and the results are as presented in table 4.27 below:

**Table 4.19: Programs with Messages on Cervical Cancer**

<b>Statement</b>	<b>No</b>	<b>Yes</b>	<b>Total</b>
News contain messages about cervical cancer	44.8	55.2	100.0
Local drama contains messages about cervical cancer	94.0	6.0	100.0
Features contain messages about cervical cancer	84.9	15.1	100.0
Advertisements contain messages about cervical cancer	71.6	28.4	100.0
No program contained messages about cervical cancer	81.7	18.3	100.0

Table 4.27 shows the responses showing the programs that contained messages on cervical cancer. Of the total respondents, 55.2% stated that they had seen messages on cervical on television news, while 44.0% denied having watched any program on news with messages on cervical cancer. This was followed by 28.4% who reported to have heard a message on cervical cancer in advertisements. Local drama, features followed at 6.0% and 15.1% respectively and 18.3% stated that none of the programs contained

messages on cervical cancer. It is important to note that a whole 94.0% reported to have heard no message on cervical cancer in the local drama program, 84.9% said they had not heard any message on cervical cancer in the features program and 71.6% reported to have not heard any message of cervical cancer in advertisements. Another 81.7% reported that they had not heard any message of cervical cancer at all in any of the programs they had listened to or watched on television. This is in agreement with information gathered in this study that radio and television are not the main source of information about cervical cancer; accounting for less than 20.0% while information from other sources account for more than 67.0%.

#### **4.3.9: Information Credibility as Presented in TV and Radio\**

The study sought to establish the credibility of the messages as presented on radio and television and whether they were sufficient enough to foster positive behavior change as far as cervical cancer prevention was concerned.

**Table 4.20: Information Credibility as Presented on TV and Radio**

	<b>Frequency</b>	<b>Percent</b>
0	2	0.8
Radio	125	48.2
Television	132	51.0
<b>Total</b>	<b>259</b>	<b>100</b>

Table 4.28 shows the distribution on the medium, between radio and television that contained more information on cervical cancer. According to the responses 51.0% reported that television contained more information on cervical than radio which stood at 48.2% . A small percentage of 0.8% did not give their option. This again could be an indication that television is more preferred medium by majority of respondents than radio as demonstrated on table 4.27 above where television was preferred by 74.2% of

the respondents against radio which had only 25.4%. This could be because of television's entertaining aspect and its audio-visual impact.

#### 4.3.10: Adequacy of the Messages

The study sought to establish whether the messages were adequate enough to foster behavior change and the responses were as recorded in the table below:

**Table 4.21: Adequacy of the Messages**

Adequacy	No	Yes	Total
Messages are clear	62.6	37.4	100.0
Messages are relevant	51.3	48.7	100.0
Messages are educative	29.6	70.4	100.0
Messages caused fear	62.5	37.5	100.0

Table 4.29 shows the responses given to indicate the impact of the messages on respondents. For instance, 62.6% reported that messages were not clear, and another 51.3% stated that the messages were not relevant and only 29.6% indicated that the messages were not educative while 62.5% thought that the messages did not cause fear. It is important to note that a big percentage of 70.4% stated that the messages were educative while 48.7% said the messages were relevant. Another 37.4% indicated that the messages were clear yet another 37.5% thought that the messages caused fear. The mixed responses are an indication of knowledge gaps that exist among the women. So there is need for a different approach to tackling cervical cancer like additional factual information crafted by health professionals together with the media professionals to ensure maximum impact.

As pointed out by Zeisker H, Meyer Hofer K, Joura EA, *et al* (1997), women therefore need additional, clear and factual information on the meaning of both the cervical smear

result and the colposcopy. Women who perceive the information provided to be adequate are less distressed, less likely to fear they have cancer, and more likely to attend for future cervical screening. The most common source of information used by women is usually a friend who had previously experienced a colposcopy, although, given that knowledge does not appear to increase their desire to go for screening, it is unlikely that women receive correct information by this route. That is why this study set out to examine the role the electronic media can play in creating awareness about cervical cancer to make the women take positive steps towards its prevention.

Moreover, women may be highly anxious during consultations and so unable to absorb fully what is being said or to ask questions; information should be provided clearly so that women do not misunderstand or forget what they have been told. Although information leaflets are provided by many colposcopy clinics, some leaflets may be difficult to read particularly as there may be a preponderance of women with low educational attainment among the women with abnormal smears.<sup>66,67</sup> Indeed, information leaflets do not generally take into account that English may not be the first language of many women. Women's fears and misconceptions can be addressed by health professionals either in person or by telephone; both methods significantly increase attendance. Alternatively, the provision of audio-visual educational material in women's preferred language has been shown to improve attendance among ethnic-minority women, (Miller, Siejak, Schroeder *et al* 1997, Cuzick, Singer, 1990).

#### **4.5 The Influence of the Nature of Information on Cervical Cancer Awareness and Prevention**

The section sought to establish what the messages on cervical cancer, whether from radio, television or other sources had done to underlying and deep-seated issues that make women vulnerable to cervical cancer and cause them to fail to take appropriate steps towards its prevention.

**Table 4.22: The Nature of the Messages**

	False		True		Total	
	Count	%	Count	%	Count	%
The messages about cervical cancer left me very	134	48.0	145	52.0	279	100.0
The information has made me aware of the severity of cervical cancer	14	5.0	267	95.0	281	100.0
The messages made me very threatened about	117	41.9	162	58.1	279	100.0
The information made me aware that if I do not go for pap smear, I can die of cervical cancer	78	27.7	204	72.3	282	100.0
The messages made me aware that cervical cancer is a threat to every woman who is sexually active	65	23.3	214	76.7	279	100.0
The messages made me know that cervical cancer can be prevented if detected in early stages	7	2.5	276	97.5	283	100.0
The messages informed that I am in control of my reproductive health situation	17	6.0	264	94.0	281	100.0
The messages gave me hope about prevention and treatment of cervical cancer	14	5.0	266	95.0	280	100.0

Table 4.30 shows the responses that were given over the nature of the messages about cervical cancer as presented by the electronic media. Of the total respondents, 52.0% reported that the messages on cervical cancer left them fearful 95.0% of the respondents stated that the messages made them aware of the severity of cervical cancer, while 58.1% reported that the messages made them threatened about cervical cancer and 72.3% said that they knew that if they did not go for a pap smear test, they can die of cervical cancer. Another 76.7% reported that the messages made them aware that every sexually active woman is in danger of contracting cervical cancer. 97.5% knew that cervical cancer can be prevented if detected early and 94.0% reported to know that women are in charge of their own reproductive health issues. The responses showed that the women are aware of the severity of cervical cancer but the reason why they are not

taking appropriate steps towards its prevention is the focus of this study. It is important to note 48.5% reported that the messages left them very fearful and another 41.9% felt very threatened by the messages. This is almost 50% of the respondents who reacted negatively meaning that there is need to correct the misconceptions out there about cervical cancer and encourage the women to go for screening. Even if there is a big percentage that knows what is supposed to be done to prevent cervical cancer, more than 64.0% reported never to have done a pap smear as reported earlier in this report. This creates an impression that there is still a lot of work to be done in terms of awareness creation by the electronic media with a view to preventing cervical cancer.

A gynecologist at the reproductive health department at Kenyatta National agrees that majority of the women who come for treatment do not have the right information and which causes them a lot of fear and anxiety. This hampers the fight against cervical cancer because the women fail to take the right steps because of fear and wrong information.

*K2: Majority do not have the right information; only 10 to 20% do. Majority do not have any meaningful information that can help them prevent cervical cancer. For instance, if the women knew that HPV is the main cause of cervical cancer, then they would be more careful about their sexuality. There is need therefore for systematic approach to help the women. For example, a number of patients need psychological care because they fear so much; in fact some are so stressed that they end up dying of stress as opposed to the disease-related complications. Awareness is key in controlling cervical cancer. A lot of information need to be corrected on this whole issue. If women knew that routine screening can help prevent cervical cancer, then they would embrace that but unfortunately some wait until the symptoms manifest and at that time it is too late. Issues surrounding cervical cancer vaccine need to be highlighted because the vaccine can prevent 95% of the cases. There is need also need for the vaccine to be administered to the boys because they are the*

*ones who carry the HPH that causes cervical cancer. Misconceptions surrounding the vaccine should also be addressed by the media and other stakeholders.*

The gynecologist's sentiments can be supported by a number of authors who have pointed out that women stay away from information and preventive strategies of fear and anxiety.

The receipt of an abnormal cervical smear result, and of referral for colposcopy, causes anxiety, fear and distress in a large number of women, although the degree of anxiety experienced varies, (McDonald *et al.*, 1993). The most distressing period appears to be the receipt of the abnormal smear result; however, women's anxieties diminish following colposcopy and treatment. The primary cause of distress appears to be fear. Many women are frightened of medical procedures, believe that the abnormal smear is indicative of cancer and that their reproductive ability will be threatened, (Kavanagh & Broom, 1997; Miller, 1995). The resulting anxiety and fear can have severe effects on day-to-day functioning; for example, depressed mood and decreased libido. This situation causes women stay away from information that may point to the fact that they could be having cervical cancer, leading to the high cervical cancer being reported in the country.

#### **4.6 Factors That Hinder Access to Information about Cervical Cancer and Participation In Screening Programs**

The section sought to establish factors that hinder women from participating in cervical cancer prevention information and programs. The results are as presented in table 4.31 below:



**Table 4.23: Reasons for not participating in cervical cancer screening and awareness programs**

	No	Yes	Total	
	Count	%	Count	%
If I go for cervical cancer screening people will think	140	50.4	138	49.6
If I go for cervical cancer screening I fear I might test	100	38.3	161	61.7
I will not go for screening because the procedure is	34	12.2	245	87.8
I will not go for cervical cancer screening because I	21	7.7	253	92.3
I am HIV positive so I will also test positive for cervical cancer so I will not go for screening	40	14.6	234	85.4
I do not want to go for screening because I do not	35	13.1	233	86.9
I have no symptoms so I will not go for cervical	63	24.0	199	76.0
I am too young to go for cervical cancer screening	45	16.6	226	83.4
I am too old to be infected with cervical cancer so I will not go for screening	56	20.7	214	79.3
I will not go for screening because I have no money for transport and treatment	82	38.5	131	61.5
I will not go for cervical cancer screening because I do not know the benefits	72	34.3	138	65.7
I will not take any step towards cervical cancer prevention because I am not at risk	144	69.9	62	30.1

Table 4.31 above shows the responses given to indicate reasons why women fail to participate in cervical cancer awareness and prevention programs. For instance more than 50% of the respondents indicated that they will not participate in cervical cancer prevention programs because of wrong information or misinformation. A whole 92.3% reported that they would not go for screening because they would die anyway, so why try? This is a major impediment to the fight against cervical cancer because women fail to take appropriate steps because of fear of death yet cervical cancer is not a death

sentence because they is cure when the disease is detected in its early stages. Another 87.8% reported that they could not go for screening because the procedure is painful, while 86.9% said they failed to go for screening because of fear; they did not want to know their status. Another big percentage, 85.4% reported that they could not go for screening because they are HIV positive so they will also test positive for cervical cancer. Again this is an assumption that is based on wrong information because whereas HIV positive women are more prone to cervical cancer infection, not all HIV positive women have cervical cancer. Another 83.4% felt they were too young to go for cervical cancer screening while 79.3% felt that they were too old to get cervical cancer. Basically, the responses given as to why women fail to participate in cervical cancer prevention programs can be associated with lack of proper information. This is why the current study sought to establish the role electronic media in creating awareness about cervical cancer.

Furthermore, the findings agree with what several authors have given on reasons women give for not participating in a cervical screening program. They include lack of knowledge about the test and its indications; considering the test unnecessary or of no benefit, or considering oneself not to be at risk of developing cervical cancer as pointed out by Wathoove (1998), Doyle, 1991 Bonelli, Brance *et al*(1996). Other reasons given as to why they fail to take steps towards cervical cancer prevention is fear of embarrassment or pain, as pointed out by Summers , Fullard, (1995) and Peters, Moyare, Bear MS, and Thomas (1989). In addition, certain groups of women may experience particular problems. Furthermore, McAvoy , Raza (1991) have argued that women of low socio-economic status may be less likely to have been screened. There is some evidence that ethnic-minority women, particularly those of Asian origin and Africa, are less likely to participate because of poverty levels and other socio-economic issues. Finally, postmenopausal women are less likely to be screened regularly and non-participation may be a result of uncertainty as to whether the smear test is appropriate for their age group, (Murray M, Mcmillan C. 1993). Yet this is one age group that is

affected by cervical cancer because of weakened immune system and if they happen to be sexually active.

This can be corroborated by information given by the gynecologists at the Reproductive Health Department at the Kenyatta National Hospital:

*K4: “Most of the patients come very late because of not knowing the symptoms or harboring wrong information. Which again depends on social economic strata. Majority cannot associate the symptoms with cervical cancer while others have been failed by the health systems which continue treating the wrong ailments such as typhoid and hepatitis. And given that is a disease that mostly affects the older women average of 50/51 years and above, culturally they don’t expect to get STDs because they are not sexually active and so they don’t associate the symptoms with sexual activity especially those who are premenopausal and are discharging does not voice the complain because they don’t expect to be diagnosed with cervical cancer and hence fail to report to the health facility until the disease has progressed to late stages where it cannot be cured. The first time they are ever being seen is ‘the first time they are diagnosed with cervical cancer and by this time the disease has advanced because of not knowing, the symptoms have been there for a while.. Culturally, basically the more learned someone is the easy access they have to information and bargaining power for care that could be preventive is higher than someone who illiterate is less learned who end coming to hospital when are really sick; it has to pain them and associated with lower economic strata and so they cervical cancer does not start by paining you that would influence their coming later”*

This notion has been supported by another gynecologist in the department who says:

**K3:** “Sexuality and values placed especially the older women becomes difficult for them to open up especially the older women mostly when they start to experience signs like bleeding. The fact there is reduced knowledge, it’s assumed that after menopause, they stop having children and hence it has nothing to do with the birth canal. They don’t come out to say that they are sick because they are perceived as being promiscuous and therefore they might be having STDs hence they keep it to themselves. That is why 80% of our patients are presented to us late with advanced diseases. The same goes to their partners who might run away saying that they have not been faithful to them hence gender issues come in”.

**K3:** Inadequate and non- accessible health facilities in the rural areas, coupled with taboos and cultural barriers, stigma contribute to the inevitable under- reporting of cases in many African countries, Kenya included. Rural women tend to shy from reporting symptoms related to the genital tract such as vaginal discharge and post- coital bleeding. They are also most reluctant to submit to pelvic examination as a result of fear and stigma. This situation points to lack of correct information, misconception that leads to low levels of knowledge leading to wrong decisions i.e. women go to health facilities when the disease has advanced to late stages where the disease cannot be prevented or cured.

The answers are an indication that a sizable number of the respondents had not taken positive steps towards cervical cancer prevention and underscores the need for spirited efforts towards prevention initiatives.

A gynecologist at Kenyatta national Hospital’s reproductive health clinic states that failure by the women to take positive steps towards cervical cancer prevention may be a pointer to many factors:

**K2:**“KNH being a referral hospital, majority of the patients who are referred there from all over the country have no idea what they are suffering from. They get to learn that the symptoms they had been experiencing all along were a pointer to cervical cancer but they had not anything about them.

*The uneducated ones may not have even the wrong information leave alone myths about cervical cancer. The educated ones may have some knowledge, but not sufficient enough to make them take positive steps towards cervical cancer prevention. They do not have any knowledge on risk factors either and therefore may not seek medical intervention whenever they experience symptoms that may point to the fact that they could be having, making the cancer situation in the country very grave. There are those who may wish to take some positive steps but fear, stigma and poverty keeps them away and hence expose themselves to dangers of cervical cancer.*

#### **4.6.1 Intervening Variables**

The study also looked at intervening variables that hindered the knowledge processing behavior of the respondents and their failure to expose themselves to proper information and prevention initiatives and the results were computed in the table below:

**Table 4.24: Intervening Variables**

	No		Yes		Total	
	Count	%	Count	%	Count	%
Cervical cancer screening is not for married women	120	43.2	158	57.0	278	100.0
My neighbour went for screening but still died so why should I go?	70	28.0	180	72.0	250	100.0
Culturally, women of my age do not go for cervical cancer screening	31	11.5	245	90.7	270	100.0
I am faithful to one partner so I am not at risk	23	8.3	253	92.0	276	100.0
I will not for cervical cancer screening because my womb might beremoved	42	15.2	234	85.0	276	100.0
I will not go for cervical cancer screening because I am bewitched	27	10.3	233	90.0	260	100.0
I will consult a witch doctor to treat me for the symptoms am experiencing	66	25.0	199	75.0	265	100.0
If I go for cervical cancer screening, people might know my status and I will lose my	44	16.0	230	84.0	274	100.0
Cervical cancer is a death sentence	58	21.3	214	79.0	272	100.0
I have never had children so I don't need to go cervical cancer screening	88	40.0	132	60.0	220	100.0
My neighbour told me screening for cervical cancer is very painful	89	38.6	138	63.0	230	100.0
I will not go for screening because my husband will chase me away	66	31.4	144	68.5	210	100.0
If my husband knows that I have gone for cervical cancer test he will chase me away	60	25.0	180	75.0	240	100.0
I will not go for cervical cancer screening because I don't want a young male doctor	50	23.0	170	72.2	220	100.0
If I go for the test, I might test positive and die	52	21.0	198	79.2	250	100.0
I will not want to know my status because I don't have money for treatment	72	30.0	168	70.0	240	100.0
I will not go for cervical cancer screening because it is embarrassing	70	26.0	200	74.1	270	100.0

Table 4.32 above shows the responses given that demonstrate how intervening variables hamper women's reception of cervical cancer prevention messages and hence prevent them from taking steps to prevent cervical cancer infection. Intervening variables are a great hindrance to any communication initiative because they interfere with how a message is received and acted upon. From the responses given, it can be seen that more than 70.0% of the respondents reported to be harboring other underlying issues that hinder them from taking positive steps towards cervical cancer prevention and control. For instance, 90.7% felt that culturally, it is wrong to go for cervical cancer screening, while 92.0% felt they are not at risk, another 85.0% are fearful; they feared that their wombs might be removed so they would stay away from any preventive initiatives. Another 90.0% reported to have been bewitched and 75.0% reported that they would consult a witch doctor for treatments and 84.0% reported that they would not want people to know their status because they might be stigmatized and lose their friends. Another 79.2% fear death so much that they would not want to know their status; they would rather die silently.

The responses are in line with what the WHO has pointed out. According to WHO (1994), inadequate and non-accessible health facilities in the rural areas, coupled with taboos and cultural barriers, stigma contribute to the inevitable under-reporting of cases in many African countries, Kenya included. Rural women tend to shy from reporting symptoms related to the genital tract such as vaginal discharge and post-coital bleeding because they think it is embarrassing especially if the examination is being done by a young male doctor. They are also most reluctant to submit to pelvic examination as a result of fear and stigma. This situation points to lack of correct information, misconception that leads to low levels of knowledge leading to wrong decisions. For instance, majority of the women go to health facilities when they experience symptoms and the disease has advanced to late stages where it cannot be prevented or cured, (WHO 1994).

Many women have given various reasons for not participating in cervical screening programs. They include lack of knowledge about the test and its indications; considering the test unnecessary or of no benefit, or considering oneself not to be at risk of developing cervical cancer. Wathoove, 1998; Doyle *et al*, (1996) have cited more reasons such as fear of embarrassment or pain. Summers and Fullard, (1995) and Peters, Moyare, Bear and Thomas, (1989) have also pointed out that certain groups of women may experience particular problems and symptoms but fail to report them to a health care facility due to fear. The authors further argue that the women of low socio-economic status may be less likely to be screened due to a number of problems such as poverty whereby majority poor cannot even afford transport to travel to a health care facility, many of which are based in urban centers to be screened leave alone pay for the procedure. Myths and misconceptions that exist in Africa where issues of reproductive health are not discussed openly.

This is in line with what a gynecologist at the reproductive health clinic who pointed out those myths and misconceptions have hampered the fight against cervical cancer.

**K3:** *A gynecologist in the department points out that any vaginal discharge is associated with an STD and women fear going to hospital because of a discharge because it is shameful and so it is kept secret; not opening up to get help. Cultural issues come into play. For instance, older women are not expected to be sexually active, so when they experience abnormal reproductive health issues, they shy away from seeking medical help because they feel that they will be ostracized and in the process, the situation is getting worse. Some women think that if the cancer is touched it will spread, while all they need is a biopsy or other treatment for preventive while they need treatment procedures for early cancer so guarded for surgery because they say it will spread. There are some patients who know about symptoms as being related to a sexual activity, but they cannot voice it and instead blame themselves and stay away from seeking medical care. When a co-wife dies of cervical cancer, it may not occur to the surviving wife that the husband could be the one carrying the HPV, the virus that causes*



*cervical cancer because culturally, she cannot discuss her husband in negative light but choose to remain silent.*

#### 4.6 ANOVA Test Results

The researcher went ahead to investigate whether the sources of information for the respondents had influenced cervical cancer awareness. One way analysis of variance (ANOVA) was conducted on each entry. The results were as presented in tables below;

**Table 4.25: Level of Knowledge and Cervical Cancer Awareness per age category**

		N	Mean	Std. Deviation	Std. Error	Mean square btw groups	Mean square within groups	F	Sig (p)
Correct Pct. Others	18-28 yrs	116	60.0510	34.81882	3.23285	356.332	1252.801	.284	0.837
	29-39 yrs	114	64.2058	34.82158	3.26134				
	40-59 yrs	38	61.8301	37.79785	6.13162				
	60-69 yrs	3	67.0635	50.98705	29.43738				
	Total	271	62.1259	35.25395	2.14152				
Correct Pct. TV	18-28 yrs	116	21.9255	28.08126	2.60728	463.690	860.280	.539	0.656
	29-39 yrs	114	17.0355	29.53333	2.76605				
	40-59 yrs	38	20.2060	32.12378	5.21116				
	60-69 yrs	3	19.4444	33.67877	19.44444				
	Total	271	19.5999	29.25532	1.77713				
Correct Pct. Radio	18-28 yrs	116	18.0235	23.50274	2.18217	35.440	643.260	0.055	0.983
	29-39 yrs	114	18.7587	26.25859	2.45934				
	40-59 yrs	38	17.9639	28.32997	4.59573				
	60-69 yrs	3	13.4921	17.55027	10.13266				
	Total	271	18.2743	25.22907	1.53256				

One way ANOVA was conducted to establish whether the amount of correct information obtained from the respondents depended on age group. For other sources, ANOVA results; (F= 0.284, p=0.837>0.05) for the mean level of information accessed by each age group revealed insignificant influence of information from other sources and cervical cancer awareness. For TV, (F=0.539 and p=0.656>0.05) for the mean level of information from TV revealed that the influence of information accessed through TV had insignificant effect on cervical cancer awareness. Similarly, (F=0.055 and p=0.983)

for information accessed through radio revealed statistically insignificant influence of information access through radio and cervical cancer awareness.

**Table 4.26: Level of Knowledge and Cervical Cancer Awareness per Marital status**

		N	Mean	Std. Deviation	Std. Error	Mean sq btw grp	Mean sq within grp	F	Sig
CorrectPct.Others	Married	217	20.0252	29.21726	1.98340	1889.786	1240.815	1.523	.209
	Single	42	61.8125	35.03947	5.40671				
	Widowed	8	51.8398	41.83821	14.79204				
	Separated	3	23.2323	20.17675	11.64905				
	Total	270	62.2624	35.32779	2.14998				
CorrectPct.TV	Married	217	20.0252	29.21726	1.98340	1019.880	857.049	1.190	.314
	Single	42	14.1889	26.17604	4.03905				
	Widowed	8	21.9697	39.03432	13.80072				
	Separated	3	43.7710	49.13634	28.36888				
	Total	270	19.4388	29.30640	1.78353				
CorrectPct.Radio	Married	217	16.7014	23.66318	1.60636	1021.497	633.661	1.612	.187
	Single	42	23.9986	29.27069	4.51657				
	Widowed	8	26.1905	39.26767	13.88322				
	Separated	3	32.9966	29.01880	16.75401				
	Total	270	18.2987	25.25840	1.53718				

From the results table 4.34, for television those who are separated had the highest index of 43.8 with standard deviation of 49.1 while those who are single had the lowest with an index of 26.1 with a mean of 14.1. For radio, the results were a bit different in that those who are married had the lowest index of 23.6 with a mean of 16.7 while those who are separated had the highest with a mean of 32.9 with index of 29.0. This implies any

messages on cervical cancer awareness should take into consideration the marital status when choosing the correct medium of communication. The results of one way ANOVA on the respondents and marital status and access of information; ( $F=1.523$  and  $p=.209$ ), ( $F=1.190$  and  $p=.314$ ) and ( $F=1.612$  and  $p=.187$ ) reveal statistically insignificant influence of marital status in the level of awareness about cervical cancer obtained from other sources, TC and radio respectively.

**Table 4.27: Level of Knowledge and Cervical Cancer Awareness per Level of Education**

		N	Mean	Std. Deviation	Std. Error	Mean Square Between Groups	Mean Square Within Groups	F	Sig (p)
CorrectP ct.Others	Primary and below	29	66.9298	34.44856	6.39694	1265.139	1244.888	1.016	.240
	Secondary	86	58.0404	35.81289	3.86180				
	College/University	145	63.5969	35.61926	2.95802				
	Postgraduate	6	77.4537	15.60549	6.37092				
	Total	266	62.4764	35.28621	2.16354				
CorrectP ct.TV	Primary and below	29	9.7977	18.02885	3.34787	1093.894	840.791	1.301	.763
	Secondary	86	19.2560	30.17861	3.25424				
	College/University	145	21.2775	30.31386	2.51743				
	Postgraduate	6	15.2778	17.01035	6.94444				
	Total	266	19.2370	29.04577	1.78091				
CorrectP ct.Radio	Primary and below	29	23.2724	31.20320	5.79429	1525.300	622.214	2.451	.011
	Secondary	86	22.7035	28.99855	3.12699				
	College/University	145	15.1256	21.06827	1.74962				
	Postgraduate	6	7.2685	8.51726	3.47716				
	Total	266	18.2866	25.14831	1.54194				

From the results presented in table 4.32, for the mean level of information accessed by each age group, it can be noted that those with primary education and below had the lowest index of 18 and a mean of 9.8 while those with university/college education had the highest index of 30.3 with a mean of 21.2. For radio, those with primary education and below had the highest with the mean of 32.2. The ANOVA results ( $F=1.016$ ;  $p=0.240$ ) reveal statistically insignificant influence of the education levels and the level of awareness obtained from other sources. Similarly, ( $F=1.301$  and  $p=0.763$ ) revealed statistically insignificant influence of education level and level of awareness obtained from TV. On the other hand, ( $F=2.451$  and  $p=0.011$ ) revealed that the influence of education level on amount of awareness obtained from radio is statistically significant.

**Table 4.28: Level of Knowledge and Cervical Cancer Awareness per Income Levels**

	Income Range	N	Mean	Std. Deviation	Std. Error	Mean Square Between Groups	Mean Square Within Groups	F	Sig
Correct Pct. Other s	.00								
	Kshs 10,000-20,000	61	60.6306	34.95697	4.47578	1589.262	1157.406	1.373	.240
	Kshs 30,000-40,000	33	63.6641	33.48256	5.82857				
	Kshs 50,000-60,000	14	73.6222	32.99502	8.81829				
	Kshs 70,000-80,000	4	51.8347	35.50912	17.75456				
	Kshs 90,000-100,000	3	94.4444	9.62250	5.55556				
	Total	116	63.2178	34.29551	3.18426				
Correct Pct. TV	.00	1	.0000	.	.				
	Kshs 10,000-20,000	61	18.7252	28.42149	3.63900	407.586	788.908	.517	.763
	Kshs 30,000-40,000	33	18.7138	26.34108	4.58539				
	Kshs 50,000-60,000	14	19.3773	28.76221	7.68702				
	Kshs 70,000-80,000	4	35.7843	41.51356	20.75678				
	Kshs 90,000-100,000	3	5.5556	9.62250	5.55556				
	Total	116	18.8869	27.79081	2.58031				
Correct Pct. Radio	.00	1	87.5000	.	.				
	Kshs 10,000-20,000	61	20.6442	23.94912	3.06637	1610.466	514.922	3.128	.011
	Kshs 30,000-40,000	33	17.6221	25.12649	4.37396				
	Kshs 50,000-60,000	14	7.0005	7.63019	2.03925				
	Kshs 70,000-80,000	4	12.3810	20.55908	10.27954				

Kshs 90,000- 100,000	3	.0000	.00000	.00000
Total	11	17.895	23.7182	2.20218
	6	3	3	

One way ANOVA was conducted to establish whether the level of awareness obtained by the respondents from various sources depended on the income levels. From table 4.34, those whose incomes were between Kshs 90,000 and 100,000 had the lowest with a mean of 5.5 with an index of 9.6 while those who earned between kshs 70,000 and 80,000 had the highest with a mean of 35.7 and an index of 41.5. For radio, the results were similar to those of TV in that those whose income levels were high had the lowest index while those with the lowest incomes had the highest. Those whose incomes were over Kshs 90,000 were the lowest with a mean and index of zero while those with incomes between Kshs 10,000 and 20,000 were the highest with a mean of 20.6 and an index of 2. One way ANOVA test revealed ( $F=1.373$  and  $p=.240$ ;  $F=.517$  and  $p=.763$ ;  $F=3.128$  and  $p=.011$ ) for the influence of income on other sources, TV and Radio respectively. The results imply that income level had statistically insignificant influence on amount of correct information obtained.

**Table 4.29: Level of Knowledge and Cervical Cancer Awareness per Income levels**

	Income Range	N	Mean	Std. Deviation	Std. Error	Mean Square Between Groups	Mean Square Within Groups	F	Sig
CorrectP	.00								
ct.Other	Kshs 10,000-20,000	61	60.6306	34.95697	4.47578	1589.262	1157.406	1.373	.240
	Kshs 30,000-40,000	33	63.6641	33.48256	5.82857				
	Kshs 50,000-60,000	14	73.6222	32.99502	8.81829				
	Kshs 70,000-80,000	4	51.8347	35.50912	17.75456				
	Kshs 90,000-100,000	3	94.4444	9.622504	5.55556				
	Total	116	63.2178	34.29551	3.18426				
CorrectP	.00	1	.0000	.	.				
ct.TV	Kshs 10,000-20,000	61	18.7252	28.42149	3.63900	407.586	788.908	.517	.763
	Kshs 30,000-40,000	33	18.7138	26.34108	4.58539				
	Kshs 50,000-60,000	14	19.3773	28.76221	7.68702				
	Kshs 70,000-80,000	4	35.7843	41.51356	20.75678				
	Kshs 90,000-100,000	3	5.5556	9.62250	5.55556				
	Total	116	18.8869	27.79081	2.58031				
CorrectP	.00	1	87.5000	.	.				
ct.Radio	Kshs 10,000-20,000	61	20.6442	23.94912	3.06637	1610.466	514.922	3.128	.011
	Kshs 30,000-40,000	33	17.6221	25.12649	4.37396				
	Kshs 50,000-60,000	14	7.0005	7.63019	2.03925				
	Kshs 70,000-80,000	4	12.3810	20.55908	10.27954				

Kshs 90,000- 100,000	3	.0000	.00000	.00000
Total	11	17.895	23.7182	2.20218
	6	3	3	

One way ANOVA was conducted to establish whether the level of awareness of the respondents obtained from various sources depended on the income levels. From table 4.34, those whose incomes were between Kshs 90,000 and 100,000 had the lowest with a mean of 5.5 with an index of 9.6 while those who earned between kshs 70,000 and 80,000 had the highest with a mean of 35.7 and an index of 41.5. For radio, the results were similar to those of TV in that those whose income levels were high had the lowest index while those with the lowest incomes had the highest. Those whose incomes were over Kshs 90,000 were the lowest with a mean and index of zero while those with incomes between Kshs 10,000 and 20,000 were the highest with a mean of 20.6 and an index of 2. One way ANOVA test revealed ( $F=1.373$  and  $p=.240$ ;  $F=.517$  and  $p=.763$ ;  $F=3.128$  and  $p=.011$ ) for the influence of income on other sources, TV and Radio respectively. The results imply that income level had statistically insignificant influence on amount of correct information obtained.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

The chapter presents a summary of the research findings, conclusions and recommendations of the study based on the study objectives. Suggestions for further research have also been given based on the gaps that were identified during the study. The main objective of the study was to examine the influence of electronic media in creating awareness about cervical cancer among women accessing reproductive health services at the Kenyatta National Hospital, in Nairobi County. The specific objectives of the study were: to establish the knowledge levels about cervical cancer among women seeking reproductive health services at Kenyatta National Hospital; to establish the influence of the electronic media sources of cervical cancer information on women seeking reproductive health services at Kenyatta National Hospital; to describe the nature and influence of cervical cancer messages targeted at the women seeking reproductive health services at Kenyatta National Hospital and to explain the obstacles that hinder access to information and prevent women from participating in cervical cancer screening programs.

However, despite the grim picture of the situation of cervical cancer, there has not been a deliberate effort by the electronic media to give it the attention and create awareness about cervical cancer prevention and control. Issues on vulnerability to cervical cancer infection, fear, stigma, culture, anxiety, and poverty are never brought to the fore in the form of electronic media campaign strategies as witnessed in other areas such as family planning, malaria, diarrhea, all which are curable, ( Steel *et al* 2005). As a result, many more women continue to die every day as a result of cervical cancer. This is what informed this study.

The literature reviewed in this study by various scholars showed that cervical cancer was still a life-threatening disease worse than HIV/AIDS worldwide and is killing many women in their reproductive age, with over 10 million new cases of cervical and more than 6 million deaths annually. Two decades ago, these figures were 6 million and 4 million compared to today, (Zomatis *et al* 1990). Of the ten million cancer cases each year, 4.7 million are in the less developed countries. In approximately 20 years time, the number of deaths annually due to cancer will increase from about 6 million to 10 million, (WHO, 2001). In sub-Saharan Africa cervical cancer accounts for 22.2% of all cancers in women and it is also the most common cause of cancer death among women, (Parkin *et al.*, 2003). In Kenya, cervical cancer is the second most frequent cancer among and the leading cause of cancer deaths in women of reproductive age, ( Lewis, 2004).

## **5.2 Summary of the Research Findings**

The study used systematic random sampling to pick 295 respondents for data collection for quantitative data from among women seeking reproductive health services at the Kenyatta National Hospital, in Nairobi County. For qualitative data, the study selected four gynecologists/oncologists and five health care givers (nurses) within the study site (Kenyatta National Hospital reproductive health department's clinics 18 and 66)). The respondents were selected using purposive sampling for participate in the interview schedule.

From the data collected, there was clear evidence that knowledge levels about cervical cancer were still very low among the respondents. And whatever knowledge they had was riddled with myths and misconceptions, misinformation and fear that hampered women's screening and prevention efforts. From the information collected from the health professionals, there was a clear indication that women, especially those above 40 and 50 years felt shy to seek treatment for cervical cancer or report symptoms because of shame, stigma, fear and anxiety. And cervical cancer, like any other cancer, once the

pain is experienced, it has progressed to stages three and four where cure is not feasible. So awareness on any issue surrounding cervical cancer need to be done the same way it is done for HIV/AIDS and other diseases.

### **5.2.1 Respondent demographic characteristics**

Majority of the respondents were aged between 18-28 and 29 -39 at 42.2% respectively; 40-59 were 14.6% while 60-69 were the least at only 1.0%. On education levels, 11.0% never finished primary school level, 32.62% had some high school education and 54.3% had at least a college/university education; and 2.1% had some postgraduate training. On income levels, majority of the respondents, 57.3%, had no gainful employment and only 42.7% were gainfully employed. Even for those that were gainfully employed, more than 80% earned less than Kshs 40,000 per month.

### **5.2.2 Knowledge Levels about Cervical Cancer**

The study established that knowledge levels on causes, symptoms, risk factors, treatment, control and prevention of cervical cancer were very low at less than 50% among the respondents. But even in cases where more than 50% reported to have some high level knowledge about the risk factors of cervical cancer, there was no positive correlation between the knowledge they possessed and appropriate actions towards the prevention of cervical cancer because more than 68.2% reported to have never had a pap smear test. Myths, fear, stigma and misconceptions hampered women's ability to take positive steps towards prevention of cervical cancer. However, the fact that many women continue to die of cervical cancer demonstrates that there was a disconnect between information dissemination and positive behavior change about cervical cancer prevention and control and hence the focus of this study.

The study also established that whereas radio and television are powerful mediums of communication, they have not taken deliberate efforts to create awareness and employ spirited campaigns towards the prevention and control of cervical cancer as only less

than 20.0% reported to have received their information from radio and television. Another key research finding was that the two media channels were not the main source of the information the women had about cervical cancer, as only less than 17.0% of the respondents reported to have received their information from radio and television and more than 60.0% of the respondents reported to have received their information from other sources such as health care givers, friends and neighbors, relatives, women *chamas*, religious leaders and other women who had undergone the cervical cancer screening.

Again, the fact that more than 60.0% of the respondents have never done a pap smear casts doubt on the effects of the information they receive from radio, television and other sources. Another more than 60.0% reported to have taken no step towards the prevention of cervical cancer as a result of the information they had received also points to gaps between levels of information and positive behavior change. Whereas a majority acknowledged the severity of cervical cancer, they had not taken any step to correspond to the information they reported. And that informed the current study; that the electronic media and other relevant stakeholders have not put deliberate efforts to create awareness about cervical cancer to help the women realize their own vulnerability and take a cue to action as pointed out in the two theories that were used in the study e.g the Health Belief Model (HBM)(Rosenstock, 1994) and the Transtheoretical (Stages of Change) Model, by Prochaska (2013)

More than half of the respondents 63.1% reported to have never heard of HPV (Human Papilloma Virus), which is the main cause of cervical cancer and only (36.9%) had heard of HPV. However, even those that have heard about it, is not known what they have done with that information, because a large percentage 65.4% had never done a pap smear thereby endangering their lives to cervical cancer infection.

The study findings demonstrated very low knowledge levels about cervical cancer. Of the 225 women who responded to the question, only about 34.6% had an idea of what

cervical cancer was while 35% had no idea what cervical cancer was by responding “I don’t know”. Another 14.5 gave wrong answers, based on wrong information. When asked whether they have ever done a pap smear, most of the respondents, at 65.4% reported to have never done a pap smear and only a small percentage (31.8%) reported to have done a pap smear. This information points out to the knowledge gaps that exist among the women.

The study also established that majority of the respondents did not know the symptoms of cervical cancer as more than 60% of the respondents did not know about the symptoms. Another cumulative 47.6.7% did not know about prevention and treatment. But again, whether they knew the causes, the symptoms and severity of cervical cancer, the fact that there is no corresponding action to demonstrate the knowledge levels is an issue of concern and the focus of the study.

### **5.2.3 Influence of Electronic Media Sources**

The study sought to establish the influence of electronic media sources. The study sought to establish how information about cervical cancer they received from electronic media sources, (radio and television) from the programs they watched on television or listened to on radio, and how the information had influenced their behavior in terms of cervical cancer prevention. Out of those responded to the question, 94.6.0% reported to own a radio while 96.3% reported to own a television. This is an indication that the two mediums are a popular gadgets owned by the majority of the respondents. More than 60% have owned either radio or television for more than five years. When asked about which between the two they used most, television was more popular at 74.2% while radio followed at 25.4%. This is an indication that television was a preferred medium and a better source of information about cervical cancer compared to radio. That means that any awareness programs should target television as opposed to radio. On programs watched or listened to mostly by respondents on either radio and television, news came in first at 89.8%, followed by programs on health at 38.4%, followed by local drama at

33.1%, then soap operas at 27.1%, talk shows at 26.8% and advertisements at 24.6%. This is an indication that majority of the respondents listened to or watched news more than any other program. This implies that any awareness messages should be crafted as a news item or slotted in between the news for it to have maximum reach, followed by programs on health, local drama, soap operas, and advertisements respectively.

On which programs among those that they watched on television or listened to on radio contained information about cervical cancer, again news topped at 55.2% followed by advertisements at 28.4% and followed by features at 25.1% and another 18.3% stated that none of the programs contained messages on cervical cancer. The respondents also stated that between radio and television, television contained more information about cervical cancer at 51.0% followed by radio and 48.3%.

When asked about other sources of information on cervical cancer apart from radio and television, most of the respondents reported to have received their information from health care givers at 58.8%. This was followed by internet at 36.8%, doctors and newspapers at 34.7% respectively. Women *chamas* followed closely at 20.4%, work place at 15.1% followed by religious leaders at 14.8%. Others reported to have received information from the bill boards (9.5%) and chief's baraza at 4.6%. This means that the electronic media is not the main source of information the women have on cervical cancer. Therefore there is need for the two media channels to incorporate these other sources and have a multispectral approach in creating awareness about cervical cancer. These views were voiced by one gynecologist and healthcare givers who argued that there is need to incorporate other sources such as women *chamas*, politicians, health professionals, women reps in the counties and use the vernacular radio stations to pass information on cervical cancer.

On clarity of the messages, majority of the respondents indicated that the messages were not clear at 62.6%, another 51.3% said the messages were not relevant and a big percentage 62.5% reported that the messages caused fear. Fear has been identified as a

major reason why many women fail to turn out for a pap smear because they fear the results could be positive; so they would rather stay without knowing their status. So any electronic media messages should strive to address the issue of fear in their campaigns. Although a big percentage 70.4% indicated that the messages were educative, there was no corresponding action to show what step they have taken as a result of being educated by radio and television messages on cervical cancer. That may explain why cervical cancer is killing many women in their reproductive ages.

#### **5.2.4 Influence of Nature of Information on Cervical Cancer Awareness and Presentation**

On the nature of information, the respondents gave mixed answers. For instance, the issue of fear came up again as 52.0% reported that the nature of messages gave them fear while 48.0% did not experience after exposure to messages. Another 58.1% felt threatened by the information. And another 72.3% were made aware that if they did not go for screening they can die of cervical cancer. So what comes of the responses is the element of fear; fear that cervical cancer is a threat to every woman who is sexually active and its severity can be immense. However a big percentage 95.0% reported that cervical cancer can be prevented and treated when discovered in its early stages. However, from the other responses in terms of the steps they have taken towards cervical cancer prevention, more than 60% reported to have never gone for a pap smear; which is an indication that the information has not translated to positive steps towards the prevention of cervical cancer. The information from the gynecologists indicates that majority of the cases they handle are usually at an advanced state where they cannot be cured and only managed through chemotherapy and radiotherapy. Only a few cases are reported in stage one and two where they can be treated surgically. So awareness by the electronic media is still needed to address the issues that hinder the women from accessing treatment early enough when they can be helped.

### **5.2.5 Factors that hinder access to information about cervical cancer and participation to screening programs**

Various reasons were given why women fail to participate in cervical cancer awareness and prevention programs. For instance more than 50% of the respondents indicated that they will not participate in cervical cancer prevention programs because of diverse reasons, but mainly based on wrong information or misinformation. A whole 92.3% reported that they would not go for screening because they would die anyway, so why try? This is a major impediment to the fight against cervical cancer because women fail to take appropriate steps because of fear of death yet cervical cancer is not a death sentence because they is cure when the disease is detected in its early stages. Another 87.8% reported that they could not go for screening because the procedure is painful, while 86.9% said they failed to go for screening because they did not want to know their status. Another big percentage, 85.4% reported that they could not go for screening because they are HIV positive so they will also test positive for cervical cancer. Again this is an assumption that is based on wrong information because whereas HIV positive women are more prone to cervical cancer infection, not all HIV positive women have cervical cancer. Another 83.4% felt they were too young to go for cervical cancer screening while 79.3% felt that they were too old to get cervical cancer. Basically, the responses given as to why women fail to participate in cervical cancer prevention programs can be associated with lack of proper information and myths and misconceptions. This is why the current study sought to establish the role electronic media in creating awareness about cervical cancer.

### **5.3Conclusion**

Cervical cancer is still a problem in sub-Sahara Africa. Concerted and focused efforts towards by relevant stakeholders need to be put in place towards the reduction of the burden of the disease is urgently needed. The intensification of preventive, screening



and therapeutic measures including education of the populace on these aspects can bring the disease under control as it is in the developed countries. Each country of Sub Sahara Africa should develop and implement sustainable preventive and screening programs using any of the available methods suitable and appropriate for their own setting instead of the present opportunistic screening activities prevalent in the region. Functional cancer registries are needed to analyze the pattern of the disease so as to help in planning control programs. There is also the need to address some of the conditions that predispose to practices that favor the development and spread of the disease. These conditions include poverty, illiteracy, political instability and widespread underdevelopment.

Preventive messages on the electronic media are minimal as majority of the respondents reported to have received their information on cervical cancer prevention from other sources and not necessarily from radio and television. There is therefore need for electronic media to come up with strategies to create awareness about cervical cancer prevention. Messages need to be tailored towards the specific issues at which women are vulnerable such as fear, stigma, cultural beliefs, gender stereotyping and poverty, myths and misconceptions while being careful to give factual information about cervical cancer. We have not seen efforts being made by the media to come up with messages specifically targeted at women's vulnerability to cervical cancer. Most messages are general and not formulated to address a specific audience with their unique socio-demographic and cultural characteristics. There are no documented cancer reduction and screening services based on awareness creation by the electronic media.

There is also need for concerted efforts between the media, health professionals and policy makers to come up with comprehensive messages that address causes, symptoms, preventive and care of cervical cancer. Issues of cultural beliefs about cervical cancer also need to be addressed by the media. There is need to sensitize the government and policy makers, NGOs and other stakeholders to address this deadly disease which has now becoming worse killer than HIV/AIDs and maternal mortality rates.

Media professionals and other stakeholders need to involve interpersonal communication and group discussions to come up with best preventive messages that can address the issues at which women are vulnerable to cervical cancer. Vernacular radio stations can be very instrumental in passing information about cervical cancer prevention to the rural woman who is most affected by cervical cancer due to poverty and other logistical challenges.

#### **5.4 Recommendations**

Based on the information gathered, it is obvious that there exists knowledge gaps among the women out there and therefore the need for further research to establish the prevalence of cervical cancer at community level and the knowledge of the disease among women. The research should determine the best approaches that can be used to improve the level of knowledge of cervical cancer and related risk factors to women of all levels of socio- economic status. Establish the various cultural inhibitions among women be overcome in order to encourage early reporting of symptoms, and acceptance of medical examination. There is need for further research to determine role of electronic media in cervical cancer prevention.

The study recommends that the need for multi-sectoral approach toward cervical cancer prevention. Future interventions using radio and television should bring all professionals on board; health care workers, women *chamas*, women reps, the local administration to put up a spirited fight against cervical cancer. The media especially the vernacular stations should be used for effective reach and results.

Given the severity of cervical cancer in Kenya, there is need for all national control programs to direct their efforts toward the prevention of cervical cancer by creating awareness about its symptoms, treatment and prevention because its effects are more devastating than any other terminal illnesses. There is need for cervical cancer managerial guidelines and policy guidelines to make screening mandatory, for screening programs to be provided, accompanied by appropriate, well sustained awareness

campaigns by the electronic media targeted at the vulnerable groups, (Hemisphere 1998; Hakana. 1982).

Screening with the cervical smear plus adequate follow-up therapy can achieve major reductions in both incidence and mortality rates and this information needs to be out there targeted at the vulnerable groups (Miller, Chamberlain, Day, Hakama, & Prorok, 1990).

In the National Cancer Control and Prevention (NCCP), it is suggested that screening programs should be organized to ensure a large target group is screened and that those individuals in whom abnormalities are observed receive appropriate diagnosis and therapy in good time and appropriate follow up. For Public information may be effected through radio, television, movies and the print media, including pamphlets and posters. Direct personal communications with knowledgeable and respected members of the community, the health care providers and the community leaders, are very important. However, this has not been witnessed in preventive messages, if any, in Kenya despite the fact that cervical cancer is becoming a leading killer among women and its serious negative implications, (Report on Workshop on VICC Project on Evaluation of Screening for Cancer (Miller, Chamberlain, Day, Hakama, & Prorok, 1990).

Clearly, the problem of cervical cancer will not be solved by any one discipline alone and there is need to encourage collaboration involving various cadres of the clinical team, the laboratory social scientists and media professionals. Information and education programs designed in collaboration with social scientists are urgently needed in order to increase the awareness of the community to the problem of cervical cancer and its risk factors.

The electronic media should sensitize the government on the need to identify cervical cancer as a major health concern in the country. And there is need to invest in the prevention and treatment of cervical and the socio- economic implications for failure to

do so. Further, treatment of early stages of cancer and pre- malignant lesions offers the best outcome and is also much cheaper than management of advanced disease.

Cervical cancer prevention should be in all national cancer control programs. Prevention should not focus on the risks associated with a particular illness or problem but also with protective factors. Among prevention activities, emphasis should be placed on tobacco control, health diet, physical activities, gender issues, myths and misconceptions, and avoidance of obesity, control of alcohol use, immunization against cervical cancer, health education etc (WHO, 2001).

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There is need for sensitization of health workers about cervical cancer and importance of screening. Based on studies carried out in countries where organized screening is available, it is known that screening uptake can be influenced by cultural beliefs, the social position of women, characteristics of the health care system, the physician's attitudes towards screening and women's comprehension of the screening process.

Embarrassments about undergoing a gynecological examination, fear of the procedure or belief that little can be done to prevent cancer are other factors that might decrease screening participation. Lower socio-economic background, lack of health insurance and low literacy also compromise participation in screening.

Widespread adoption of HPV vaccination to the recommended target population will reduce the disease incidence in the future. The vaccine is however seen to demobilize efforts towards setting up and improving screening services in places with poor screening coverage. The high cost of the vaccines is a constraint on low resource countries that have high incidence of the disease. It has been submitted that the vaccines if given to girls before onset of sexual activity, have the potential to dramatically reduce the incidence of HPV infection and therefore cervical cancer (McIntyre, 2011).

Prevention and early diagnosis through vaccination and screening requires effective mobilization of the target groups and this has been a problem in developing countries especially in Sub Sahara Africa. An approach to improve this has been formulated by Alliance for Cervical Cancer Prevention (ACCP) as follows. Since cultural and emotional barriers and practical needs are among the main reasons why women choose not to be screened, addressing these barriers and needs will help increase women's awareness and willingness to seek services. Screening, treatment, and follow-up services need to address women's cultural, emotional, and practical needs and concerns. These are the areas around which the media should tailor or build its preventive messages but as things currently stand, this is largely missing in their campaigns on awareness creation and prevention of cervical cancer. There have not been messages tailored towards addressing issues such as cultural and emotional barriers, issues at which women are vulnerable and about which they can do nothing about. Hence this paper will seek to sensitize the media to re-evaluate their messages on cancer prevention among women and address those very issues at which women are vulnerable.

An effort in creating effective messages to improve women's awareness is needed. Women should be involved in creating prevention messages and programs. Recognized barriers to women's participation in screening include: little understanding of cervical cancer, limited understanding of female reproductive organs and associated diseases, lack of access to services, shame and fear of a vaginal examination, fear of death from cancer, lack of trust in health care system, lack of community and family support. Common misconceptions about cervical cancer that screening means they have HIV infection and so on.

Helping women discuss cervical cancer can bring the message home. This can be done through community health or outreach workers who can facilitate communication at the community level. Counseling by health care providers can both inform women and help them talk to their families. Women who receive treatment for precancerous lesions and who must abstain from sexual intercourse for several weeks especially need good counseling. This was corroborated by information gathered from health care providers (nurses in clinics 18 and 66 at the Kenyatta national Hospital). The same professionals also alluded to the fact that information about cervical cancer should not be confined to the health care facilities but rather it should be out there where the women can access it and use it to prevent cervical cancer. Besides that, vernacular radio stations can be used to facilitate the discussions on cervical cancer with the help of health professionals who can help elaborate and explain things further.

To ensure women's positive experiences with screening, there is need to build and maintain positive provider-client relationships. This is needed because women are more likely to participate when they are treated well, health care providers are sensitive, responsive and respectful. Health care providers should develop a respectful rapport with clients. Women with positive experiences will become advocates when talking to other women. Important counseling tips include listening and encouraging women to express their concerns.

The study recommends that any advocacy and awareness by radio and television should target the above issues of concern as raised by the respondents. The information is corroborated by what Ts and Levin (2008) that knowing the causative/risk factors, symptoms and preventive measures of cervical cancer can make all the differences, but without this, prevention is far more difficult. The same researchers further argued that that there is poor knowledge of cervical and among women especially those in the rural areas. Prevention and early detection are keys to the reduction of incidence and progression of many chronic diseases including cancer, (Tsu VD, Levin CE 2008). All areas of advocacy and awareness must therefore target the vulnerable groups especially in the rural areas, women of low economic status and with less education because these are the most affected by cervical cancer. Arrosi *et al* (2010) also points out that cervical cancer services do not reach women most at risk i.e. those aged between 35 and 60 especially those who live in the rural areas and who face various challenges like poverty, cultural beliefs, gender-based issues, stigma and so on. This is the area of focus that should be given priority by all stakeholders and especially by the e the electronic media. The vernacular radio stations can be a very important source of creating awareness about cervical cancer especially in the rural areas. To reach other women as well, it is important that cervical cancer screening be integrated into routine reproductive health services that the majority of the women are exposed to such as family planning, HIV?AIDS, fistula, post and ante natal as supported by the reported out in the National Reproductive Strategy (2015).

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## **APPENDICES**

### **Appendix I: Consent Information Document**

#### **Title: Determination of the Influence of Electronic Media in Cervical Cancer Awareness at Kenyatta National Hospital Nairobi, Kenya**

My name is Rhoydah Mogoi Ochieng'I Nyambane. I am a Doctor of Philosophy student in Mass Communication at the Jomo Kenyatta University of Agriculture and Technology, Karen Campus. I am collecting data for the dissertation whose title has been outline above.

#### **Introduction**

Cancer of the cervix is the second most common cancer among women and the leading killer of women in their reproductive ages. Data from hospital-based registries in Kenya indicate that cancer of the cervix accounted for 70-80% of all cancers of the genital tract and 8-20% of all cancer cases and these statistics do not reflect the cases that go unreported and those in the rural areas. It has been reported that there are 10 to 15 new cases of cervical cancer in Nairobi each week. This study sets out to investigate the influence of electronic media in creating awareness about cervical cancer among women aged between 18 and 65 in Nairobi County; a case study of Kenyatta National Hospital.

#### **Study objectives**

The main objective of the study will be to examine the influence of radio and television in cancer awareness among women accessing reproductive health services at the Kenyatta National Hospital. Other study objectives will be:

- to establish the knowledge levels about cervical cancer among women in the study area

- to determine the source of the knowledge about cervical cancer among the women
- to examine how the knowledge has influenced their behavior and
- to establish how women protect themselves against cervical cancer and to investigate the role of electronic media in creating awareness about cervical cancer among women in Nairobi Country

### **Risks**

The information that you will provide during the study will be kept in confidence and there will be any anticipated risks whatsoever.

### **Benefits**

By participating in this study and answering the questions, you will help to increase my understanding of the needs of women in Kenya in terms of reproductive health and cervical cancer communication. The information will benefit health professionals, government and other relevant stakeholders to formulate relevant strategies towards cervical cancer prevention.

## **CONSENT FORM**

### **Voluntarism**

Your participation in this study is voluntary and you have the right to refuse to participate or answer any questions that you may feel uncomfortable with. If you change your mind about participating during the course of this study, you have the right to withdraw at any time.

**Declaration of the respondent**

I have understood the purpose of this study and therefore consent voluntarily to participate as a respondent.

Signature of the respondent \_\_\_\_\_

Date: \_\_\_\_\_

Witness: \_\_\_\_\_

—

Date: \_\_\_\_\_

**Researcher: Rhoydah O. Nyambane:** Tel: 0722661930/0733816939

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Prof. M.L. Chindia**

Secretary,

KNH/UoN—Ethics and Research Committee (ERC)

P.O. Box 20723-00203

Tel. 726300-9

Email:uonknh\_erc@uonbi.ac.ke

**Lead Supervisor: Dr Hellen Mberia**

(Bed, Kenyatta University, MA JKUAT, PHD , Mass Communication, JKUAT),Nairobi

Dean

School of Communication and Development Studies



Jomo Kenyatta University of Agriculture and Technology (JKUAT)

**Appendix III: Questionnaire**

**SECTION A: BIO DATA-SOCIO-DEMOGRAPHIC INFORMATION**

1. What is your name?\_\_\_\_\_ (optional)

2. What is your age bracket? Tick as appropriate

i) 18 to 28

ii) 29 to 39

iii) 40 to 59

iv) 60 to 69

3. Marital status

i) Married

ii) Single

iii) Widowed

iv) Divorced

v) Separated

vi) other

4. Number of children

i) One

ii) Two

iii) Three

iv) Four

v) Five

v) Other

5. What is your level of education?

i) Primary school and below

ii) Secondary

iii) College/University

vi) Postgraduate

6. Are you employed?

i) Yes

ii) No

7. If yes, place of employment\_\_\_\_\_

8. Indicate salary range

i). kshs 10,000 to kshs 20,000

ii). Kshs 30,000 t0 40,000

iii). Ksh 50,000 to 60,000

iv). Kshs 70,000 to 80,000

v). kshs 90,000 to 100,000

vi) Other \_\_\_\_\_

9. Are there any family members who live with you?

i) Yes

ii) No

ii) In what ways are you related to the family members? (tick as appropriate)

Son/daughter

Husband/wife

Siblings

Friend/partner

Parent

Other

Other \_\_\_\_\_

Specify \_\_\_\_\_

**SECTION B: CERVICAL CANCER KNOWLEDGE AND AWARENESS LEVELS**

What is cervical cancer? \_\_\_\_\_

Have you ever heard of HPV virus? Yes  No

Have you ever done a pap smear? Yes  No

## II CAUSES OF CERVICAL CANCER

Tick the following statements whether they are true or false about causes of cervical cancer	True	False	Source of info		
			TV	Radio	Others
Cervical cancer is a sexually transmitted disease					
HPV virus is the main cause of cervical cancer					
HPV virus is sexually transmitted just like HIV/AIDS					
If you are HIV positive then you also have cervical cancer					
Having multiple sexual partners can cause one to get cervical cancer					
Cervical cancer is caused by witchcraft					
Anyone who is sexually active can get cervical cancer even if you have had sex with only one partner					
All women are potentially at risk of developing cervical cancer at one time in their life					
Early age of first intercourse may cause cervical cancer					
Having a weakened immune system may cause one to have cervical cancer					
Women who have reached menopause can also get cervical cancer					
Cervical cancer is a hereditary disease					
Prolonged use of contraceptives can cause cervical cancer					
Having many children can cause one to have cervical cancer					
History of sexually transmitted infections can cause cervical cancer					
Cigarette smoking can cause cervical cancer					
Long term oral contraceptives can cause cervical cancer					

Low carotene or low vitamin C intake can cause cervical cancer					
I can get cured of cervical cancer if it is detected early as a result of routine screening					

### II SYMPTOMS OF CERVICAL CANCER

Tick the following statements whether they are true or false about cervical cancer	True	False	Source (tick one)		
			TV	Radio	Others
Abnormal vaginal discharge may suggest that one has cervical cancer					
Any abnormal bleeding means one may have cervical cancer					
If you bleed after periods then you have cervical cancer					
Bleeding between periods may mean you have cervical cancer					
Discomfort during intercourse may mean you have cervical cancer					
If you have reached menopause and you start bleeding it means you have cervical cancer					
A woman can have cervical cancer even when they don't have any symptoms					

### III SEVERITY OF CERVICAL CANCER

Tick as appropriate : true or false	True	False	Source of info (tick one)		
			TV	Radio	Others
Cervical cancer is a dangerous disease					
All women are at risk of getting cervical cancer					
A woman can have cervical cancer even when they do not have any symptoms					
The cervical cancer vaccine can cause bareness among young women					

If you do not go screening for cervical cancer, you are at a risk of dying of cervical cancer					
Cervical cancer has no cure when detected in late stages					
If I go for cervical cancer screening people will think I am immoral					
Going for cervical pap smear is very shameful					
If you are diagnosed with cervical cancer, then you will die					
Screening for cervical cancer is very painful					
If my mother died or sister got cervical cancer, I am also at risk of contracting cervical cancer					

#### **IV PREVENTION AND CONTROL OF CERVICAL CANCER**

Read the following statements and tick as appropriate : true or false	True	false	Source of information (tick one)		
			TV	Radio	Others
Routine screening can help prevent cervical cancer					
Having protected sex can help prevent cervical cancer					
Sufficient knowledge can help women start going for routine screening in order to prevent cervical cancer					
Awareness messages can help prevent cervical cancer					
Cervical cancer can be cured if detected early					
If you are HIV positive, then you need to go for cervical cancer screening					
If your blood relative has died of cervical cancer,					

then you need to go for cervical cancer screening					
If you avoid multiple sexual partners, you can prevent cervical cancer					
I don't know how cervical cancer can be controlled					

### V. TREATMENT OF CERVICAL CANCER

Read the following statements and tick as appropriate	True	False	Source of information		
			Tv	Radio	Others
Cervical cancer has no cure when detected late					
Traditional medicine can cure cancer					
Cervical cancer is treated by doctor's medicine					
Cervical cancer is treated by chemotherapy					
If your womb is removed then you can be cured of cervical cancer					
Cervical cancer is treated by surgery					

10. Do you own radio or a television set?

a). Radio Yes  No

b). Television Yes  No

c). Both

11. How long have you had any of the media channels mentioned in '2' above?

a) 1 to 5 years

b) 5 to 10 years

c) 10 years and over

12. Which channel do you listen to/watch? (tick as appropriate)

a) Television

b) Radio

e) Any other (specify)

13. How often do you watch television?

Daily

Weekly

Monthly

14). How often do you listen to radio?

Daily

Weekly

Monthly

e) Other (specify) \_\_\_\_\_

15). Which programs do you watch on television?

a) News

b) Local drama

c) Features



- d) Advertisements
- e) Talk shows
- f) Programs on health
- g) Interviews
- h) Documentaries
- i) Soap operas

14. Which programs do you listen to in the radio mostly?

- i). News
- ii). Local drama
- iii) Features
- iv) Advertisements
- v) Talk shows
- vi) Programs on health
- vii) Interviews

15. In the programs you listen to in the radio, which ones contained any messages about cervical cancer?

- a) News
- b) Local drama
- c) Features

d) Advertisements

e) None

16. Between radio and television which one has more information about cervical cancer?

Radio, Yes  No

Television Yes  No

17. Apart from radio and television, what other sources of information on cervical cancer do you have?

a) Health worker/nurse

b) Doctor

c) Religious leader

d) Newspaper

e) Billboard

f) Internet (facebook, twitter, whatsapp)

g) Chief's baraza

h) Women chamas

i) Workplace

j) Friends

k) Other

(specify) \_\_\_\_\_

\_\_\_\_\_

18. How adequate have the messages in '18' above been? Tick as appropriate

- a) Clear Yes  No
- b) Relevant Yes  No
- c) Educative Yes  No
- d) Caused fear Yes  No

**SECTION C: INFLUENCE OF NATURE OF INFORMATION FROM ELECTRONIC MEDIA**

**Complete the following questions according to your opinion on each statement**

Read the following statements and tick as appropriate: true or false	True	False
The messages on radio about cervical cancer left me very fearful		
The information made me aware of the severity of cervical cancer among women		
The messages made me very threatened about cervical cancer situation in the country		
The nature of the information made me aware that if I do not go for regular pap smear, I can die of cervical cancer		
The messages made me aware that cervical cancer is a threat to every woman who is sexually active		
The messages made me know that cervical cancer can be prevented if detected in early stages		
The messages informed me that I am in control of my reproductive health situation if follow the instructions contained in the messages		
The messages gave me hope about prevention and treatment of cervical cancer		

**SECTION D: FACTORS THAT HINDER ACCESS TO INFORMATION ON  
WARENESS ABOUT CERVICAL CANCER/SELF EFFICACY**

**19.** Which of the following statements explains your current situation?

Tick as appropriate (true or false)	True	False
If I go for a pap smear, people will think I am promiscuous		
I will not go for cervical cancer screening because I fear I might test positive		
I will not go for cervical cancer screening because I will die anyway		
I am HIV positive so I will also test positive for cervical cancer		
I will not go for screening because I do not want to know my status		
I will not go for screening because I do not have any symptoms( I am not feeling sick)		
I am too young so there is no need to go for cervical cancer screening		
I am past menopause so I cannot have cervical cancer		
Only promiscuous women can get cervical cancer; I am not so I will not go for screening		
I am too anxious so I will not go for cervical cancer screening		
I will not go for cervical cancer screening because I do not know the benefit		
I will not go for cervical cancer screening because the procedure is very painful		
I will not go for cervical cancer screening because I do not have money for transport and treatment if I test positive		
I will not go for screening because if I test positive my husband will run away from me		

**SECTION E: INTERVENING VARIABLES**

	No		Yes		Total	
	Count	%	Count	%	Count	%
Cervical cancer screening is not for married women						
My neighbour went for screening but still died so why should I go?						
Culturally, women of my age do not go for cervical cancer screening						
I am faithful to one partner so no need to go for screening						
I will not for cervical cancer screening because my womb might be						
I will not go for cervical cancer screening because I am bewitched						
I will consult a witch doctor to treat me for the symptoms am experiencing						
If I go for cervical cancer screening, people might know my status and I will lose my Cervical cancer is a death sentence						
I have never had children so I don't need to go cervical cancer screening						
My neighbour told me screening for cervical cancer is very painful						

21. Is there any information about cervical cancer that you wished to hear from either radio or television but you have not heard?

i) yes

ii) No

If \_\_\_\_\_ yes \_\_\_\_\_ indicate \_\_\_\_\_ which  
one \_\_\_\_\_

## **Appendix IV: Interview Schedule for Gynecologists and Health Care Providers**

### **L. GYNECOLOGISTS**

#### **SECTION A: BIO-DATA**

1. Tell us your name please ( optional)
2. Number of years in service: 1-5  5 and above
3. Number of cervical cancer patients handled :
  - i). Daily \_\_\_\_\_
  - ii). Weekly \_\_\_\_\_
  - iii) Monthly \_\_\_\_\_
  - iv) Annually \_\_\_\_\_

#### **SECTION B: KNOWLEDGE LEVELS ABOUT CERVICAL CANCER AMONG PATIENTS AT THE REPRODUCTIVE HEALTH CLINICS AT KNH**

4. What, in your view, are the knowledge levels about cervical cancer among the patients that you have handled at this facility?
5. What are some of the myths and misconceptions about cervical cancer that you have had to deal with among your patients have any information about cervical cancer symptoms, treatment, prevention and management?
6. Are there any that you have handled that know the risk factors about cervical cancer?

7. Can you explain some facts about cervical cancer that you think should be in the public domain but which are missing?

#### **SECTION C: SOURCE OF INFORMATION**

8. What is the major source of information that the cancer patients have about cervical cancer?
9. In your view, what should be the major source of knowledge about cervical cancer and why?
10. Has the government played its role adequately in addressing cervical cancer as a health concern?
11. In your view, what do you think should be the role of the radio and television in the fight against cervical cancer?
12. Have the two media channels played their role well in creating awareness about cervical cancer?
13. What are the major challenges facing the war against cervical cancer in Kenya? How can these challenges be tackled?

#### **SECTION D: SOURCE OF INFORMATION AND AWARENESS ABOUT CERVICAL CANCER**

14. Have you established whether the cancer patients have the right kind of information about cervical cancer?
15. Has the information helped them or left them more confused?
16. Are there some steps that the women have taken as a result of receiving wrong information from radio or television?

#### **SECTION E: THE EFFECTS OF THE INFORMATION ON CERVICAL CANCER AWARENESS**

17. Can you establish whether the women have taken any step towards cervical cancer prevention as a result of receiving information from radio and television?
18. Have radio and television been useful in the fight against cervical cancer?
19. In your view, what should be the role of radio and television in creating awareness about cervical cancer?





**Appendix VI: Research Authorization Form**



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Telephone: +254-20-2213471,  
2241349, 310571, 2219420  
Fax: +254-20-318245, 318249  
Email: secretary@nacosti.go.ke  
Website: www.nacosti.go.ke  
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9<sup>th</sup> Floor, Utalii House  
Uhuru Highway  
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NAIROBI-KENYA

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**NACOSTI/P/15/8886/5875**

Rhoydah Ochiengi Nyambane  
Jomo Kenyatta University of Agriculture  
And Technology  
P.O. Box 62000-00200  
**NAIROBI.**

**RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Determination of the influence of electronic media in cervical cancer awareness at Kenyatta National Hospital Nairobi,”* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for a period ending **5<sup>th</sup> August, 2016.**

You are advised to report the **Chief Executive Officer, Kenyatta National Hospital, the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

  
**SAID HUSSEIN**  
**FOR: DIRECTOR-GENERAL/CEO**

Copy to

The Chief Executive Officer  
Kenyatta National Hospital.

The County Commissioner  
Nairobi County.



*National Commission for Science, Technology and Innovation is ISO 9001:2008 Certified*

**THIS IS TO CERTIFY THAT:  
MS. RHOYDAH OCHIENGI NYAMBANE  
of JOMO KENYATTA UNIVERSITY OF  
AGRICULTURE AND TECHNOLOGY ,  
29821-202 Nairobi, has been permitted  
to conduct research in Nairobi County**

**on the topic: DETERMINATION OF THE  
INFLUENCE OF ELECTRONIC MEDIA IN  
CERVICAL CANCER AWARENESS AT  
KENYATTA NATIONAL HOSPITAL  
NAIROBI**

**for the period ending:  
5th August,2016**

  
.....  
**Applicant's  
Signature**

**Permit No : NACOSTI/P/15/8886/5875  
Date Of Issue : 15th June,2015  
Fee Received :Ksh 2,000**



  
.....  
**Director General  
National Commission for Science,  
Technology & Innovation**

**CONDITIONS**

- 1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit**
- 2. Government Officers will not be interviewed without prior appointment.**
- 3. No questionnaire will be used unless it has been approved.**
- 4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
- 5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.**
- 6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.**



**REPUBLIC OF KENYA**



**National Commission for Science,  
Technology and Innovation**

**RESEARCH CLEARANCE  
PERMIT**

**Serial No. A 5357**

**CONDITIONS: see back page**



UNIVERSITY OF NAIROBI  
COLLEGE OF HEALTH SCIENCES  
P O BOX 19676 Code 00202  
Telegrams: varsity  
(254-020) 2726300 Ext 44355



KNH/UON-ERC  
Email: [uonkoh\\_erc@uonbi.ac.ke](mailto:uonkoh_erc@uonbi.ac.ke)  
Website: <http://erc.uonbi.ac.ke>  
Facebook: <https://www.facebook.com/uonknh.erc>  
Twitter: [@UONKNH\\_ERC](https://twitter.com/UONKNH_ERC) [https://twitter.com/UONKNH\\_ERC](https://twitter.com/UONKNH_ERC)



KENYATTA NATIONAL HOSPITAL  
P O BOX 20723 Code 00202  
Tel: 726300-9  
Fax: 725272  
Telegrams: MEDSUP, Nairobi

Ref: KNH-ERC/A/167

14<sup>th</sup> April, 2015

Rhoydah M. Nyambane  
HD421-C002-1288/12  
JKUAT

Dear Rhoydah

**Research Proposal: Determination of the Influence of Electronic Media in Cervical Cancer Awareness at Kenyatta National Hospital Nairobi, Kenya (P602/10/2015)**

This is to inform you that the KNH/UoN-Ethics & Research Committee (KNH/UoN-ERC) has reviewed and **approved** your above proposal. The approval periods are 14<sup>th</sup> April 2015 to 13<sup>th</sup> April 2016.

This approval is subject to compliance with the following requirements:

- a) Only approved documents (informed consents, study instruments, advertising materials etc) will be used.
- b) All changes (amendments, deviations, violations etc) are submitted for review and approval by KNH/UoN ERC before implementation.
- c) Death and life threatening problems and severe adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the KNH/UoN ERC within 72 hours of notification.
- d) Any changes, anticipated or otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to KNH/UoN ERC within 72 hours.
- e) Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. (*Attach a comprehensive progress report to support the renewal*).
- f) Clearance for export of biological specimens must be obtained from KNH/UoN-Ethics & Research Committee for each batch of shipment.
- g) Submission of an *executive summary* report within 90 days upon completion of the study  
This information will form part of the data base that will be consulted in future when processing related research studies so as to minimize chances of study duplication and/or plagiarism.

For more details consult the KNH/UoN ERC website [www.erc.uonbi.ac.ke](http://www.erc.uonbi.ac.ke)

Appendix VI: Study Registration Certificate

KNH/R&P/FORM/01



**KENYATTA NATIONAL HOSPITAL**  
P.O. Box 20723-00202 Nairobi

Tel.: 2726300/2726450/2726565  
Research & Programs: Ext. 44705  
Fax: 2725272  
Email: [knhresearch@gmail.com](mailto:knhresearch@gmail.com)

**Study Registration Certificate**

1. Name of the Principal Investigator/Researcher  
RHOYDAH OCHIENGEI NYAMBANE
2. Email address: nyambane.rhojdah23@gmail.com Tel No. 0722 661930
3. Contact person (if different from PI).....
4. Email address: ..... Tel No. ....
5. Study Title  
DETERMINATION OF THE INFLUENCE OF ELECTRONIC MEDIA IN CERVICAL CANCER AWARENESS AT KENYATTA NATIONAL HOSPITAL
6. Department where the study will be conducted REPRODUCTIVE HEALTH CLINICS  
(Please attach copy of Abstract)
7. Endorsed by Research Coordinator of the Department where the study will be conducted.  
Name: Dr. Mwangi ISO Signature [Signature] Date 6/5/15
8. Endorsed by Head of Department where study will be conducted.  
Name: [Signature] Signature [Signature] Date 27/4/15
9. KNH UoN Ethics Research Committee approval number P602/10/2015  
(Please attach copy of ERC approval)
10. I RHOYDAH O. NYAMBANE commit to submit a report of my study findings to the Department where the study will be conducted and to the Department of Research and Programs.  
Signature [Signature] Date 20/04/2015
11. Study Registration number (Dept/Number/Year) R. Prog. / 50 / 2015  
(To be completed by Research and Programs Department)
12. Research and Program Stamp



All studies conducted at Kenyatta National Hospital must be registered with the Department of Research and Programs and investigators must commit to share results with the hospital.

## Appendix VII study approval



KENYATTA NATIONAL HOSPITAL,  
P. O. BOX 20723-00202, NAIROBI  
Tel: 2726300-9/2726450/2726550

**Fax: 2725272**

**Email: [knhadmin@knh.or.ke](mailto:knhadmin@knh.or.ke)**

KNH/RH/16/Vol.1

DATE: 4<sup>th</sup> May, 2015

---

To

Rhoydah M. Nyambane  
HD421-C002-1288/12  
JKUAT

**RE: RESEARCH PROPOSAL: DETERMINATION OF THE INFLUENCE MEDIA IN  
CERVICAL CANCER AWARENESS AT KENYATTA NATIONAL**

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The Department of Reproductive Health has approved your study.

Please liaise with Senior Assistant Chief Nurse Reproductive Health and In-charge clinic 18 to facilitate.



Dr. O.I. Marang  
**ACTING ASSISTANT DIRECTOR  
REPRODUCTIVE HEALTH DEPARTMENT  
KENYATTA NATIONAL HOSPITAL**

**CC: SACN – Reproductive Health  
In-charge clinic 66**

## Appendix VIII facts about Cancer



# CANCER

## What is cancer?

**Cancer is a cell that has lost its normal control mechanisms and thus has unregulated growth.** Cancer also refers to **abnormal growth or multiplication of body cells** which is purposeless, parasitic and flourishes at the expense of the human host.

The **characteristics of cancers** are the tendency to cause **local destruction**, to **spread by metastasis** (transference of disease from one part of the body to another), to **recur after removal/treatment** and **cause toxemia** (poisoning of the body by the products of bacteria or damaged body tissue).

Cancer can **develop from any tissue within any organ**. As cancer cells grow and multiply, they form a mass of **cancerous tissue that invades adjacent tissues and can spread (metastasize) around the body**.

Cancer cells develop from normal cells in a complex process called **transformation**. The first step in the process is **initiation**, where change in cell's genetic material (DNA) is brought about by an agent called a carcinogen- such as a chemical, virus, radiation, sunlight, chronic physical irritation etc. In the next step, **promotion**, a cell that has been initiated becomes cancerous.

However, not all cells are equally susceptible to carcinogens. A host of **genetic and environmental factors** increases the risk of developing cancer.

There are **specific and universal risk factors** for various cancers. Cancers are mainly the diseases of **lifestyles**. **Lifestyle factors** are the main causes of several cancers.

Many cancers are turning out to be **do-it-yourself diseases**. However, **eating a healthy diet and making a few lifestyle changes** may reduce your overall chance of **getting cancer**.

**Cancer screening tests** serve to detect the possibility that cancer is present.

The **more advanced** your cancer, the **poorer the outcome**. **Cancer is the third leading cause of death in Kenya** with a rate of 18,000 deaths per year (Kenya, Ministry of Public Health, 2009).

**Cancer is always named after the part of the body** where it spreads to other body parts later.

Prevention of any cancer is **not an impossible dream**.

**NB** **Cervical cancer and Breast cancer are the most common women cancer killer diseases in the world.**