UTILIZATION OF CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED 30-49 YEARS IN KITUI COUNTY, KENYA

JANE HANNAH MUMBI MBALUKA (BsN)

Q139/CE/25462/2014

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE OF MASTER OF PUBLIC HEALTH (REPRODUCTIVE HEALTH OPTION) IN THE SCHOOL OF PUBLIC HEALTH AND APPLIED HUMAN SCIENCES OF KENYATTA UNIVERSITY

OCTOBER, 2020
DECLARATION

Student’s declaration

This thesis is my original work and has not been presented for a degree in any other University.

Signature ........................................ Date 23/10/2020

Name: Jane Hannah Mumbi Mbaluka

Reg: Q139/CE/25462/2014

Department of Population, Reproductive Health and Community Resource Management

Supervisors

This thesis has been submitted with our approval as University Supervisors.

Signature ........................................ Date 23/10/2020

Name: Dr. Kenneth K. Rucha

Department of Health and Management & Information School of public health

Signature ........................................ Date 23/10/2020

Name: Dr. Benjamin M. Ndeleva

Department of Surgery and Orthopaedics School of medicine
DEDICATION

This thesis is dedicated to my family members, Husband Peter Maliti, and our sons, Mwendwa Maliti and Keli Maliti for their support, encouragement, motivation, sacrifice and prayers.
ACKNOWLEDGEMENT

I would like to appreciate everyone who made this study feasible and achievements of my objectives a reality.

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Finally to almighty God for giving me a chance to accomplish this work, after surviving a fatal road accident on May 2018.
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<tr>
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<td>Acquired Immunodeficiency Syndrome</td>
</tr>
<tr>
<td>ASCUS</td>
<td>Atypical Squamous Cells of Unknown Significance</td>
</tr>
<tr>
<td>CCPPSP</td>
<td>Cervical Cancer Preventive Program Strategic Plan</td>
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<td>CCS</td>
<td>Cervical Cancer Statistics</td>
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<tr>
<td>CHV</td>
<td>Community Health Volunteers</td>
</tr>
<tr>
<td>CIN</td>
<td>Cervical Intraepithelial Neoplasia</td>
</tr>
<tr>
<td>CIS</td>
<td>Carcinoma in Situ</td>
</tr>
<tr>
<td>CHS-UDUS</td>
<td>College of Health Science Usmanu Danfodiyo University, Sokoto</td>
</tr>
<tr>
<td>CT-SCAN</td>
<td>Computed Tomography Scan</td>
</tr>
<tr>
<td>CXR</td>
<td>Chest X-Ray</td>
</tr>
<tr>
<td>FIGO</td>
<td>International Federation of Gynaecology and Obstetrics</td>
</tr>
<tr>
<td>GLOBOCAN</td>
<td>Global Cancer Incidence, Mortality and Prevalence</td>
</tr>
<tr>
<td>H.I.V</td>
<td>Human Immune Deficiency Virus</td>
</tr>
<tr>
<td>HPV</td>
<td>Human Papilloma Virus</td>
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<tr>
<td>LEEP</td>
<td>Loop Electrosurgical Excision Procedure</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<td>--------------</td>
<td>--------------------------------------------------</td>
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<tr>
<td>MOH</td>
<td>Ministry of Health</td>
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<tr>
<td>MRI</td>
<td>Magnetic Resonance Imaging</td>
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<td>NCR</td>
<td>Nairobi Cancer Registry</td>
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<tr>
<td>STI</td>
<td>Sexually Transmitted Infections</td>
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<tr>
<td>TAH</td>
<td>Total Abdominal Hysterectomy</td>
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<tr>
<td>U/S</td>
<td>Ultrasound</td>
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<tr>
<td>VIA</td>
<td>Visual Inspection with Acetic Acid</td>
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<tr>
<td>VILI</td>
<td>Visual Inspection with Lugol’s Iodine</td>
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<td>WHO</td>
<td>World Health Organization</td>
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DEFINITION OF OPERATIONAL TERMS

Cancer of the cervix: refers to malignant cell growth in the lower part of the uterus that opens into the vagina (WHO, 2019).

Cancer: malignant cells in the cervical tissues (MoH, 2016).

Cervix: the lower part of the uterus that opens into the vagina (WHO, 2019).

Determinants: factors that significantly influence the use of available screening methods of cervical cancer screening services (Al-amro, Gharaibeh & Oweis, 2020).

Screening: use of simple tests across a healthy population in order to identify individuals who have cancerous cells, but do not yet have symptoms (Donatus et al., 2019; MoH, 2016).

Cancer Cervix refers to malignant cell growth in the lower part of the uterus that opens into the vagina. Cervical cancer is one of the most prevalent cancers in developed countries and the third most common cancer among women worldwide, with an estimated 569,847 new cases and 311,365 deaths recorded in 2018. Cervical cancer is primarily associated with young women. Women aged 50 years and below accounts for 62%, of all cervical cancers. More than a million women in the world are living with cervical and most of them have no access to screening, treatment and palliative care, resulting in late treatment. Cervical cancer usually develops slowly, which means that most cases can be identified and managed when screening is performed regularly. The study sought to investigate the determinants of utilization of cervical cancers screening services among women aged 30-49 years in Kitui West Sub-County. The study population was women aged 30-49 years of age. A stratified random sampling technique was used to obtain 270 respondents from the study population (2542). Data was collected using self-administered semi-structured questionnaires issued to women aged 30-49 years in Kitui west sub-County. The study adopted a cross-sectional descriptive study design. The study used quantitative research methods to obtain data from selected respondents. Data from the respondents was analyzed using statistical package of social sciences (SPSS) in conjunction with Microsoft excel. The study used chi-square test calculated at 95% interval and a margin of 0.05% error to determine the relationship between dependent and independent study variables. The results found out that Majority of the participants 145 (53.7%) were aware of the cancer screening. There was a no significant relationship (p =0.054) between the awareness and cervical cancer screening services among women aged 30-49 years. The study established that 35% of the participants had been screened for cervical cancer while 65% had not been screened at all. The study established that, majority 152 (56.3) of the respondents had low knowledge on cervical cancer and there was a relationship between knowledge on signs (p=0.001) and prevention of cervical cancer (p=0.002) and utilization of cervical cancer screening services. Regarding perception there was a relationship between whether one perceived screening to be necessary (p=0.011), painful (0.0221) and screening was a procedure or commercial sex workers (p=0.026) and utilization of cervical cancer screening services among women aged 30-49 year. Based on the findings of this study, it was concluded that, although majority of women are aware of the cervical cancer, the screening is low. There is therefore a need for more sensitization on the need for cervical cancer screening. The Ministry of Health should advocate for cervical cancer screening early enough and tailor the awareness through health education seminars in the community to help improved transfer of correct knowledge on cervical cancer screening services.
CHAPTER ONE: INTRODUCTION

1.1 Background to the study

Worldwide, among all types of cancers among women, cancer of the cervix is 3rd common with an estimate of 311,365 annual deaths and 569,847 new cases recorded in the year 2018 (Bruni et al., 2019). Generally, a mortality rate in developed countries exceeds the one for advanced nations by four times, with eighty to eighty five percent of deaths taking place in developing countries, by Mupepi, Sampselle & Johnson, 2011). In the year 2010, cancer of the cervix killed 200,000 people worldwide (Lambert, 2013). Cervical cancer is primarily associated with young women. Women who are 50years and below accounts for 62% of all cervical cancers with the highest number raging between 22-29 years (Benard, Watson, Castle & Saraiya, 2012). Cervical cancer incidence rate can be reduced by approximately 25% to 35% if women are screened once at the age of 35years, however, if women get screened twice between the ages of 35 years to 40 years this can reduce the risk of cancer of the cervix to up to 40% (Ferly et al, 2010)

In east Africa cancer of the cervix still remains most common type of cancer among all other types of cancers (Bray, 2018). In Kenya alone, new cases per year are 5,250 (12.9%) and contribute to 3,286 (11.84%) of annual deaths related to cancer of the cervix. Cervical cancer is the 2nd leading cause of cancer deaths amongst all female cancers. (Bray, Ferlay, Soerjomataram, Siegel, Torre & Jemal, 2018). Screening and testing healthy women for precancerous cells can prevent cancer of the cervix WHO (2014). Cancer of the cervix cancerous cells can be detected early which can enable early
treatment and hence prevention to progression to cancer of cervix. When cancers of the cervix precancerous cell are detected early, treatment can be effective.

More than a million women in the world are living with cervical and most of them have no access to screening, treatment and palliative care, resulting in late treatment. Due to the slow progress of cancer of the cervix early identification through regular screening can lead to prompt management (Siegel, Miller & Jemal, 2018). Treatment, therefore, becomes difficult and expensive and chances of cure diminish (WHO, 2014). Burden of disease due to cancer of the cervix can be achieved through pap-smear screening (WHO 2010).

Reports have linked human papilloma virus various types which is sexually transmitted to development of cancer of the cervix pre-cancerous cells. Those women with multiple sexual partners are most at risk of getting infected with HPV which is the main cause of the cancer of the cervix as well as those who had a previous exposure to to HPV virus are more prone to developing the disease (Ifemelumma et al., 2019). Therefore, when women are screened early it helps to detect cases at the precancerous stage and hence requires simple management which prevents cancer of the cervix (Al-amro, Gharaibeh & Oweis, 2020). However, screening and other measures to counter the ravaging effects of cervical cancer continue to face several challenges in various contexts. Developing countries has limited resources for training health care providers and laboratory services to make diagnosis in order to initiate treatment
1.2 Problem Statement

The effects of late screening of cervical cancer among women cannot be overstated. Globally 270,000 lives are lost due to cervical cancer annually with 80% of these lives being from developing countries (WHO 2010). In Kenya Cancer of the cervix is ranked the 2nd leading type of cancer of all cancers among women for women of ages 15 years and 44 years it is the leading type of cancer. It is estimated that HPV-16 harbours 9.1% of comprises of women in the general population and 63.1% of invasive cancer of the cervix is attributed to HPV 16 or 18 (HPV Information Centre, 2016).

Despite the emphasis placed on screening as an effective measure to diagnose cancer at an early stage, below 10% of the women in the developing countries have been screened for cancer of the cervix. There is deficiency of treatment and where services for cancer of cervix are available are grossly underutilized (WHO, 2010). The uptake of cancer of cervix is wanting in Kenya among eligible women with 14% of women of ages 30years to 49 years having been screened for cancer of the cervix (Nyangasi et al., 2018; Kenya National Bureau of Statistics, 2014). Mortality associated with cancer of the cervix has shown a worrying trend in Kitui since 2005 when cervical cancer prevention programme was started. According to the Ministry of Health reports, 42 new cases were registered at the Kitui County referral hospital and out of these 21 (50%) died. This shows that 50% were diagnosed in late stages when the cancer cells had already metastasized (MoH, 2015; MoH, 2016). From the above statistics, it is evident that screening services in Kenya are not fully optimized given late screening. This greatly affects women health
since the numbers of cervical cancer reported are at later stages where treatment is expensive and chances of survival are minimal.

Besides, empirically it has been noted that there are unsatisfactory studies conducted in Kenya, specifically in Western sub-county of Kitui County to address the issue at hand. Other studies have presented weaknesses in their findings. The study by Donatus et al., (2019) in Kumbo West Health District, Cameroon, among women who were aged 25 years to 65 years on cancer of the cervix uptake. The findings were conceptually and contextually limited to the age of 25-65 years and women in Cameroon. The studies by Seyoum (2017), Tefera and Mitiku (2017) and Aynalem, Anteneh and Enyew (2020) were based in Ethiopia while Ifemelumma et al. (2019) were based in Nigeria. These studies present a contextual gap since the findings cannot be generalized to Kenya. Therefore, based on the above backdrops, the current study finds it justifiable to fill in the gaps and address the problem by investigating the determinants of utilization of cervical cancers screening services among women aged 30-49 years in Kitui West Sub-County.

1.3 Justification

An important aspect of our preventive health care involves screening tests. Women aged 30-49 years use screening tests in order to detect most common conditions and potentially long life conditions (such as diabetes, heart disease and cancers) that start affecting people in their mid-life years. Early screening and testing can help detect conditions and illnesses at early stages when is most curable before symptoms set in. With the screening tests information, a patient can work closely with the healthcare
provider to develop preventive measures that can improve and even extend the extent of healthy years.

Likewise, WHO recommends screening for cancer of cervix at least once between the ages of 30-49 year is most beneficial, however the screening can also be done to women below the age of 30 years if they are at high risk of CIN2+ (WHO, 2018).

Furthermore, there are limited studies that have been done not only in Kitui but also in Kenya with the focus on women aged 30-49 years. This has been noted from the research gaps identified in chapter 2 and in the problem statement. According to DHIS 2017 only 1.25% of women aged 25-49 years were screened in Kitui County. Kitui West sub-county was also purposively selected since it was the first among the first sub-county to receive health education on the exercise human papilloma virus vaccination (MOH, 2013). Kitui west was also among the leading sub-county with 19% of mortalities related to cervical cancer according to records in the palliative care Centre at the County Referral Hospital (MOH, 2015). Therefore, the current study is a maiden study that seeks to shed more light on the issue at hand.

There is limited research which has been done on the community to look into the determinants of cancer of the cervix screening services. The study provided an insight on the knowledge level, awareness level and the perception on cancer of the cervix screening services at Western sub-county of Kitui County. It will also provide data for literature review for future researchers.
1.4 Research questions

i) What is the influence of social demographic factors on the utilization of cervical cancer screening services among women aged 30-49 years in Kitui west Sub-County?

ii) What is the utilization of cervical cancer screening services among women aged 30-49 years in Kitui west Sub-County?

iii) What is the influence of knowledge, awareness and perception of cervical cancer screening services on the utilization of cervical cancer screening services among women aged 30-49 years in Kitui west Sub-County?

1.5 Hypotheses

The study was testing the following alternative hypotheses:

\( H_{A1} \): There is a significant relationship between socio-demographic factors and utilization of cervical cancer screening services among women aged 30-49 years in Kitui West Sub-County.

\( H_{A2} \): There is a significant relationship between utilization of cancer of the cervix screening services and the knowledge of cancer of cervix among women aged 30-49 years in Kitui West Sub-County.

\( H_{A3} \): There is a significant relationship between utilization of cancer of cervix screening services and the awareness of cancer of cervix screening services among women aged 30-49 years in Kitui west Sub-County.
There is a relationship between utilization of cancer of cervix screening services and the perception on cancer of cervix screening services among women aged 30-49 years in Kitui West Sub-County.

1.6 Objectives

1.6.1 Broad objective

To investigate the determinants of utilization of cervical cancers screening services among women aged 30-49 years in Kitui West Sub-County.

1.6.2 Specific objectives

i. To determine the influence of social-demographic factors on the utilization of cervical cancer screening services among women aged 30-49 years in Kitui West Sub-County.

ii. To examine the utilization of cervical cancer screening services among women aged 30-49 years in Kitui West Sub-County.

iii. To determine the influence of knowledge, awareness and perception of cervical cancer screening services on the utilization of cervical cancer screening services among women aged 30-49 years in Kitui West Sub-County.

1.7 Significance and anticipated output

There is a downward trend on mortality related to cancer of the cervix after using pap-smear test as reported by studies done in United States of America. This study provides information on awareness of utilization of cancer of the cervix, knowledge on cancer of
the cervix and screening, the social demographic effect on utilization, perception of cancer of the cervix and screening services of cancer of the cervix screening services and the percentage of women aged 30-49 years who have utilized the screening services. This information will help in improving the uptake of cancer of the cervix screening services through identification of clients’ determinants for the services utilization.

Information gathered during this study is beneficial for cervical cancer programmes planning to improve the utilization of cancer of the cervix screening services which can reduce deaths and ill health related to cancer of the cervix. This study can enhance policy related to cancer of the cervix and therefore address the shortcomings of the utilization of screening services for cancer of the cervix and improve quality of life to the community and can, therefore, engage in income-generating activities.

This study can improve cervical cancer screening services by addressing the determinants of cancer of the cervix screening services and also giving feedback to the policymaker in order to strengthen and support cervical cancer screening services. Client focused policy can improve the uptake of cancer screening services and therefore reduce deaths related to cancer of the cervix.

1.8 Delimitation and limitation

Potential weaknesses in a study which are out of the researcher’s control are limitations while actions taken by the researcher in order to take care of the limits that arise from the research are delimitations (Simon, 2011). The study was limited to women of ages
30 years to 49 years in Kitui west Sub-County of Kitui County. However, limiting the study to the County offers a narrower and more specific scope of research to pinpoint the problems and derive country-specific solutions. In addition, since the study is scientifically carried out, the findings were generalizable to the entire population.

This study experienced a number of limiting factors. For instance, the researcher anticipated unwillingness from respondent to give information. This anticipation was addressed by explaining the respondents that the gathered information was confidential and was for academic purposes only. Time was another limitation whereby the researcher was not able to reach all respondents. The research assistants assisted the principal researched by collecting the data at the same time hence addressing the limitation of time. Financial constrains was another limitation which the researcher addressed through personal savings and support from family members.

1.9 Conceptual framework

This is a tool used in research by researcher with the intention of developing understanding and awareness of variables under scrutiny (Gerber, Gerber & Van der Merwe, 2014).
Figure 1.1: Conceptual Framework

Source: Adopted and modified from the literature review (2020)
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Cancer of the cervix is as a result of human papilloma virus infection. It accounts for more than eighty percent from middle and low income countries. An estimate of one million women are living with the cancer of the cervix currently. Many of cervical cancer clients have no access to curative, preventive, and palliative care for cancer of the cervix (WHO, 2010). Women who are infected with HIV infected women get infected by cancer of the cervix earlier than those not infected at a peak of 35 years to 45 years primary prevention of cancer of the cervix can be achieved through sexual abstinence, delayed sexual rebut and use of condom, vaccination of girls at the age of 9-11 year with HPV vaccine and male circumcision promotes primary prevention. (Arbyn et al., 2020).

Invasive cancer of the cervix progresses in duration of 10 years after precancerous cell detection through early screening and appropriate treatment is important for secondary prevention. Pre-cancerous cell for cervical cancer can be screened through visual inspection with lugos iodine (VILI), and also acetic acid (VIA) (Mishra, Pimple & Shastri, 2011). It is recommended that women who are HIV positive be tested at the time of diagnosis and then be tested again after six months followed by yearly. The cycle for women who are HIV negative is at the initial time and then after every five years. Gravid women can be screened up to twenty week of gestation but no treatment should be commenced until after delivery (NCPP, 2015)
2.1.1 Global Perspective

Incidence of cancer of the cervix has reduced by seventy to eighty percent through well-organized screening programs World Health Organization (WHO). Developing countries has highest burden of cancer of the cervix which is caused by lack of effective programmes for screening (WHO, 2019). For developed nations such as the United States, about 40% of women living with cervical cancer die of cervical cancer, while the corresponding mortality rate for developing countries like Sub-Saharan Africa is 78%. The United Kingdom (UK) has reported a 42 per cent drop in cervical cancer after the successful introduction of cervical cancer services by the National Health Service (Torre et al., 2015). A fifth of disease burden in India is due to cancer of the cervix caused by inadequate screening programmes for cervical cancer. An initiative of cancer of the cervix in Australia lowered the numbers to an average of 4.5% of people affected by cancer of the cervix (Vhuromu, Goon, Maputle, Lebese & Okafor, 2018).

Haiti has a mortality rate of 4.1 percent per one hundred thousand women while Jamaica has 17.4 percent in same hundred thousand making the highest cancer of cervix mortality rates in the Caribbean Region Countries. In Jamaica mortality rate is 6.6 times higher for cervical cancer than females from unite state of America and 2.8 greater for African American females (Bourne, Kerr-Campbell, McGrowder & Beckford, 2010; Ncube, Bey, Knight, Bessler & Jolly, 2015).

Human papilloma virus testing is not available in public health sector in Jamaica. It ranges between fifty four and eighty seven percent. It is highest on young teenagers aged between sixteen to nineteen years with multiple sexual partners. In Jamaica despite
having high prevalence for cancer of the cervix does not have programme for HPV vaccination (Ncube, Bey, Knight, Bessler & Jolly, 2015).

2.1.2 Regional Perspective

Among the Sub-Saharan African countries, cancer treatment and screening facilities as well as the resources is limited. Cancer of the cervix is still a major cause of mortality and morbidity despite the importance of screening to women in LMICS in SSA (Bayu, Berhe, Mulat & Alemu, 2016). For instance, in Nigeria sporadic screenings for cancer of the cervix for women visiting certain clinic since there are no policy guidelines for screening (Ndikom & Ofi, 2012). High burden of cancer of the cervix in Nigeria is caused by high prevalence and no policy programmes for screening services. Poor knowledge, Negative seeking behavior and lack of screening programme which are effective has caused low utilization of screening services (Ndikom & Ofi, 2012; Ifemelumma et al., 2019).

Women of reproductive age in Cameroon comprises of 24% prevalence rate for cancer of the cervix. In Cameroon the uptake the uptake of a cancer of cervix screening services remains poor at nineteen point six percent with 1993 new cases and 1676 deaths annually. Risk factor awareness is low on cancer of the cervix symptoms as well as signs. This creates the need for education and awareness creation on cancer of the cervix signs and symptoms to the community and health care workers at KWHD (Donatus, Nina, Sama, Nkfusai, Bede, Shirinde & Cumber, 2019).
Among those surveyed by Ifemelumma et al. (2019) in Abakaliki, Nigeria, it was noted that the uptake of cancer of the cervix screening services was poor with only 20.6% having been screened. Recently in Northwest Ethiopia, Aynalem, Anteneh and Enyew (2020) corroborated that there was low magnitude of uptake of cancer of the cervix screening services. Factors that contributed to this included, marital status, multiple sexual partners, history of sexual transmitted disease as well as attitude and knowledge of the respondents.

In Botswana, Tapera et al. (2017) above two thirds of cancer deaths in HIV positive women is caused by cancer of the cervix with 17% prevalence rates of screening for precancerous cells of the cancer of the cervix which is still low in health facilities despite the services been free of charge. Women of child bearing age in Zimbabwe who had under taken cancer of cervix screening services in rural area was 5.2% while those in urban centers was 10.8%. The country still records high number of premature deaths from the condition which can be prevented through screening and testing (Chifamba, 2019). These reports are an indication of the clear need for the health sector to scale up its strategies towards the awareness and education of the society on matters cancer screening. It is evident that African developing countries still succumb to the consequences of the lack of facilities to help in screening. Programmes aiming at improving cancer of cervix screening services should aim on factors hindering the uptake of the services.
2.1.3 Kenyan Perspective

Kenya projects approximately four thousand and sixty ne cases by the year 2025. Cancer of the cervix still remains low at 3.2% of women aged 18 years to 69 years in Kenya. New cases of cervical cancer make up 12.9 % (5,250) annually and 11.84% (2,286) deaths of cervical cases annually. Cancer of the cervix is the 2nd among all cancers in women (MOH, 2018; Fitzmaurice et al., 2017). Nyangasi et al. (2018) likewise acknowledge that in Kenya awareness of cancer of the cervix screening is high, however the rate of screening is still low. Strategies should be put in place to focus on women in rural areas and with no formal education as well as those with nn-risky behavior and risky behavior in order to implement the message.

At Mama Lucy Kibaki Hospital, Nairobi, Kenya, Mbaka, Waihenya, Oisebe and Lihana (2018) stated that 83.6% comprised of those who were aware of cancer of the cervix 23.1% had ever gone for screening for cancer of the cervix prior to the study. They feared the procedure for cervical cancer screening where most of the respondent sited the procedure as the main barrier to utilization the service. Motivators for cancer of cervix screening uptake included mass media, health education, and outreach campaigns on screening services, mobile clinics and voluntary cervical cancer screening Centre. A study on reduction risk for cervical cancer showed, screening at 35 year and 45 years can reduce risk by 40%. Three screening visits at 34 years, 40 years and 45 yeas increases reduction risk by 15%. 65% of the women diagnosed in 2006 died of cancer of the cervix. This shows that most women with cancer of the cervix seek medical services when it’s very late (NCCPSP, 2011-2016).
Study on utilization of cancer of the cervix services in Embu County showed that 82% of the women interviewed were aware on cancer of the cervix and 73.2% knew about the availability of screening services (Nthiga 2014). At Moi Teaching and Referral Hospital a study on barriers to cervical cancer showed that only 22.8% who felt at risk of cancer of the cervix and only 12.3% were screened prior to the study. Cervical cancer positive results after tests scared women from going for the screening at 22.4% as well as financial constrains at11.4% (Were et al 2011). Currently, Kandie, Mburugu, Onyambu and Kapigen (2019) state that in Meru Teaching and Referral Hospital 78.4% reported not to have had of HPV vaccination, 38.1% had never heard of cancer of the cervix screening ,while 61.9% had heard about cancer of the cervix screening. Aware of cancer of the cervix was at 69%

In Migori County, Kenya, Oketch et al. (2019) reported that women indicated to have a positive experience with the HPV self-sampling strategy. Influence on uptake of cancer of the cervix screening services included knowledge, prior awareness of human papilloma virus, perception of cervical cancer by individuals and partner and peer encouragement. However, most of them pointed out that they were paranoid about death associated to cacer of the cervix and the examination

In Kitui 50% of women who were diagnosed with cancer of the cervix in the year 2015 died within the same year. It is reported that they sort health services when it was late and the cancer cells were in stage three and four. A study HPV vaccine acceptability among primary school teachers at Kitui County revealed that awareness of the vaccine was at 90% while knowledge level of cancer of the cervix was at 48 %( Masika et al., 2015).
The national strategic plan on cancer of cervix prevention for the years 2012 to 2015 which was rolled out in the year 2012 had an aim of providing priority actions which would produce a greater reduction on cancer of the cervix by increasing the screening rate among women. Cervical cancer proportion in Kenya when compared to other cancers is 12.7% and contributes 8.6% deaths of all other cancers.

The above instances among others are clear indicators of low uptake of cancer of the cervix screening services not only in Kenya but also globally. The program in Kenya recommends good screening testing criteria which include VIA, VILI and pap-smear as well as HPV cytology.

2.2 Utilization of Cervical cancer screening services

In the United States of America in the year 1950, the uptake of cancer of the cervix screening services was very low and was the leading cause of death but now accounts to only 0.7% among women mortality caused by cervical cancer (National Cancer Institute, 2017). HPV infection is the leading cause of cancer of the cervix. Owing to the reports, Seo, Li and Li (2018) a study on Chinese Americans identified that maintenance of privacy among women on their health problems, being vulnerable in the system which is not familiar and fear of losing control and cultural beliefs make Chinese immigrants women not to be able to make decision on cancer of the cervix screening services. Utilization of cancer of the cervix screening services has been reported to be low especially in developing countries. The uptake of cervical cancer screening by women was 5.1% only among women who had been done Pap smear. (Wright et al 2014). Non-screening for cancer of the cervix was attributed to the respondents’ assumption that they
were not at risk of contracting cancer of the cervix. Poor perception on cancer of the cervix screening services by most women who were not screened. (Ajibola et al, 2016).

Vhuromu, Goon, Maputle, Lebese and Okafor (2018) studied the use of cancer of cervix Screening Services for Women in Vhembe District, South Africa. By randomly assigning five hundred women ranging between 20-59 years in Vhembe District, Limpopo Province, South Africa, the study indicated that the use of cancer of the cervix screening services is still very low, given the free provision and understanding of cancer of the cervix screening services. In particular, majority of the women would not have been tested for cervical cancer, primarily due to lack of resources, phobia of discomfort, and humiliation. According to the women, the Pap test included scratching the cervix to identify suspected cancer cells, and about a third of them did not have a Pap test. Cancer of the cervix screening health talks should be intensified and improved to provide additional, affordable alternatives for screening women in the rural area.

In Ethiopia, cervical malignancy is a general medical problem, as it is a typical reason for mortality among ladies of conceptive age. It is known to influence the most distraught networks on the planet, for example, rural, marginalized and HIV-positive females. While there is clear proof that cervical screening diminishes mortality because, its utilization is still wanting. Examination by Assefa, Astawesegn and Eshetu (2019) on the utilization of cervical malignant growth screening programs by HIV-positive ladies visiting grown-up ART centers in general wellbeing offices in Hawassa, Ethiopia, indicated that only 40.1 per cent of them had been screened. Having a post-essential training, less than 500 cell/mm3 CD4 check; length since HIV finding, accomplice
support, information about hazard factors and favourable attitude towards cervical disease altogether affected the choice to receive cervical malignancy screening use.

By use of a descriptive cross-sectional survey in Bugiri and Mayuge districts in eastern Uganda, Ndejjo, Mukama, Musabyimana and Musoke (2016), cancer of the cervix screening uptake in rural Uganda has likewise been found to be very low. It was found that only 4.8 per cent of the women studied had been tested for cervical cancer, and 48.8 per cent had been tested by a health professional, whereas 39.5 per cent had certain symptoms and signs consistent with cancer of the cervix. Voluntary screening was 37.2 percent. The study showed that personal perceptions and health facility-related challenges posed challenges to cervical cancer screening. The study suggests that strategies to increase the uptake of cancer of the cervix screening be carried out in order to improve access to services in rural areas.

The survey by Kileo, Michael, Neke and Moshiro (2015) utilization of cancer of cervix screening services and related factors among primary school teachers in Ilala Municipality, Dar es Salaam, Tanzania, and the findings suggest that the uptake of the services was poor. The use of cancer of the cervix screening programs was 28% for women who were aged 20–29 years, 22% for those married and 24% for those of higher education. People were more likely to use cancer of cervix screening whether they were multiparous, had reported more than one-life sexual relationship, and did not include their husband choosing health services.

In Kenya, a study of NCDs Risk Factors revealed that only 16.4 per cent of women aged 30 to 49 years had been tested for cervical cancer (KNBS, 2015). Nevertheless, the use of
cervical cancer screening programs that can eliminate any of this remains exceptionally small at just 3.2 per cent in the country for women aged 18 to 69 years. Fresh cases of cervical cancer account for 12.9 per cent (5.250) per year and 11.84% (2.286) of prostate cases per year. The leading cause of deaths related to all female cancers is cancer of the cervix (MOH, 2018; Fitzmaurice et al., 2017).

Nyangasi et al. (2018) likewise acknowledge that despite high awareness of cancer of cervix screening services the utilization in Kenya is low and therefore the strategies should aim at improving the uptake through health messages addressing risky and non-risky group

At, Mama Lucy Kibaki Hospital, Nairobi, Mbaka, Waihenya, Oisebe and Lihana (2018) announced that the prevalence of cervical screening was 23.1 per cent, with 83.6 per cent conscious of cancer of the cervix. Fear of tests, the lack of knowledge and mistrust of screening were significant obstacles to cervical screening. Free cervical screening, Community medical awareness, free cervical screening centers, mass marketing advertisements for cervical cancer and mobile cancer screening services have been described as possible motivators for cervical screening.

2.3.1 Influence of Knowledge on Utilization of cervical cancer screening services

Heena, Durrani, AlFayyad, Riaz, Tabasim, Parvez and Abu-Shaheen (2019) on study on knowledge, attitude and practice on women health professional in King Fahad Medical City (KFMC) on cancer of cervix screening showed that only 4.0 per cent of participants tended to have strong cancer of cervix information (in terms of risk factors, susceptibility,
signs and symptoms, preventive measures and screening procedures) and that 14.7 percent had average knowledge of cervical cancer. 86.8 percent of participants agreed that the Pap test was a successful tool for the diagnosis of cervical cancer and 103 (26.2 percent) respondents had experienced Pap Test Testing. This research suggests that female health workers at KFMC have low understanding of cervical cancer as a condition.

In 2012, Gu, Chan, Twinn and Choi (2012) examined the impact of awareness and understanding of the risk of cancer of the cervix on screening conduct in Chinese mainland women. As per the results, both women regarding themselves to be at low risk of cervical cancer. No substantial correlation has been found between the prior screening uptake and the PMT variables. Nevertheless, according to Zhou, Wang, Liu and Zhang (2019), deaths related to cancer of the cervix has been on the rise among younger women in urban China in the last 10 years in China.

Therefore, Chen et al. (2020) underscore that there is an immediate need for education in urban China to boost screening for cancer of the cervix. There is no understanding of cancer of the cervix in both rural and urban China. While the screening facility is accessible from pharmacies, there is limited active use in urban China before symptoms occur. In rural China, women aged between 35 years and 59 years of age benefit from the National Program for Cervical Cancer Screening in Rural Areas (NCCSPRA), which offers free screening services since 2009 and leads to the prevention of this outbreak in rural areas (Chen, Wei, Liu, Wang, Zhou, Bi & Zhang, 2020).
Vora, Mcquatters, Saiyed and Gupta (2020) indicate that early diagnosis and preventive care will eliminate up to 80 per cent of cervical cancers-related illness in developing countries where successful screening services are in place. The authors studied Awareness, perception and obstacles to Screening for cancer of the cervix among Women in India and found that in urban and rural areas, the majority of females have learned about cervical cancer, but there is a surprisingly poor adoption for cancer of the cervix screening. This poor incidence of cancer of the cervix screening can be due to a variety of reasons, including a low level of education and understanding, a low level of perceived risk, shame/stigma associated with cancer, cancer anxiety, expense and family responsibilities.

The case has likewise been noted in the Sub Saharan Africa where many countries fall short of the necessary resources and capital to facilitate the early screening. Using a cross-sectional descriptive analysis, Gyamfua et al. (2019) investigated the effect of the awareness level on cervical cancer among women in the Kenyan Bosore group in Ghana. The study found that only 9.7 per cent of respondents had high knowledge of cervical cancer, 20.6 per cent had moderate knowledge, while 69.7 per cent had poor knowledge of cancer of the cervix. This is an implication that the respondents have understanding of signs, symptoms, risk factors, diagnosis and treatment of cancer of the cervix. The analysis also showed that the educational experience and profession are significantly associated with knowledge level of cancer of the cervix screening among the respondents.
A study carried out on uptake of cancer of the cervix screening services in Moshi Tanzania showed that, among the respondents interviewed 59.6% had low level of knowledge on cancer of the cervix as well as its prevention among the respondents. 60.5% had been screened. High knowledge level and prevention on cancer of the cervix screening influenced screening among the respondents (Lyimo and Beran 2012). Likewise, Mugassa and Frumence (2020) analyzed influencing factors to uptake of cancer of the cervix screening services in Tanzania and the study revealed that there was an influence on utilization by the national health system to early uptake of the services by poor flow of information and inadequate availability of tools and competent staff.

Daniyan (2019) measured the effect of Knowledge, Attitudes and Practice of cancer of the cervix screening among Women Health Workers at the Tertiary Health Facility in South-East Nigeria. Informants' level of knowledge on cancer of the cervix screening services was considered satisfactory. That is likely due to the fact that the respondents were health professionals who were subject to public knowledge of the prevalence of cervical cancer and the need for routine screening. This further suggests that big initiatives and public understanding of the topic have greatly changed knowledge within the target markets. Similar studies have, however, shown that, given a high degree of knowledge and availability of screening facilities, there is low use of Pap-dating among health staff, for example in Maiduguri (Bakari, Takai & Bukar, 2015). Healthcare workers despite been the custodian of heath care has low uptake of cancer of the cervix screening services hence needing investigation in order to improve utilization of cancer of the cervix screening services. In another study in Southern Ethiopian Mabelele,
Materu, Ng’ida and Mahande (2018) studied the effect of awareness on the prevention and screening activities of cancer of the cervix among women attending reproductive and child health clinics in Magu District Hospital, Lake Zone Tanzania. The study showed that awareness of cervical cancer was poor, with 82.7 per cent of women having 50% and below. Slightly above three quarter (82.4%) among the respondents were aware about cancer of cervix. Many women lack detailed awareness of cancer of the cervix and only a handful use screening facilities. Strategies to raise awareness of cervical cancer can help to increase the understanding and use cancer of the cervix screening procedures.

Therefore, the current study notes various disparities in levels of Knowledge among females in different contexts. However, the level of knowledge has been underscored to be relatively low especially in low- and middle-income countries. Healthcare workers need formal education programme to highlight the need to improve their knowledge on cervical cancer and signs and symptoms. Thus, the current study adopts the following hypothesis:

\[ H_{A1}: \text{There is a significant relationship between utilization of cancer of the cervix screening services and knowledge of cancer of cervix among women aged 30-49 years in Kitui West Sub-County.} \]

### 2.3.2 Influence of Awareness on Utilization of cervical cancer screening services

The level of awareness on cervical cancer and cervical cancer screening can influence an individual’s intention to seek for the services. In a study conducted among Tunisian, it was revealed that the awareness level of the cancer of the cervix was 40% and an anti
HPV vaccination acceptability of eighty percent. The researcher also revealed that there was strong statistical association between awareness of cancer of the cervix and utilization of the same (Gamaoun, 2018).

Abiodun, Oluwasola, Durodola, Ajani, Abiodun and Adeomi (2017) did a cross-sectional survey on perception risk and awareness level on cancer of the cervix among clients attending general outpatient clinic at Bowen University Teaching Hospital (BUTH) showed that recognition and screening tests for cancer of the cervix was at 22.6 per cent and 17.9 per cent, respectively, hospital personnel were the main source of health talks. Approximately 5.7 per cent of the respondent had an assumption that they were never at a risk of cancer of the cervix. Among the respondents, only 1.6% had gone for cervical cancer screening test and approximately 5.7% assumed that they were never at risk of cancer of the cervix.

In a study done in Nigeria to investigate community awareness on cervical cancer among respondent’s majority of them were aware of its causes through health talks even though they were reluctant to seek screening services. In another study done in the south-east of Nigeria to determine the influence of awareness on uptake of screening services, it was further revealed that majority of those interviewed had higher awareness levels and a relatively higher rate of uptake of screening services (Aniebue et al., 2010).

Amin et al. (2020) utilized a cross-sectional study design to study the perception of cancer of the cervix and its cytological screening among medical students (Preclinical students of CHS-UDUS). The study showed that UDUS preclinical medical students were well aware of cervical cancer screening (82%) which made them favorably inclined
towards the screening method. Many of them (75.6 percent) agree the Pap is successful in the diagnosis of cervical cancer. Most of participants derived their knowledge from daily seminars (81 per cent) against mass media (7 per cent) and other international outlets. Nevertheless, 42.8 per cent were unsure of the Pap Fungal Screening Programs offered at their university. The level of understanding of cancer of the cervix screening was believed to be high among the population of the sample.

In a study conducted among Gabonese women, revealed that majority among the respondent had awareness on cancer of the cervix with a few reporting that not to know the causes of cancer of the cervix with risk factor knowledge gap on cervical cancer. Multiple sexual partners, sexually transmitted infections, insertion of objects into the vagina and early sexual rebut were the risk actors frequently cited by the respondents (Assoumou et al., 2015)

The current study, therefore, underscores various empirical results that imply the extent to which awareness has influenced the uptake of cancer of cervix screening services in various contexts. Most of these studies have noted that awareness level on the cancer of the cervix effects, early detection and effects of unscreened cases have had significant effects on the uptake of cancer of the cervix screening services. The current study, therefore, seeks to narrow the effect to a case of women aged 30-49 years in Kitui West Sub-County. Thus, the current study adopts the following hypothesis:

$H_{A2}$: There is a significant relationship between utilization of cancer of the cervix screening services and awareness of cancer of the cervix screening services among women aged 30 years to 49 years in Kitui West Sub-County.
2.3.3 Influence of perception on Utilization of cervical cancer screening services

Psychological factors that affected cancer screening included, culture, spiritual beliefs, poor knowledge and fear of invasive procedures. Approval by partners, language barrier, lack of confidentiality, high cost on referral and lack of health insurance policy are external factors that influence on utilization of cancer of the cervix screening. (Maria et al, 2011). Study done on breast and cancer of the cervix revealed that, socio-economic factors knowledge level, acceptability of healthcare services and language barrier partially explained disparities among Asian and Hispanic women (Elizabeth et al 2011).

A study conducted among women in Bangladesh on cancer screening attitude on women showed that knowledge level of the respondent on cancer of the cervix was 12%. (Ferdous et al, 2014). Embarrassment was found to be the greatest barrier on a research done in Brazil on cancer of cervix barriers among women seeking family planning services regardless of their educational level (Augusto et al 2013).

Salem, Amin, Alhulaybi, Althafar and Abdelhai (2017) a study on in Al Hassa, Saudi Arabia randomly selected 506 female secondary school teachers to assess knowledge level about risk factors and signs and symptoms of cancer of the cervix in relation to perceived risk and to characterize compliance to cancer of the cervix. The study showed that 65.4 per cent and 63.4 per cent of respondents were deemed less informed about risk factors for cancer of the cervix and early symptoms, respectively. The respondents were found to be at a normal or below-average level of cervical cancer. The study also found that respondents concerns (presumed the procedure to be embarrassing) were the key
reasons that hampered cervical cancer screening with a high loading value of 4.392, which clarified 30.8% of the obstacles to use, followed by health-related considerations.

A study done in Lagos on perception and prevention practices at the community level showed that among the respondent those who had ever heard about cancer of the cervix were only 37.2 per cent with 5.1 percent having been done Pap smear test (Wright et al 2014). Abiodun, Oluwasola, Durodola, Ajani, Abiodun and Adeomi (2017) conducted a cross-sectional study to determine the level of understanding and perceived risk of cervical cancer among females at the Bowen University Teaching Hospital (BUTH) general outpatient clinic. The study also indicated that risk assessment is strongly related to age and early coitarche. In fact, the mood of the participants to cervical cancer screening was positive.

Ndikom, Fadahunsi, Adekanmbi and Young (2019) indicated that since most women attending the gynaecological clinic have not utilized cervical cancer screening services and have a poor perception about the consequences of late diagnosis. The research examined the potential effects of late cervical cancer diagnosis and use of Cervical Cancer Screening Services (CCSS) by Gynecology clinic participants in Ibadan, Nigeria. Much of the participants had little knowledge of the implications of a late diagnosis of cervical cancer, and only the respondents had ever used CCSS. There is a major correlation between potential implications and ability to track cervical cancer, educational level and readiness to use CCSS, as well as awareness and preparation for CCSS.
Ampofo, Adumatta, Owusu and Awuviry-Newton (2020) conducted a study on cancer of cervix utilization services barriers in Ghana. The study confirmed that perceived danger, advantages, obstacles and action signals demonstrated substantial variations in participation in engaging in screening. The correlation was distinct after a long period of waiting, setting priorities early morning and late evening tests, but revealed little substantial change.

Feyisa and Temesgen, H. (2019) studied the barriers and perceived benefits on cancer of the cervix to women above 15 years in Arsi Zone, Southeastern Ethiopia. Most respondents had a better understanding of the advantages and drawbacks to screening. Women who wanted to undergo cancer of the cervix screening in the future would believe about the benefits for going for the screening services 2.6 times more than those who did not. People living in rural areas were four times more likely to see the results of screening for cervical cancer than women living in semi-urban settings. Females who began sexual intercourse below than 16 years of age were twice as likely to find obstacles to cervical cancer screening as women who started sexual intercourse years above 16.

Kandie, Mburugu, Onyambu and Kapigen (2019) on a study in assessing the perception and knowledge on cervical cancer screening at Meru Teaching and Referral Hospital. 352 respondents were surveyed through purposive sampling technique, the findings revealed that 86.9 percent never new cancer of cervix causes. Awareness of cancer of cervix was at 69 percent. Those among the respondent who had undergone screening were 61.9% and heard about cancer of cervix screening and human papilloma vaccination respectively. A negative relationship between screening, perceived pain and perceived
embarrassment was also established by the study. This negative perception on cancer of cervix screening influences the uptake of cancer of the cervix screening services negatively.

Oketch et al. (2019) did implementation strategies survey in Migori County on cancer of the cervix screening services among 120 respondents in a cluster randomized trial. Women mentioned having good experience with the HPV self-sampling technique. Perceptions and awareness such as previous HPV awareness, personal understanding of the risk of cancer of the cervix, preference for better health outcomes, and peer and partner support have been reported to affect the use of cervical cancer screening. Most of them, however, found out that they were paranoid about pelvic examination, illness, and death connected with cervical cancer.

Perception of women on the uptake of cancer of the cervix screening services has been empirically tested by various studies and one common theme has been identified. The perceptions of women towards the uptake of these services have been found to be very significant. Several factors such as the attitude, fear, paranoia, stigma, and cost among others have been named by the majority of the studies. Positive attitude specifically has a positive and significant effect on the uptake of cervical cancer screening services and vice versa is also true. Thus, the current study adopts the following hypothesis:

\( H_{A3} \): There is significant relationship between utilization of cancer of the cervix screening services and the perception on cancer of the cervix screening services among women aged 30-49 years in Kitui West Sub-County.
2.3.4 Influence of Social demographics on the utilization of cervical cancer screening services

Social demographic factors such as age, marital status, educational level, religion and occupation could influence the utilization of screening services. Research findings have shown that younger women tend to seek for cervical screening services more than the older women (Ifemelumma, 2019). Other studies have shown that there is no statistical relationship between the respondents age and utilization cancer of the cervix screening services. In a study done in Korea, results showed that age did not influence intention to seek for cervical screening services (Park et al, 2011). Similar results were reported in a study done in Greece which showed that there was no association between age and utilization of cancer of the cervix screening services (Simou et al., 2010).

In Norway, Leinonen, Campbell, Klungsøyr, Lønnberg, Hansen and Nygård (2017) examined the impact of personal and provider-level influences on involvement in cervical cancer screening among Norwegians and immigrants. In particular, 34 per cent of women were non-attached 31 per cent of native Norwegians, compared to 50 per cent of immigrants. Higher non-compliance rates were correlated with having a male general practitioner (GP), an international GP, a young GP, and a distance to the screening site. Being single, having no daughters, having a lower socioeconomic status and area of residency, expected non-compliance and, to a lesser degree, influenced the respondents towards adherence to screening. Past contact of cervical disorders, by comparison, greatly improved conformity to the screening.
Ebu (2018) conducted a research at central region of Ghana on social demographic characteristic on cancer of the cervix screening among HIV positive women. The study showed that those respondents who had high level of education utilized screening services more than the ones with formal education. Education gives more understanding of health related issues and therefore can be attributed to a better utilization of screening services for cervical cancer. Women who are educated can also evaluate risk factors to certain disease and can also influence decision making for a health service positively including cancer of cervix screening services (Ebu, 2017).

Research findings by Ebu (2018) have also reported respondents marital status did not influence screening for cancer of the cervix, this could have been due to the study inclusive criteria whereby those cohabitating respondents were termed as married and those who had been divorced were added to the singles as well as the windowed respondents were termed as unmarried (Ajibula et al., 2015).

In Ethiopia, Woldetsadik et al. (2020) have examined the impact of socio-demographic features on cancer of the cervix screening for female clients attending St. Paul’s Teaching and Referral Hospital. This examination demonstrated that there was a poor adoption in cervical disease screening. This was evidenced by women between the age of 40 and 49 years old who were bound to be screened than those in the range of 18 and 29 years old. Individuals living in urban zones were bound to be tested than individuals living in rustic regions. Females in the conceivable objective segment of cervical malignant growth screening was an extent of all age bunches studied and screening was more continuous than in more youthful females. Likewise, rustic residency, low month to month salary and
absence of mindfulness were critical indicators of the helpless utilization of cervical malignant growth screening exercises.

In Kenya, Mwangi, Gachau and Kabiru (2017) dissected the impact of socio-demographic, social-economic and socio-cultural factors on take-up of cervical malignancy screening administrations in low asset settings. The investigation demonstrated that the degree of awareness on cervical disease avoidance is still low and this among different components lead to low VIA/VILI screening tests usage. This was evidenced by the discoveries that there is a statistically relationship between use of VIA/VILI cervical malignant growth screening administrations and the degree of training of the respondents, fundamental wellspring of salary, normal month to month pay and principle leader in the family. General Health offices were not very much staffed and prepared to enough offer the VIA/VILI screening administrations viably.

Nyangasi et al. (2018) studied the factors influencing the utilization of cancer of the cervix screening among Kenyan women and noted that the uptake of cervical cancer screening is low despite high awareness in Kenya. It was discovered that 16.4 percent were recently screened for cervical malignancy and 67.9 percent of non-screened ladies were educated regarding cervical disease screening. Lower screening results have been distinguished for increasingly taught ladies, the most elevated quintile salary and living in urban regions than for ladies without formal tutoring, the least and living in rustic regions. More youthful ladies 35 years to 39 years and those with low-thickness lipoprotein (HDL) were less inclined to be tried. Independently employed ladies, those in
the fourth quintile profit, gorge consumers, over the top sugar admission and low
physical movement were bound to be screened.

Occupational status of a person enables him/her to afford the direct and indirect costs
associated with seeking for the services. However, research findings have shown that
cancer of the cervix screening is not significantly affected by employment status.
Employment provides a high self-esteem however issues of stigma, fears, and uncertainty
cannot be resolved by employment. (Simou, 2010). Working women can therefore be
prevented from utilization of the screening services due to the barrier of stigma, fears and
uncertainty related to cancer of cervix screening services (Matejic et al., 2011).

Based on the above literature, it can be underscored that there is a theme that
demographic factors such as level of employment, occupation, socio-economic status,
area of residency, marital status among others have a significant influence on the
utilization/adoption of cancer of the cervix screening services. Therefore, along the same
line, the current study finds it worthwhile to investigate the influence of these socio-
demographic factors on the uptake of cervical cancer screening services in Kenya. Thus,
the current study adopts the following hypothesis:

\textbf{H}_{A4}: There is a significant relationship between utilization of cancer of the cervix
screening services and socio-demographic factors among women aged 30-49 years in
Kitui West Sub-County.
2.4 Summary of Gaps in the literature review

From the reviewed studies, the study has noted that the selected variables play a significant part in influencing the performance. However, some studies have presented weaknesses and limitations in various aspects. These form the basis of argument of the current study to fill them. For instance, the study by Heena et al. (2019) was based in King Fahad Medical City (KFMC), Gu, Chan, Twinn and Choi (2012) focused on Chinese mainland women, while Chen et al. (2020) focused on both rural and urban China; Gyamfua et al. (2019) was based in the Kenyan Bosore group in Ghana and Mabelele, Materu, Ng’ida and Mahande (2018) was based in Magu District Hospital, Lake Zone Tanzania. These studies present findings from different contexts and given different utilization rates, demographic factors and economic capacities of each country, the studies present a contextual gap which the current study seeks to contextualize in Kenya.

Ebu (2018) conducted a research on the influence of socio-demographic characteristics on cervical cancer screening intention of HIV-positive women in the central region of Ghana. The study was based on HIV-positive women and thus neglected the influence the uptake has on other women. The study therefore presents a conceptual gap. Woldetsadik et al. (2020) also examined the impact of socio-demographic features on cancer of the cervix screening for women attending St. Paul’s Teaching and Referral Hospital. The study likewise presented a contextual and conceptual gap since the focus was only on socio-demographic features leaving out the influence, knowledge, altitude and practices have on the uptake of cancer of the cervix screening services.
Review of literature shows that most of the studies done focused on generally the risk factors for cancer of the cervix and other types of cancers. However, in Kenya despite several interventions being put in place to increase uptake of cancer of the cervix screening services, the rate of utilization still remain alarmingly low despite being offered for free in most public hospitals. This prompted the Ministry of Health together with the County government of Kitui to conduct several sensitizations on cervical cancer screening services to lure women to undertake cancer of cervix screening services. Since its implementation of such interventions in the county, there is scant data on the influence of these strategies on utilization of cancer of the cervix screening services in Kitui County. This, therefore, calls for the need to carry out this study on the utilization of cervical cancer screening services among women aged 30-49 years in Kitui County.
CHAPTER THREE: MATERIALS AND METHODS

3.1 Study Design

Descriptive study design was adopted by the researcher. This type of study design describes situation as it is through a process of data collection in order to produce facts in regard to nature of condition of the research phenomena. Standing facts and quality are given meaning in a descriptive survey (Nassaji, 2015). Several studies such as Kasvosve et al. (2014), Granholm et al. (2015), Hailu et al. (2020), Akal and Andualem (2018), Desale, Taye, Belay & Nigatu (2013) and Lee et al. (2017) have used the descriptive design successfully.

3.2 Variables

The study variables were dependent and independent variables. Dependent variable was utilization of cervical cancer screening services while independent variables were social demographic factors, knowledge level of cervical cancer screening, awareness of cervical cancer screening and perception of cervical cancer screening services.

Knowledge was measured using a rating scale of 1—5. Respondents were subjected to 4 questions. Those who gave 4 correct responses were termed as excellent knowledge; those who gave 3 correct responses were rated to have very good knowledge those who gave 2 correct answers were rated good knowledge, those with one correct answer were rated fair and those with no correct response were rated to have poor knowledge.
Awareness was measured using a rating of 1-5. The scale for Excellent was awarded to those who answered ‘Yes’ in the 4 questions, Very good was for those who answered ‘Yes’ in 3 questions, Good was for those who answered ‘Yes’ in 2 questions, Fair was for those who answered ‘Yes’ in 1 question and poor was for those who answered ‘No in all 4 questions.

3.3 Study area

Kitui County was purposively selected given that it was the pilot county in Kenya on HPV vaccination on girls aged 9-13 year. Kitui west sub-county was also purposively selected since it was the first among the first sub-county to receive health education on the exercise (MOH, 2013). Kitui west was also among the leading sub-county with high number of mortalities related to cervical cancer, 19% according to records in the palliative care Centre at the County Referral Hospital (MOH, 2015).

Kitui County is located in the eastern region of Kenya. Kitui County borders Taita Taveta, Tana River Machakos, Makueni, Meru, Tharaka Nithi and Embu County. It has a total of 30,496.5km², females 52% and males 48% making a total population of 1,012,709. National percentage of 2.6% and a population density is 33 people per km². Growth rate of the population stands at 2.2% annually with an age distribution of 46.6 %(0-14years), 48.2 %(15-64years) and the remaining 5.2 %(above 55 years) (MOH 2014). Kitui West Sub-county cover an area of sq. km (approx.) 667.20. It has a total population of 102,314. It has four wards namely Mutonguni with population of 34,140, Kauwi with population of 26,016, Matinyani with 24,081 and Kwa-mutonga with population of 18,708. It has a total of 536 villages and 24, 170 households.
3.4 Study Population

The population consisted of all sampled women aged 30-49 years in Kitui west Sub-county of Kitui County in the villages which were selected. This was done by tracking the households in Kitui west Sub-county. According to the Ministry of Health (2020), there are 2542 households in Kitui west Sub-county (that is the purposively selected wards: Matinyani and Kauwi wards). The population is distributed as follows:

Table 3.1: Population Distribution in the Selected Wards in Kitui West Sub-County

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Sub-Location</th>
<th>Village</th>
<th>Number of households</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Kalia</td>
<td>Kalenge</td>
<td>189</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>Silanga</td>
<td>132</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>Ndauni</td>
<td>122</td>
</tr>
<tr>
<td>4.</td>
<td>Kyondoni</td>
<td>Syolei</td>
<td>218</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td>Mbavae</td>
<td>193</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>Kiumoni</td>
<td>193</td>
</tr>
<tr>
<td>7.</td>
<td>Yalatani</td>
<td>Nzunguli</td>
<td>101</td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td>Kakeso</td>
<td>156</td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td>Kalatine</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>10.</td>
<td>Katheka</td>
<td>Kwa Ndoi</td>
<td>111</td>
</tr>
<tr>
<td>11.</td>
<td></td>
<td>Mang’elu</td>
<td>144</td>
</tr>
<tr>
<td>12.</td>
<td></td>
<td>Ndolo</td>
<td>159</td>
</tr>
<tr>
<td>13.</td>
<td>Kiseveni</td>
<td>Kiukuni</td>
<td>105</td>
</tr>
<tr>
<td>14.</td>
<td></td>
<td>Kathiani</td>
<td>139</td>
</tr>
<tr>
<td>15.</td>
<td></td>
<td>Kalindini</td>
<td>116</td>
</tr>
<tr>
<td>16.</td>
<td>Mutini</td>
<td>Mutomo</td>
<td>137</td>
</tr>
<tr>
<td>17.</td>
<td></td>
<td>Kaliani</td>
<td>121</td>
</tr>
<tr>
<td>18.</td>
<td></td>
<td>Liani</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Grand Total</strong></td>
</tr>
</tbody>
</table>

Source: Ministry of Health (2020).
3.4.1 Inclusion criteria

The study included all women who were aged 30-49 years within Kitui west sub-County who had stayed in the sub-county for six months gave an informed consent to participate in the study.

3.4.2 Exclusion criteria

The study excluded women who were sick and unable to participate and those who had been done total hysterectomy, more than 5 years prior to the day of data collection.

3.5 Sampling Techniques and sample size determination

3.5.1 Sampling Technique

The study targeted 300 respondents. The county was purposively selected while the 2 Sub-counties were randomly selected from the 8 sub counties. The 2 wards were likewise randomly selected from the 4 wards and the 3 Sub-locations were randomly selected that is, 3 for each ward. The Villages were targeted by clustering and the household being sampled by use of systematic random sampling (interval of 9 so every 10th house). Randomization for household was on the basis of if more than 1 with inclusive criteria.

3.5.2 Sample Size Determination

Fisher et al sample size determination was used to calculate the sample size as quoted by Mugeda and Mugeda 2003. The study population for females aged 30-49year in Kitui west sub-county is approximately 11,375 (MOH, 2015) assuming the utilization of
cervical cancer screening services is 23.1% based on study done in Kenya, (Mbaka et al 2018)

Therefore:

\[ n = \frac{z^2 pq}{d^2} \]

Where;

n-the desired sample size when target population is greater than 10,000

z=the standard normal deviation at the required confidence level

p=the proportion in the target population estimated to have characteristics been measured.

q=1-p

d=the level of statistical significance set.

Substituted as in:

\[ n = \frac{(1.96)^2(0.231)(1-0.231)}{(0.05)^2} \]

Therefore:

n = 272.96 respondents.

That is 273 respondents.
A 10% sample size was included to cater for a possible non-respondents’ rate (Attrition).

Therefore, the study sample was 300 responses.

The sampling frame is as shown in the table below:

Table 3.2: Sampling Frame

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Sub-Location</th>
<th>Village</th>
<th>Number of households</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Kalia</td>
<td>Kalenge</td>
<td>189</td>
<td>22</td>
</tr>
<tr>
<td>2.</td>
<td>Silanga</td>
<td></td>
<td>132</td>
<td>15</td>
</tr>
<tr>
<td>3.</td>
<td>Ndauni</td>
<td></td>
<td>122</td>
<td>14</td>
</tr>
<tr>
<td>4.</td>
<td>Kyondoni</td>
<td>Syolei</td>
<td>218</td>
<td>25</td>
</tr>
<tr>
<td>5.</td>
<td>Mbavae</td>
<td></td>
<td>193</td>
<td>23</td>
</tr>
<tr>
<td>6.</td>
<td>Kiumoni</td>
<td></td>
<td>193</td>
<td>23</td>
</tr>
<tr>
<td>7.</td>
<td>Yalatani</td>
<td>Nzunguli</td>
<td>101</td>
<td>12</td>
</tr>
<tr>
<td>8.</td>
<td>Kakeso</td>
<td></td>
<td>156</td>
<td>18</td>
</tr>
<tr>
<td>9.</td>
<td>Kalatine</td>
<td></td>
<td>92</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1396</strong></td>
<td><strong>165</strong></td>
</tr>
</tbody>
</table>

| 10.        | Katheka      | Kwa Ndoi  | 111                  | 13          |
| 11.        | Mang’elu     |           | 144                  | 17          |
| 12.        | Ndolo        |           | 159                  | 19          |
| 13.        | Kiseveni     | Kiukuni   | 105                  | 12          |
| 14.        | Kathiani     |           | 139                  | 16          |
| 15.        | Kalindini    |           | 116                  | 14          |
| 16.        | Mutini       | Mutomo    | 137                  | 16          |
| 17.        | Kaliani      |           | 121                  | 14          |
| 18.        | Liani        |           | 114                  | 13          |
|            | **Total**    |           | **1146**             | **135**     |

|            | **Grand Total** |           | **2542**             | **300**     |

Source: Ministry of Health (2020).

3.6 Research instruments

The study was both qualitative and quantitative in nature and use both primary and secondary data. The combination of mixed methodologies in research offers an added
advantage and complementary benefit to the research in terms of reinforcing the weaknesses and supporting the strength.

Primary data was collected from the selected sample respondents in table 3.2 above while secondary data was collected from the Health records of the respondents. Semi-structured questionnaires were used to collect primary data while secondary information was collected from the secondary sources and archived material from the County records. Primary data provides the researcher and the audience with information which is authentic and free of bias or manipulation provides the researcher with realistic views to research phenomena and holds an element of accuracy of information (Elmusharaf, 2012). Secondary data on the other hand has the advantage of objectivity since the information provided is from the records and cannot be altered by personal subjective opinions. It is a commentary source to the primary source of information (Johnston, 2017).

3.7 Pre-testing of instrument

The questionnaire was pretested at Kwa-Mutonga ward where 30 women aged between 30-49 years were interviewed which have the same population characteristic as the selected. Unclear questions which were observed were restated or removed in line with objectives of the study.

3.7.1 Validity Test

The study used content validity (a logical process whereby connection between the test items and the job-related tasks are established logically through expert judgment) and
face validity (determined by a review of the items anyone examines and other stakeholders developing an informed opinion as to whether or not the test is measuring what it is supposed to measure) (Cronbach & Meehl, 1955). The study used content and face validity where expert judgement was from the Kenyatta University research supervisors.

3.7.2 Reliability Test

Internal consistence of each question in the study questionnaire was ensured by carrying out a reliability test. A test retest method was used to analyze the responses.

3.8 Data collection technique

The research recruited three research assistant after training them for data collection. The research assistants had a bachelor’s degree in nursing. The principal investigator trained them on aim, objectives, tools and ethical considerations of the study. They were also taken through the questionnaire (interviewer administered questionnaire) and how to administer them to minimize information bias. The county government and the local government granted authority to conduct the study. Data collection activity commenced after explaining the objectives of the study to the respondent. After attaining informed consent from the respondent and explaining to them that it was voluntary the data collection commenced. Verification of response on screening was done by close checking their response with individual health records from facilities. Those who had not been issued with health record card gave the date of screening and the facility. Confidentiality
was ensured by coding the questionnaires and making sure the respondents names were not written on the questionnaire.

3.9 Data presentation and analysis

Data collected was analyzed quantitatively. The data was collected from the closed-ended part of the questionnaires was analyzed by use of descriptive and inferential statistics. The descriptive statistics involved such analysis as frequencies, means, standard deviations, central tendencies and percentages among others. In order to show the relationships/link between variables, the inferential statistics was used where chi-square and regression analyses were applied. This was aided by use of Excel and SPSS software. The study was conducted within the threshold of 0.05, where p values, odd ratio coefficients were assessed for the significance to test for causal relationship between dependent and independent variables. The results were presented in graphs, Charts and tables.

3.10 Ethical Consideration

Authorization was obtained from Kenyatta University and the National Council for Science Technology and Innovation (NACOSTI) prior to conducting the research. This was then presented to Kitui County Government. The information which was collected from the respondents did not reveal their identity and was treated with utmost confidentiality. Personal integrity was upheld throughout data collection. The respondents were also explained to the objectives of the study, therefore informed
consent was observed. The respondents were appreciated for finding time to answer the questionnaires.
CHAPTER FOUR: RESULTS

4.1 Socio-demographic

Table 4.1 shows the social demographic characteristics of the respondents. Most of the study participants were aged were aged between 30-34 years 79 (29.3%) while 56 (20.7%) were between 44 and 49 years. Proportions of participants in different age groups varied across the sample. Slightly above a half 154 (57%) of the respondents were married while 17 (6.3%) of the respondents reported to be widowed.

Respondents level of education showed that slightly more than half 150 (56%) of the respondents had primary level while 26 (9.6%) reported to have no form of education at all. This is an indication of the low level of literacy in Kitui County. On the respondents’ religion, it was established that majority 216 (80%) of the respondents were Christians.

On respondents occupational status, study revealed that below half 123 (45.2%) of the respondents were unemployed while 60 (22.4%) were employed. This is an indication of the escalating unemployment rate which makes most of the respondents depend on self-employment. The results further showed that below half 112 (41%) of the participants were earning between Kshs 5,000 – 9999 per month while 23 (8.5%) earn more than Kshs 20,000.

The results were presented in the table 4.1
Table 4.1: Socio-demographic characteristics of the respondents (n=270)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category</th>
<th>Frequency (n=270)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td>30-34</td>
<td>79</td>
<td>29.3</td>
</tr>
<tr>
<td></td>
<td>35-39</td>
<td>67</td>
<td>24.8</td>
</tr>
<tr>
<td></td>
<td>40-44</td>
<td>68</td>
<td>25.2</td>
</tr>
<tr>
<td></td>
<td>45-49</td>
<td>56</td>
<td>20.7</td>
</tr>
<tr>
<td>Marital status</td>
<td>Married</td>
<td>154</td>
<td>57.0</td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>58</td>
<td>21.5</td>
</tr>
<tr>
<td></td>
<td>Separated</td>
<td>16</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>Widowed</td>
<td>17</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>25</td>
<td>9.3</td>
</tr>
<tr>
<td>Education level</td>
<td>None</td>
<td>26</td>
<td>9.6</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>150</td>
<td>55.6</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>65</td>
<td>24.1</td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>29</td>
<td>10.7</td>
</tr>
<tr>
<td>Religion</td>
<td>Christian</td>
<td>215</td>
<td>79.6</td>
</tr>
<tr>
<td></td>
<td>Muslim</td>
<td>37</td>
<td>13.7</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>18</td>
<td>6.7</td>
</tr>
<tr>
<td>Occupation</td>
<td>Employed</td>
<td>60</td>
<td>22.4</td>
</tr>
<tr>
<td></td>
<td>Self employed</td>
<td>87</td>
<td>32.4</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>123</td>
<td>45.2</td>
</tr>
<tr>
<td>Income</td>
<td>&lt;Kshs 5,000</td>
<td>94</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Kshs 5000-9999</td>
<td>112</td>
<td>41.5</td>
</tr>
<tr>
<td></td>
<td>Kshs 10,000-19999</td>
<td>41</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>≥Kshs 20,000</td>
<td>23</td>
<td>8.5</td>
</tr>
</tbody>
</table>

4.1.1 Relationship between socio-demographic factors and utilization of cervical cancer screening services

The study sought to determine the influence of socio-demographic factors on utilization of cervical cancer screening services. Results showed that slightly below a third 29 (30.8%) of the respondents who had utilized cervical cancer screening services were aged between 30-34 years. There was a relationship between age of the respondent and utilization of cervical cancer screening services (p=0.001). Majority of the respondents 60 (63%) who had utilized cervical cancer screening services were married. However,
there was no statistical relationship between cervical cancer screening services and marital status (p=0.052).

The research found out that above half of the respondents 101 (57.9%) of the respondents who had not utilized cervical cancer screening services had primary education as their highest level of education. There was a significant relationship between level of education and cervical cancer screening services (p=0.002). Regarding religion, most of the respondents 150 (85.5%) who reported to have had not utilized cervical cancer screening services were Christians. However, there was no relationship between religion and utilization of cervical cancer screening services (p=0.444).

On occupation, the results showed that more than half 56 (58.4%) of the respondents who utilized cervical cancer screening services were employed. There was a relationship between occupation and cervical cancer screening services were employed (p=0.001). Concerning income, the results further revealed that, below half 39 (40.6%) of the respondents who utilized cervical cancer screening services earned between Kshs 5000-9999. There was a statistical relationship between level of income and utilization of cervical cancer screening services (p=0.011).

The results were presented as in the table 4.2
Table 4.2: Relationship between socio-demographic factors and utilization of cervical cancer screening services among respondents (n=270)

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable Utilization of cervical cancer screening services (n=270)</th>
<th>Statistical inference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Respondent Response Yes (n=95)</td>
<td>No (n=175)</td>
</tr>
<tr>
<td>Age in years</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>30-34</td>
<td>29 (30.8%)</td>
</tr>
<tr>
<td></td>
<td>35-39</td>
<td>25 (26.0%)</td>
</tr>
<tr>
<td></td>
<td>40-44</td>
<td>23 (24.0%)</td>
</tr>
<tr>
<td></td>
<td>45-49</td>
<td>18 (19.2%)</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>60 (63%)</td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>19 (20.5%)</td>
</tr>
<tr>
<td></td>
<td>Separated</td>
<td>4 (4.1%)</td>
</tr>
<tr>
<td></td>
<td>Windowed</td>
<td>5 (5.5%)</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>7 (6.8%)</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>6 (6.3%)</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>49 (51.6%)</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>23 (24.2%)</td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>17 (17.9%)</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Christian</td>
<td>65 (75.3%)</td>
</tr>
<tr>
<td></td>
<td>Muslim</td>
<td>20 (13.7%)</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>10 (6.8%)</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employed</td>
<td>21 (22.1%)</td>
</tr>
<tr>
<td></td>
<td>Self employed</td>
<td>31 (32.6%)</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>43 (12.7%)</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Kshs 5,000</td>
<td>43 (45.3%)</td>
</tr>
<tr>
<td></td>
<td>Kshs 5000-9999</td>
<td>39 (40.6%)</td>
</tr>
<tr>
<td></td>
<td>Kshs 10,000-19999</td>
<td>16 (17.2%)</td>
</tr>
<tr>
<td></td>
<td>&gt;Kshs 20,000</td>
<td>9 (9.5%)</td>
</tr>
</tbody>
</table>

4.1.2 Hypothesis testing

The study adopted an alternative hypothesis. Based on the significant chi-square values in table 4.2, the study concluded that there is a significant relationship between socio-demographic factors and utilization of cervical cancer screening services among women.
aged 30-49 years in Kitui West Sub-County. As such the alternative hypothesis was upheld.

4.2 Rate of utilization of cervical cancer screening services in Kitui County

The research findings established that slightly above a third 95 (35%) of the participants had been screened for cervical cancer while 175 (65%) had not been screened at all. This implies that the rate of utilization of in Kitui County is still low, at 35%. The results were as presented in Table 4.3 below:

Table 4.3: Rate of utilization of cervical cancer screening among respondents

<table>
<thead>
<tr>
<th>Utilization</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not screened</td>
<td>175</td>
<td>65</td>
</tr>
<tr>
<td>Screened</td>
<td>95</td>
<td>35</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>270</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.2.1 The last time the respondents were screened for cervical cancer

On the last time the respondents were screened cervical cancer, less than of the respondents half 43 (44.8%) reported to have been screened at 36 – 60 months prior to the study followed by 19 (20%) who reported to have been screen more than 60 months prior to the study.
These results were as shown in Table 4.4.

Table 4.4: The last time the respondents were screened for cervical cancer

<table>
<thead>
<tr>
<th>Time of screening</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 3 months</td>
<td>5</td>
<td>5.6</td>
</tr>
<tr>
<td>3-6 months</td>
<td>7</td>
<td>7.6</td>
</tr>
<tr>
<td>6-12 months</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>12-36 months</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>36-60 months</td>
<td>43</td>
<td>44.8</td>
</tr>
<tr>
<td>Above 60 Months</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>95</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.2.2 Source of the prescription towards screening for cervical cancer

Table 4.5 shows that 49 (52%) of those screened had been referred by a healthy worker while 46 (48%) were screened out of their own initiative.

Table 4.5: Source of the prescription towards screening for cervical cancer

<table>
<thead>
<tr>
<th>Source of the Prescription</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health provider prescription</td>
<td>49</td>
<td>52</td>
</tr>
<tr>
<td>Own initiative</td>
<td>46</td>
<td>48</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>95</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.2.3 Reason for not being screened

The reasons for not being screened were given as; don’t think am susceptible to cancer of the cervix 53 (30.1%), was not aware am supposed to be screened 41 (23.3%), Embarrassed been examined in my private parts 32 (18.2%), did not get the service when I needed it 18 (10.2%), Lack of time15 (8.5%), my husband or partner will not approve 8
(4.6%), has not thought about it 5 (2.8%) and worried that I can be told that I have the disease 4 (2.3%). The results are shown in table 4.6

**Table 4.6: Reason for not being screened**

<table>
<thead>
<tr>
<th>Reason why not screened</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was not aware am supposed to be screened</td>
<td>41</td>
<td>23.30%</td>
</tr>
<tr>
<td>Lack of time</td>
<td>15</td>
<td>8.50%</td>
</tr>
<tr>
<td>Was not offered the service when I needed it</td>
<td>18</td>
<td>10.20%</td>
</tr>
<tr>
<td>Not susceptible to cancer of the cervix</td>
<td>53</td>
<td>30.10%</td>
</tr>
<tr>
<td>Embarrassed been examined in my private parts</td>
<td>32</td>
<td>18.20%</td>
</tr>
<tr>
<td>Afraid of positive results</td>
<td>4</td>
<td>2.30%</td>
</tr>
<tr>
<td>My husband or partner will not approve</td>
<td>8</td>
<td>4.60%</td>
</tr>
<tr>
<td>Has not thought about it</td>
<td>5</td>
<td>2.80%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>175</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**4.2.5 Willingness to be screened in future**

When the respondents were asked whether they were willing to be screened in the future majority 122 (69.6%) of the respondents revealed that they were willing to be screened in the future while 53 (30.4%) were not willing to be screened. These results were as shown in the Table 4:7 below:

**Table 4.7: cervical cancer future Screening plan**

<table>
<thead>
<tr>
<th>Screening plan</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not planned to be screened</td>
<td>122</td>
<td>70</td>
</tr>
<tr>
<td>Planned to be screened</td>
<td>53</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>175</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
4.2.6 Best place for giving information on cervical cancer screening services

The respondents were asked to indicate their own opinion on the best place to pass messages on cervical cancers screening to women. Slightly below a third 84 (31.2%) of the respondents indicated that the appropriate places for passing screening messages were the health facilities. Other places include; local women’s groups 66 (24.4%), places of worship 54 (20%), at markets 39 (14.4%) and at home 27 (10%) as demonstrated in table 4.8

**Table 4.8: Best place for giving information on cervical cancer screening services**

<table>
<thead>
<tr>
<th>Places</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local women’s groups</td>
<td>66</td>
<td>24.40%</td>
</tr>
<tr>
<td>Places of worship</td>
<td>54</td>
<td>20%</td>
</tr>
<tr>
<td>Health facilities</td>
<td>84</td>
<td>31.20%</td>
</tr>
<tr>
<td>At home</td>
<td>27</td>
<td>10%</td>
</tr>
<tr>
<td>Markets</td>
<td>39</td>
<td>14.40%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>270</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.3 Awareness on Cervical Cancer and screening services

Awareness of cancer of the cervix was slightly above half 145 (53.7%) of the participants awareness on cancer of the cervix screening services was high while 125 (46.3%) had low awareness level. The results were as shown in Table 4.9 below:

Information on cervical cancer screening, 173 (79%) who have received information on cervical cancer as demonstrated in figure 4.3. 142 (65%) of the participants knew someone with cervical cancer. On enquiring the source of information on cervical cancer
screening, majority 140 (64%) had heard from a health care provider while 38 (17.2%) had heard from the media.

**Table 4.9: Source of information on cervical Cancer (n=270)**

<table>
<thead>
<tr>
<th>Awareness of Cervical cancer screening services</th>
<th>Awareness level</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High awareness</td>
<td>125</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Low awareness</td>
<td>145</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Grand Total</td>
<td>270</td>
<td>100</td>
</tr>
</tbody>
</table>

| Source of information on cervical Cancer       | Relaties        | 23        | 8.4        |
|                                               | Friends         | 28        | 10.4       |
|                                               | Health provider | 173       | 64         |
|                                               | Media           | 46        | 17.2       |
|                                               | Total           | 270       | 100        |

4.3.1 Relationship between awareness and utilization of cervical cancer screening services (n=270)

The results showed that majority 122(69.0%) of respondents with high awareness levels did not utilize cervical screening services. There was no statistically significant relationship between awareness and utilization of cervical cancer screening services (p=0.054) as shown in Table 4.10:
Table 4.10: Relationship between awareness and utilization of cervical cancer screening services among the respondents (n=270)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Respondent response</th>
<th>Dependent variable Utilization of Cervical cancer screening services</th>
<th>Statistical significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness level</td>
<td>High</td>
<td>Yes (N=95) 23(24.2%)</td>
<td>No (N=175) 122(69.8%)</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>72(75.8%)</td>
<td></td>
</tr>
</tbody>
</table>

4.3.2 Hypothesis Testing

The study adopted an alternative hypothesis. Based on the significant chi-square values in table 4.10 ($\chi^2=21.180$, p=0.054), the study concluded that there is no statistically significant relationship between utilization of cancer of the cervix screening services and awareness of cancer of cervix screening services among women aged 30-49 years in Kitui West Sub-County. As such the alternative hypothesis was rejected and the null hypothesis adopted.

4.4. Knowledge of signs of cervical cancer

Table 4.11 shows that 93 (34.4%) of the respondents had fair knowledge followed by 69 (25.6%) who had poor knowledge on signs. The results further showed that slightly above a third 92 (34.1%) of the respondents had fair knowledge on prevention of cervical
cancer followed by 62 (23.0%) who had poor knowledge. The study revealed that more than half 152 (56.3%) of the respondents had low knowledge on cervical cancer, 63 (23.3%) had high knowledge while 55 (20.4%) had average knowledge.

Table 4.11: Knowledge of signs of cervical cancer

<table>
<thead>
<tr>
<th>Knowledge level</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>25</td>
<td>9.3</td>
</tr>
<tr>
<td>Very good</td>
<td>22</td>
<td>8.1</td>
</tr>
<tr>
<td>Good</td>
<td>61</td>
<td>22.6</td>
</tr>
<tr>
<td>Fair</td>
<td>93</td>
<td>34.4</td>
</tr>
<tr>
<td>Poor</td>
<td>69</td>
<td>25.6</td>
</tr>
<tr>
<td>Total</td>
<td>270</td>
<td>100</td>
</tr>
</tbody>
</table>

4.4.1 Relationship between Knowledge level and utilization of cervical cancer screening services

The study revealed that below half 76 (43.4%) of the respondents who had fair knowledge did not utilize cervical cancer screening services. There was no relationship between knowledge on signs of cervical cancer and utilization of cervical cancer screening services (p=0.056). Slightly above a third 33 (34.7%) of the respondents who utilized cervical cancer screening services had good knowledge on the warning signs of cervical cancer.

The study further showed that slightly below a third 29 (30.5%) of the respondents who had very good knowledge on prevention of cervical cancer screening had utilized cervical
cancer screening services. There was a relationship between knowledge on prevention of cervical cancer screening and utilization of cervical cancer screening services \( p=0.002 \).

The results were as presented in table 4.12 below

**Table 4.12: Relationship between knowledge and utilization of cervical cancer screening**

<table>
<thead>
<tr>
<th>Independent variables on Knowledge</th>
<th>Utilization of cervical cancer screening services (270)</th>
<th>Statistical significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Category</td>
<td>Yes (95)</td>
</tr>
<tr>
<td>Signs of cervical cancer</td>
<td>Excellent</td>
<td>15(15.8%)</td>
</tr>
<tr>
<td></td>
<td>Very good</td>
<td>14(14.7%)</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>31(32.7%)</td>
</tr>
<tr>
<td></td>
<td>Fair</td>
<td>17(17.9%)</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>18(18.9%)</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
<td>95(100%)</td>
</tr>
<tr>
<td>Prevention of cervical cancer</td>
<td>Excellent</td>
<td>25(26.3%)</td>
</tr>
<tr>
<td></td>
<td>Very good</td>
<td>29(30.5%)</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>22(23.2%)</td>
</tr>
<tr>
<td></td>
<td>Fair</td>
<td>11(11.6%)</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>8(8.4%)</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
<td>95(100%)</td>
</tr>
</tbody>
</table>

**4.4.2 Hypothesis Testing**

The study adopted an alternative. Based on the significant chi-square values in table 4.12, the study concluded that there is a significant relationship between utilization of cancer of the cervix screening services and the knowledge of cancer of the cervix among women aged 30-49 years in Kitui West Sub-County. As such the alternative hypothesis was upheld.
4.5 Perception on Screening of cervical cancer

The study found out that slightly more than half 142 (52.6%) of the respondents felt that cervical cancer screening was not necessary while 128 (47.4%) felt it was necessary. Majority 162 (60.0%) thought Cervical cancer screening would be painful while the rest 108 (40.0%) thought it would not be painful.

The study also showed that majority 178 (65.9%) of the respondents did not perceive screening to be an embarrassing procedure while 92 (34.1%) thought it is embarrassing procedure. Majority 191 (70.7%) of the respondents did not perceive screening to be for commercial sex workers while 79 (29.9%) felt it was a procedure for commercial sex workers. When the respondents were asked whether they perceived cervical screening was for only those who were sexually active, more than half 144 (53.3%) of the respondents agreed that it was indeed a procedure for the sexually active women while 126 (46.7%) felt it was not only for those who were sexually active.

The results were as presented in the table 4.13

Table 4.13: Perception on cervical cancer

<table>
<thead>
<tr>
<th>Perception</th>
<th>Respondent’s response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical cancer screening is necessary</td>
<td>Yes</td>
<td>128</td>
<td>47.4</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>142</td>
<td>52.6</td>
</tr>
<tr>
<td>Cervical cancer screening is painful</td>
<td>Yes</td>
<td>108</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>162</td>
<td>60.0</td>
</tr>
<tr>
<td>Screening procedure is</td>
<td>Yes</td>
<td>92</td>
<td>34.1</td>
</tr>
<tr>
<td>embarrassing</td>
<td>No</td>
<td>178</td>
<td>65.9</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------</td>
<td>-----</td>
<td>------</td>
</tr>
<tr>
<td>It is for commercial sex worker</td>
<td>Yes</td>
<td>79</td>
<td>29.9</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>191</td>
<td>70.7</td>
</tr>
<tr>
<td>Screening is only for only the sexually active women</td>
<td>Yes</td>
<td>126</td>
<td>46.7</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>144</td>
<td>53.3</td>
</tr>
</tbody>
</table>

### 4.5.1 Relationship between perception and utilization of cervical cancer screening

The study revealed that majority 65 (86.4%) of the respondents who had been screened perceived screening to be necessary. There was a statistically significant relationship between perceiving cervical cancer screening to be necessary and utilization of cervical cancer screening services (P=0.011). The study also showed that majority 83 (87.4%) of the respondents who perceived screening not being painful had had been screened for cancer of the cervix. There was a significant statistical relationship between perceiving screening to be painful and utilization of cervical screening services (p=0.0221).

The respondents’ perception that screening would be embarrassing, most 119 (68.0%) of the respondents who had not utilized cervical screening services perceived it not being embarrassing procedure. There was however no statistically significant relationship between perceiving screening to be embarrassing and utilizing cervical screening services (p=0.073). The results further showed that majority 88 (92.6%) of the respondents who had sought for cervical screening services did not perceive the procedure to be for only commercial sex workers. There was a statistically significant relationship between perceiving the procedure not being for commercial sex workers alone and utilization of cervical screening services (p=0.026).
The study showed that more than half 53 (55.8%) of the respondents who did not perceive procedure to be for only sexually active women had gone for cancer of the cervix screening. However, there was no statistically significant relationship between perceiving the procedure to be for sexually active women and utilization of cervical cancer screening services (p=0.140). The results are as presented next page:

Table 4.14: Relationship between perception and utilization of cervical cancer screening

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Responses</th>
<th>Dependent variable Utilization of Screening services (n=270)</th>
<th>Statistical inference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes (95)</td>
<td>No (175)</td>
</tr>
<tr>
<td>Perception of cervical cancer screening</td>
<td>Yes</td>
<td>65(86.4%)</td>
<td>63(36.0%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>30(13.6%)</td>
<td>112(64.0%)</td>
</tr>
<tr>
<td>Cervical cancer screening is necessary</td>
<td>Yes</td>
<td>12(12.6%)</td>
<td>96(54.9%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>83(87.4%)</td>
<td>79(45.1%)</td>
</tr>
<tr>
<td>Cervical cancer screening is painful</td>
<td>Yes</td>
<td>36(37.9%)</td>
<td>56(32.0%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>59(62.1%)</td>
<td>119(68.0%)</td>
</tr>
<tr>
<td>Screening procedure is embarrassing</td>
<td>Yes</td>
<td>7(7.4%)</td>
<td>72(41.1%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>88(92.6%)</td>
<td>103(58.9%)</td>
</tr>
<tr>
<td>It is for commercial sex worker</td>
<td>Yes</td>
<td>42(44.2%)</td>
<td>84(48.0%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>53(55.8%)</td>
<td>91(52.0%)</td>
</tr>
</tbody>
</table>
4.5.2 Hypothesis Testing

The study adopted an alternative hypothesis. Based on the significant chi-square values in table 4.14, the study concluded that there is a significant relationship between utilization of cancer of the cervix screening services and the perception on cancer of the cervix screening services among women aged 30-49 years in Kitui West Sub-County. As such the alternative hypothesis was upheld.
CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussion

5.1.1 socio-demographic factors and utilization of cervical cancer screening services

Among the respondents, the study found majority to be women aged 30-34 years. This can be attributed to worldwide increase in population growth rate. The younger women were utilizing screening service more than the older ones. This can be attributed to the fact that younger women have higher self-vulnerability perception than older ones and also more knowledgeable hence they tend to take precautions more. The study found statistical relationship between age of the respondent and utilization of cervical cancer screening services. The findings of the study were in consistent with a study conducted in Nigeria which showed that young women were more acceptable to cervical cancer screening than older women (Ifemelumma et al., 2019)

Regarding educational status of respondents, the study revealed that majority of respondents had primary level of education. This is because Kitui County is among the counties with low literacy levels. There was a statistically significant relationship between utilization of cancer of the cervix screening services and the education level of the respondents. This can be due to better understanding on information on cervical cancer messages. The results were in agreement with another study done in Ghana which revealed that that high educational level of the respondent can be a facilitating factor to go for screening more than those with low or no formal education (Ebu, 2017). This implies that education is an enabling factor to a positive health seeking behavior
On marital status, the studies showed that majority of the respondents were married. This is because from age 30 many of the women have settled down in their marriages after completing their studies. The study however, found no statistically significant relationship between utilization of cancer of cervix screening services and marital status of the respondent. The results were contrary to a study by Ajibola et al., (2016) which revealed that married women sought for screening services more because they received moral support and encouragement from their husbands or partners.

The study revealed that majority of the respondents’ are unemployed with many of them resorting to self-employment. The study found that there is a statistically significant relationship between utilization of cancer of the cervix screening services and occupation of the respondents. This is attributed to the fact that the employed can be able to afford the direct and indirect costs associated with seeking for cervical cancer screening services. The results are contrary study by Matejic et al. (2011) and Hoque et al. (2014) which revealed that there was no significant relationship between utilization of cancer of the cervix screening services and employment status of the respondent.

5.1.2 Utilization of cervical cancer screening services

According to this study, in Kitui west sub- County that majority of the respondents do not utilizing cervical cancer screening services, that is, the rate of utilization of cervical cancer screening services in Kitui County is still low, at 35%. Concerning the last time the respondents were screened cervical cancer, less than of 50% of the respondents reported to have been screened at 36 – 60 months prior to the study. Slightly above half of those screened had been referred by a healthy worker. Most of the
respondents cited varied reasons as to why they had not been screened. Some indicated that they were not susceptible to cancer of the cervix, other indicated lack of awareness, embarrassment, lack of accessibility, lack of time among others. This could be related to the fact that most women don’t perceive themselves to be at risk while some fear the outcome of the screening results hence the low utilization levels reported.

These results agree with MOH (2012) report which indicated that the coverage of cervical cancer screening for women was low in Kenya cancer f cervix screening services are still low whereby women do not go for checkups even after government making efforts to offer free screening services. The same results were reported by MoH (2013) which indicated that, screening for cancer of cervix still remained low even after massive health education during HPV vaccination as shown by number of deaths in the palliative care Centre. The study findings were also consistent with a study done in Ilorin, North Central Nigeria on utilization of cancer of the cervix screening services which showed that only a handful of the respondents had ever done a Pap smear test before. The low rate of utilization of cervical cancer screening was attributed mainly to low risk perception among respondents who had never been screened (Ajibola et al, 2016)

5.1.3 Awareness of cervical and cancer screening services among women aged 30-49 years

Majority of the participants had awareness on cancer of cervix screening. However, the study found that there is no statistically significant relationship between utilization of cancer of the cervix screening services and awareness among women aged 30 years to 49 years. This led to the rejection of the alternative hypothesis adopted in the study and thus,
there is no statistically significant relationship between utilization of cancer of the cervix screening services and awareness among women aged 30-49 years in Kitui West Sub-County.

These results were contrary with Ombech et al (2012) who carried out a study on female primary school teachers on risk factors and awareness and established that there was low awareness level on cervical cancer screening. The results were contrary to a study conducted among Tunisian which revealed that the awareness level was moderate among the women aged above 30 years (Gamaoun, 2018). In a study done in Nigeria to investigate community awareness on cervical cancer among respondents majority of them were aware about its causes through health talks even though they were reluctant to seek for screening services. The results were in agreement with another study done in south east of Nigeria to determine the influence of awareness on uptake of screening services, which revealed that majority of those interviewed had higher awareness levels and relatively higher rate of uptake of screening services (Aniebue et al., 2010).

5.1.4 Knowledge of cervical cancer screening services

The study found that there is a statistically significant relationship between utilization of cancer of cervix screening services and the knowledge of women aged 30-49 years. This led to the acceptance of the alternative hypothesis adopted in the study and thus, the study concluded that there is a significant relationship between knowledge of cervical cancer screening services and utilization of cervical cancer screening services among women aged 30-49 years in Kitui West Sub-County.
These results agree with a study carried out by Nthiga, 2014 in Embu County on cervical cancer which indicated that majority of the women were aware of cervical cancer but only few had ever been screened for cervical cancer. Similar results were given by HN Harsha et al, (2014) who argued that knowledge and screening for cervical cancer influence the screening. The results were also consistent with a study in Moshi Tanzania which showed low knowledge level on cancer of the cervix signs and prevention (Lyimo & Beran, 2012).

5.1.5 Perception of the women aged 30-49 years on cervical cancer screening services

There was a relationship between women perceiving cervical cancer screening not being necessary, painful procedure and it’s a procedure for commercial sex workers and uptake of cancer of the cervix screening services. This led to the acceptance of the alternative hypothesis adopted in the study and thus, there is a significant relationship between utilization of cancer of cervix screening services and the perception of cancer of the cervix screening services among women aged 30-49 years in Kitui West Sub-County.

These results are similar to those of Nyangasi et al. (2018) who found that most of the respondents felt that cervical cancer screening was just a time-wasting procedure hence it was not necessary for them. Similar results were given by Augusto, Rosa, Cavalcanti and Oliveira (2013) who argued that the main barrier to cervical cancer screening in women was, embarrassment and time constraints due to nature of work and childcare.
The findings were contrary to a study conducted among women in Bangladesh on perception towards cancer screening, which revealed that they felt it was a necessary procedure that enabled them monitor their health status and hence be able to address any health issue early enough to avoid poor prognosis 12% (Ferdous et al, 2014). The study findings were also consistent to a study on barriers to cancer of the cervix screening services on Brazil among female clients attending family planning, revealed that despite the level of education there was a relationship between utilization of cancer of cervix screening services and feeling of embarrassed among the respondents (Augusto, Rosa, Cavalcanti & Oliveira, 2013).

5.2 Conclusions from the study

Based on the findings above, the study concludes that majority of the respondents were aware of cervical cancer screening. Ironically, the rate of utilization of cervical cancer screening services was low despite results revealing that the respondents were aware of cervical cancer and cervical cancers screening services.

The study concludes that the knowledge level of respondents on cervical cancer is low since majority of the respondents were unable to state the signs, and prevention of cervical cancer. It was however not clear how the respondents were aware of cervical cancer screening services but not knowledgeable on the same.

Finally, these results have shown that the respondents had poor perception towards cervical cancer screening. This may be due to the poor knowledge among the respondents towards cervical cancer.
The study further concludes that socio-demographic factors influence the utilization of cervical cancer screening. In fact, age, occupation, level of income, and education showed significant statistical relationship with utilization of cervical screening services. This implies that the likelihood to utilize cervical cancer screening services increases with those women with high income, those who are employed, those who are educated and those who are between the age of 30 and 49 years. This explains the variation utilization of cancer screening services among respondents.

The study therefore, concludes that the rate of utilization of cervical cancer screening services is alarmingly low despite the efforts to increase the uptake. This was in comparison to other studies done across different regions in the world which revealed relatively higher uptake of cervical cancer screening services despite being the second most common type of cancer.

5.3 Recommendations of the study

5.3.1 Recommendation from the study

Based on the findings that the utilization of cancer screening services in Kitui County is low, this study made the following recommendations;

i. The Ministry of Health, non-governmental organization (Afya Halisi which supports the county on reproductive health issues) should work on strategies to advocate for cervical cancer screening early enough when the condition can be managed and thus better prognosis. They should also empower women to ensure
barriers to access of screening services are broken to improve uptake of such services.

ii. The Ministry of Health and relevant stakeholders addressing cervical cancer issues should ensure that when creating awareness on screening, they should organize events targeting women and thereafter offer free cervical cancer screening services.

iii. The Ministry of Health together with relevant stakeholders organize health education seminars in the community to help improved transfer of correct knowledge on cervical cancer screening services thus signify importance of seeking such services early enough

iv. Ministry of health and Ministry of Communication should enhance health messages on cervical cancer to demystify the wrong perception among the community members about cervical cancer.

5.3.2 Recommendations for future Research

This study recommends a study to be conducted to determine quality of cervical screening services health facilities in Kenya. Future research can also be done on how to bridge the gap between awareness and utilization screening of cervical cancer screening among women aged 30 to 49 years. This would help in early detection of the disease leading to early treatment.
REFERENCES


women: results of a nested case-control study in a nationally representative survey. *BMC public health, 18*(3), 1221.


Touch and Oh (2018) conducted a cross-sectional study on knowledge, attitudes, and practices toward cervical cancer prevention among women in Kampong Speu Province, Cambodia. Out of the surveyed respondents (female healthcare professionals at KFMC),


APPENDICES

Appendix 1: Informed Consent

This Informed consent form is for women aged between 30-49 years who I am inviting to participate in this research. The title of the research is Utilization of Cervical Cancer Screening Services among Women Aged 30-49 years in Kitui County, Kenya.

The informed consent is in two parts

Part 1: information sheet

Part 2: certificate of consent

Part 1: information sheet

I am Jane Mbaluka a student at Kenyatta University undertaking a master’s degree in public health reproductive health. I am conducting a research on Utilization of cervical cancer screening services among women aged 30-49 years at Kitui County, Kenya. I am going to give you information and invite you to participate in the research. If there are words that you do not understand or need clarification, please ask me to stop as we go through the information and I will take time to explain.

Cervical cancer screening and early treatment of precancerous lesions prevents up to 80% of cervical cancers (KDHS 2014). The objectives Broad objective of this study is to investigate the factors associated with utilization of cervical cancers screening among women aged 30-49 years in Kitui West Sub-County. The Specific objectives are: To determine the awareness on cervical cancer screening services among women aged 30-49 years in Kitui West Sub-County, Kitui County. To find out the knowledge of cervical cancer screening services among women aged 30-49 years in Kitui West Sub-County, Kitui County, to determine social-demographic factors influencing the utilization of cervical cancer screening services among women aged 30-49 years in Kitui West Sub-County, Kitui County, to find the perception among women aged 30-49 years on cervical cancer screening services in Kitui West Sub-County of Kitui County and to find out the
utilization of cervical cancer screening services among women aged 30-49 years at Kitui west sub-county.

Your participation in this research is entirely voluntary and you have a right to terminate your participation at any stage. There will be no risk involved by participating in this research. All The information given will be treated with utmost confidentiality and used for academic purposes and improving cervical cancer screening services in Kitui west sub-County.

There will be no money or gifts in participating in this research but the information given will be used to prevent cervical cancer by improving the utilization of screening services and hence improve community well-being and reduce morbidity and mortality related to cervical cancer.

The questionnaire/interview will take about 15-20 minutes to fill. Where we have more than one female with required criteria only one person will be randomly selected for the questionnaire.

In case of any queries concerning this research you can contact the following referees who are my supervisors.

Dr. Kenneth K. Rucha Tel no. 0723227480

Dr. Benjamin Ndeleva Tel no. 0722647610

**Part 2: certificate of consent**

I have read the foregoing information/ the fore going information has been read to me. I have had the opportunity to ask questions and all the questions I have asked, have been
answered and clarified to my satisfaction. I hereby consent voluntarily to participate in this research.

Name of participant………………………………………………….

Signature of participant……………………………………………..

Date………………………………………………………………………

Illiterate participant

I have witnessed the accurate reading of the consent form to the participant. She has had the opportunity to ask questions and they have all been answered to her satisfaction. I confirm that she has given consent freely

Witness name …………………………………………………………………

Witness signature…………………………………………………………

Date……………………………………………………………………..

Thumb print of the participant


Statement by researcher/researcher assistant

I have accurately read out the information to the potential participant and the participant was given an opportunity to ask questions which were answered correctly and to the best of my ability. I confirm that the participant has given the consent freely and voluntarily
Name of researcher/researcher assistant..................................................

Signature......................................

Date.............................................
Nyongeza 1: Utoaji Idhini

Hii utoaji idhini ni kwa ajili ya wanawake wenye umri kati ya miaka 30-49 ambaye nimewakaribisha kushiriki katika utafiti huu. sehemu ndogo kabisa ya utafiti ni vigezo ya Matumizi ya huduma ya uchunguzi wa saratani ya mfuko wa uzazikati ya Wanawake wa umri wa miaka 30-49 katika kaunti ya kitui, kenya.

Ridhaa na taarifa ni katika sehemu mbili

sehemu 1: karatasi ya habari

sehemu 2: cheti la kubali

sehemu ya kwanza

Mimi ni Jane Mbaluka wanafunzi katika Chuo Kikuu cha Kenyatta ngazi ya Shahada ya uzamili katika afya ya umma afya ya uzazi. Mimi na fanya utafiti juu ya vigezo wa matumizi ya huduma ya uchunguzi wa saratani ya mfuko wa uzazikati ya Wanawake wa umri wa miaka 30-49 katika kaunti ya kitui, kenya

Nitakupa taarifa na kisha nikualike ushiriki katika utafiti huu. Kama kuna maneno kwamba huelewi au unahitaji ufafanuzi tafadhali uniulize kukomesha na nitachukua muda nikwelesee

uchunguzi wa kansa ya kizazi na Matibabu mapema kabla ya Vidonda vinazuia hadi 80 ya kansa ya kizazi (KDHS 2014). Malengo kubwa la utafiti huu ni kuchunguza mambo yanayohusiana na matumizi ya uchunguzi wa kansa ya kizazi kati ya wanawake wenye umri wa miaka 30-49 miaka katika kata ndogo ya magarimbi ya kata ya kitui. Malengo maalum ni: Kuamua kiwango cha ufahamu juu ya huduma za uchunguzi wa kansa ya kizazi kati ya wanawake walio na miaka 30-49 katika kata ndogo ya kitui magharibi kata ya Kitui, Ili kujua huduma za uchunguzi wa kansa ya kizazi kati ya wanawake walio na miaka 30-49 katika kata ndogo ya magharibi kata ya Kitui, Kuamua sababu za kijamii na idadi ya watu zinazoathiri matumizi ya huduma za uchunguzi wa kansa ya kizazi kati ya wanawake walio na miaka 30-49 katika kata ndogo ya kitui magharibi kata ya Kitui, kupata mtazamo kati ya wanawake wenye umri wa miaka 30-49 juu ya huduma za uchunguzi wa saratani ya kizazi katika kata ndogo magharibi kata ya Kitui na kupata
utumishi wa huduma za uchunguzi wa kansa ya kizazi kati ya wanawake walio na miaka 30-49 katika kata ndogo ya kitui magharibi kata ya Kitui

Ushiriki wako katika utafiti huu ni kikamilifu kwa hiari na una haki ya kusitisha ushiriki wako kwa hatua yoyote. Hakutakuwa na hatari yoyote inayohusika na kushiriki katika utafiti huu. Maelezo yote yaliyotolewa yatashughulikiwa kwa siri zaidi Na kutumika kwa madhumuni ya kitaaluma na kuboresha huduma za uchunguzi wa kansa ya kizazi katika Kata ya Kitui Hakutakuwa na pesa au zawadi katika kushiriki katika utafiti huu Lakini habari iliyoitelea itatumika kuzuia saratani ya kizazi Kwa kuboresha matumizi ya huduma za uchunguzi na hivyo kuboresha utawala wa jamii na kupunguza maradhi na vifo kuhusiana na kansa

maswali / mahojiano itachukua dakika 15-20 ili kuja. Ambapo tuna zaidi ya mwanamke mmoja na vigezo vinavyohitajika Mtu mmoja tu atachaguliwa kwa nasibu kwa dodoso

Ikiwa kuna maswali yoyote kuhusu utafiti huu unaweza kuwasiliana na wapinzani wafuatayo ambao ni wasimamizi wangu

Dk. Kenneth K. Rucha, nambari ya simu: 0723227480

Dk. Benjamin Ndeleva, nambari ya simu: 0722647610

Sehemu ya 2: kutoa kibali


Jina la mshiriki ..........................................................

Saini ya mshiriki ................................................... ..

Tarehe……………………………………………………………………………..
Mshiriki asiyandika

Nimeona usomaji sahihi wa fomu ya ridhaa kwa mshiriki. Amekuwa na fursa ya kuuliza maswali na yote yamejibu kwa kuridhika kwake. Ninathibitisha kwamba ametoa ridhaa kwa uhuru

Jina la Shahidi..................................................

Sawa saini ......................................................

Tarehe……………………………………………………………………..

Chapisha ya mshiriki

Taarifa kwa mtafiti / mtafiti msaidizi

Nimesoma kwa usahihi maelezo kwa mshiriki anayeweza na mshiriki huyo alipewa fursa ya kuuliza maswali yaliyojibu kwa usahihi na kwa uwezo wangu. Ninathibitisha kwamba mshiriki amewapa ridhaa kwa uhuru na kwa hiari

Jina la mtafiti / msaidizi wa uchunguzi ..........................

Sahihi..........................

Tarehe…………………………………………......................
MWANYA MUMANYITHANIE

Mwanya uu mumanyithanie ni wa aka ala mena ukuu wa miaka 30-49 ila nguthokya othe kilio nthini wa wosanya wa mauvoo aa. Kiongo kya wosanya wa mauvoo aa ni iulu wa syindu ila itumaa aka a kati wa myaka miongo itatu kuvika miongo ina na kenda matumia mautethyo ma kusisya uwau wa kenza ya wao nthini wa kaunti nini ya ithuwironi wa sua ya kaunti nini ya kitui ya kaunti ya kitui

Mwanya uu mumanyithanie uandikitwe ilungu ili

Kilungu kya mbee: Ithangu ya umanyithanio

Kilungu kya keli: Valua wa mwanya

Kilungu kya mbee: Ithangu ya umanyithanio

Ninye Jane Mbaluka mumanyiwa sukuluni munene wa Kinyatta ngisomea ndikilii yakwa ya keli iulu wa uima kwa othe nthini wa maundu ma usyai. Niosanya mauvoo ma syindu ila itumaa aka a kati wa myaka miongo itatu kuvika miongo ina na kenda matumia mautethyo ma kusisya uwau wa kenza ya wao nthini wa kaunti nini ya ithuwironi wa sua ya kaunti nini ya kitui ya kaunti ya kitui. Nikuumanyithya na nguthokya wosanyani wa mauvoo aa. Ethiwa ve maundu mateukuelea ngulia kutheangisywa otwendee

Kuthiana na kuitwa kwi tene uwau wa kansa ya munuka wa wao ni kusiiyaa nyanya iulu wa ikumi uwau wa kansa (KDHS,2014). Kielelo kinene kya wosanya wa mauvoo aa ni kumanya syindu ila itumaa aka kati wa myaka miongo itatu kuvika miongo ina na kenda itumia mautethyo ma kusisya uwau wa kenza ya munuka wa wao nthini wa kaunti nini ya ithuwironi wa sua ya kaunti nini ya kitui ya kaunti ya kitui. Syielelo ila ingi ni: Kumanya kila kisikiye iulu wa mautethyo ma kusisya kansa ya munuka wa wao kati wa
aka ala mena ukuu wa kati wa myaka miongo itatu kuvika miongo ina na kenda nthini wa kaunti nini ya ithuwironi wa sua ya kaunti nini ya kitui ya kaunti ya kitui, Kumanya Umangyi wa usisya wa mautethyo ma kusisya kansa ya munuka wao kati wa aka ala mena ukuu wa kati wa myaka miongo itatu kuvika miongo ina na kenda nthini wa kaunti nini ya ithuwironi wa sua ya kaunti nini ya kitui ya kaunti ya kitui, kumanya undu iiika na mikalile ila itumaa aka ala mena ukuu wa kati wa myaka miongo itatu kuvika miongo ina na kenda matumia mautethyo ma kusisya uwau wa kenza ya munuka wa wao wa usyai nthini wa kaunti nini ya ithuwironi wa sua ya kaunti nini ya kitui ya kaunti ya kitui, kumanya undu aka ma ukuu wa myaka miongo itatu kuvika miongo ina na kenda woni woo iulu wa utethyo usu wa kusisya kenza ya munuka wa wao nthini wa kaunti nini ya ithuwironi wa sua ya kaunti nini ya kitui ya kaunti ya kitui na kumanya ala aka ma miaka miongo itatu kuvika miongo ina na kenda matumiite mautethyo ma kusisisya kansa ya mvuko wa waonthini wa kaunti nini ya ithuwironi wa sua ya kaunti nini ya kitui ya kaunti ya kitui

Kwithiwa umwe kati ala meunengane uvoo uu.nikwiyumia na vai ndivi kana muthisiyo, na ukenda nowiyumie wona wairite. Uvoo ula ukutavania withiwa wa kimbithi kinene.mauvoo aa tukwosania makatumika iulu wa mawalanio ma kusiiya na kuiita kansa ya munuka wa wao kauntini ya kitui

Ithangu yii ya wosanya wa mauvoo ikua ndatika ikumi na itano kuvika miongo ili kuisusya. ti kila mundu wikulasua Vala aka mavitukite umwe, umwe akanyuvwa.

Ukethiwa na ikurio no umakunie asyaisya ma wia wakwa kwisila nambani ii sya simu

Dr. Kenneth K.Rucha, namba ya simu . 0723227480
Dr. Benjamin Ndelewa, namba ya simu. 0722647610

Kilungu kya keli: Valua wa mwanya

Nyie ninasoma uvo u/ninasmewa. Ninakwata mwanya wa ukulya makulyo na
ninasyakwa na neaniwa. Na yu ningunengane mwanya kwitihu umwe kati wa wosanya
wa mauvoo aa.

Isyitwa ya musungia…………………………………

Saii…………………………………………………

matuku………………………………………………

Musungia ute musomu

Ninoona usomi wa mwanya mumanyithanie. Niwakulya makulio na na asungiwa o nesa.
Na ningukyithya kana anengane mwanya vate kuthing’iisya.

Isyitwa ya musyaisya……………………………. 

Saii wa musyaisya……………………………………

matuku………………………………………………

kyaa


Ndeto sya mwosanya wa mauvoo/ mutetheesya
Ninasoma nesa uvoor iulu wa musungii wa makulio na nunengiwe mwanya wa ukulya makulio na oonthe masungiwa o nesa kwianana na utonyi wakwa. Ninguikiithya kana musungii wa makulio anenenganie mwanya vate kuthing’isisya.

Isyitwa ya mwosanya wa mauvoirmutetheesya……………………………

Saii………………………………………………

matuku…………………………………………………………
Appendix 2: Questionnaire

Date…………………………

Code……………………

Ticking the box to your appropriate response

Demographic Information

1. How old are you?
   - 30-34 years
   - 35-39 years
   - 44-44 years
   - 45-49 years

2. What is your marital status?
   - Married
   - Single
   - Separated
   - Windowed
   - Divorced

3. What is your highest level of completed education?
   - Never attended school
   - Primary
   - Secondary
   - College
   - Others specify…………………………………………………………………………………………

4. What is your religion
   - Christian
   - Muslim
   - Others specify…………………………………………………………………………………………
Social Economic

5. What is your occupation?
   - [ ] Employed
   - [ ] Unemployed
   - [ ] Self employed

6. How much do you earn in a month?
   - [ ] < 5000
   - [ ] Ksh 5000-9,999
   - [ ] Ksh 10,000-19999
   - [ ] Ksh 20,000 and above

Awareness of cervical cancer and screening services

7. For the following statements answer YES or NO
   i. Have you heard of cervical cancer?
   ii. Do you know someone who have had cervical cancer?
   iii. Have you ever received information related to cancer of the cervix?
   iv. Are you aware of screening for cancer of the cervix?

8. If yes to statement (iii) is “yes” in question 7 from who/where
   …………………………………………………………………………………

9. If yes to statement (iv) is “yes” in question 7 how did you get to know about it?
   - [ ] Relatives
   - [ ] Friends
   - [ ] Health provider
   - [ ] Media(Radio, TV, Newspaper)
   - [ ] Others specify………………………………………………

Knowledge on cervical cancer screening

10. Can you give me 4 signs of cervical cancer?
    1………………………………………………
11. State 4 warning signs for cervical cancer?
1. .............................................
2. .............................................
3. .............................................
4. .............................................

12. How can cervical cancer be prevented? Give a maximum of 4 ways
1. .............................................
2. .............................................
3. .............................................
4. .............................................

Perception

20. What is your perception on cervical cancer? Choose one

- [ ] It is a disease caused by witchcraft
- [ ] It is a curse
- [ ] It is killer disease
- [ ] Disease of commercial sex workers
- [ ] It is non curable disease
- [ ] Have never heard people discussing it

Others (specify)...................................................................................................................
........................................................................................................................................
........................................................................................................................................

21. What is your perception on cervical cancer screening? Tick all appropriate.

- [ ] Necessary
- [ ] Not necessary
- [ ] Cervical cancer screening is painful
- [ ] Screening procedure is embarrassing
☐ It is for commercial sex workers
☐ Screening is only for only the sexually active women

**Screening practices**

19. Have you been screened for cancer of the cervix?
   ☐ Yes
   ☐ No

14. If YES to question 13. How long is it since you were screened?
   ☐ Less than three months ago
   ☐ Between 3-6 months ago
   ☐ 6-12 months
   ☐ 12-36 months
   ☐ 36 -60 months
   ☐ Above 60 months

15. If you answered yes to question 13, whose prescription was it?
   ☐ Health provider prescription
   ☐ Own imitative

16. If you have not been screened what is the reason? Select one.

<table>
<thead>
<tr>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was not aware am supposed to be screened</td>
</tr>
<tr>
<td>Lack of time</td>
</tr>
<tr>
<td>Did not get the service when I needed it</td>
</tr>
<tr>
<td>Don’t think am susceptible to cancer of the cervix</td>
</tr>
<tr>
<td>Embarrassed been examined in my private parts</td>
</tr>
<tr>
<td>Worried that I can be told that I have the disease</td>
</tr>
<tr>
<td>My husband or partner will not approve</td>
</tr>
<tr>
<td>Has not thought about it</td>
</tr>
</tbody>
</table>
17. Are you planning to be screened in future?

☐ Yes
☐ No

18. If answer in question 13 is NO. What are the reasons for not screening? Select all that apply?

☐ Little understanding of cervical cancer
☐ Cervical cancer screening is painful
☐ Not thinking that one is at risk
☐ Fear of a vaginal exam
☐ Not knowing where to go for screening
☐ Lack of husband/partner approval
☐ Not allowed by religion/culture
☐ Lack of female screeners at the health facility
☐ Attitude of health care workers
☐ The screening is expensive
☐ Lack of designated rooms for screening at health facility (privacy)
☐ Not offered at the nearest health facility
☐ Long distances to a health facility
☐ Lack of information about cervical cancer

19. In your own opinion, which would be the best place to pass messages on cervical cancers screening to women?

Tick all appropriate.

☐ Local women’s groups
☐ Places of worship (church/mosque)
☐ Health facilities
☐ At home
☐ Markets

Others
Thank you for taking time to participate in this interview
Nyongesa ya pili : Maswali
Tarehe…………………..
Kanuni …………………
Changia kwenye sanduku kwa majibu yako sahihi
Maelezo ya kibinafsi

1. Una umri gani?
   - [ ] miaka 30-34
   - [ ] miaka 35-39
   - [ ] miaka 40-44
   - [ ] miaka 45-49

2. Hali yako ya ndoa ni nini?
   - [ ] Mkewe
   - [ ] Sijaolewa
   - [ ] Tumetengana
   - [ ] Mjane
   - [ ] talaka

3. Ni kiwango gani cha juu cha elimu kamili?
   - [ ] Sijawahi kuhudhuria shule
   - [ ] Msingi
   - [ ] Sekondari
   - [ ] Chuo
   - [ ] zingine Taja ………………………………………………………………………………………………………

4. Dini yako ni ipi?
   - [ ] Mkristo
   - [ ] Muslim
   - [ ] Wengine :Taja ………………………………………………………………………………………………………
Uchumi wa Jamii

5. Kazi yako ni nini?

☐ Ajira
☐ Mwenye kujiajiri
☐ Sina ajira

6. Je, unapata pesa kiasi gani kwa mwezi?

☐ Jini ya 5,000
☐ shilingi 5000-9,999
☐ K shilingi 10,000-19,999
☐ shilingi elfu 20,000 na saidi

Uelewa wa saratani ya kizazi

7. Kwa mistali imefuata jibu la ama ndiyo
   i. Je! Umewahi kusikia saratani ya kizazi?
   ii. Je! Unajua mtu ambaye amewahi pata saratani ya kizazi
   iii. Je! Umewahi kupata taarifa kuhusiana na saratani ya kizazi?
   iv. Je! Unajua uchunguzi wa saratani ya kizazi?

8. Kama ndiyo namba 7 mustali wa iii namba, kutoka kwa nani / wapi
   ...........................................................................................................

9. Kama ndiyo namba 7 mustali wa iv, kutoka kwa nani / wapi
   ...........................................................................................................
   ...........................................................................................................

ufahamu

10. Je, unaweza kunipa ishara 4 za saratani ya kizazi?
    1. ................................................
    2. ................................................
    3. ................................................
    4. ................................................
11. Nipe ishara 4 za onyo kwa saratani ya kizazi?
   1. ........................................
   2. ........................................
   3. ........................................
   4. ........................................

12. Je! Tunaweza zuiya aje saratani ya kizazi? Nipe nia ine
   1. ........................................
   2. ........................................
   3. ........................................
   4. ........................................

Mazoezi ya kupima
13. Je! Umekuwa umepeimwa saratani ya kizazi?
   □ Ndiyo
   □ Hapana

   □ Chini ya miezi mitatu iliyoopita
   □ Kati ya miezi 3-6 iliyoopita
   □ Miezi 6-12
   □ Miezi 12-36
   □ Miezi 36-60
   □ Zaidi ya miezi 60

15. Ikiwa umejibu ndiyo kwa swali la 14, aliyeikutuma ni nini?
   □ Mtoa huduma ya afya
   □ Mwenyewe

   □ Haikufahamika ni lazima ionyeshe
   □ Ukosefu wa wakati
   □ Haikupata huduma wakati nihilitaji
☐ Sifikiri kamanaesa aathirika na saratani ya kizazi cha uzazi
☐ Namaa kuchunguzwa katika sehemu zangu za faragha
☐ niliogopa kwamba ninaweza kuambiwa kwamba nina ugonjwa
☐ Mume wangu au mpenzi wangu hatakubali
☐ sijafikiri juu yake
zinginefafanua..........................

17. **Je, una mpango wa kuchunguzwa baadaye?**

☐ Ndiyo
☐ Hapana

18. **Kama jibu katika swali la 14 ni la!. Ni sababu gani zisizochunguza? Chagua yote yanayotumika?**

☐ Uelewa mdogo wa saratani ya kizazi
☐ Uchunguzi wa saratani ya kizazi ni chungu
☐ Sio kufikiri kwamba mtu ana hatari
☐ Hofu ya uchunguzi wa uke
☐ Sijui nienda wapi uchunguzi
☐ Ukosefu wa idhini ya mume / mpenzi
☐ Sio kuruhusiwa na dini / utamaduni
☐ Ukosefu wa wachunguzi wa kike kwenye kituo cha afya
☐ Mtazamo wa wafanyakazi wa huduma za afya
☐ Uchunguzi ni ghali
☐ Ukosefu wa vyumba vilivyochaguliwa kwa uchunguzi kwenye kituo cha afya (faragha)
☐ Haipatikani kwenye kituo cha afya cha karibu
☐ umbali mrefu kwenda kituo cha afya
☐ Ukosefu wa habari kuhusu saratani ya kizazi
19. Kwa maoni yako mwenyewe, ni sehemu gani nzuri zaidi ya kupitisha ujumbe kwenye uchunguzi wa saratani ya kizazi kwa wanawake?

chagua yote yanafaa

☐ Makundi ya wanawake wa mitaa
☐ Mahali ya ibada (kanisa / msikiti)
☐ vituo vya afya
☐ nyumbani
☐ Masoko
   WengineTaja ...............................................................

mtazamo

20. Je, una mtazamo gani juu ya kansa ya kizazi?

☐ Ni ugonjwa unaosababishwa na uchawi
☐ Ni laana
☐ Ni ugonjwa wa kuua
☐ ni ugojwa wanao faya mapenzi kwa pesa
☐ Ni ugonjwa usio na tiba
☐ Hajawahi kusikia watu wakizungumzia
☐ Wengine (taja) .............................................................

21. Je, una mtazamo gani juu ya kupimwa kansa ya kizazi? chagua yote inafaa

☐ Haina maana
☐ Iko na maana
☐ Kupimwa ni chungu
☐ Kupimwa kuna aimbu
☐ Kupimwa ni kwa wale wanafanya ngono kwa pesa
☐ Ni kwa wale wanafanya ngono

Asante kwa kuchukua muda wa kushiriki katika mahojiano haya
Maukulio
Matuku………………………
Namba………………………

Nyuya usungio ulu waile isandakuni

1. Wina ukuu wa miaka iiina ata?
   - Miaka 30-34
   - Miaka 35-39
   - Miaka 40-44
   - Miaka 45-49

2. Hali yaku ya utwae ni iva?
   - Mtwae
   - Mwiitu
   - Ni tutaanisye
   - Ni ndiwa
   - Nituitianite

3. Usomete kufika kiwango kiva ukamina?
   - Ndiathii sukuru
   - purimari
   - Sekondari
   - Kolenji
   - ingi
tavania………………………………………………………………………

4. Ndini yaku ni iva?
   - Mwitikili
   - Muisilamu
   - Ingi ?tafania……………………………………………………………..

5. Wia waku ni wiva?
   - Nandikitwe wia wa mwei
   - Ndii mwandike
   - Nikite kwiyandika.

6. Ukwataa besa siana ata kila mwei?
   - Nthi wa 5000
5000-10000
10,00-19,999
20,000 na iulu

Umanyi wa kansa ya wao
7. Sungia maukulio aa kwa niwo kan ekai
   i. Waiwa uvoo iulu wa kansa ya wao?
   ii. Niwisi mundu wawaie kansa ya wao?
   iii. Wakwata uvoo ulu wa kansa ya wao?
   iv. Ni wisi uvoo wa kusiswa kansa ya wao?

8. Wethia ni wewiye no. 7 iii. Wewiye kuma kuma va?
   ........................................................................................................

9. Withiwa ni wisi namba 7iv. Wamayee va?
   □ Andu ma mucii
   □ Anyanyawa
   □ Aiiti
   □ Atangaasi (kameme)
   Angi, tafania.................................................................
   Ui wa kansa ya wao
10. Nounangane mawonanio ana ma kansa ya wao
   1. .................................................................
   2. ........................................................................
   3. ........................................................................
   4. ........................................................................

11. Nounangane ndalili inya sionananasya mundu ena kansa ya wao?
   1. .................................................................
   2. ........................................................................
   3. ........................................................................
   4. ........................................................................

12. tutonya kusyiya ata kansa ya usyai. Nenge nziya inya
   1. .................................................................
   2. ........................................................................
   3. ........................................................................
   4. ........................................................................

Nzia sya kuthima
13 waathimwa kansa ya usyai?
14. Wethia ni wathimie namba 16. Wamina ivinda iina at kuma wathimwa?
   - Itheo wa myei itatu
   - Myei itatu kuvika thathatu
   - Myei thathatu kuvika kumi na ili
   - Myei kumi na ili kuvika miaka itatu
   - Miaka itatu kuvika miaka itano
   15. Wethia ni wathimie namba 16. Watumitwe nuu
   - Muiiti
   - Nye mwene
   Angi……………………………………

   - Ndyesye kana vee vata wa kuthimwa
   - Ndikwata utethyo usu ila na wendaa
   - Nonaa ndikwatwa ni uwau usu
   - Kuiwa thoni kuthimwa mwi wakwa wa kimbithi
   - Muumewa kan munyanyawa ndetikila
   - Ndivindiisya undu usu
   Itumi Ingi, tavania………………………………………

17. Wina muvango wa kuthimwa?
   - Ii
   - Ekai

18. Withia ndui na muvango wa kuthimwa itumi na myau?
   - Umanyi munini wa kansa ya wao
   - Kuthimwa kwi woo
   - Ndikuona ta niwaa
   - W’a wa kuthimwa uciai
   - Ndiici kula kuthimiwaa
   - Muumewa kana munyanyawa kulea
   - Uthaithi wakwa niuleete
   - Kwithia vatee mundu muka wa kuthima
Mituo ya aiiti

Kuthimwa kwi mbeca mbingi mbeca mbingi

Vaie kimbithi sivitali

Sivitali ila ivakuvi maithimaa

Sivitali ivaasa

Kulea umanya uvoo wa kansa ya wao

19 Kwa woni waku, ni va vala vaile kutavanua iulu wa kansa

Ikundi cia aka

Nyumbani cia uthaithi

Sivitalini

Mucii

Ndunyu

Ingi/ tavania………………………………………………

Woni iulu wa kuthimwa kansa

20 Woni waku iulu wa kansa ni mwau? Yuva imwe

Nikuowa

Nikiumo

Uwau uwaa

Uwau utavooa

Ndiaiwa andu mainena uvoo wawuo

Angi/ tavania…………………………………………..

21 Woni waku iulu wa kuthimwa kansa ni mwau? Yuva imwe

Vaiye maana

Ve maana

Kuthimwa kwi woo

Kuthimwa kwi nthoni

Ala mekaa ulalai makwate mbesa

Kuthimwa ni kwa alan alakalalai

Ni muvea
### Appendix 3: Schematic presentation of the variables

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Variables</th>
<th>Instrument</th>
<th>Question No.</th>
</tr>
</thead>
</table>
| To determine awareness on cervical cancer screening services among women aged 30-49 years in Kitui West sub-county | Awareness of cancer  
Awareness of screening services  
Source of information | Questionnaire | 7,8,9         |
| To find out the knowledge on cervical cancer screening services among women aged 30-49 years in Kitui West sub-county | Knowledge on signs and symptoms of cervical cancer  
Ability to notice signs and symptoms of cervical cancer  
Knowledge on prevention | Questionnaire | 10,11,12     |
| To determine the social-demographic factors influencing the utilization of cervical cancer screening services among women aged 30-49 years in Kitui West sub-county | Age  
Marital status  
Level of education  
Employment  
Income | Questionnaire | 1, 2, 3, 4, 5, 6 |
| To find out the perception on cervical cancer screening services among women aged 30-49 years in Kitui West sub-county | Perception on cervical cancer  
Perception on cervical cancer screening | Questionnaire | 20,21        |
| To determine the utilization of cervical cancer screening services among women aged 30-49 years in Kitui West sub-county | Screening practices | Questionnaire | 13,14,15,16, 17, 18, 19, |
Appendix 4: approval by Kenyatta university graduate school

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

FROM: Dean, Graduate School
TO: Malakah Jane Hannah
     C/o Population and Reproductive Health Department

DATE: 17th May, 2017
REF: Q130/CU/25462/2014

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge receipt of your revised Research Proposal as per our recommendations made by the Graduate School Board 13th February, 2015, entitled "Determinants of Utilization of Cervical Cancer Screening Services among Women Aged 30-49 Years in Kitui West, Kenya".

You may now proceed with your Data collection, subject to clearance with the Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

Thank you.

EDWIN OBUNGU
FOR: DEAN, GRADUATE SCHOOL

CC. Chairman, Population and Reproductive Health Department

Supervisors:

1. Dr. Kenneth K. Ruch
   C/o Health Management and Informatics Department
   Kenyatta University

2. Dr. Benjamin Ndeleva
   C/o Surgery and Orthopaedics Department
   Kenyatta University
Appendix 5: approval by ethical committee Kenyatta University

Kenyatta University
Ethics Review Committee

Fax: 8711242/8711575
Email: kuerc.chairman@ku.ac.ke
kuerc.secretary@ku.ac.ke
Website: www.ku.ac.ke

Our Ref: KU/ERC/ APPROVAL/VOL.1 (193) Date: 16th August, 2018

Jane Hannah Mumbi Mbabuka
P.O Box 43844-00100
NAIROBI

Dear Jane,

APPLICATION NUMBER: PKU/862/1927 “DETERMINANTS OF UTILIZATION OF CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED 30-49YRS IN KITUI WEST, KENYA”

10. IDENTIFICATION OF PROTOCOL

The application before the committee is with a research topic “Determinants Of Utilization Of Cervical Cancer Screening Services Among Women Aged 30-49yrs In Kitui West, Kenya” received on 27th June, 2018 and discussed on 14th August, 2018.

2. APPLICANT

Jane Hannah Mumbi Mbabuka

3. SITE

Kitui County, Kenya

4. DECISION

The committee has considered the research protocol in accordance with the Kenyatta University Research Policy (section 7.2.1.3) and the Kenyatta University Ethics Review Committee Guidelines and APPROVED that the research may proceed for a period of ONE year from 14th August, 2018.
5. **ADVICE/CONDITIONS**

i. Progress reports are submitted to the KU-ERC every six months and a full report is submitted at the end of the study.

ii. Serious and unexpected adverse events related to the conduct of the study are reported to this committee immediately they occur.

iii. Notify the Kenyatta University Ethics Committee of any amendments to the protocol.

iv. Submit an electronic copy of the protocol to KUERC.

When replying, kindly quote the application number above.

If you accept the decision reached and advice and conditions given please sign in the space provided below and return to KU-ERC a copy of this letter.

[Signature]

**PROF. JUDITH KIMUYWE**

CHAIRMAN ETHICS REVIEW COMMITTEE

I, Jane Mbugua, accept the advice given and will fulfill the conditions therein.

Signature: 

Dated this day of 23.08.2018

**cc:** DVC-Research Innovation and Outreach
Appendix 6: Approval by National Commission for Science, Technology and Innovation

Ref: No NACOSTI/P/18/33383/25810

Date 23rd October, 2018

Jane Hannah Mumbi Mbaluka
Kenyatta University
Po Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Determinants of utilization of cervical cancer screening services among women aged 30-49 years in Kitui West Kenya” I am pleased to inform you that you have been authorized to undertake research in Kitui County for the period ending 22nd October, 2019.

You are advised to report to the County Commissioner, the County Director of Education and County Director of Health services in Kitui County before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a copy of the final research report to the Commission within one year of completion. The soft copy of the same should be submitted through the Online Research Information System.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Kitui County

The County Director of Education
Kitui County
Appendix 7; Research License

THIS IS TO CERTIFY THAT:
MS. JANE HANNAH MUMBII MBALUKA
of KENYATTA UNIVERSITY, 0-90200
KITUI, has been permitted to conduct
research in Kitui County.

on the topic: DETERMINANTS OF
UTILIZATION OF CERVICAL CANCER
SCREENING SERVICES AMONG WOMEN
AGED 30–49 YEARS IN KITUI WEST
KENYA

for the period ending:
22nd October, 2019

Permit No.: NACOSTI/P/18/33383/25810
Date Of Issue: 23rd October, 2018
Fee Received: Ksh 1000

By Director General
National Commission for Science,
Technology & Innovation

Signature
Appendix 8: Authority from County Commissioner

MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

OFFICE OF THE
COUNTY COMMISSIONER
KITUI COUNTY
P.O. BOX 1 - 90200
KITUI

30th October 2018

Ref. K.C.603/II/65

Jane Hannah Mumibi Mbaluka
Kenyatta University
P.O. Box 43844-00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Reference is made to a letter from National Commission for Science, Technology and Innovation Ref. No. NACOSTI/P/18/33383/25810 dated 23rd October 2018 on the above subject.

You are hereby authorized to carry out research on “Determinants of utilization of cervical cancer screening services among women aged 30-49 years in Kitui West Kenya, Kitui County” I am pleased to inform you that you have been authorized to undertake research in Kitui County for the period ending 22nd October 2019.

ODHINJ OOTIENO
FOR: COUNTY COMMISSIONER
KITUI COUNTY

C.C.

Deputy County Commissioner
Kitui West Sub County
Appendix 9: Authority from County Director of Education

MINISTRY OF EDUCATION, SCIENCE & TECHNOLOGY
State Department for Education

Telegrams "EDUCATION"
Kitui
Telephone: Kitui 22759
Fax :04444-22103
E-Mail : cde.kitui@qmai.com

When replying please quote:

Ref. No. KTIC/ED/RES/22/Vol. 1/23
Date:29/10/2018

Jane Hannah Mumbi Mbalukena
Kenyatta University
P.O Box 43844 - 00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to conduct a research on "Determinants of utilization of cervical cancer screening services among women aged 30-49 years in Kitui West, Kenya," am pleased to inform you that permission has been granted to undertake research in Kitui County for the period ending 22nd October, 2019.

You are advised to liaise with the respective Sub County Directors of Education before embarking on the exercise and a copy of the research report should be forwarded to this office.

Regardss,

S. Adano
County Director of Education
Kitui County
Appendix 10: Authority from County Director Medical Services Officer

THE COUNTY GOVERNMENT OF KITUI

Office of the Chief Officer
Health and Sanitation
P.O. Box 460-90200
KITUI

MINISTRY OF HEALTH AND SANITATION

Ref: KTI/GEN.CORRES/VOL.X/081
Date: 7th November, 2018

Jane Hannah Mumbi Mbaluka
Kenyatta University
P O Box 43844 – 00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Reference is made to the letter ref no. NACOSTI/P/18/33383/25810 dated 23rd October, 2018 in which ethical approval was granted by the Director General – NACOSTI for you to carry out research on “Determinants of utilization of cervical cancer screening services among women aged 30-49 years in Kitui West Kenya”.

The office of the undersigned has no objection on the same and therefore you can proceed with the research in Kitui County.

Dr. Allan Owino
County Director for Health
Kitui County

[Signature]
Appendix 11: Kitui West Sub-County, Kitui County, Kenya

NBS 2014