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A STUDY OF FACTORS INFLUENCING ACCESS AND UTILIZATION OF CERVICAL CANCER SCREENING SERVICES AMONG WOMEN OF REPRODUCTIVE AGE IN MURANG'A COUNTY, KENYA

BY

ROSE WANJIRU KAGIKA
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DECLARATION

This research project is my original work and has not been submitted for the award of any degree in any other University.

Sign: …… Date: ……

Rose Wanjiru Kagika

C50/86241/2016

This research project has been submitted for examination with my approval as the University supervisor.

Sign: …… Date:……

Prof. C.B.K. Nzioka,

Supervisor,

University of Nairobi.

DEDICATION

This project is dedicated to my family, my husband Kagika Mwangi, my son Kanyoro Kagika and my daughters Krystal and Rita Kagika for their constant and unwavering understanding, motivation, encouragement and moral support and above all immeasurable love and affection that they accorded me as I embarked on my course.

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LIST OF ABBREVIATIONS

CCSS	-	Cervical Cancer Screening Services
GOK	-	Government of Kenya
HIV	-	Human Immunodeficiency Virus
HPV	-	Human Papilloma Virus
KDHS	-	Kenya Demographic Health Survey
KNBS	-	Kenya National Bureau of Statistics
MCHP	-	Maternal Child Health Program
MOH	-	Ministry of Health
WHO	-	World Health Organization

ABSTRACT

The study sought to examine factors influencing access and use of cervical cancer screening services among women aged between 18 and 49 years in Kiru Ward of Mathioya Sub-county in Murang'a County, Kenya. The study focused on such factors as socio-demographic, knowledge and awareness, socio-cultural, and health facility related factors and their influence on access and utilization of cervical cancer screening services. The study was descriptive in nature and adopted a cross-sectional research design. Quantitative data were collected using an interview schedule from a multistage selected sample of 186 women aged 18-49 years as primary respondents. Additional qualitative data were obtained from six key informants and two focused group discussions who were purposively selected. The findings showed that a majority of women had not utilised cervical cancer screening services. Older women were likely to participate in care seeking behaviour than younger women. Married women were also more likely to go for screening services while lower income earners were less likely to go for screening services. More than half of the sample had heard about cervical cancer. However, there were major knowledge gaps in majority of the respondents putting into question the quality of information they heard. Majority of women agreed that none of their family members had ever gone for screening and some indicated that they feared pain during screening and feared abnormal results .A majority of women found it affordable to pay higher costs of transport to access screening services. Patient waiting time attributed to high work load was a major hindrance to screening. Factors such as means of transport, and attitude of personnel were not key factors influencing how women access and utilize screening services. The study recommends that there is need to raise awareness on cervical cancer to both men and women. Trained health personnel should be increased to reduce on workload and offer provider initiated counselling. County government of Murang'a and other agencies should provide community outreach services to reach those who cannot afford to visit the health facilities. The measures would increase access and use of cervical cancer screening services.

CHAPTER ONE: INTRODUCTION

1.1Background of the Study

Cancer refers to a generic term that describes a large group of diseases likely to affect any part of the body (World Health Organization ([WHO], 2018). According to the WHO, while other terms used include “malignant neoplasms and tumours, one of the common defining aspects of cancer involves the rapid formation of abnormal cells that grow beyond their usual boundaries, and which can then invade adjoining parts of the body and spread to other organs and whose spread causes death from cancer” (par. 4). In specific, cervical cancer attacks the women reproductive organs – cervix (the lower narrow end of the uterus that forms a canal between the vagina and uterus. WHO (2018) explain that cervical cancer is caused by Human papilloma virus (HPV) transmitted through sexual contact whose infection occurs shortly after the onset of sexual activity.

At a global scale, cervical cancer ranks fourth among the most frequent cancer in women. WHO (2018) report estimates that over 530,000 new cases of women were recorded to have died in 2012 forming 7.6% of female that died because of cancer. Furthermore, the report estimates that out of this, 270,000 are caused by cervical cancer. In addition, the report notes that more than 86% of the cervical cancer deaths take place within less developed regions that experience limitations in resources needed to manage and control cancer. Besides, the 2014 Kenya Demographic Health Survey report maintains that among developed countries, responsible stakeholders have come up with comprehensive prevention programmes and treatment programmes effective for screening, and early diagnosis to reduce high mortality rates accruing from cervical cancer (Kenya National Bureau of Statistics [KNBS], 2014).

The screening services offered among health facilities make it possible to identify most of the pre-cancerous lesions during early stages when they can easily be controlled. According to the KDHS (2014), when women receive regular screening of cervical cancer, it becomes easier to identify pre-cancerous lesions and cervical cancer during the early stages. Women that receive early treatment are likely to prevent up to 80% of cervical cancer. Furthermore, WHO (2018) report shows that early treatment among developed countries have managed to prevent up to 80% of cervical cancer. However, in developing countries, such as Sub-Saharan Africa, the persistent limited access to effective screening services is a clear implication that a majority of women that get infected live with such disease up to the point when it has already advanced following development of symptoms. Additionally, prospects to treat the disease when it is already in late-stage might become poor. Consequently, it results in an in increased rate of death among a majority of African countries (WHO, 2018).

Cervical cancer is a real threat to sexually active women in Kenya. The WHO report warns that over 10 million Kenyan women are always at the risk of dying because of cervical cancer (WHO, 2014a). The 2017 report by the HPV Information Centre shows that cervical cancer is the leading cause of female cancer in Kenya. It also ranks top as the common cause of death among women aged between 15 and 44 years in Kenya (HPV Information Centre, 2017). The 2012 estimations show that Kenya diagnoses 4,802 new cervical cancers every year. Out of this number, the country records annual number of deaths amounting to approximately 2,451, crude mortality rate of 11.5 higher than the global average of 7.6, and age-standardized mortality rate of 21.8 (against global of 6.8).The 2014 Kenya demographic and health survey report shows the percentage of women aged between 15 and 49 that have heard about cervical cancer and cervical cancer screening (KNBS, 2014).

The findings show that about three-quarters (approximately 76 percent) of women in Kenya have heard about cervical cancer. However, only 14 percent have succeeded in going through cervical cancer screening exam. Out of the 14 percent, the greatest number making up to 62 percent have received Pap smear, while 32 percent received visual inspection and only 1 per cent received both screening tests. Additionally, the KDHS 2014 report shows that knowledge about cervical cancer and likelihood of having exam remain lowest among young Kenyan women aged between 15 - 19 (making as high as 59 percent and 2 percent respectively). Women in rural areas make 71 percent and 10.6 percent (against 83.7 percent and 18.6 percent in urban areas) who have heard about cervical cancer and received cervical cancer exam respectively (KNBS, 2014). The Kenya national guidelines recommends that screening tests should be done after every five years once the test is normal, (National Guidelines for prevention and management of cervical Breast and Prostate cancer, 2012).

The greatest burden that comes from increased mortality of cervical cancer affected women affects the underserved population. According to Topazian, *et al. (*2016), poor and older women that live in the rural areas are the one likely to experience a high risk of cervical cancer-related complications because of poor accessibility to screening services. In their study, Bayu, *et al. (*2016) argue that complications of accessing screening services in most of the rural areas are characterised by lack of information, poorly equipped health facilities, long distances required to access health facilities, and challenges of transportation. Studies conducted to understand cervical screening have mainly focused on health care settings and women in urban areas (Abdullah, *et al*., 2001; Minja Kileo, *et al.,* 2015).

The same studies also report on the existing numerous gaps in knowledge about cervical cancer among the study communities (Sakellariou & Rotarou, 2017). Furthermore, Adap (2004) finds that other barriers that hinder women from accessing screening services range from health facility related factors, economic factors, beliefs about illnesses, cultural constraints, domestic gender relations, unfriendly health care givers, or knowledge about availability of cervical cancer services. Additionally, fear to have positive results, financial constraints, nonchalant attitude about personal health, illiteracy, experiencing several contending issues, and beliefs of not being at risk are some of the factors that have been cited by Abdullah, *et al. (*2001). It is therefore, important to find out the factors that affect access and utilization of cervical cancer screening among rural women aged between 18 and 49 years.

1.2 Problem Statement

This study was conducted in Murang'a County because it is one of the rural areas in Kenya that experiences accessibility challenges and has a low uptake level as other rural areas. A majority of rural areas in Kenya experience cervical cancer as one of the major health problems (KNBS, 2014). Similar to other local areas in Kenya, Murang'a County refers a majority of patients to other higher-level hospitals such as Kenyatta National Hospital. The Kenya Health Policy 2014 – 2018 shows that referral system in Kenya cover six levels of service delivery. Level 1 services are provided at the community level within the community-based services. Level 2& 3 (operate as dispensary nursing homes, maternity, health centres) provided as primary care health services. Level 4 and 5 services are provided by the county referral health services. Level 6 services are provided by the national referral health services (Ministry of Health, 2017).

Nonetheless, the government of Kenya has succeeded in equipping 100 hospitals with cervical cancer screening and treatment equipment. The initiative is done through the help of Beyond Zero campaign and the Ministry of Health. The Beyond Zero campaign was launched in January 2014 by the First Lady of the Republic of Kenya Mrs Margaret Kenyatta under the inspiration that it is possible to prevent maternal and children deaths (Beyond Zero, 2014). The initiative calls upon health facilities to prioritize and formulate policies to allocate more resources, improvement in service delivery, and better health seeking behaviour among individuals suffering from different diseases including cervical cancer. The Beyond Zero Campaign has succeeded in promoting advocacy messages to facilitate regular screening.

All level 4 and 5 hospitals across all the 47counties in Kenya have cervical cancer equipment to assist in management of cervical cancer through screening tests. However, as Ngugi, *et al.,* (2015) points out, despite a large proportion of health personnel having knowledge about cervical cancer and screening tests (Pap smear tests, Visual inspection using acetic acid or Lugo's iodine and HPV test), the utilization of screening services by women is still low. Nonetheless, few studies have focused on studying factors that inhibit both access and utilization of cervical cancer screening services among women that are in the reproductive age. Furthermore, it is imperative to note that studies have not studied utilization of cervical cancer screening services and some of the related factors among women aged between 18 and 49 years. This group forms the large population in Murang'a County (Bayu, *et al.,* 2016).

This study therefore, sought to provide a better understanding concerning the factors that affect access and utilization of cervical cancer screening services among women aged between 18 and 49 years in Murang'a County. In particular, this study focused on

the social-demographic characteristics that affect access and utilization of services among patients included age, size of household, marital status, level of education, and source of income (Ndejjo, *et al.*, 2016).

Additionally, the study also focused on knowledge and awareness factors that determine behaviour of respondents to seek for cervical cancer services such as fear of vaginal examination, knowledge of associated risks; understanding about cervical cancer, and information about cervical cancer (Tung, Lu and Cook, 2010). Furthermore, the study focused on social cultural factors found to affect behaviours of patients to include encouragement, taboo, self-esteem, stigma, reproductive health problem, cost, social value, embarrassment, and modesty (Adab, Holroyd, and Twinn, 2004), beliefs and perceptions (Wong, *et al.*, 2008), fear of abnormal results (Gu, Chan, Twinn & Choi, 2012). Gender roles and behaviours of women, traditional disease and religion (Ngugi, *et al.*, 2015). Health facility related factors that affect patients covers attitude of personnel, time taken to reach the facility, availability of reliable means of transport, family planning clinics, patient waiting time, gender of personnel (Nuño, *et al.*, 2011.

1.3 Research Questions

The study sought to find answers to the following questions;

a. What are the socio-demographic factors affecting access and utilization of cervical cancer screening services among women in Murang'a County?
b. What are the knowledge and awareness factors affecting access and utilization of cervical cancer screening services among women in Murang'a County?
c. What are the socio-cultural factors affecting access and utilization of cervical cancer screening services among women in Murang'a County?

d. What are the health facility related factors affecting access and utilization of cancer screening services among women in Murang'a County?

1.4 General Objective

The aim of this study was to develop factors influencing access and use of cervical cancer screening services among women aged between 18 and 49 years in Murang'a County.

1.4.1 Specific Objectives

a. To investigate the socio-demographic factors that affect access and utilization of cervical cancer screening among women in Murang'a County.
b. To explore the knowledge and awareness factors that affect access and utilization of cervical cancer screening services among women in Murang'a County.
c. To investigate the socio-cultural factors that affect access and utilization of cervical cancer screening among women in Murang'a County.
d. To explore the health facility related factors that affect access and utilization of cancer screening services.

1.5 Justification of the Study

The rationale for carrying out this project was to try to contribute towards knowledge about factors that affect access and utilization of cervical cancer screening services. The findings will contribute towards addition of multiple perspectives concerning cervical cancer. The study examines factors that affects utilization of screening services and more importantly factors that affect individuals in accessing services offered in public health facilities by those in the community. Even though research that focuses on screening has been extensive, time has changed. The majority of the past studies have

only focused on access to services among those living in urban areas and in private hospitals (Wong, *et al.,* 2008; Tung, Lu, & Cook, 2010). Only few scholars have managed to examine four aspects that determine accessibility among individuals living in communities; socio-demographic, health facility related factors, knowledge and awareness, and socio cultural aspects (Topazian, *et al.,* 2016). The fact that a majority of women living in rural areas do not have full access to screening services, it would be critical to adopt a multi-level approach to examine such factors (Sakellariou & Rotarou, 2017; Ngugi, *et al.,* 2015).

1.6 Significance of the study

The increased rate of mortality and morbidity from cervical cancer can be controlled if all women in their reproductive age went for screening for appropriate intervention upon discovery of abnormal cells. The Ministry of Health has made efforts to ensure that at least every level 4 and 5 hospitals across every county has free screening programs as prevention plans. The services focus on primary prevention, screening, as well as early detection and treatment (Ministry of Health, 2017). Despite all the efforts, there is still a low rate of utilization of such services among women of reproductive age in rural areas.

This study sought to make three key contributions. Firstly, the study sought to provide results applicable for policy decision-making, formulation, and implementation among different government agencies involved in cervical cancer screening and management. The agencies can use some of the findings from this study to develop guidelines for cancer screening, early detection, as well as improvement in diagnosis and treatment of all those affected.

Secondly, we expect that the findings from the study can be utilized for advocacy purposes. The findings on the level of access and utilization among the women in Murang'a County are important in order to enable the stakeholders understand the best way to advocate for cervical cancer prevention beyond Murang'a. Just as explained by Sherris, *et al. (*2005), lack of political will and understanding remain major barriers to implement effective cervical cancer prevention activities. Under-appreciation of cervical cancer screening has led to the burden of the disease in many counties across Kenya. Furthermore, there is also poor understanding about the needed principles to achieve effective prevention. Changing of such a situation would require a broad-based advocacy in order to gain support from policy and programs that seek to achieve effective prevention and interventions towards cervical cancer. Agencies working at a local or regional level will use the findings from this study to focus their efforts to prevent cervical cancer in order to improve the health of women of reproductive age.

Thirdly, the study provides policy needed to improve effectiveness in cervical cancer screening rates among women that live in Murang'a county and rural areas. Interventions that depend on theory have been found to produce one of the most effective and sustained behavioural change among people. This will be critical given that cervical cancer has been found to surpass other cancers that affect women in Kenya resulting in numerous deaths among women living in rural areas. The study sought to highlight some of the strategies like education, adoption of media, one-on-one interactions, and reduction of structural barriers that are likely to be effective in increasing accessibility and utilization of cancer screening services.

1.7 Scope of the study

The study focused on women between the age of 18 and 49 therefore women outside this age bracket did not form part of the study.

The study was carried out in Murang'a County, Kiru ward. Other Wards were excluded.

1.8 Definitions of Key Terms

Cervical Cancer: Cervical cancer is a type of cancer that attacks the women reproductive organs – cervix (the lower narrow end of the uterus that forms a canal between the vagina and uterus.

Screening: This refers to tests done as a Secondary prevention on a woman's cervix who have not developed any symptoms in order to detect abnormal cells which if not treated may lead to cervical cancer.

Secondary Prevention: This refers to screening tests done (VIA/VILLI/PAP smear) on women of child bearing age followed by treatment of detected precancerous cells which may develop into cancer.

Utilisation / uptake: This is the proportion of women who had already been screened for cervical cancer.

Women of reproductive age: In this study, women of reproductive age are adult women aged between 18 to 49 years who were interviewed.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter first looked at literature review in relation to level of knowledge and awareness factors, health facility related factors, social cultural factors and social demographic factors that affect access and utilization of cervical cancer screening services. Secondly, it looked at theoretical framework and conceptual framework.

2.2 Factors Related to access and utilization of cervical cancer screening

2.2.1 Knowledge and Awareness Factors

Sensitization about the disease is imperative to influence the uptake of the available cervical cancer screening. In a study by Eze, *et al* (2012)establishes that the possession of the facts or awareness of the disease is a crucial factor in attaining effective access and utilization of the cervical cancer screening facilities. Undoubtedly, the knowledge about cervical cancer influence the attitude of women towards screening. The study shows it is a major contributor to the prevention and treatment of the disease. Respondents from Southeast Nigeria were less than 40 percent of women that were aware of cervical cancer. Out of this, 30 percent were aware that the disease could be prevented whereas 25 percent of the same were aware of the screening of cervical cancer. The study concluded that the deficit in knowledge about cervical cancer and its screening was a significant factor that affect the access and utilization of the available cervical cancer screening services. In a similar study Ichaminya (2015) established that many women in Japan had little knowledge about cervical cancer and the early screening tests such as Pap smear. Women were not aware that they could save their lives through undergoing early tests.

Oshima and Maezawa (2013) conducted a focus-group discussion among Japanese univesity students to understand their attitudes in participating in cervical cancer screening. Discussions provided in all recorded and transcripts showed four themes. Respondents had very low sense of reality regarding existence of cervical cancer. Respondents also lacked knowledge about services such as pap smear. Thirdly, respondents failed to get motivation to go for screening services. However, respondents that indicated to have gone for screening services, indicated that they had received information from their friends, family members, and information from the media. Despite the focus group collecting insights from the respodents, it failed to show a relationship between knowledge and screening services. Siddiqui, *et al* (2016) is a recent study that focused on six randomly picked towns and 12 respondents including men and women were asked structured questions. The findings from multivariate logistic regression shows that knowledge and awareness indicators have strong relationship with the level of accessibility and access to household practices among people living in Karachi, Pakistan.

The question of awareness is also a significant factor in the Kenyan context in regards to the access and use of cervical cancer screening services. Kibicho (2014)points out that over the years the awareness and uptake of the screening services has been poor in Kenya. This has translated into the poor utilization of the available screening services. This indicated that women are not provided with adequate information about cervical cancer and screening. Even though the women could be interested to know more about this health issue, the health providers are not taking this opportunity to provide the required information on cervical cancer.

Murugi (2014)concurs in his study where he found out that the knowledge that women have about cervical cancer and Pap testing affect their uptake of the services for cancer screening. While most Kenyan women know about cancer, almost half knew about cervical cancer, while about a quarter had heard of Pap smear test, a factor that hindered them from taking advantage of it in order to safeguard their health.

The lack of awareness programs about cervical cancer in particular and the available services for cervical cancer screening has significantly affected the rate at which women have accessed and utilized the available services. Mupepi, Sampselle, & Johnson (2011) note that there are no adequate awareness and control programs that are aimed at increasing the adoption of the screening services. Due to the lack of these survelliance programs, it has become increasingly hard to tell the exact incidence of cervical cancer in Kenya. This makes it even more difficult to approximate the prevalance of the disease. Historically, a larger burden of cervical cancer in Kenya has been attributed to the lack of the national screening guidelines and adequate funding for the awareness and prevention programs for cervical cancer.

Rasul, Cheraghi, & Moqadam (2015) point out that inappropriate awareness of Kurdish women was characterised by the misinformation of the women from invalid sources of information such as their friends, family or other women. For example, those women from the rural areas, whose husbands had died of cancer believed that they had contracted the cervical cancer from their deceased husband as that was what their family and fellow women made them to believe. Other women lacked the knowledge about what a Pap smear test entailed, in the particular cases that it is applicable, why it should be procured and the number of time that this need to be done.

In summary therefore, the above findings shows mixed approaches in the methodologies used to investigate whether knowledge and awareness affect how women access screening services. In specific, studies have applied focused group discussions to bring out the opinion of respondents. However, they have failed to capture different scales to understand and relate to screening services. This study sought to fill such a gap by designing a structured qualitative interview.

2.2.2 Health Facility Related Factors

Even though women go to healthcare facilities to screen for cervical cancer, the access and utilization of the services are determined by cost-associated factors. Atuhaire (2013) notes that the screening services for cervical cancer are available in both secondary and tertiary heath care facilities though at a cost that make it unaffordable or rather inaccessible to many women.

The attitudes of many people towards medical practitioners, particularly in public healthcare facilities are largely negative. This is an inhibiting factor given that many access medical services through public healthcare facilities and only does it when they are sick and have no choice. Therefore, accessing these healthcare facilities when they are not ailing but just to conduct a screening test is out of question. Murugi (2014) concurs that the unhelpful attitude that health professional portray towards patients in public healthcare facilities is a turnoff for women who may want to seek for screening for cervical cancer and cannot afford it in a private healthcare facility.

The other health facilities related issues regard the infrastructures available in terms of the equipment required in conducting the screening and the competencies of the healthcare personnel. Kibicho (2014) found that the lack of female screeners in the healthcare facilities was a major hindrance to women accessing the screening services.

The nature of the screening itself involves opening up the cervix, a process that many women find offensive if it is conducted by a male health practitioner.

2.2.3 The Socio-demographic Factors

A large and growing body of research shows that socio-demographic factors cover age, income, education, gender, marital status, religious affiliation, ethnicity, migration background, employment, and household (Hoffmeyer-Zlotnik, 2016; Kokuro, 2017). In a standardization study in individual variables, Hoffmeyer-Zlotnik explains that demographic standards cover aspects that shape an individual behaviour. Extension of such behaviours has been found to play a key role in determining how people access and utilize screening services. A majority of the studies have been conducted among women living in the urban areas leaving out those that live in the rural areas.

Adeyemi (2013) adopted the use of quantitative approach on a cross-sectional data to examine the association between a few selected factors including age, insurance status, language of interview, income, as well as the level of education and cancer screening practices among African immigrants living in the United States. Adeyemi found that there are some distinct disparities in the cases of cervical cancer screening between the foreign-born and immigrant women as compared to the native-born American women. This disparity is attributed to demographic factors such as ethnicity, race, insurance status, their place of birth and the access to the healthcare services.

Kokuro (2017) conducted a cross-sectional quantitative study to examine factors factors that affect access and utilization of cervical cancer screening services among women living in the Kumasi metropolitan. The study asked women to identify the frequency they managed to engage with health related behaviors such as physical exervies, medical check-ups, and cervical cancer screening. The findings showed that older

respondents reported higher frequencies towards protional actions. Older respondents also showed higher likelihood than younger respondents to adopt the use of cognitive strategies as effective in preventing illinesses. However, youger respondents interpreted signs of illinesses easily than older respondents. Furthermore, the analaysis showed that age (except for those aged between 42 and 53) and gender had strong significant association with a majority of health practices such as attending health facility for screening.

While using a different approach to understand the preventive health practices, Utoo, Ngwan, and Anzaku (2013) requested all the respondents to indicate the frequency they had participated in screening services, physical exercises, medical check-ups, and nutritional habits. Older persons showed higher frequencies, followed by gender, and educational level as predictors of behaviors to attend screening services. However, differences occurs among antecedents and studies focusing on women in rural areas. For example, Ndejjo, Mukama, Musabyimana and Musoke (2016) conducted a comparison of a casual model on a sample of adolescents and adults. Exogenous variables included in the hypothesized model included gender, education, and age. Furthermore the model included endogenous variables of social support and self-esteem. The findings shows that the model failed to fit all data equaly. Furthermore, gender failed to have a statistically significant effect on individual behavior.

Few studies on rural areas have shown conflicting results on marital status and educational level. A study by Tsikouras, *et al* (2016) investigates the relationship between the health status and individual behavior to go for screening services. The findings reports that individual having higher educational status reported higher odds to have good health. Educators strongly predicted positive behaviors towards

preventive health among every age group**.** Similalry, a study by Tung, Lu and Cook (2010) observes that individuals with more formal education aged from 18 to 88 exhibited nutritional patterns, frequent use of screening services, and stress management approaches. Sakellariou and Rotarou (2017) constructed a path model in order to investigate existing casual relationships among a group of social-demographic variables. The findings showed that education explained a direct effect along all measures of health lifestyles across all age groups.

In sumary, review of above literature shows that a majority of studies have focused on women living in urban areas with only few studies focusing on women living in the rural areas. Furthermore, a majority of studies have applied cross-sectional quantitative data that fails to captite the opinions and perceptions of respondents. Besides, there is mixed findings among studies that focus on rural areas showing mixed findings. This study sought to add more knowledge concerning differences among socio-demographic factors and their effects on individual behavior in determining their access and utilization of cervical cancer screening.

2.2.4 Social-Cultural Factors

Most people do not bother to conduct a medical test as long as they are physically sound, even though they may know of available cervical cancer screening, which may even be provided free in medical camps. This is largely attributed to the societal negative attitude towards illness and the ill, which discourages women to go for screening services. Adeyemi (2013) established that some people regard a positive test of cancer as a death warrant, compounded by the cost that it takes to treat the disease; this discourages them from seeking screening altogether. The belief system of the

women in a particular society is another contributing factor to whether or not they will embrace the available screening and testing services.

Rasul, Cheraghi, &Moqadam (2015) **e**stablished that belief played an integral role in determining the decision for Kurdish women to go for cervical cancer screening tests. The study established that these beliefs can be broadly categorized as the cervical cancer screening-related beliefs and the health related beliefs. On one hand, the beliefs regarding cervical cancer screening involved both incorrect and correct beliefs regarding the Pap smear test. The incorrect belief involved those women who believed that those with gynaecological problems are prone to cancer. There are those in this group who also believed that only the older women need to procure a Pap smear test or that the trust in their God would safeguard them from having cervical cancer. This category of women did not find it necessary to go for cervical cancer screening. The correct belief involves those women who believe that all women are prone to developing cervical cancer are highly likely to procure a Pap smear test to ascertain about their own status. They therefore, undertake these tests regularly or periodically in order to make sure that an impending cervical cancer does not endanger their health. On the other hand, the health related belief emerged as a preventive behaviour in the sense that women who consider their own reproductive health as important to them are highly likely to resort to screening as one of the ways to take proactive measures against future medical challenges.

The other perspective of belief system is related to the religion of women in their respective context. Rasul, Cheraghi, & Moqadam (2015) established that the religion of Kurdish women played an integral role in influencing them to accept undergoing cervical cancer screening. In particular, religion was characterized by practices such as

the trust in God, praying and the belief in destiny, which influence the decisions that the women made in regards to conducting the screening tests. There were those women who believed that God would protect them from cervical cancer and they therefore, do not see the need to go for screening, as that would somehow compromise the belief that they have in their God. Other believe that if they developed the disease and it is diagnosed at a much later stage when it cannot be treated then that would be their destiny as ordained by God and that there is nothing that they could have done before to prevent such an eventuality. In this regard, their religion served as a hindrance to the access and use of the available screening services for cervical cancer.

In a society where there is explosion of information dissemination, the media too plays a significant role in shaping the attitudes of women and determining the making of informed decisions regarding cervical cancer treatment. Rasul, Cheraghi, & Moqadam (2015) pointed out that the media plays a significant role in the development of public belief and attitudes regarding health. The broadness of its scope in terms of the channel and audiences that it can reach make the media one of the most powerful tool that can be used to combat the prevalence of cervical cancer. However, the media has not made it as an agenda to disseminate information regarding cervical cancer, its nature and treatment. In Kurdistan, for instance, the media does not publish any information about cervical cancer prevalence amongst women and therefore, most of them do not know about it even though almost all of the television and radio channels, including the print media such as newspapers, reach them. Notably, most of the information that the modern public knows in this contemporary times is through the media and therefore, if the media does not prioritize such health information the women are invariably left in the dark about health issues that may be endangering their lives already.

Domestic gender power relation is also another factor that discourages or encourages the use of the available cervical cancer screening services. Mupepi, Sampselle, & Johnson (2011) found out that there are instances where married women would not get the consent of their husbands to conduct the test. This is attributed either to the lack of money to conduct the test, especially in the case where the man is the breadwinner. It is also associated with the whole process of conducting the test, particularly when men administer it. Women who are older than the medical practitioner may also find the process repugnant, even when younger female medical practitioners conduct it.

As Atuhaire (2013) observes, amongst the Xhosa in South Africa their gender norms inhibited the women who had undergone treatment for the precancerous lesion from making any negotiations about the recommended four weeks that one is required to abstain from sex after the treatment. This has caused women to refrain from participating in cervical cancer screening exercises even though they are well aware of its benefits to their health.

The increase in use of alternative sources of reproductive health inhibits women from seeking cervical cancer screening. Murugi (2014) notes that such services keep women away from seeking conventional medical services from giving birth. They therefore, do not see the need of subjecting themselves to screening procedures. Most of these women who use alternative reproductive health methods are in the rural areas, where local midwives who use traditional methods to facilitate delivery conduct even the process of child delivery. This makes the medical screening process to become out of questions for these women.

The fact that the screening procedure involves peeking into the cervix is a turnoff for many women. This is especially true in the cases where the medical professional to

conduct the procedure is a man. Kibicho (2014) established that such social factors turned off women from accessing cervical screening services. Such incidences may become quite embarrassing to the women seeking the test and they would therefore, rather forego them instead of opening up their nudity to members of the opposite sex. This becomes even difficult in the case where the woman in question is married.

2.3 Theoretical Framework

2.3.1 The Health Belief Model

The Health Belief Model (HBM) developed by Rosenstock, has remained one of the most applicable models in health behaviour research (Rosenstock, 1988). Rosenstock and others sought to gain more understanding as to why there was a "widespread failure" among people when it came to acceptance of preventive screening tests for dental diseases, cervical cancer, influenza, polio, and tuberculosis even though such services were being provided for by the government at the lowest cost or at no cost.

The Kurt Lewin's field theory together with the social psychological principles helped influence the formation of HBM model. In the field theory, Lewin explain that every people live in a cognitive lifespan as a social environment that influences relationship with others as well as own place within a society (Getahun, *et al.* 2013). Places found within the lifespan have both negative and positive points. Negative points create a force that compels people to move away from that point while the positive points tend pull people into a region.

The tension that causes people to move away from the negative places to positive places also causes a counter reaction. The countering of tension (that is movement to where the goal is and away from negative places) can be achieved through cognitive of adoption of behaviour. According to Lewin, a movement towards a positive goal places

will continue to take place in the absence of countering forces. Finally, external sources influence creation of awareness enough to cause tension and the need for an individual to move away from negative points (Utoo, Ngwan, Anzaku, 2013).

Other studies have applied Lewin's work to understand people towards health behaviour. Vidourek, *et al* (2015) applied the concept of movement and tension in cognitive fields. The results showed that three components played a key role of inducing individuals to move to regions of preventive health and take actions.

Firstly, individuals developed the belief that one was likely to fall ill and be infected with diseases. Secondly, contracting the disease or illness would lead to death or severe consequences. Thirdly, participating in preventive health actions would help reduce the level of susceptibility to contract an illness and consequently, reduce occurrence of illness. Similarly, a study conducted by Naghashpour, *et al* (2014) believed that cues are factors likely to necessitate an individual to move away from the "readiness to act" state in order to take an actual behaviour.

Hence, Naghashpour, *et al* included cues to become a fourth component. Naghashpour, *et al* categorized cues as either internal (at a bodily state) or external (promotion of health through the media). In overall, the new model contains five components. Firstly, people develop susceptibility that they are vulnerable to given conditions. Secondly, people start to develop some perceptions concerning the severity of a likely consequence in case they contract the illness. Thirdly, people start considering the benefit to reduce the actual or what was perceived as susceptibility and weigh against the costs.

Fourthly, people look at the internal as well as external cues that are likely to trigger the most effective preventive health action. Fifthly, modifying structural, social, psychological, and demographic variables played a key role in determining how individuals react to services provided in health facilities (Naghashpour, *et al*, 2014).

Scholars that have succeeded in modifying the initial HBM have maintained that the model can as well be applicable to most of the repetitive behaviours in which there is always a positive relationship between health considerations and actions such as cervical cancer screening, annual breast examination (Bayu, *et al,* 2016). According to Bayu, *et al,* several factors play a key role in predicting how people access and respond to health behaviours. Bayu, *et al* (2016*)* categorized them into age, earnings, gender, level of education, and socio cultural factors.

The most recent studies have modified HBM to categorize the factors that affect access and utilization of individual to screening services such as dental diseases, cervical cancer, influenza, polio, and tuberculosis into social-demographic, knowledge and awareness, socio-cultural, and health facility related issues. The rest of the sections look at different studies that have been conducted in each of these areas. Furthermore, the study sought to identify gaps in areas of focus, conflicting results, hypothesize, as well as methods of application to collect data. All these reasons form a foundation to explain the need to conduct a study on women aged between 18 and 48 years in the rural Murang'a. However, HBM experiences two major limitations – it fails to explore the effects of socio-cultural factors towards a behaviours, and lack of constructs to explore habits and health-facility related factors.

2.3.2 Expectancy theory of Motivation

Victor Vroom developed a theory of expectancy theory of motivation in 1964 to act as the best substitute to content theories of motivation. The theory refers to a condition or an event where people develop expectations what they do. The motivation explains that motivated behaviours increases when an individual develops a positive relationship between efforts and performance such as an outcome. Depending on this theory for example, Bahmani, *et al* (2016) explains that extrinsic financial motivation works well in a case where there exists a connection between a reward and an effort. In addition, the value that one seeks to achieve in the form of a reward must be equal to the effort that one puts in. Vroom separated an effort (the one that arises out of the motivation), performance, and an outcome. Vroom went ahead to hypothesize that in order for an individual to gain motivation, then there must be a link between performance and motivation. Vroom proposed that three major variables to bridge the link included instrumentality, expectancy, and valence.

A woman in the reproductive stage who perceives the significance of attending a cervical cancer screening sessions is likely to be motivated to accept screening services. The significance of doing so could include among others, the need to detect any cancerous cells during their early period of formation. Consequently, any detection could lead to commencement of treatment efforts in order to cure and eliminate any form of complications likely to arise out of failure to treat. The effort that a woman takes will be significance to own health status. Matebesi, Meulemans and Timmerman (2005) the outcome would increase productivity because of a cut down in the number of visits that a woman has to go to the health facility in search of medical care, and a further improvement in economic performance because of utilization of funds that could be used for treatment into doing other productive things in the household.

Muller (2016) reiterates that a woman is likely to consider going for early screening services under three conditions. She is motivated to maintain a good health status, (b) she believes that she is at risk of developing cancer, (c) develops insight about getting cancer, and (d) understands the importance of setting aside some time amidst the busy schedule to go for screening sessions. All these should be understood to outweigh the cost of the lost pay. According to Muller, is that all these conditions must depend on physical symptoms or health screening in order to take an action. Therefore, expectancy theory suits this study into developing a better understanding of factors that affect women to access and utilize screening services in public hospitals in the rural Murang'a County.

However, the expectancy theory of motivation fails to acknowledge that intention does not always make an individual to perform health behaviour. Secondly, the theory fails to explore the effect of socio-demographic, knowledge and awareness, and facilitating conditions in shaping of an individual behavioural response to engage in care seeking behaviours.

2.3.3 Theory of Care Seeking Behaviour

Lauver (1999) developed the theory of care seeking behaviour to understand factors that affect participation of women in screening programs such as cervical cancer, HIV testing, mammography, and breast cancer. Lauver sought to explore the reasons that made people to participate or avoid participating in health promotional screening programs. Lauver developed the theory from Triandi's theory of behaviour. The model has since been modified in order to suit cervical cancer screening behaviours. For example, while the initial theory included physiological arousal, it was considered not a factor that predicts behaviour and could not be associated with health threats like

cancer. Lauver modelled his theory by arguing that the probability for an individual to participate in health behaviour is a function of psychosocial variables (norms, habits, utility on expectations and values about results, and affect), socio-demographic variables, and facilitating conditions.

Affects involves the feelings that an individual develops to help shape behaviour for care seeking such as anxiety concerning embarrassment of serious diagnosis about an examination. Expectations involve the beliefs concerning the likelihood of positive results of care seeking. Values refer to the significance of those results. Therefore, when corresponding to what an individual expects and value ratings regarding specific results of care seeking through multiplication and addition, and then one can find a subjective expected utility theory (Lauver, 1992). In this case, utility refers to an overall worth from the care seeking.

Normative influences integrate personal and social norms together with interpersonal agreements that make an individual to make decision on ways to engage in care seeking. Personal norms form part of own beliefs concerning what seems morally correct behaviour about care seeking while social norms are the beliefs that other people in a society develop that determine the behaviour for an individual to engage in care seeking. Interpersonal agreement to take an action depicts the promise that one has with another person to engage in care seeking.

Habits presented by Lauver explain the manner in which people behave when they start experiencing symptoms (such as whether or not they prompt an individual to start seeking for care promptly after seeing the symptoms). Therefore, habits tend to reflect the normal care seeking behaviours that makes an individual to reflect about the experiences. The model also incorporates facilitating conditions as external, objective,

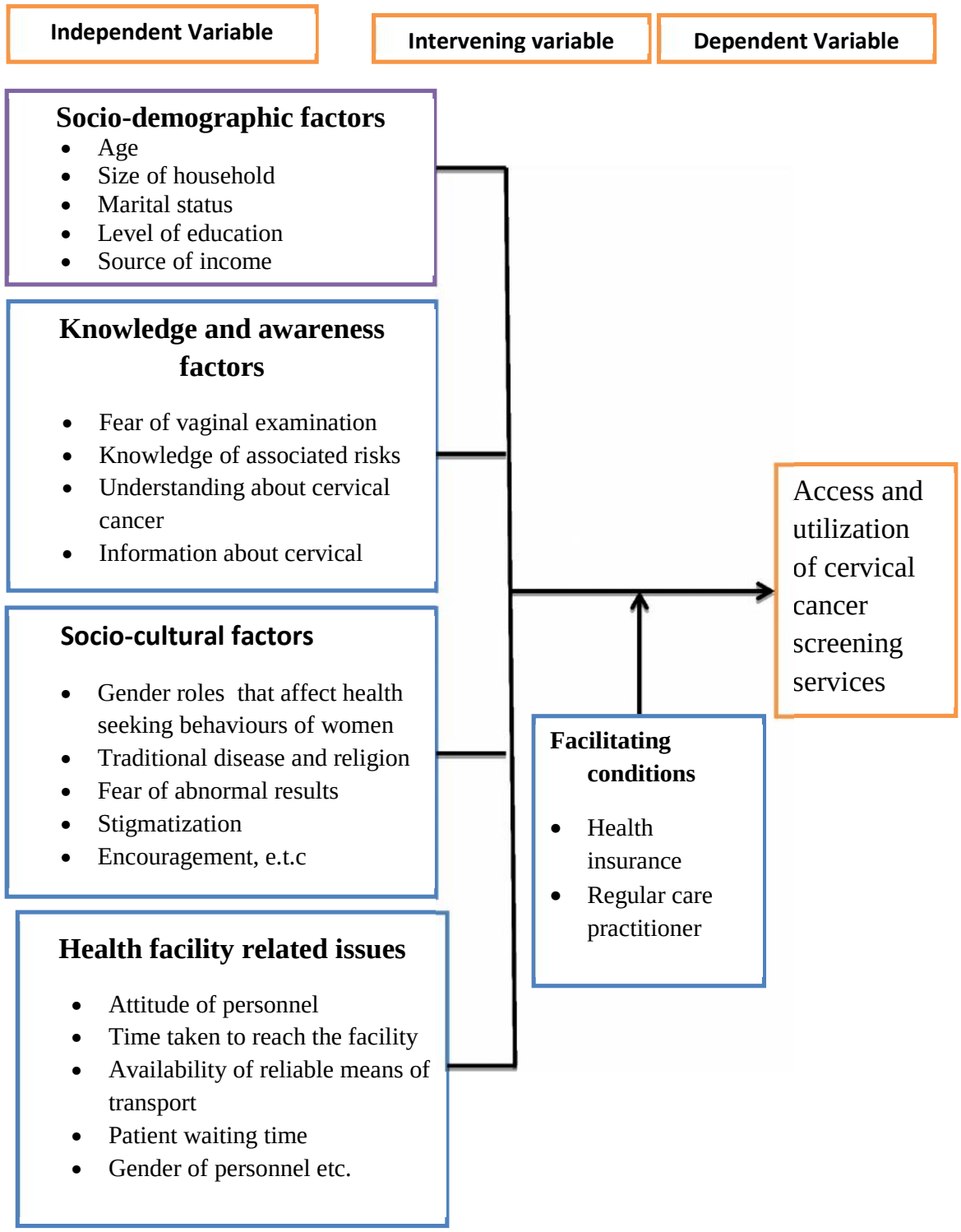
and specific conditions that allows an individual to engage in care seeking such as subscribing with health insurance, having a regular care practitioner, or other external factors.

Such conditions are opposite to those that inhibit an individual from engaging in seeking for care. Unlike the HBM model reviewed above where these variables act as barriers, CSB theory maintains that a selection of these variables to form key independent variables of behaviours depend on the preposition that an individual's behaviour is influenced by several factors such as cognitions, past experiences, external facilitators, personal feelings, and social influences. Hence, the low use of CSB theory in behavioural studies to examine women's health behaviours towards engagement in cervical cancer screening services, presents it as the best theory to guide this study. More specifically, Lauver (1992) recommended that future studies that seek to test the theory to explore women behaviour towards screening services for secondary prevention, must incorporate relevant variables. A study must explore whether facilitating conditions influence care-seeking behaviour. The variables must also integrate socio-demographic variables, knowledge and awareness, socio-cultural, and health facility related factors.

2.4 Conceptual Framework

The following conceptual framework guides this study on explaining the factors that affects accessibility and utilization of cervical screening services by women that live in Murang'a. The variables identified were informed by the literature review. Besides, it shows the interconnectedness of independent variables, intervening variables and dependent variables.

Figure 2.1: Conceptual Framework



CHAPTER THREE: RESEARCH METHODOLOGY

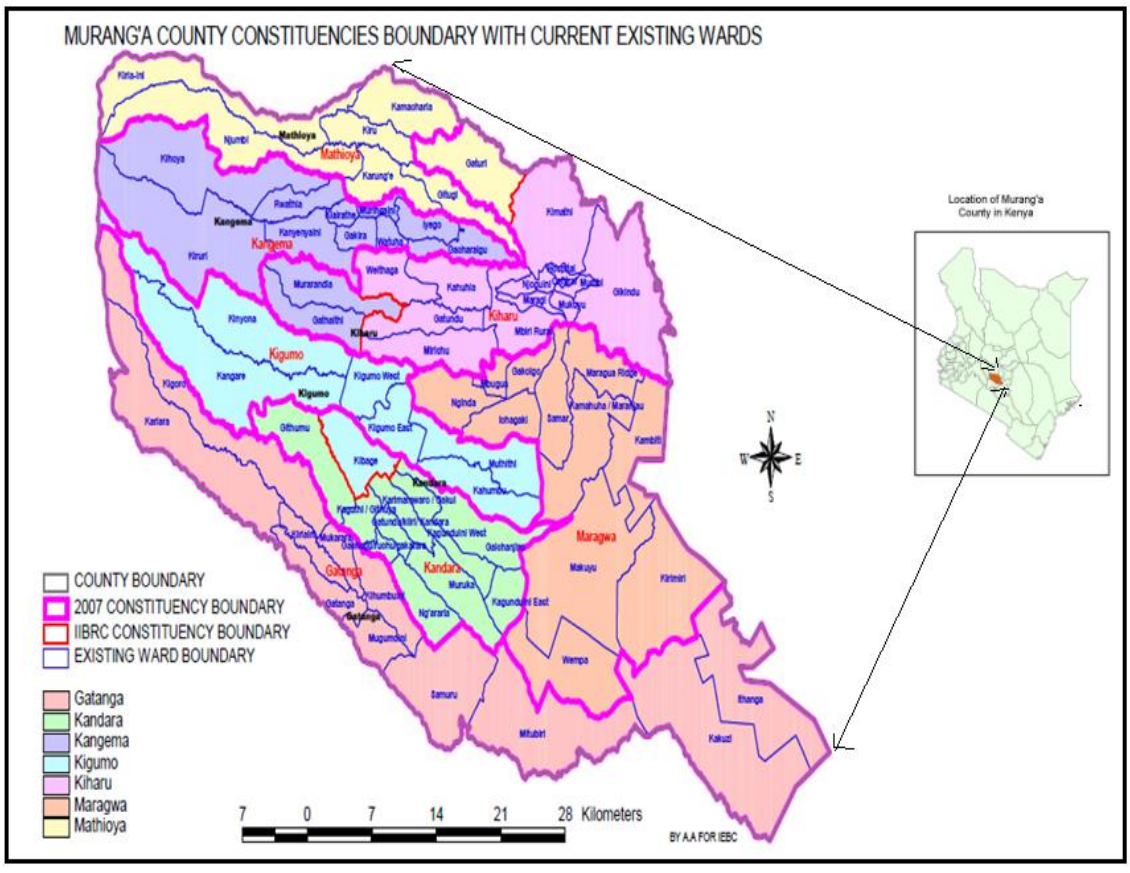
3.1 Introduction

This chapter focuses on site description, research design, sample size and sampling method, data collection procedure, data analysis, and ethical considerations.

3.2 Site Description

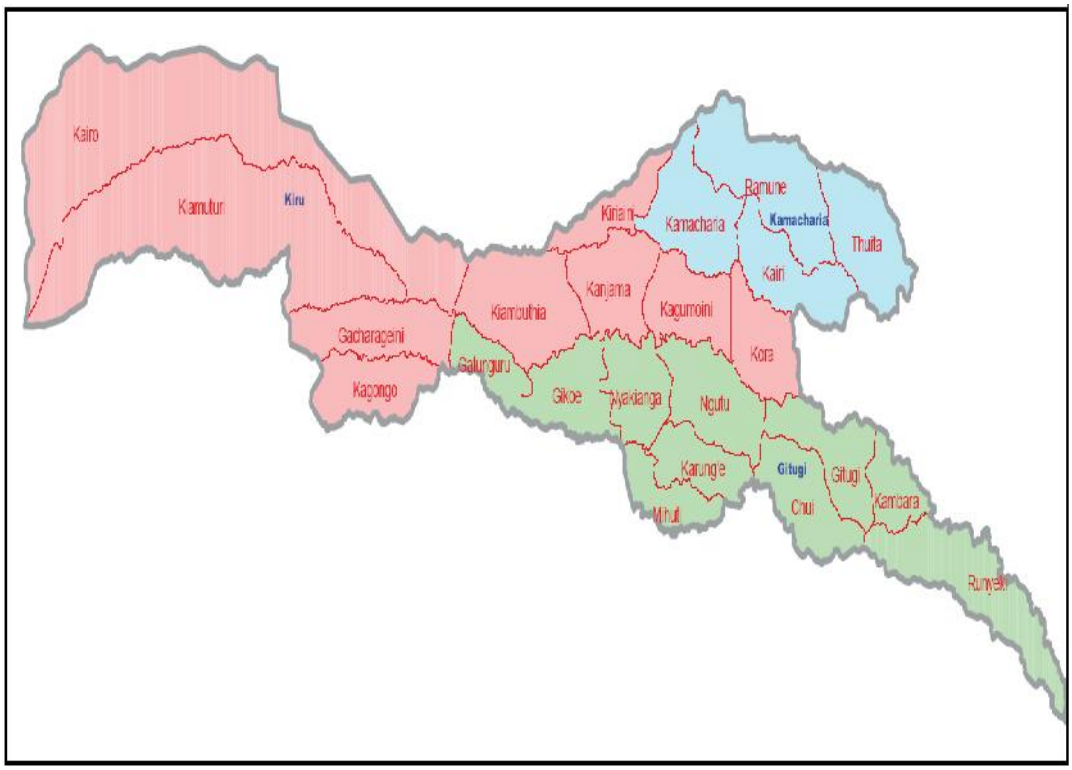
The study was carried out in Kiru Ward in Mathioya sub-county in Murang'a County in Kenya. Murang'a County has seven sub-counties (Kiharu, Kangema, Gatanga, Mathioya, Kigumo, Kandara, and Maragwa). Mathioya is located at the North of Murang'a County with three wards (Gitugi, Kiru, and Kamacharia).

Figure 3.1: Murang'a County



Source: Mathioya Constituency strategic development plan (2010-2017)

Figure 3.2: Mathioya Study Site



Source: Mathioya Constituency Strategic Development Plan (2010-2017), p. 25)

3.3 Research design

This study used descriptive research design in order to present an accurate situation of factors that determine access to and utilization of free screening services. Mugenda and Mugenda (2003) define descriptive research as a study whose purpose involves production of accurate representation of situations, events, and persons. An advantage for using descriptive research approach involves opportunity to collect quantitative data through semi-structured interviews. Furthermore, the approach allows one to identify variables to test relationship among them. This study sought to use semi-structured interviews attached in the appendices to collect quantitative data that would help identify variables around factors affecting how women access and utilize cervical cancer screening.

The study also used exploratory research in order to seek new insights by asking questions and assessing phenomenon within a new light. Saunders, Lewis, and Thornhill (2009) explain that the approach is more applicable when one seeks to clarify an understanding concerning a problem and when one is not sure of a problem under investigation. The advantage to use this approach is the opportunity to review different literature, conduct focus group interviews, as well as key informant interviews from experts to shed more light into what is unknown. Apart from the findings from the literature review, the study sought to collect qualitative data by conducting key informant interviews (KIIs) and focus group discussions (FGD).

3.4 Target Population

The target population for this study comprised of women aged between 18 and 49 years.

3.5 Unit of Analysis

The unit of analysis for this study were the factors affecting access and utilization of cervical cancer screening services among women aged between 18 to 49 years in Murang'a County. The specific units analysed were socio-demographic factors, the level of knowledge and awareness, the socio-cultural factors and the health facility related factors that affect access and utilization of cancer screening services. The unit of observation were the women aged between 18 – 49 years and the key informants.

3.6 Sampling Process and Sample Size

3.6.1 Selection of primary sample

The primary sample comprised of women aged between 18 and 49 years. The study used a multi-stage sampling method combining purposive sampling and simple random sampling. Multistage sampling involves selecting samples in stages where different sampling techniques can be used in various stages, (Kothari.C, 2004).

Level 1: Purposive sampling was used to identify households that had any woman aged between 18-49 years.

Level 2: Simple Random sampling.

(a.) Where there was only one woman aged between 18 and 49 years, she was automatically chosen provided she indicated willingness and approval by signing a consent form.

(b.) In the event that there were more than one eligible respondents in any given household, all eligible respondents were assigned numbers 1to n^{th} where n^{th} was the highest number. These pieces of paper were put in a small container, mixed together and only one was randomly selected. The process was continued until all samples were achieved.

The study used Fisher's formulae as explained by Fisher *et al.* (1991) to calculate the appropriate sample size. The study used 95% level of confidence with an assumption that the uptake of 14 per cent as recorded by the KDHS (2014) about the cervical cancer screening among women aged between 15 and 49 years in Kenya. The formula applies to samples that have no pre-defined population (Amini, Ahmadi, &Balakrishnan, 2012).

$$n = P\%\, xq\%\, x \left(\frac{Z}{d}\right)^2$$

n = the targeted sample size

Z = the critical value within the normal deviation

P = proportion of the target population that is estimated to exhibit given characteristics with a reasonable estimation of 14 per cent (0.14). In this case, this covers the proportion of women that are estimated to have accessed and utilised cervical cancer screening

q = proportion of the target population that does not belong to cervical cancer screening. This covers the proportion of women that are estimated not to access and utilise cervical cancer screening services, 86 per cent (0.86)

d = degree of precision set at 0.05 with z-value corresponding to 1.96

Table 3.1: Levels of confidence and associated z values

Level of confidence	**Z value**
90% certain	1.65
95% certain	1.96
99% certain	2.57

Substitution in the equation gives;

$$n = \frac{1.96^2 * 0.14 * 0.86}{0.05^2}$$

$$n = \frac{3.8416 * 0.14 * 0.86}{0.0025}$$

$$n = 186$$

3.6.2 Selection of additional qualitative data

The study collected additional qualitative data from selected samples using purposive sampling procedure. Totawar and Prasad (2016) define it as a process of selecting the target groups based on their knowledge about the topic/subject of study. The study used KIIs to select three medical doctors and three nurses. The KIIs are skilled, have more knowledge, and experience concerning health facility related factors. Adjustments were

made to select cases that were likely to provide critical information that could not be provided by interviewees from the study areas around the health facility related factors. The approach is also good for studies that focus on small samples to select informative cases. The study also used FGDs to collect additional qualitative data. The FGDs allowed discussion with groups of young and elderly women who discussed issues relating to socio-cultural factors.

3.7 Methods of Data Collection

The study used qualitative and quantitative methods to collect primary data. The quantitative data was collected using interview schedules while additional qualitative data was collected through KIIs and Focus Group Discussions.

3.7.1 Survey

In this survey, the interview schedules was key tool for collecting quantitative data. Saunders, *et al. (*2009) refers to survey method as a tool used to answer questions on who, how many, how much, where, and what. It is much used in descriptive and exploratory research. The advantage for using survey method is because of its applicability to collect data from a sizeable population in the most economical way. Furthermore, the data collected through survey can be administered through interviews or questions that have standardized questions that allow for easier comparisons, and analysis. Mugenda and Mugenda (2003) reiterate that survey strategy provides an opportunity to collect quantitative data that can then be analysed using quantitative methods such as descriptive and inferential statistics. This study found the opportunity to explain relationships between variables.

Interview schedule (see appendix 1) comprise of a semi-structured interview that contains both closed and open questions. The open questions allowed the interviewees with the option to state their opinions and views while closed questions contain multiple choices that allow interviewees to select the correct option. The tool covers the demographic information, knowledge and awareness, socio-demographic measures, as well as facility related factors. All interviews were conducted in Agikuyu language. The study used this approach to achieve easier communication with different categories of interviewees who do not understand or have competency in English Language.

3.7.2 Key Informant Interviews

The study also used key informants to collect informative information from health personnel associated with cervical cancer screening. The KIIs involves the use of in-depth interviews with a group of people that already have information about the subject under study (Kenyon, 2004). KIIs will help cover qualitative technique around themes of study. The process involved asking three nurses and three medical doctors questions that allow respondents to provide their own opinions/views around the study areas. Purposive sampling provided an opportunity to access all the informants at their places of work.

3.7.3 Focus Group Discussion

Two group discussions consisting of ten women for each group were organized to help inform the study on socio-cultural factors. Saunders, *et al.* (2009) defines FGDs as a group of interviews that looks clearly at a given issue, topic, or a product and requires interactive discussion with participants. The advantage for using FGDs is the ability to allow for interaction with individual group members. Women were selected to participate in the study because they have some attributes in relation to the study topic.

Participants were encouraged to freely discuss and share different viewpoints. The participants were drawn from Kiru ward in order to recruit the members to participate in the study and facilitate the group discussions.

3.8 Eligibility Criteria

The inclusion criteria for interviewees to participate in the survey were based on their age. The study picked on only women from 18 to 49 years and excluded any woman who was above or below the age limits. The study also considered women that gave their consent without any form of coercion.

3.9 Data Analysis Procedure

3.9.1 Quantitative analysis

The study applied statistical package for social sciences (SPSS vs. 25) as the best computer-assisted qualitative data analysis software (CAQDAS) to analyse frequencies and central measures of all variables across socio-demographic factors, knowledge and awareness, socio-cultural, as well as health facility related factors. The study used the recommendations provided by Saunders *et al* (2009) to analyse quantitative data. Saunders *et al* groups analysis into descriptive and inferential statistics. The study used descriptive statistics to show frequencies, percentages and mean. In addition, the study used cross-tabulation to show relationship between dependent and independent variables.

3.9.2 Qualitative analysis

The study used content analysis to analyse qualitative data from KIIs and FGDs. The process assisted in triangulation of quantitative and qualitative data (Ketokivi, Mantere and Cornelissen, 2017). The responses from the focus groups were transcribed and translated from Swahili and Kikuyu to English. The study processed data through a

five-stage process (reading, coding, displaying, reducing, and interpreting). The study also developed themes from the FGDs.

3.9 Ethical Considerations

This study considered several ethical concerns that emerge at different stages from access to respondents, collection of data, analysis as well as reporting of findings. The researcher considered Ethics as appropriate behaviour exhibited while relating with the rights of respondents that participated in the study process. Saunders, *et al* (2009) defines ethics as standards or norms that act as guidelines to moral choice concerning behaviour and relationship with others in a society.

The study obtained security clearance from the area chief who is a community gate keeper. The consent was obtained from all eligible respondents for the survey, key informants and focused group discussions. This was after having adequate explanation on the objective to participate in the study.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The section presents the overall study findings. The initial stage presents the social-demographic attributes of the primary sample. Subsequently, the chapter presents relationship between socio –demographic factors and access and utilization of cervical cancer screening. Other areas presented are knowledge and awareness factors, social-cultural factors as well as the health-facility related factors affecting access and utilization of cervical cancer screening services on women in rural Murang'a County to include qualitative information from respondents.

4.2 The Response Rate

The fact that this study employed the use of interview schedules, it was possible to achieve a high response rate of 100%. The study considered such a response rate as effective in terms of making conclusion regarding the study area. According to Mugenda and Mugenda (2003) recommendations, a study that achieves over 50 percent response rate would be adequate to make a conclusion about the area of study. Besides, they point out that a study that achieves more than 70 percent shows not only the strong willingness but also a strong representative sample about the study area.

4.3 Socio-Demographic Characteristics of Sampled population

This study presents the socio-demographic characteristics of the respondents in terms of their age, marital status, education level, religion, source of income, and their income per month. The study focused on understanding how these factors affect the women's ability to access and utilize cervical cancer screening services in Murang'a County. The results were presented in table 4.1.

4.3.1 Age Distribution of Respondents

Table 4.1: Age Category

Age in years	Frequency (n)	Percent (%)
18-22	23	12.4
23-27	25	13.4
28-32	32	17.2
33-37	35	18.8
38-42	35	18.8
43-49	36	19.4
Total	**186**	**100.0**

Table 4.1 reveals that most of the respondents at 36 (19.4%) were aged between 43-49 years. The second category comprised of two groups each consisting of 35 (18.8%) aged between 33-37 years and 38-42 years. This number was slightly higher than the 32 (17.2%) found between the age of 28-32 years. Only a few number of the sample of women were aged between 18–32 years. For instance, 25 (13.4%) were found to be aged between 23-27 years while 23 (12.4%) were aged between 18-22 years. The above findings provide a clear understanding about the distribution of women by age from the study area. The findings show that most women who participated in this study were in the age bracket 33-49 years (57.0%). The age of respondents was important because of their exposure to information and experience with the issues and cases of cervical cancer and they would be able to shed light on the topic.

4.3.2 Marital Status

The study also sought to understand the marital status of women from the study area. As shown in table 4.2, it is clear that most of the respondents consisting of more than half were married at 118 (63.4%). This number was found to be more than three times those who indicated that they were single at 35 (18.8%). Furthermore, those that were single were found to be double those who indicated they had separated from their husbands at 17 (9.1%) and those that were widowed at 15 (7.5%) with 1 case of divorce at 1 (0.5%). This findings shows that most of the women in Murang'a County are in marriages and therefore this predisposes them to cervical cancers especially due to the fact that their husbands could be having multiple sexual partners or several wives. This then puts the women in a more precarious situation and therefore having accessibility to cervical cancer screening services is very important.

Table 4.2: Marital Status

Marital Status	**Frequency (n)**	**Percent (%)**
Single	35	18.8
Married	118	63.4
Separated	17	9.1
Divorced	1	0.5
Widowed	15	7.5
Total	**186**	**100.0**

4.3.3 Level of Education

The study sought to establish the educational level of respondents. The study found it important to collect demographic information on the educational level of respondents

as this would show the level of knowledge and awareness on cervical cancer screening services. As depicted in table 4.3 below, most of the respondents had primary and secondary level of education at 127 (68.3%). Women who had secondary level of education were rated at 64 (34.4%) slightly higher than those that had primary level of education at 63 (33.9%). The third category of respondents indicated to have college level of education at 42 (22.6%) with those who had the highest level of education at university level being rated at 13 (7%). The least were those without any formal education at 4(2.2%). With limited level of education where most of the women only managed secondary and primary education, the level of knowledge and awareness on cervical cancer and the screening process might be a big challenge which most likely may hinder the level of access and utilization of CCSS as well, bearing in mind that education gives people exposure to information and interaction with many people of different backgrounds.

Table 4.3: Level of Education

Level of Education	**Frequency (n)**	**Percent (%)**
None	4	2.1
Primary	63	33.9
Secondary	64	34.4
College	42	22.6
University	13	7.0
Total	**186**	**100.0**

4.3.4 Source of Income

As shown in table 4.4 below, the most significant source of income for the women is farming at 60 (32.3%). This number is slightly higher than those who indicated to earn their income from casual work at 49 (26.3%) and those in full-time employment were rated at 39 (21%). Those that were not employed at all were rated at 22 (11.8%) while the self-employed were at only 15 (8.1%).The study sought to understand the source of income for women because of its impact in influencing how women access and use cervical cancer screening services. It is clear from the findings that most of the respondents from the study earn their income from either farming at 32.3 %, followed by casual labourers at 26.8 % bearing in mind that women living in the area of study participate in tea and dairy farming or are employed as casual labourers in tea farming. Those who are fully employed at 21% are mainly the ones with college training and university degrees working in the area institutions and Kiria-ini town. Source of income might also dictate a person's availability in terms of time to go for cervical cancer screening as family planning clinics are available during weekdays.

Table 4.4: Source of Income

Source of Income	Frequency (n)	Percent (%)
Employed Full Time	39	21.0
Farming	60	32.3
Unemployed	22	11.8
Self-employed	15	8.1
Casual laborers	50	26.8
Total	**186**	**100.0**

4.3.5 Income per Month

The table 4.5 below illustrates the percentage of women with their income per month. According to the categories of income per month, it is clear that most of the respondents had an income of between Ksh. 1,001-5,000 at 69 (37.1%). The second category had an income of 5000 – 10,000 at 41 (22%). Those whose income was less than Kshs. 1000 were rated at 31 (16.7%) and another category has an income of Kshs.10000 – 20000 at 29 (15.6%). The lowest number of respondents comprised on those whose income was more Ksh. 20,000 per month at 16 (8.6%). The income level is important as one might have to use some money to go for screening services. The earnings can be explained by the fact that women sell milk at a price of Kshs. 50 per litre while casual work is charged at Kshs. 200 per day.

Table 4.5: Income per Month

Income Per Month (Kshs.)	Frequency (n)	Percent (%)
<1000	31	16.7
1001-5000	69	37.1
5001-10000	41	22.0
10001-20000	29	15.6
>20000	16	8.6
Total	**186**	**100.0**

4.4 Level of Knowledge and Awareness

The objective of this study involved understanding the level of knowledge and awareness towards access and utilization of cervical cancer screening services.

Knowledge refers to education, understanding, and interpretation that people have towards cervical cancer services. While awareness involves the ability of a woman to know, become conscious of sensory patterns, emotions, thoughts, objects, and events regarding cervical cancer and screening services offered among different health facilities in the study area. This study measured the level of knowledge and awareness around having heard, where heard from, understanding about its nature, how people get it, screening, the number of times that women went for screening, and possible consequences of having cervical cancer.

4.4.1 Heard About Cervical Cancer

Table 4.6 below reveals 173(93%) of respondents had heard about cervical cancer with just a minimal number who did not have such knowledge at 13(7%). Discussions with interviewees from the two focused groups confirmed that indeed, they had heard about cervical cancer. The study findings are supported by various studies. For example, a study conducted in Embu Kenya showed 77% had heard about cervical cancer, (Kibicho, 2014), 66.7% of respondents had heard about cervical cancer screening in Naivasha, Kenya, (Mbatia 2016). Also, the 2014 Kenya demographic and health survey report showed a 76% of women aged between 15 and 49 had heard about cervical cancer, (KNBS, 2014).

Table 4.6: Heard About Cervical Cancer

Heard About Cervical Cancer	Frequency(n)	Percent (%)
Yes	173	93.0
No	13	7.0
Total	**186**	**100.0**

4.4.2 Sources of information

The study sought to find the sources of information from the respondents who indicated to have heard about cervical cancer. This was important as the results can be used for creating awareness in future. The results shows many of the respondents heard about cervical cancer form health personnel at 52 (30 %), this was followed by those who had heard from radio at 38 (22%), those who heard from the campaigns either in medical camps or church were at 26 (15%), friends at 28(16.2%) , family at 14(8.1%), those who heard from television were 10 (5.8%) while those who heard form newspaper and social media remain the lowest at 4 (2.3 %) and 1 (0.6%) respectively. It is evident that many people heard about cervical from health personnel, this could be attributed to many of the respondents who were married and had sought family planning services. Local radio stations played a great role in creating awareness especially in cancer awareness month and prompted people to go for screening from the nearest health facility. It is important to note that friends and medical camps acted as a significant source of information in the community level. Internet and social media had the lowest source of information bearing in mind the costs associated with internet costs.

Table 4.7: Sources of information

Sources of Information	Number of Respondents (n)	Frequency (%)
Family	14	8.1
Friends	28	16.2
Television	10	5.8
Newspaper	4	2.3
Internet/ social Media	1	0.6
Radio	38	22
Health Personnel	52	30.0
Medical Camps (faith based/ county organized)	26	15.0
Total	**173**	**100**

The above sources of information were supported by respondents in focused group discussions who when asked about how the community creates awareness, they had the following comments.

A young respondent in her mid- thirties from group one who had indicated to have screened had this to say,

> *"I heard from Kameme FM when they were talking about cancer awareness month and those people emphasized that we go ask from nearest facility. You know these days we can tune in to many channels that even speak Kikuyu, it is very good."*

Another older respondent in her early forties from the same group had commented as follows in her own words,

> *"Our women representative organized free medical camp and those people went around our village and they said we go to Rurii in Kiria-ini playground for various free tests. She normally organizes many medical*

camps in Kangema and Kahuro and at times in Anglican Church in Kiria-ini."

A respondent in her early forties from group one commented as follows,

"We have to tell people what the doctor says so as to help others. When I went for family planning screening, the doctor told me to be screened and I was very surprised because I had never learnt about it, that was like 5 or 4 years ago, since then, I told my friends about it and some have been screened. These days people have no excuse because these things are announced even in churches and even today there is one going on in Kahuro and there were loudspeakers telling people to go for free medical camps."

4.4.3 Knowledge on Cervical Cancer Transmission

The study also asked the respondents to indicate how people get cervical cancer. According to Table 4.9 below, it is surprising that despite hearing about cervical cancer, most of the women still do not have clear information on how people get cervical cancer. For example, 82 (44.1%) comprised of the respondents who indicated of not knowing how cervical cancer is transmitted. This was followed by those who gave out true information about how people get cervical cancer through sexual intercourse with different partners at 60 (32.3%). Furthermore, it is critical to know that those who did not know were twice the number of those who gave false information about people getting it from sharing clothes 3 (1.64%), eating specific foods 21 (11.3%), hereditary 15 (8.1%), and other approaches. Other approaches mentioned included curse, not taking a bath properly and wounds during child birth. Overall, those who did not know or had false information on cervical cancer transmission stands at 126(67.7%). The study findings are supported by a study that was conducted in Naivasha, Kenya which showed that 51.6 % of respondents did not know what caused cervical cancer, (Mbatia, 2016).

Table 4.8: Knowledge on How People Get Cervical Cancer

Knowledge on How People Get Cervical Cancer	Frequency (n)	Percent (%)
Sexual Intercourse	60	32.3
Hereditary	15	8.1
Sharing Clothes	3	1.6
Eating specific foods	21	11.3
Others	5	2.7
I don't know	82	44.1
Total	**186**	**100.0**

Furthermore, the findings from the FGDs also revealed similar perception about the knowledge and awareness on how cervical cancer is transmitted. For instance, a young interviewee in her mid-twenties from group one had this to say,

> *"In my opinion, I think it comes when one is wounded on birth canal during childbirth and when one does not shower properly. Then dirt can get in the birth canal and one gets cervical cancer."*

Another interviewee in her early forties in the same group reiterated,

> *"This is because women get tears during child birth hence, one has to use salt while showering."*

A third young interviewee in her early twenties from group two who had screened for cervical cancer in her own word said,

> *"I was screened for cervical cancer but I was not informed of how it is transmitted. We would like to know how it is transmitted."*

4.4.4 Cervical Cancer Consequences

The findings presented in the Table 4.9 below shows different opinions provided by primary respondents concerning the consequences of cervical cancer. More than half of the respondents pointed out that cervical cancer could cause death to a victim when not attended to accounting to112 (60.2%). This number was way above the respondents who did not have any knowledge concerning the likely impact of cervical cancer accounting to 24(12.9%). Furthermore, this number was more than those who indicated that when detected, cervical cancer causes stigmatization in a society at 16 (8.6%). Besides, only a small number of women that participated in the study agreed that cervical cancer is likely to cause poverty because of increase in spending on medication 10(5.4%), reproductive health complications 8(4.3%), and problems of getting children 14(7.5%). Only 2(1.1%) of respondents indicated that cervical cancer can lead to unfaithfulness. A study conducted in Vihiga County in Kenya showed that 50.2% of women were not aware of the consequences that comes along with cervical cancer, Ichaminya (2015)

Table 4.9: Consequences of Cervical Cancer

Consequences	**Frequency (n)**	**Percent (%)**
Death	112	60.2
Poverty	10	5.4
Reproductive Health Complications	8	4.3
Problem Getting Children	14	7.5
Unfaithfulness	2	1.1
Stigmatization	16	8.6
Don’t know	24	12.9
Total	**186**	**100.0**

The response from the FGDs showed how a majority of women understand in relation to cervical cancer consequences. For instance, a respondent who was in her early twenties from group one commented as below,

> *"It can be prevented and cured in early stages but causes death if in late stages."*
>
> *"It cannot be cured if at stage 4, one would just die like in other cancers"*

Another older interviewee in her late forties from group two had this to say,

> *"We would like to know the truth about the consequences, we rely on what we hear from other people, we hear that the womb is removed, and one cannot get children, tell us the signs and symptoms."*

4.5.1 Nearest Distance that has CCSS

As depicted in Table 4.10 below, 57 (30.6%) of the respondents live more than ten kilometres away from the nearest health facility that has CCSS. The second highest number of respondents comprised of 53 (28.5%) who indicated that the nearest facility is located between 1 km and 5 km away. Those who indicated that the facility is located between 5 km and 10 km were 47 (25.3%). Only a small percentage of 29 (15.6%) said that the facility was less than 1 km away. The distance of a facility is a major determinant on how respondents are likely to access and utilize CCSS.

Table 4.10: Nearest Health Facility that has CCSS

Distance(km)	Frequency (n)	Percent (%)
<1	29	15.6
1-5	53	28.5
5-10	47	25.3
> 10	57	30.6
Total	**186**	**100.0**

4.5.2 Cost to the Nearest Facility that Tests Cervical Cancer

Table 4.11 below shows that 53 (28.5%) of the respondents pay between Ksh. 51-100 as the cost of transport from their places of residence to the nearest facility that tests cervical cancer. This number is slightly higher than those who indicated to pay the lowest cost of Ksh. 10-50 at 50 (26.9%). The other respondents comprised of 40 (21.5%) who indicated that they pay between Ksh. 101 -150. The highest number was more than twice of those who pay between Ksh 151 – 200 at 26 (14.0%) in order to get to the nearest facility.

Table 4.11: Transport Cost

Transport Cost (Kshs)	Frequency (n)	Percent (%)
10-50	50	26.9
51-100	53	28.5
101-150	40	21.5
151-200	26	14.0
>201	17	9.1
Total	**186**	**100.0**

4.5.3 Affordability

When asked about affordability, 156 (83.9%) majority of primary respondents were positive that they were able to pay for the cost of transport to the nearest the facility. However, only 30 (16.1%) found the cost of going to the nearest facility not affordable. The disparity in affordability is because a majority of respondents had already indicated to earn between Ksh.1001 and 10,000 per month. It is good to note that the cost of transportation was not inclusive of the cost of treatment. These findings were presented in table 4.12.

Table 4.12: Affordability

Affordability Response	Frequency (n)	Percent (%)
Yes	156	83.9
No	30	16.1
Total	**186**	**100.0**

4.5.4 Time to get to the Facility that offers CCSS

Time taken by women play a key role in influencing how people access and utilize cervical screening services offered by health facilities. The study asked the respondents to indicate the average time they were likely to take to get to the facility that offers CCSS. Table 4.13 below shows that 130 (69.9%) of the sample indicated to take only less than 1 hour. Another 33 (17.7%) of the sample reiterated that they take between 1 and 3 hours to get to the facility. Only 21(11.3%) takes long hours between 3 and 5 hours.

Table 4.13: Time to Get To the Facility

Time (Hours)	Frequency (n)	Percent (%)
< 1	130	69.9
1-3	33	17.7
3-5	21	11.3
>5	2	1.1
Total	**186**	**100.0**

4.5.5 Descriptive statistics on Health Related Factors

The descriptive statics shown in Table 4.14 below sheds more light concerning the opinion of respondents about different factors that influence them into accessing and utilizing CCSS from different health facilities. On a scale of 1 to 5, a majority of them agreed that patients tend to take a long time waiting for health personnel ($M = 2.53$). However, they also failed to neither agree nor disagree on five items. For example, they were neutral on less number of personnel ($M = 3.03$), attitude of personnel ($M = 3.45$), fear of paying more at the hospital in case found to have cervical cancer ($M = 3.8$), not having insurance to cover for medical expenses ($M = 3.09$), and lack of equipment for cancer screening ($M = 3.30$). Besides, respondents also disagreed that some items did not influence them. For example, no availability of reliable transport ($M = 4.54$), and far facilities from where they live ($M = 4.2$).

Table 4.14: Descriptive Statistics on Health Facility Related Factors

Health Facility Related Factors	N	Mean
Patients take a long time waiting for health personnel	186	2.53
There is no availability of reliable means of transport at my place	186	4.54
There are less number of health personnel to attend to me	186	3.03
Personnel at the hospital always have negative attitude against me	186	3.45
The nearest health facility is very far from where I live	186	4.42
I am not able to raise the money needed to get to the health facility	186	4.54
I fear that most of the personnel conducting screening are male	186	4.29
I fear paying more at the hospital in case I am found with cervical cancer	186	3.80
I don't have the insurance cover that can take care of any bills that I might incur at the hospital	186	3.09
The health facility lacks cancer screening equipment	186	3.33
Valid n	**186**	

Key: 1- Strongly agree, 2- Agree, 3-Neither agree nor disagree, 4- Disagree, 5-Strongly disagree.

The findings from FGDs support the above results in different ways. For example, when asked about some obstacles that hinder women from CCS, a middle aged respondent in group two said,

> *"Some say it is expensive to screen and also distance … for me, I have no problem with screening. I have even gone for screening at Mukuruwe-ini and some had normal results and others abnormal results. So, I have no problem of being screened if the same people who screened us come back."*

Another older respondent in her late forties from group one commented as follows,

> *"I just ignore because it is not painful … I have gone once and didn't go back because the queue is very long. The last time I went the queue very long. The doctors are there but they serve us slowly."*

A young respondent from group two and in her early twenties had this to say,

> *"There is a time I went for screening but I was told that I could not be screened due to some liquid that the nurse did not have, I was asked to return some other day. Why should I waste my time and Money to go all that far and find that they could not screen me?"*

In group one it was interesting to hear from one of the respondents in her late thirties and who works closely with the area chief when it comes to health, she had this to say,

> *"As long as the health personnel is qualified to screen, I don't care whether the doctor is male or female, as women we give birth and at times men can be better because they will handle you with care."*

The findings from two of the key informants explains the health facility related factors. When asked about the reasons that causes low uptake of cervical cancer screening, female nurse aged 35 years and has served for eight years in family planning clinic commented as below,

> *"Poor attitude among staff, and at times we are overwhelmed by the clients for family planning."*

The other one female nurse aged thirty years and had served for six years had this to say,

> *"We need to have more staff in the family planning clinic to help us screen because at times the solution used to screen even expires. I think provider initiated counselling would help increase the numbers if done in the outpatient department."*

4.6 Socio-Demographic Factors and Access to Cervical Cancer Screening Services

The study sought to understand how the different socio-demographic characteristics account for the level of access and utilization of CCSS in Murang'a County. More importantly, the study analysed the influence of age, marital status, education, religion, and income on the access and utilization of cervical cancer screening services among the women in rural Murang'a County. The study used cross-tabulation to carry out this analysis. The results were presented as follows.

4.6.1 Level of Uptake of Cervical Cancer Screening

As shown in Table 4.15 below, it is apparent that there has been a low level of uptake of screening services by the women from the study area at 36 (19.4%). Those that have never gone for screening were rated at 150 (80.6%). The low uptake of screening tests has been reported in various studies in various countries with 0.6 % in South-East Nigeria, (Eze *et al*, 2012), 20% in Kampala, Uganda, (Atuhaire 2013), 15.4% in Naivasha, Kenya, (Mbatia 2016) and 14% uptake in Embu, Kenya, (Kibicho, 2014).

Table 4.15: Level of Uptake of Cervical Cancer Screening

Ever gone for cancer screening	Frequency(n)	Percent (%)
Yes	36	19.4
No	150	80.6
Total	**186**	**100.0**

There was low uptake of CCSS among the respondents from the study area. The above findings are supported by a majority of the KIIs who when asked about the level of uptake of cervical cancer screening in the facility, a female nurse aged forty nine years and had served for sixteen years in family planning clinic had this to say,

> *"The screening rate is very low, however, 50 percent of women informed of cervical cancer are willing to undergo screening."*

Another male key informant aged thirty six years and had served as a clinical officer for eight years commented as follows,

> *"It is at 1 percent – very low, a lot needs to be done to improve this, if Beyond Zero could be revived, this would change."*

4.6.2 Age versus Access to Cancer Screening

The study sought to understand the relationship between age of the respondents and the level of access and utilization of cervical cancer screening. Table 4.16 below shows differences across the age of respondents and the level of access and utilization of screening services offered in health facilities in the study area. It is evident that while the number of respondents that have not screened is almost the same across all the age groups, the screening level tends to increase with the age of respondents. The older women at the age of 43 – 49 years showed a higher propensity for cervical cancer screening services than younger women at 10 (5.4%). This could be attributed to more exposure to information as one advances with age and also women gatherings where matters affecting of women are discussed especially in churches. This trends was observed even among women in the age bracket if 38- 42 years, 33 – 37 years and 28 – 32 years at 7 (3.8%) in each case. The lowest level of cancer screening uptake was observed mostly among the younger women aged between 23- 27 years and 18 – 22 years at 2 (1.2 %) and 3 (1.6%) respectively.

The study finding are supported by a similar study that was conducted among women living in Kumasi metropolitan. The findings showed that older women respondents reported higher uptake of cervical cancer screening services unlike their younger counterparts, see also (Kokuro, 2017). Similar findings were observed where older persons showed higher frequencies of engaging in preventive health, (Utoo, Ngwan and Anzaku, 2013). However, the findings are in contrast with a study conducted in Naivasha, Kenya where by 79% of those who had screened were 35years and below, (Mbatia, 2016).

Table 4.16: Age versus Access to CCSS

Age of the respondents (in Years)	**Ever Screened**				**Total**	
	Yes		**No**			
	No.	**%**	**No.**	**%**	**No.**	**%**
18-22	3	1.6	20	10.8	23	12.4
23-27	2	1.2	23	12.4	25	13.4
28-32	7	3.8	25	13.4	32	17.2
33-37	7	3.8	28	15.1	35	18.8
38-42	7	3.8	28	15,1	35	18.8
43-49	10	5.4	26	14.0	36	19.4
Total	**36**	**19.4**	**150**	**80.6**	**186**	**100.0**

4.6.3 Marital Status versus Access and Utilization of Screening Services

The study examined the influence of marital status on women's' access and utilization of CCSS. The study found that most of the married women indicated they had gone for CCSS than all other groups at 22 (11.9%). A minimal number of single women and those who had separated from their husbands had gone for CCSS at 5 (2.7%) in each case with a few widowed women reported to have gone for CCSS at 4 (2.2%). These results were presented in table 4.17.

Table 4.17: Marital Status versus Access to CCSS

Marital status	**Ever Screened**				**Total**	
	Yes		**No**			
	No.	**%**	**No.**	**%**	**No.**	**%**
Single	5	2.7	30	16.2	35	18.9
Married	22	11.9	96	51.9	118	63.8
Separated	5	2.7	12	6.5	17	9.2
Divorced	-	-	1	0.5	1	0.5
Widowed	4	2.2	10	5.4	14	7.6
Total	**36**	**19.5**	**149**	**80.5**	**185**	**100.0**

Other studies have shown similar findings. For example, a study that was conducted in Kumasi, Ghana showed that the married women had the highest screening rate at 10.0 %, (Kokuro 2017) and at 75% in Embu, Kenya (Kibicho, 2014). A high number of married women that have screened are supported by the responses provided by the key informants and focused group discussions. Most of the women who seek for family planning services in a clinic set up are married. For example, when asked at what point

does the health personnel give advice on cervical cancer screening among those who come to receive treatment to any other illness, a female nurse aged 39 years and had served for thirteen years commented as follows,

> *"During family planning counselling is when we inform and screen for cervical cancer. We also inform them when giving health talks. However, this does not always happen because the clients are very many and we have to tell them to come another day for screening because the priority is family planning to avoid unwanted pregnancies."*

Another male clinical officer aged forty two years and had served in the outpatient department for seven years had this to say,

> *"This is done when they come for family planning services and during health talks given in the morning hours. Mostly, this is emphasized in the comprehensive care centre due to associated high risks."*

Findings from FGD reveals that men would actually support the women in screening. A young lady in her early twenties from group one commented as follows,

> *"Let me tell you, my husband always accompanies me to the family planning clinic and we are counselled together, he cannot tell me not to be screened, he even pays for my bus fare. We are always encouraged to go with our partners and this helps because we don't have to hide anything. "*

4.6.4 Level of Education versus Utilization of Screening Services

The level of education gained by the respondents was also tested to understand whether they influenced how women accessed and utilized CCSS. It is apparent that there was no any big difference across the level of education attained by the women and access to screening services except for those who had tertiary training having the highest level of access at 13 (7.0%). For example, there were similar number of respondents that accessed CCSS among women that had completed primary education and secondary education at 11 (5.9%) for each of them and only 1 (0.53%) for those with University education. The study findings are in agreement with various studies. For example, a

study that was conducted in Embu County in Kenya showed that there was no significant association between educational level and screening, (Murugi, 2014). Also, a study conducted in Makurdi, Nigeria showed that utilization of cervical cancer was not significantly influenced by education, (Ngwan and Anzaku, 2012). The low level of education and screening especially in the primary and secondary category could be attributed to low exposure to information bearing in mind that the two categories has the majority of respondents. It is also worth noting that despite a small number of those who had no formal education, none of them had screened. This can also be explained by the knowledge and awareness gap identified in this study whereby a 67.7 % of respondents did not know or had false information about cervical cancer transmission. These results were presented in table 4.18.

Table 4.18: Level of Education versus Cervical Cancer screening

Education	**Screened**				**Total**	
	Yes		**No**			
	No.	**%**	**No.**	**%**	**No.**	**%**
None	-	-	4	2.2	4	2.2
Primary	11	5.9	52	28.0	63	33.9
Secondary	11	5.9	53	28.4	64	34.4
College	13	7.0	29	15.6	42	22.6
University	1	0.53	12	6.5	13	7.0
Total	**36**	**19.3**	**150**	**80.7**	**186**	**100.0**

4.6.5 Level of Income versus Access and Utilization of Screening Services

As depicted in table 4.19 below, it is evident that the level of income did not have a very significant influence on the access and utilization of CCSS. This is shown by the fluctuations in percentages in the various levels of income. For example, it shows at 10 (5.2%) for those earning between kshs. 10,000 – 20,000, 9 (4.8%) for those whose income was between Kshs. 1000 – 5000 and 8 (4.3%) for those whose income was between Kshs. 5000 – 10,000. The screening rate was lowest in the highest income earners. This could be attributed to other factors such as tight work schedules during weekdays for respondents in formal employment who are likely to earn more than small scale farmers and casual labourers who have flexibility in time.

Table 4.19: Income versus Cervical Cancer Screening

Level of income (Kshs)	**Ever Screened**				**Total**	
	Yes		**No**			
	No.	**%**	**No.**	**%**	**No.**	**%**
<1000	7	3.8	24	13.0	31	16.7
1001-5000	9	4.8	57	31	66	35.5
5001-10000	8	4.3	34	18.3	42	22.6
10001-20000	10	5.2	20	10.8	30	16.1
>20000	2	1.1	15	8.1	17	9.1
Total	**36**	**19.4**	**150**	**80.6**	**186**	**100.0**

4.7 Socio-Cultural Factors

The social-cultural factors that influence how women access and utilize CCSS were measured using ten items on categorical scales. The five-point Likert scales covered 1 = strongly agree to 5 = strongly disagree. A majority of the primary respondents agreed that none of the family members had ever gone for cancer screening services($M = 2.66$). A majority of respondents were also neutral on three items. They could not agree or disagree when asked to go for screening when they felt sick with($M = 3.44$), when asked about the fear of abnormal results whenever they go to the hospital for resting($M = 3.7$), and whether their friends did it and told them that it was painful($M = 3.90$). However, respondents disagreed on six items. For example, there was a mean score, M = 4.14 when asked about whether they feared if found positive, my husband would leave me. Secondly, there was also a mean of M = 4.24 when asked about testing leading to other health problems. This response was presented in table 4.20.

Table 4.20: Descriptive Statistics on Social Cultural Factors

Social Cultural Factors	N	Mean
None of my family members has ever gone for cancer screening services	186	2.66
I can only go for screening when I feel sick	186	3.44
I am always in fear of abnormal results whenever I go to the hospital for testing	186	3.70
My friend did it and told me it is painful so I fear going to test	186	3.90
I fear that if found positive, my husband would leave me	186	4.15
I avoid going for the testing because it would lead to other reproductive health problems	186	4.24
I avoid going for screening tests to avoid being stigmatized by my family members and friends in case of a positive result	186	4.27
My husband cannot allow me to go for screening test	186	4.63
My community does not allow women to expose their nudity to other people apart from their partners	186	4.87
My religion does not allow us to go to the hospital for any form of treatment	**186**	4.95
N = 186		

Key: 1- Strongly agree, 2- Agree, 3-Neither agree nor disagree, 4- Disagree, 5-Strongly disagree.

The findings from the KIIs also provided an insight in understanding some socio-cultural factors that make a majority of women not go for cervical cancer screening. For example, a female key informant aged forty nine years and has served as a nurse for sixteen years said that,

> *"Lack of awareness, and the belief that the screening is painful which is caused by lack of proper information. They even ask you if it is painful, I don't know why they think it is painful"*

Another female nurse aged 35 years and had served for 8 years commented as below,

> *"Some clients fear positive results when we inform them that it is sexually transmitted, they decline to be screened."*

Apart from the results from KIIs, the study also conducted FGDs to collect qualitative information that could shed light into a number of socio-cultural factors likely to influence women from making decision to go for cervical cancer screening. Women were asked to explain some of the greatest obstacles that hindered them from going for cervical cancer screening. One of the respondents in mid-forties from group one said,

> *"One of the reasons is that the doctors putting their hands in the birth canal or the machine they put during examination and it makes me feel painful, it cannot be checked in any other way?"*

The second respondent from group one and in her late twenties reiterated,

> *"We fear the results if abnormal because it can cause stress and high blood pressure .Even if it was brought to where I live, I cannot go. I can only go when I feel sick, I can die the following day if positive''*

The other respondent who was married and in her early thirties from group two had this to say,

> *"Our husbands are not the problem, we as women are the problem.*
>
> *We would like to know how it is transmitted because we don't really know and then you people should come and screen us. We hear that it is painful but you should inform us if this is true"*

Another respondent in her early forties from group two had this to say,

> *"For me, it is just ignorance and at times I am caught up by work, now that you have come and reminded us of screening, I will find time to go."*

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This being the final chapter on the study on factors affecting access and utilization of cervical cancer screening services among women of reproductive age in Murang'a County, it covers the summary of findings, conclusion, recommendations and suggestion for further studies. The study specifically sought to investigate the socio-demographic factors, to explore the knowledge and of awareness levels, to investigate the socio-cultural factors and to explore the health facility related factors that affect access and utilization of cancer screening services among women in Murang'a County. The findings were summarised and concluded as follows.

5.2 Summary

5.2.1 The Socio-demographic Factors Affecting Access to CCSS

The findings from the study covered different socio-demographic factors including age, marital status, level of education, and earnings per month. The study found that older women had a higher likelihood of taking steps to attend CCSS than their younger counterparts. The married women were more likely to go for screening than other groups. Besides, a high number of married women had not gone for screening. The analysis conducted on the level of education revealed that there was no significant differences associated with how women make decision to access and utilize CCSS. Women across educational level reported almost similar level for having gone for screening sessions. Therefore, education was found not to predict health seeking behaviour of CCSS among women in Kiru.

The study also analysed the level of income per month among the women from the study area. Further, the findings showed that socio-economic status of women from the study area had an influence on how women accessed and utilized CCSS. Women in the lower earnings cohort were not likely to go for screening services. This was different from those with higher income who were more likely to attend health facilities for screening even though the highest income group had the lowest screening rate which could be influenced by other factors such as tight work schedules in formal employment. 156 (83.3%) of women found it affordable to access health facilities for cervical cancer screening but the low income earners might find it unaffordable to attend health facilities located kilometres away from their homes despite the free service.

5.2.2 The Level of Knowledge and Awareness on CCSS

The findings showed that 173 (93.0) of the primary sample had already heard about cervical cancer. Many of the respondents had heard about it from health personnel followed by local radio stations. Also, other significant sources of information in Kiru are friends and medical campaigns unlike internet and newspapers which did not serve as significant sources of information. However, there is a knowledge and awareness gap especially in transmission and prevention of cervical cancer. For example, a high number of respondents at 126 (67.7%) failed to have proper information on how it is transmitted. It is a major concern to learn that some of those who had screened did not know how it is transmitted. Furthermore, the findings from FGDs showed that it is caused at the time of giving birth and development of wounds in the birth canal and when a woman fails to bath.

The findings on possible consequences showed that a majority of the respondents at 112 (60.2%) understood that cervical cancer causes death. This was followed by those who did not have information about associated consequences. Besides, only a few mentioned poverty, problem of getting children, and stigmatization.

However it is apparent that there has been a low level of uptake of screening services at 36 (19.4%) by the women from the study area.

5.2.3 The Socio-Cultural Factors Affecting Access to CCSS

The social-cultural factors that influence how women access and utilize CCSS showed that most of the respondents agreed that none of the family members had ever gone for cervical cancer screening services. Responses from FGD showed that men would allow their partner to go for screening. It was also noted that women were neutral when asked if a friend informed them that it was painful to screen and this was also supported by responses given in the FGDs. Key informants ascertained that some clients have fear of pain during screening while others fear a positive result.

5.2.4 The Health facility Related Factors Affecting Access to CCSS

Many women live more than ten kilometres away from the nearest health facility. Only a small percentage said that the facility was less than 1 km away. Time taken by women play a key role in influencing how they access and utilize cervical screening services offered by health facilities. The study found that most of the women took less than 1 hour.

Majority of women at 103 (55.4%) pay between Ksh. 10-100 as the cost of transport from their places of residence to the nearest facility that tests for cervical cancer. It was found that there was a reliable means of transport. When asked about affordability, a majority of women at 156(83.9) were positive that they were able to pay for the cost of

transport to the nearest the facility. However, a few found the cost of going to the nearest facility not affordable. The cost of transportation was not inclusive of the cost of treatment.

A major facility related factor that was found to hinder cervical cancer screening is the patients waiting time to be attended by a health personnel in a public health facility. This was supported by both the key informants who are health personnel and also focused group discussions. Respondents failed to neither agree nor disagree on five items. For example, they were neutral on less number of personnel, attitude of personnel, fear of paying more at the hospital in case found to have cervical cancer, not having insurance to cover for medical expenses and lack of equipment for cancer screening. Respondents also disagreed that some items did not influence them, for example, no availability of reliable transport and far facilities from where they live.

5.3 Conclusion

The study therefore, concludes that age and marital status influences cervical cancer screening whereby older women and married women accessed and utilized the services. Uptake of CCSS was low despite the high numbers of those who had heard about cervical cancer. There is poor quality of knowledge on cervical cancer transmission and prevention despite a high literacy level among women aged between 18 -49 years. The main sources of information in Kiru are health personnel, radio, friends and medical camps. Obstacles like failure to understand whether it is free in the government health facilities, patient waiting time due to work load and lack of provider initiated counselling are some of the factors that hinders women from accessing and utilizing CCSS from the public hospitals. Majority of respondents had none of their family members screened, also fear of pain and fear of positive results acted as barriers to

screening. CCSS were available and easily accessible in hospitals but the staff at the family planning clinics were overwhelmed. However, low income earners lining far from health facilities found it difficult to access CCSS. Therefore, health-facility related factors such as attitude of personnel and means of transport could not be considered among the women who participated in this study.

5.4 Recommendations

The findings provided in this study make it possible to make the following recommendations:

1. The rate of cervical cancer screening remains low. This was attributed to poor quality of information that led to information gaps. There is a need to have programs that will focus on creating awareness in prevention, transmission and associated risks through all agents of communication targeting women in groups and in local language which is well understood.
2. Cervical cancer testing was higher among married women than unmarried women. Men helped women access cervical cancer screening services by facilitating transport costs and others accompanied women to family planning clinics. Educational programs targeting men would help increase the uptake of cervical cancer as men acts as a source of support to women.
3. Patient waiting time was a hindrance to screening. This was attributed to huge workloads in family planning clinics and few staff. Since health is a devolved function, Murang'a County should increase staff in family planning clinics and more rooms specifically for cervical cancer screening services to avoid missed opportunities.

4. Low income earners living far from the health facilities found it difficult to access cervical cancer screening services. This is due to high transport costs. Agencies and MOH in Murang'a County should establish more clinics and plan for outreach services to reach those who cannot access the services. The beyond Zero campaign should be revived as it acted as a source of information
5. The study found that cervical cancer services are not always offered to clients who have visited the hospital for other illnesses. This is due to lack of provider initiated counselling caused by workload. The study recommends that continuous medical education on health promotion for health personnel need to be done regularly and provider initiated counselling offered during every clinical contact with the patients who seek other normal illness treatment and family planning. This approach will integrate care seeking behavioural advice with curative health by health personnel and this would raise the uptake of screening services.

5.5 Suggestions for Future Studies

Based on the findings, the study makes recommendations for further studies in the following areas;

1. This study focused on factors inhibiting access and use of cervical cancer screening services in Murang'a County. Owing to the fact that Kenya has an enormous diversity, the underlying factors in Murang'a County might differ significantly with other regions. Consequently I would recommend the replication of this study in other areas to take account of their diversity.
2. This study was mainly on quantitative methods, there is a need to conduct more qualitative studies because they have strong explanatory power.

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APPENDICES

Appendix I: Interview schedule

University of Nairobi

Department of Sociology and Social Work

Introduction

Good morning/afternoon/evening. My name is Rose Wanjiru Kagika and I am from the University of Nairobi and currently undertaking a Master's Degree in Rural Sociology and Community Development. I am conducting a research for my project to determine the factors that affect how women aged 18 - 49 years access and utilize cervical cancer screening services offered in public hospitals in Murang'a County. The information you provide will be treated as confidential and your name will not be required. You are free to answer all or part of the questions, and should you feel like stopping the interview at any stage, you are free to do so. I am therefore requesting your consent before the interview.

SECTION 1: SOCIAL-DEMOGRAPHIC INFORMATION

1. What is your age?

1.	18-22	☐
2.	23-27	☐
3.	28-32	☐
4.	33-37	☐
5.	38-42	☐
6.	43-48	☐

2. What is your marital status?

    1. Single married ☐
    2. Married ☐
    3. separated ☐
    4. divorced ☐
    5. widowed ☐

3. What is your level of education

    1. None ☐
    2. Primary ☐
    3. Secondary ☐
    4. College ☐
    5. University ☐

4. What is your religion?

    1. Christian ☐
    2. Islam ☐
    3. Hinduism ☐
    4. Buddhism ☐
    5. Any other please specify ……

5. What is your main source of income?

    1. Employed full time ☐
    2. Employed part time ☐
    3. Farming ☐
    4. Casual labourer ☐
    5. Unemployed ☐
    6. Self-employed ☐

7. Rental income ☐

8. Any other please specify ……

6. How much do you earn per month?

1. Less than Ksh 1000 ☐

2. Ksh 1001-5000 ☐

3. Ksh 5001 -10,000 ☐

4. Ksh 10,001 – 20,000 ☐

5. More than ksh 20,000 ☐

SECTION 2: KNOWLEDGE AND AWARENESS FACTORS

7. Have you ever heard about cervical cancer screening? (**ask all**)

1. Yes ☐ 2. No ☐

If **Yes,**

8. From who?

1. Family member (s) ☐

2. Friends ☐

3. Television ☐

4. Radio ☐

5. Newspaper ☐

6. Internet/social media ☐

7. Health personnel ☐

8. Any other please specify ……

9. What did you understand it to be?

1. Deadly disease ☐
2. Normal disease ☐
3. Sexually transmitted disease ☐
4. A curse ☐
5. Other, specify

……

10. How do you think people get cervical cancer?

1. Sexual intercourse ☐
2. Greetings ☐
3. Hereditary ☐
4. sharing clothes ☐
5. Eating specific foods ☐
6. I don't know ☐
7. Any other please specify ……

11. Have you ever been screened for cervical cancer?

1. Yes ☐ 2. No ☐ 3. Can't tell ☐ 4. I do not know ☐

If not yes, jump to number 15

12. If yes, how many times?

1. Every 3 months ☐
2. Every 6 months ☐
3. Every 1 year ☐
4. Every 3 years ☐
5. Any other please specify……

13. Where were you screened the last time?

1. Private hospital ☐
2. Public hospital ☐
3. Dispensary ☐
4. Faith based facility ☐
5. NGOs ☐

14. When was the last time you were screened time?

1. last 3 months ☐
2. last 6 months ☐
3. last 1 year ☐
4. last 3 years ☐
5. Any other please specify……

15. Do you know if screening is free in Public health facilities?

1. Yes 2. No

16. a. In your opinion, which is the best place to be tested for cervical cancer?

1. Private hospital ☐
2. Public hospital ☐
3. Dispensary ☐
4. Faith based facility ☐
5. NGOs ☐

b. Why?

17. Which health personnel do you think should be conducting cervical cancer screening?

1. Male ☐ 2. Female☐ 3. Both male and female☐

18. What do you think are the consequences of having cervical cancer?

……

19. How can one prevent herself from getting cervical cancer?

1. Frequent screening ☐
2. By being vaccinated against cervical cancer ☐
3. Limiting on the number of sexual partners ☐
4. Avoid eating some foods ☐
5. Avoid the use of primary smoking ☐
6. Use of condom during sexual intercourse ☐
7. Making a follow up on examination results ☐

SECTION 3: SOCIAL CULTURAL FACTORS

Generally, there are social cultural factors that affect how women access and utilize cervical cancer screening services. I would like you to rate the following statements in your opinion.

20. Rate the following statements on a scale of 1 to 5 where 1 = strongly agree, 2= agree, 3=neither agree nor disagree, 4= disagree 5 = strongly disagree.

No.	Statement	1	2	3	4	5
1	None of my family members has ever gone for cancer screening services					
2	My husband cannot allow me to go for screening test					
3	I fear that if found positive, my husband would leave me					

4	My friend did it and told me it is painful so I fear going to test					
5	My religion does not allow us to go to the hospital for any form of treatment					
6	My community does not allow women to expose their nudity to other people apart from their partners					
7	I avoid going for screening tests to avoid being stigmatized by my family members and friends in case of a positive result					
8	I avoid going for the testing because it would lead to other reproductive health problems					
9	I am always in fear of abnormal results whenever I go to the hospital for testing of cervical cancer					
10	I can only go for testing when I feel sick					

SECTION 4: HEALTH FACILITY RELATED FACTORS

I would like to know about factors that relate to health facilities that affect how you access and utilize cervical cancer screening services

21. How far is the nearest health facility, which can test for cervical cancer?

1. Less than 1 km ☐
2. 1-5 km ☐
3. 5-10 km ☐
4. Over 10 km ☐

22. Which means of transport would you use to access the facility that can test for cervical cancer?

1. Walking ☐
2. Personal car ☐
3. Matatu ☐
4. Motorcycle (Nduthi) ☐
5. Any other, please specify……

23. How much do you pay to get to the nearest facility that test for cervical cancer?

1. Ksh 10 -50 ☐
2. 51 - 10 ☐
3. 101 - 150 ☐
4. 151-200 ☐
5. 201 and above ☐

24. Do you find this easily affordable to you?

1. Yes☐ 2. No☐

25. How much time do you use to get to the facility that can test for cervical cancer?

1. Less than 1 hr ☐
2. 1-3 hrs ☐
3. 3-5 hr ☐
4. More than 5hrs ☐

26. I would like to know the reasons that would make you not go to the facility

Please rate the following statements on a scale of 1 to 5 where 1 = strongly agree, 2= Agree, 3=neither agree nor disagree, 4=disagree, 5 = strongly disagree.

No.	**Statement**	**1**	**2**	**3**	**4**	**5**
1	Patients take a long time waiting for health personnel					
2	There is no availability of reliable means of transport at my place					
3	There are less number of health personnel to attend to me					
4	Personnel at the hospital always have negative attitude against me					
5	The nearest health facility is very far from where I live					
6	I am not able to raise the money needed to get to the health facility					
7	I fear that most of the personnel conducting screening are male					
8	I fear paying more at the hospital in case I am found with cervical cancer					
9	I don’t have insurance cover to take care of any bills that I might incur at the hospital					
10	The health facility lacks cancer screening equipment					

Appendix II: Focus Group Guide

University of Nairobi

Department of Sociology and Social Work

Introduction

Good morning/afternoon/evening, my name is Rose Wanjiru Kagika. I am from the University of Nairobi and currently undertaking a Master's Degree in Rural Sociology and Community Development. I am conducting a research for my project to determine the factors that affect how women aged 18-49 years access and utilize cervical cancer screening services offered among the public hospitals. I would like to invite you to participate in a group of 10 women aged between 18 – 49 years. Your participation in a group discussion will involve contributing to all questions on areas of socio-cultural and health facility related factors. I will be voice recording the discussion to enable me capture all the responses given in the group. Please note that your responses will not have any effect on your relationship with other group members. Besides, I intend to treat all the responses confidential and your name is not required.

Date of Focus Group Discussion

…….

Moderator's Name……

Start Time……

End Time……..

1. Have you ever heard about cervical cancer?
2. From who did you hear about cervical cancer?
3. What have you heard about cervical cancer ways of transmission?
4. What have you heard about cervical cancer ways of prevention?
5. What are your feeling concerning being screened by a male health personnel?
6. How does the community react when they learn that a member of the community has cervical cancer
7. Do your male partners affect how you make decisions towards seeking reproductive health advice?
8. How do you think your male partners would react if they learnt that you have cervical cancer?
9. Does the community create any awareness to go for screening?
10. Do you think people should be screened when they are not sick?
11. Do your places of worship you attend have conditions for members to go for treatment?
12. Do you follow such conditions or who determines how you go for screening?
13. What do you think are some of the greatest obstacles towards cervical cancer screening?

Appendix III: Key Informant Guide

University of Nairobi

Department of Sociology and Social Work

Letter of Introduction

Good morning/afternoon/evening, my name is Rose Wanjiru Kagika. I am from the University of Nairobi and currently undertaking a Master's Degree in Rural Sociology and Community Development. I am conducting a research for my project to determine the factors that affect how women access and utilize cervical cancer screening services offered among the public hospitals in Murang'a County. I would like to talk to you concerning factors affecting access and use of cervical cancer screening services among women aged between 18 to 49 years. More specifically, I would like to understand some information concerning health facility related factors.

Any type of response you provide will be treated with the highest level of confidentiality. Your name and the facility name will not be indicated. The analysis will only be used solely for the purpose of my Masters project. Besides, I appreciate you for taking your time to participate in this study. You are free not to answer what you are not comfortable with.

General Information

1. What position do you currently hold?

……

2. How long have you served in this position?

……

……..

Specific questions

3**.** What do you know about cervical cancer screening in this area?

……

……

4. Does the hospital currently have equipment to offer cervical cancer screening services?

……

……

5. Do you have trained personnel that offer cervical cancer screening services?

1. Yes ☐ 2.No ☐

6. Are the majority of the health personnel who normally performs the screening test male or females

.....

.....

7. At what point does the personnel give advice on cervical cancer screening to women that come to receive treatment of other illnesses?

.....

.....

8. What do you think is the attitude of health personnel towards women who requests for cervical cancer screening?

.....

.....

9. Do you think you have the capacity to handle both patients who have come due to other illnesses and at the same time manage to do cervical cancer screening services? Please explain your answer.

……

……

10. What do you think is the level of uptake of cervical cancer screening in this facility?

……

……

11. What do you think could be the factors that contribute to such a level of access and utilization of screening among women aged 18-48 years?

……

……

12. Do you think the hospital is doing enough to create awareness among women in screening services? Please explain your answer?

……

13. What are some of the means that the hospital currently uses to create such awareness?

……

……

Thank you for your time and for participating in this study

Appendix IV: Research Authorization Letter

UNIVERSITY OF NAIROBI

DEPARTMENT OF SOCIOLOGY & SOCIAL WORK

Fax 254-2-245566
Telex 22095
Varsity Nairobi Kenya
Tel. 318262/5 Ext. 28167

P.O. Box 30197, Nairobi
Kenya
Email: dept-sociology@uonbi.ac.ke

September 7, 2018

TO WHOM IT MAY CONCERN

RE: ROSE WANJIKU KAGIKA - C50/86241/2016

Through this letter, I wish to confirm that the above named is a bonafide postgraduate student at the Department of Sociology & Social Work, University of Nairobi. She has presented her project proposal entitled; "**A study of factors affecting access and use of cervical cancer screening among women aged between 18 to 49 years: A Case of rural Murang'a County.**"

Rose is required to collect data pertaining to the research problem from the selected organization to enable her complete her thesis which is a requirement of the Masters degree.

Kindly give her any assistance she may need.

Thank you.

DEPARTMENT OF SOCIOLOGY
P. O. Box 30197
NAIROBI
UNIVERSITY OF NAIROBI

Prof. C.B.K. Nzioka
Chairman, Department of Sociology & Social Work

Permission granted

SIGN:.....
SAMUEL M. MWANGI
SENIOR CHIEF
KIRU LOCATION
19/09/2018