

**FACTORS INFLUENCING THE UPTAKE OF CERVICAL CANCER SCREENING
SERVICES AMONG WOMEN
AGED BETWEEN 25 AND 49 YEARS IN THIKA SUB-COUNTY.**

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DECLARATION

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

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DEDICATION

I dedicate this work to my family, especially my parents, whose unwavering support and encouragement inspired me to pursue postgraduate studies even after I had given up on the dream. I also extend my heartfelt thanks to my husband, Joseph Wesonga, and my children, George Ouma and Zoey Chibole, for their patience, love, and constant prayers that sustained me during this journey.

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ABSTRACT

Cervical Cancer (CC) is ranked as fourth most prevalent cancer affecting women globally. Its incidence in sub-Saharan Africa averages 31.7 per 100,000 women, with Eastern Africa reaching 42.7, and some countries exceeding 50 per 100,000. These trends show rising rates over the past two decades. In Kenya, the annual incidence of cervical cancer is 19.7 per 100,000. It is the second most common cancer among Kenyan women after breast cancer. Cervical cancer screening (CCS) is essential because, when detected early, cervical cancer is highly preventable. Screening enables timely identification of precancerous lesions, which can be effectively treated to prevent progression. In low-income countries, screening is a more accessible and cost-effective preventive strategy compared to HPV vaccination, making it a practical option for reducing cervical cancer burden. Kenya issued its first cervical cancer screening guidelines in 2012–2013, yet only 14% of eligible women have been screened. This is way below the world health organization's (WHO) 70% target for Cervical cancer elimination by 2030. Objectives of this study included assessing the influence of knowledge, socio-demographic factors and health system factors on the uptake of cervical cancer screening services (CCSS). A cross-sectional study was conducted among 285 women in Thika Sub-County, selected through stratified random sampling across five wards. Simple random sampling was applied within each stratum. Data was collected using structured questionnaires, analyzed using SPSS 25, with descriptive statistics and chi-square tests explored associations. Most respondents were aged 25–30 years (45.1%), predominantly Christian (78.5%), married (55.1%) and had either a bachelor's degree (40.6%) or vocational training (34.3%). Daily income was mostly below Kes 2,000, with 38.6% earning under KES 1,000. Education level ($\chi^2 = 21.659, p < 0.01$), religion ($\chi^2 = 23.841, p < 0.01$), and employment ($\chi^2 = 7.099, p = 0.029$) were significantly associated with cervical cancer screening uptake. This study found out that only 11% were screened in the past year and 25% had been screened in the past three years demonstrating poor adherence to the national guidelines. Key barriers included fear and anxiety (72.6%), lack of awareness (56%), high hospital charges (11.5%), distance to facilities (10.2%), long waiting times (6.4%), and unfriendly health workers (5.3%). Over 80% of respondents agreed that cervical cancer is deadly, and 82.9% indicated that fear of the disease would motivate them to participate in awareness campaigns. Perceived risk, especially belief in the dangers of multiple sexual partners ($r = 0.337, \chi^2 = 35.117, p < 0.01$) and the fatal nature of CC ($r = 0.218, \chi^2 = 19.601, p < 0.01$) was significantly linked to cervical cancer screening uptake. Less than one-fifth (18.2%) of respondents had received cervical cancer sensitization from the Ministry of Health, and 59.4% had never received verbal information from healthcare providers. While 61.4% indicated that access to screening facilities would encourage them to get screened, over half (53.3%) reported a lack of adequate screening services in their area. Availability of screening programs ($\chi^2 = 49.172, p < 0.01$) and provider-led sensitization ($\chi^2 = 52.143, p < 0.01$) were strongly associated with cervical cancer screening uptake. Cervical Cancer Screening uptake remains low in Thika Sub-County, driven by fear, low awareness, and limited health system support. Strengthening health education, expanding access, and scaling up community-based screening programs are critical to improving screening rates and reducing Cervical Cancer burden.

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ABBREVIATIONS AND ACCRONYMS

CCSS :Cervical Cancer Screening Services

CCS : Cervical Cancer Screening

CC : Cervical Cancer

CDC :Center for Disease and Control

HPV : Human papillomavirus

HBM : Health Belief Model

VIA : Visual Inspection with Acetic Acid

WHO : World Health Organization

CHAPTER 1: INTRODUCTION

1.1 Background of the study

Cervical cancer (CC) is one of the most preventable cancers, largely due to the availability of effective screening and early treatment interventions. Cervical cancer screening (CCS) encompasses several methods, including the Papanicolaou (Pap) smear, human papillomavirus (HPV) DNA testing, and visual inspection with acetic acid (VIA). These tools are used to detect precancerous lesions or early-stage cancer in asymptomatic women, allowing for timely intervention (World Health Organization, [WHO], 2020). In countries where there is an organized screening program, Pap smear tests have played the role of reducing cervical cancer mortality up to 80% (National Cancer Institute, 2025), while HPV-based screening has proven to be more sensitive and allows for longer screening intervals (Canfell et al., 2020). VIA, which is more feasible in low-resource contexts like Kenya, supports single-visit “screen-and-treat” approaches. It has also proven to be cost-effective and scalable, especially when integrated with reproductive health or HIV services).

Despite these benefits, CCS uptake remains low in many low- and middle-income countries (LMICs). According to Hull et al. (2020), sub-Saharan Africa continues to record some of the lowest screening rates globally. Kenya, for example, launched its first national CCS guidelines in 2012–2013, yet, only about 14% of women aged 25–49 have ever been screened, well below the WHO target of 70% coverage by 2030 (Descamps et al., 2024). The low uptake of screening services is particularly concerning because cervical cancer (CC) is among the most preventable cancers. Hossain et al. (2022) emphasized that CC is both highly controllable and preventable, yet it remains the fourth most prevalent cancer globally. It is also the second most common cancer among women, with 604,000 new cases and 342,000 deaths reported in 2020 (Sudha et al., 2024).

Approximately 90% of new cases are diagnosed in LMICs, where access to screening and preventive services remains inadequate.

In sub-Saharan Africa, incidence rates have been rising over the past two decades. Bruni et al. (2023) reported an age-standardized incidence rate of approximately 31.7 per 100,000 women, with Eastern Africa at 42.7 and some countries exceeding 50 per 100,000. Jedy-Agba et al. (2020) further noted that CC is the second most prevalent cancer among women in this region. Yang et al. (2023) argued that the disparities in CCS and HPV immunization practices across regions are the main contributors to the shifting epidemiological patterns of CC globally.

Kenya's burden reflects these trends. According to Liu et al. (2022), the country has an annual CC incidence rate of 19.7 per 100,000 women. Canfell et al. (2020) also confirmed CC as the second most common cancer in Kenyan women with approximately 16.2 million women aged 15 years and above at risk of HPV infection (HPV Information Centre, 2021). Kiambu County ranks among the top three counties in Kenya with the highest overall cancer burden, following Nairobi and Nakuru . Hospital-based records confirm a significant cervical cancer burden in the area. At Thika Level Five Hospital, cervical cancer accounted for 24% of all cancer cases between 2013 and 2018 (Gichana et al., 2020), and another study at Kiambu and Gatundu Level Five Hospitals found that cervical cancer made up 33.4% of all female cancers (Gichana et al.,2020). Additionally, spatial modeling of cervical cancer prevalence in Kenya identifies Kiambu as one of the top ten counties with the highest cervical cancer burden (Chege & Otieno, 2023). These findings highlight the pressing need for localized research into factors affecting screening uptake and the fact that expanding CCS coverage is both a public health necessity and an equity issue. Rahangdale et al. (2022) posits that HPV vaccination is the most effective strategy as it reduces the risk for CC by over 70%. However, vaccination only benefits women who have not reached their sexual debut. It

is also expensive and its utilization is not realistic in low resource settings like Kenya. This leaves CCS, a secondary intervention, and with an average cost of approximately KES 400–1,300 (Bouquet et al.,2025) _ as the most compatible preventive approach in such settings. Precancerous lesions are timely identified through cervical cancer screening and subjected to curative management in order to dwindle the lesions. This study sought to explore the factors influencing cervical cancer screening uptake among women in Kenya, with a particular focus on knowledge, socio-demographic, and health system-related barriers

1.2 Statement of the problem

Cervical Cancer significantly results in high morbidity and mortality among women all over the world, disproportionately affecting women in low- and middle-income nations, such as Kenya. Cervical cancer screening services are absolutely necessary for the early detection of CC and its control. Screening can detect precancerous lesions in the cervix, allowing for prompt intervention and treatment. Screening can also detect lesions that have already developed into cancer (WHO, 2020). CC has the potential to progress to a more advanced state if it is not diagnosed and treated early. This can result in major health repercussions and even death. If CC is diagnosed at an earlier stage, treatment outcomes can be considerably improved, and regular screening can significantly lower the risk of developing the disease.

The World Health Organization (WHO) recommends that at least 70% of women aged 35–45 years should be screened for cervical cancer at least once in their lifetime as part of global efforts to eliminate the disease as a public health problem (WHO, 2020). However, Kenya falls significantly short of this target, with national screening coverage estimates indicating 14% of eligible women aged 25–49 years having been screened (Ministry of Health Kenya, [MOH] 2020). Kiambu being among the top 10 counties with high incidence of cervical cancer, equally reflects the low

screening coverage with only about 20% of women aged 25 to 49 years having ever accessed cervical cancer screening services (Gitonga et al., 2022)

In Kenya, the most commonly available screening methods in public health facilities are Visual Inspection with Acetic Acid (VIA) and the Papanicolaou (Pap) smear, both of which are considered relatively low-cost, VIA at an approximate cost between USD 3.30–11.17 (KES 400–1,300) per screen, and Pap smears costs approximately USD 10.50–24.59 (KES 1,400–3,200) (Bouquet, 2025). Despite this affordability and the benefit of CCS, cervical cancer screening uptake remains unacceptably low.

This study sought to identify the factors influencing the uptake of (Cervical Cancer Screening Services) CCSS in women aged between 25 and 49 years old in Thika Sub- County in Kiambu County.

1.3 Purpose of the study

This study aimed to identify factors associated with the Acceptability of CCSS among women of Between 25 and 49 Years in Thika Sub- County.

1.4 Objectives

1.4.1 Broad Objective

To identify the factors influencing cervical cancer screening uptake among women aged 25 to 49 years in Thika Sub-County.

1.4.2 Specific Objectives

- i. To assess the influence of knowledge on cervical cancer on the uptake of Cervical Cancer Screening Services (CCSS) among women aged 25 to 49 years in Thika Sub County.

- ii. To evaluate the impact of socio-demographic factors on the uptake of CCSS among women aged 25 to 49 years in Thika Sub County.
- iii. To determine the influence of health system factors on the uptake of CCSS among women aged 25 to 49 years in Thika Sub County

1.5 Research Questions

- i. How does knowledge influence uptake of CCSS among women aged 25 to 49 years in Thika Sub County?
- ii. How do socio-demographic factors impact the uptake of CCSS among women aged 25 to 49 years in Thika Sub County?
- iii. What is impact of the health system factors on the uptake of CCSS among women aged 25 to 49 years in Thika Sub County?

1.6 Justification of the Study

Cervical cancer is a significant health issue worldwide and is especially prevalent in developing nations such as Kenya. While existing studies have examined specific factors such as awareness and knowledge, socioeconomic status, and cultural beliefs, there remains limited research on the complex interplay of these factors and their collective impact on the utilization of cervical cancer screening services (CCSS) in this population.

This study provides a comprehensive understanding of the factors influencing CCSS uptake, including awareness and knowledge, cultural beliefs, socioeconomic status, access to screening services, fear and anxiety, and the role of healthcare providers. Unlike previous studies that often focus on isolated factors, this research takes a holistic approach by integrating multiple dimensions

affecting screening behavior. Furthermore, it applies statistical correlation and chi-square analysis to establish significant associations between these factors and screening uptake, contributing to evidence-based policy recommendations.

By addressing gaps in the literature, this study adds value by identifying context-specific barriers and facilitators to CCSS utilization in Thika Sub-County. The findings will provide crucial data for developing targeted interventions and public health strategies aimed at increasing screening rates, reducing cervical cancer burden, and improving early detection efforts among women in Kenya.

1.7 Limitations of the Study

This study encountered several limitations within its defined boundaries, which may have affected the comprehensiveness and generalizability of the findings.

The population scope was limited to women aged 25 to 49 years in Thika Sub-County, excluding younger or older women who may also face challenges in cervical cancer screening. This age restriction may limit the applicability of findings to the broader female population. Additionally, recruitment challenges arose due to the sensitivity of the topic, fear, and stigma associated with cervical cancer screening, which may have led to non-response bias and affected the statistical power of the study.

The geographical scope was restricted to Thika Sub-County, meaning the findings may not be directly generalizable to women in other regions with different healthcare infrastructures, cultural beliefs, or socioeconomic conditions. Differences in health service delivery and cultural perceptions across Kenya may mean that factors influencing screening uptake in Thika do not fully reflect the experiences of women in rural or other urban areas.

The conceptual scope of the study focused on four key categories of factors—socio-demographic, perceived risk, socio-cultural, and health system factors—while other potential influences, such as government policies, media influence, and personal healthcare-seeking behaviors, were not explored in depth. The exclusion of these additional factors may have provided a partial picture of the overall determinants of cervical cancer screening uptake.

The methodological scope relied on self-reported data, which may have introduced recall bias or social desirability bias, where participants provided responses, they perceived as socially acceptable rather than their actual experiences. Additionally, the use of google forms may have potentially affected the depth of qualitative insights. The reliance on smartphones and other internet-enabled devices for data collection may have also introduced selection bias, as individuals without access to such devices were excluded, potentially overrepresenting respondents of relatively higher socioeconomic status.

The temporal scope of the study means that findings reflect factors influencing cervical cancer screening uptake at a specific point in time. Changes in healthcare policies, awareness campaigns, or service availability after the study period may alter screening behaviors, limiting the study's long-term applicability.

To mitigate these limitations, the study employed multiple data sources and triangulation to enhance reliability and validity. While the findings provide valuable insights into cervical cancer screening uptake in Thika Sub-County, further research is recommended to explore additional factors and assess trends over time in broader populations.

1.8 Delimitations of the Study

This study focused on the acceptability of cervical cancer screening (CCS) among sexually active individuals in Thika Sub-County. It specifically examined factors influencing CCS uptake and did not extend to other aspects of cervical cancer prevention, such as vaccination or treatment.

To enhance the representativeness of the sample, probability sampling techniques were employed, ensuring a higher likelihood of capturing diverse perspectives within the target population. To minimize social desirability bias, the study utilized self-administered or anonymous surveys, allowing participants to respond honestly without fear of judgment or repercussions.

Furthermore, the study relied on a large sample size to improve the generalizability of the findings. However, the research was conducted within a limited timeframe and with constrained human resources, which may have influenced the depth of data collection and analysis.

1.9 Significance of the Study

This research adds to the existing knowledge regarding the rate of CCS participation in countries with low and moderate levels of income. In particular, the research will provide decipher the issues that influence the rate of CCS participation among women in Thika Sub- County. The outcome of the research may be generalizable to other regions in Kenya or other low- and middle-income (LAMI) countries with similar cultural, social, and economic contexts. The study may provide the basis for further research on CCS uptake in different settings.

This research can inform the creation of health policies with the goal of increasing the numbers of those getting screened for CC. The findings of the study can be used by policymakers to establish targeted plans addressing the identified hurdles in the uptake of CCSs. The findings of the study can be used by professionals working in the healthcare field to develop interventions that will

improve the availability, accessibility, and quality of CCSS. The study outcomes could also be utilized to educate members of the general public in the significance of CCS.

1.10 Assumptions of the Study

The study assumed that the data collected through surveys and interviews accurately reflect the views and experiences of the participants. The study also assumed that the participants provided understood the questions and gave honest and truthful responses. The researcher also assumes that the sample of women selected for the study is representative of the larger population of women aged 25 to 49 years old in the study area.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter explores key concepts relevant to the study by reviewing existing literature and comparing findings from different researchers. By analyzing previous studies, this section aims to contextualize the research within the broader academic discourse and establish a solid foundation for the study's line of inquiry. Additionally, the chapter examines the Health Belief Model (HBM) to assess its applicability in interpreting the study's findings and achieving its primary objectives.

2.2 Epidemiology of Cervical Cancer & Screening for Cervical Cancer

2.2.1 Epidemiology of Cervical Cancer

Cervical cancer remains a significant public health challenge worldwide, particularly in low- and middle-income countries (LMICs). It is the fourth most common cancer among women globally, with an estimated 604,000 new cases and 342,000 deaths reported in 2020 (Mwanje, 2023). The burden of cervical cancer is disproportionately higher in resource-limited settings, accounting for over 85% of global incidences, a finding by Mahumud et al., (2020), in a global epidemiological review. The disease exhibits significant geographic variation in incidence and mortality rates, with high-income countries experiencing a decline in both due to well-structured screening programs. In contrast, the greatest burden is observed in LMICs, particularly in sub-Saharan Africa (SSA), A recent Literature Based global analysis found that Latin America, and parts of Asia, where limited access to screening, low awareness, and inadequate healthcare infrastructure contribute to high morbidity and mortality rates (Mwanje, 2023). In Kenya, cervical cancer remains one of the leading causes of cancer morbidity and mortality among women. A national review of cancer registry data by Nyangasi et al. (2023) reported that cervical cancer is consistently among the top

cancers affecting women, with the majority of cases diagnosed at advanced stages, contributing to poor survival outcomes. At the county level, local hospital-based studies provide further evidence of the burden. At Thika Level Five Hospital, a retrospective review of hospital records found that cervical cancer accounted for 24% of all cancer cases between 2013 and 2018 (Gichana et al., 2020). Similarly, a hospital records analysis conducted at Kiambu and Gatundu Level Five Hospitals reported that cervical cancer comprised 33.4% of all female cancers (Gichana et al., 2020). These findings illustrate the disproportionate burden of cervical cancer in Kiambu County, particularly in Thika Subcounty, and emphasize the urgency of strengthening cervical cancer screening and preventive measures in this setting.

Cervical cancer is caused by persistent infection with high-risk human papillomavirus (HPV), which is transmitted through sexual contact. Several risk factors increase susceptibility to the disease, including early sexual debut, multiple sexual partners, high-risk sexual behaviors, multiparity, tobacco use, and immunosuppression (Achapak, 2019). This was demonstrated in a hospital-based case-control study in India, which highlighted how behavioral and biological factors interact to elevate cervical cancer risk. The disease has a long latent phase, allowing for the detection of precancerous lesions before progressing to invasive cancer. Another systematic review concluded that, despite cervical cancer being highly preventable and curable through vaccination and screening, lack of screening remains a major barrier to successful management, contributing to approximately 90% of cervical cancer-related deaths (Hossain et al., 2022).

The impact of cervical cancer extends beyond physical health, affecting psychological well-being, healthcare systems, and socio-economic stability. A cross-sectional study in Kenya found that the disease often presents symptoms in advanced stages due to inadequate access to early detection and screening services (Nyangasi et al., 2023). This leads to a higher likelihood of invasive

treatments, reduced survival rates, and increased morbidity and mortality. Physical morbidities associated with cervical cancer include pelvic pain, abnormal vaginal bleeding, urinary and bowel dysfunction, and lymphedema (Yildiz, 2024). In advanced stages, cervical cancer can metastasize to distant organs such as the lungs, liver, and bones, leading to severe complications (Shan et al., 2023). Furthermore, long-term effects among survivors include infertility, sexual dysfunction, and psychosocial distress (Cianci et al., 2023).

The psychological impact of cervical cancer is profound, with patients often experiencing anxiety, depression, fear, and social isolation. The stigma associated with cervical cancer, particularly due to its links with HPV and reproductive health, further exacerbates psychosocial distress. Studies in sub-Saharan Africa indicate that fertility and sexuality are crucial societal values, and women with compromised fertility due to cervical cancer treatment may face social discrimination and marital instability (Brüggmann et al., 2022). The psychosocial burden extends beyond patients, affecting families and caregivers who provide emotional and financial support (Alhassan & Kangmennaang, 2024).

Cervical cancer also imposes a heavy burden on healthcare systems, especially in resource-limited settings. In Zimbabwe, a mixed-methods study showed how limited oncology capacity contributes to treatment delays (Dzobo, 2021). Many healthcare systems struggle to provide adequate attention to cancer patients, leading to suboptimal treatment outcomes. Additionally, long-term follow-up and survivorship care require ongoing resources, including pain management, psychological counseling, and home-based care, which pose further financial challenges (Liu et al., 2022).

The economic implications of cervical cancer are significant, both at the individual and societal levels. A cross-sectional household survey in Ethiopia demonstrated that treatment costs contributed to catastrophic health expenditure (Kasahun et al., 2020). Indirect costs such as lost

productivity due to premature mortality, disability, and caregiving responsibilities further contribute to economic strain. Cervical cancer predominantly affects women between the ages of 35 and 50, a period when they are most economically productive. The loss of income and reduced workforce participation perpetuate cycles of poverty and inequality, particularly in low-income communities.

2.2.2 Epidemiology of Screening for Cervical Cancer

Screening for cervical cancer is a crucial public health strategy aimed at early detection and prevention of the disease. Screening programs focus on detecting precancerous lesions before they progress to invasive cancer, significantly reducing incidence and mortality rates. Globally, high-income countries have successfully implemented cervical cancer screening programs, leading to a marked decline in disease burden. (National Cancer Institute of Kenya, 2025). In contrast, screening uptake remains low in LMICs, including Kenya, where various social, economic, and healthcare system barriers hinder widespread participation, as shown in a cross-sectional study in Kenya (Nyangasi et al., 2023).

Several screening methods are available, including the Papanicolaou (Pap) smear, visual inspection with acetic acid (VIA), and HPV DNA testing. The Pap smear, widely used in developed countries, has contributed to a substantial reduction in cervical cancer mortality. However, its requirement for laboratory infrastructure and skilled personnel limits its accessibility in resource-limited settings. VIA, a cost-effective and immediate screening method, is commonly used in LMICs but has lower sensitivity compared to HPV DNA testing. HPV DNA testing is highly effective in detecting high-risk HPV strains but remains expensive and less accessible in low-income regions, as highlighted in a systematic review of screening strategies (Hossain et al., 2022).

Despite the availability of screening programs, uptake remains suboptimal due to multiple barriers. Social and cultural factors, such as stigma, misconceptions about cervical cancer, and fear of diagnosis, contribute to low screening rates. Qualitative research in African communities has shown that women often associate cervical cancer screening with infertility or promiscuity, leading to reluctance in seeking screening services (Brügmann et al., 2022). Additionally, community-based surveys in LMICs demonstrate that lack of awareness and low health literacy play a crucial role in reduced participation rates (Alhassan & Kangmennaang, 2024).

Healthcare system-related barriers, including inadequate screening facilities, shortage of trained personnel, and limited financial resources, further impede screening efforts. Many public health facilities in LMICs lack the necessary infrastructure and trained healthcare providers to conduct routine screenings. The high cost of screening services in private healthcare facilities also discourages participation, particularly among women from low-income backgrounds (Kasahun et al., 2020). Furthermore, limited integration of cervical cancer screening into primary healthcare services results in missed opportunities for early detection (Liu et al., 2022).

Efforts to increase screening uptake have focused on awareness campaigns, community-based outreach programs, and government-led initiatives. In Kenya, the Ministry of Health has implemented national screening guidelines and programs to improve accessibility. However, a program evaluation found that inconsistent implementation, inadequate funding, and lack of follow-up mechanisms for women who test positive remain significant obstacles (Nyangasi et al., 2023).

HPV vaccination is a complementary strategy that significantly reduces cervical cancer risk by preventing HPV infection. Countries with high HPV vaccination coverage have reported a decline in cervical cancer incidence. However, vaccination programs in LMICs, including Kenya, face

challenges such as vaccine hesitancy, logistical constraints, and low awareness levels (Mahumud et al., 2020). Integrating HPV vaccination with routine cervical cancer screening could enhance prevention efforts and reduce the disease burden.

To improve screening uptake, a multifaceted approach is necessary, including enhancing public awareness, addressing cultural barriers, strengthening healthcare infrastructure, and implementing cost-effective screening strategies. Expanding HPV vaccination programs and integrating cervical cancer screening into routine reproductive health services can further contribute to reducing the burden of cervical cancer, particularly in resource-limited settings.

2.2 Influence of knowledge and risk perception on screening

According to Devotta et al., (2025), perceived danger, or the subjective assessment of risk, plays a crucial role in shaping individuals' health-related behaviors, including the utilization of screening for CC. Devotta et al., (2025) defines one's perception of danger as the individuals' subjective assessment of the severity and susceptibility to a specific medical condition. Perceptions of risk for cervical cancer are influenced by various factors, including knowledge about the disease, personal experiences, cultural beliefs, social influences, and media portrayals, as demonstrated in their concept mapping study among South Asian women in Ontario, Canada (Devotta et al., 2025).

Cervical cancer information and awareness gaps can contribute to underestimating its severity and personal susceptibility. Evidence from an educational intervention study in Iran showed that information campaigns significantly increased women's knowledge and improved their perception of cervical cancer risk, which in turn promoted screening uptake (Taghizadeh et al., 2020).

Proximity to CC cases within social networks or communities can also influence perceptions of risk and screening behavior. As posited in the Social Cognitive Theory, an individuals' beliefs,

attitudes, and behaviors are influenced by social modeling and observational learning (Peterson et al., 2022). A community-based cross-sectional study in Ethiopia found that women with a relative or close friend diagnosed with cervical cancer reported higher perceived susceptibility and severity, which led to stronger intentions to undergo screening (Wollancho et al., 2020). Observing others' experiences with CC and witnessing the impact it has on their lives can influence individuals' perceptions of their own vulnerability and motivate them to engage in screening behaviors as a preventive measure.

Psychology scholars have determined perception to be the main driver of humans towards the actions they take and the behavior they develop. In a survey-based study in Nigeria, Owolabi et al. (2023) observed that perception superseded knowledge when shaping health practices. A negative perception on certain nutritional health practices in his study led respondents to disregard factual knowledge and lose interest in gaining knowledge on the same. On the other hand, a rightly tuned perception could make people proactive towards seeking knowledge and developing respective health behaviors. This study sought to know how perceptions of risk would act as a motivating factor, prompting individuals to take preventive action and seek screening services to detect and treat cervical abnormalities at an early stage.

2.3 Socio-demographic factors influencing screening

2.3.1 Culture and societal norms

The influence of culture and societal norms on healthcare-seeking behavior is a complex and multifaceted topic that has taken many explorations by researchers in describing the relationship. Cultural beliefs, values, and norms shape individuals' perceptions of health, illness, and

appropriate healthcare-seeking behaviors. For example, Owolabi et al. (2023), in a survey-based study in Nigeria, emphasized that perceptions shaped by cultural values often outweighed factual knowledge in driving health behaviors. Similarly, a qualitative study by Ahmed and Mao (2023) among South Asian immigrants in Canada found that stigma, religious beliefs, and adherence to traditional healing practices significantly influenced decisions to seek or delay mental health care.

Different cultures have unique models of illness that influence healthcare-seeking behavior. The explanatory model's framework suggests that individuals interpret and understand illness based on their cultural background (Hagger & Orbell, 2021). Cultures on the causes of illness, treatment options, and the role of healthcare providers influence women's decisions to seek healthcare. For instance, Ayinde et al. (2021), in a community-based study in West Africa, reported that among the Bandura community, illness was often attributed to spiritual or cultural causes, leading women to seek traditional or alternative treatment rather than conventional medical care. More broadly, cultural beliefs, values, and practices strongly shape how immigrants perceive illness, make health decisions, and interact with healthcare systems, as shown in a recent scoping review (Choi & Kang, 2025).

On the other hand, stigma associated with certain health conditions can significantly impact healthcare-seeking behavior. A systematic review by Mohammadifrouzeh et al. (2023) among U.S. immigrants found that stigma and social attitudes towards mental health disorders created barriers to accessing appropriate care. Manea et al. (2023), in another systematic review, confirmed that stigma remains a major global barrier, discouraging timely care-seeking due to fear of judgment, discrimination, or social exclusion. This is particularly relevant in cultures where reputation and avoidance of social shame are highly valued. This is particularly relevant in cultures where there are strong norms around preserving one's reputation and avoiding social exclusion.

Cultural norms and gender roles further shape healthcare behaviors, particularly among women. Onuoha et al. (2024) highlighted that these norms strongly affect women's decisions about when and how to seek care. For example, O'Brien and Newport (2023), in an ethnographic study among the Touba community in Senegal, observed that societal expectations required women to prioritize the health of family members over their own, often leading to delays or neglect in seeking personal healthcare. Similarly, Kahsay et al. (2022), in a qualitative study in Ethiopia, found that cultural beliefs about modesty and appropriateness of discussing reproductive health discouraged women from seeking preventive services. Reinforcing this, Ssekamatte et al. (2023), in a qualitative study in rural Uganda, reported that women frequently postponed healthcare due to gendered decision-making dynamics and societal expectations.

Cultural factors also influence the level of trust individuals have in healthcare providers and healthcare system. Trust is crucial for healthcare-seeking behavior, as people seek care from providers they perceive as competent, respectful, and culturally sensitive (Leung & Ku, 2023). The need to seek healthcare services is influenced by the accessibility and availability of the services. Evidence from a mixed-methods study in Hong Kong by Leung and Ku (2023) further revealed that language barriers, lack of cultural competency, and prior experiences of discrimination reduced trust in healthcare services. For individuals from marginalized or minority groups, historical experiences of mistreatment often contribute to hesitancy or outright avoidance of healthcare.

2.4. 2 Influence of Family Support.

Family members play a central role in shaping healthcare-seeking behavior by offering support, encouragement, or discouragement. Supportive family relationships can foster emotional well-being, reduce stigma, and create an environment that facilitates healthcare utilization (Jon-

Ubabuco & Dimmitt, 2019; Sims et al., 2021). For instance, Ward et al. (2022), in a cohort study of individuals living with HIV in the United States, demonstrated that those with supportive family networks were more likely to attend regular healthcare visits and adhere to cervical cancer management. Similarly, Cavelti et al. (2024), using a longitudinal study design in Switzerland, found that family encouragement significantly predicted greater professional help-seeking for mental health.

Family networks are also critical channels for health-related information. Trusted relatives often share personal experiences, disseminate knowledge on health conditions, and guide decisions on healthcare options. In an Armenian qualitative study, Arakelyan et al. (2021) emphasized that trust within family relationships shaped perceptions of healthcare and influenced willingness to seek services. Khuzaiyah et al. (2023), in a survey among adolescents in Malaysia, further showed that those with health-responsive families were more likely to demonstrate positive healthcare-seeking habits.

Observational learning is another pathway through which families shape health behaviors. As Bandura (1977) postulated in his *Social Learning Theory*, individuals learn by observing others in their social environment. Seeing family members actively seeking healthcare can normalize positive health-seeking behavior, whereas avoidance may reinforce delays in seeking care (Khuzaiyah et al., 2023).

2.4.3 Role of Peer Influence

Peers also strongly influence healthcare-seeking behavior, particularly through social support and shared experiences. For instance, Li et al. (2020), in a cross-sectional study among Chinese immigrants in the United States, found that supportive peer networks increased engagement in

preventive services such as cancer screenings and vaccinations. In contrast, negative peer experiences with healthcare may discourage others from seeking similar services.

Peer groups also function as important sources of health information. Information shared among friends can shape perceptions of disease risk and available healthcare services. Khuzaiyah et al. (2023) noted that adolescents exposed to positive health messages from peers were more likely to demonstrate proactive health-seeking behavior.

Peer norms and shared cultural beliefs also affect attitudes towards healthcare. Onuoha et al. (2024) emphasized that peer groups transmit health-related norms that influence decisions on when and how to seek care. Youniss (2022) similarly highlighted that peer networks act as agents of cultural socialization, reinforcing expectations about health and illness behaviors. Prado et al. (2020) further demonstrated that peer-based interventions that promote communication and role modeling can lead to improvements in preventive health-seeking behavior.

2.4.4 Economic Factors on Uptake of Cervical Cancer Screening

Monetary concerns have crucial influence on the choice of whether or not to seek CCS. According to findings from qualitative studies conducted in India, South Africa, and Uganda, elderly women who are unable to gain employment and have a low level of socioeconomic status have low likelihood to participate in CCS (Biddell et al., 2021). According to Fuzzell et al. (2021), Pap smear (Pap test) screening has not been equally beneficial for women in minority, socioeconomically disadvantaged, or rural areas in the United States.

Women having no marital partners were less likely to engage in screenings, according to other studies conducted in South Africa. Akokuwebe et al. (2021), while in the Netherlands, a large

portion of study participants did not see cancer of the cervix as a major issue (Hamdiui et al., 2021). Therefore, to enhance the uptake of CCS, it is imperative that coordinated screening programs deliver services to residents of their respective localities. This task necessitates the integration of educational initiatives that emphasize the significance of screening, with intensified endeavors to enhance women's understanding of the disease and foster favorable attitudes towards it (Hamdiui et al., 2021). According to Gaalema et al. (2024), individuals with low socioeconomic status face challenges in adhering to and following up on treatment, resulting in increased CC morbidity and mortality. Conversely, Biddell et al. (2021) argue that people with higher financial resources can engage more in CCS and have better access to information and healthcare services. According to Dau, (2024), a substantial part of Ugandan women cannot afford the transportation charges to the local referral hospitals offering services for screening of CC.

Comparable results are seen in S. Africa, the Netherlands, and the USA, wherever a considerable number of Latino patients residing in Latin America, who possess inadequate health coverage or lack insurance altogether, are primarily focused on their survival. Their everyday lives are dominated by meeting their most basic requirements, such as feeding themselves and paying their rent. Many people are on the verge of homelessness, and some already are. As a Latina health care worker posits, "If you don't have money for treatment, you don't want to know if you're sick." CCS is seen as a luxury. The mentality may have been reinforced by previous instances in Latin American countries where the absence of financial resources resulted in the unavailability of cancer treatment. Access to healthcare in Latin America was frequently limited and prohibitively expensive for many individuals, and this is still the case for many in USA (Guillot-Wright, 2021). Stefania and Terzera, (2022) found in a study that involved data from the Italian national interview survey done in 2014–2015 on health, that socio-economic characteristics were substantially

correlated with preventive services utilization. The use of screening for CC varied widely, and this was publicly acknowledged. Comparative research on the usage of screening programs in Europe revealed disparities in participation, however the extent of the disparity differed among nations. Less health-literate women perform regular cancer screenings less often. According to Keetile et al., (2021), people with poor socioeconomic level have a lower likelihood of having cancer screening treatments.

African contexts demonstrate that the only approach to attain high participation rates is to integrate screening services into the current health-care systems (Lott et al., 2021). Albahri et al. (2023) also found are two examples of studies that investigate potential alternatives to the current health care system in Africa. Other studies seek technological fixes (less expensive screening methods; screening methods that do not need laboratory back-up; screening methods that permit prompt treatment; screening methods that use low technology and low-cost treatment choices).

2.5 Health System Factors Affecting screening uptake

2.5.1 Structural Health System Factors affecting cervical cancer screening

Even where cervical cancer screening (CCS) is nominally free, women often face hidden costs such as transport, diagnostic fees, or supplies, which deter uptake. A mixed-methods assessment in Uganda confirmed that financial barriers persist under national insurance schemes, with many screening-related costs still borne by patients (Bivigond et al., 2022). Similarly, a multi-county study in Kenya revealed that only women accessing subsidized services through HIV clinics achieved screening rates near 46%, compared to ~17% in the general population (Mkuu et al., 2024). The national medical cover does not comprehensively fund screening services, and the

ongoing rollout of universal health coverage (UHC) continues to leave gaps, deepening financial barriers (Geda et al., 2023; Bivigond et al., 2022).

In terms of service availability, many health facilities in Kenya, particularly in rural and peri-urban areas, lack the infrastructure and human resources to offer routine screening. A baseline assessment of primary healthcare facilities by Bivigond et al. (2022) found that only half provided any form of cervical cancer screening, and fewer than 5% offered both screening and treatment services. Many facilities lacked basic equipment and trained personnel, while frequent stockouts of essential supplies, such as acetic acid for VIA and cryotherapy gas, disrupted service continuity. Mwaniki et al. (2023), in a service delivery evaluation, further highlighted how staff shortages increased reliance on inefficient referral systems, causing delays in care.

Accessibility is another significant barrier. Evidence from Borker (2025) which reported on a regional situational analysis, showed that long distances to screening centers, poor road infrastructure, and inadequate public transport systems prevented many rural women from accessing services. Some women were required to travel several hours, incurring both travel costs and opportunity costs from lost income. Even where centers were within reach, long wait times and fragmented service delivery discouraged follow-through (Mwaniki et al., 2023). Additionally, Obuna et al. (2024), in a policy analysis, noted that weak integration of screening into maternal and reproductive health services limited opportunistic uptake, resulting in missed preventive opportunities.

Systemic challenges further constrain effective screening. Kenya has national CCS guidelines, but a review by Obuna et al. (2024) found that enforcement and implementation across counties remain inconsistent. Weak information systems limit the ability to track screening coverage or follow up with patients who test positive. Supply chain inefficiencies also drive frequent stockouts of

commodities, eroding trust in health facilities and discouraging women from seeking services (Bivigond et al., 2022).

In summary, affordability barriers, inadequate service availability, geographical and logistical challenges, and weak systemic coordination continue to impede the effective delivery and uptake of CCS in Kenya. Addressing these barriers through policy reforms, health system strengthening, and community-based service integration is essential to improve coverage and meet the WHO's 70% screening target by 2030. Importantly, implementing reforms at the local level will also help address context-specific challenges, as research in Thika Subcounty highlights persistent system barriers that hinder screening uptake. Lessons from Thika can inform broader county and national strategies, ensuring interventions are evidence-based and responsive to local realities.

2.5.2 Working Experience

Healthcare workers' professional experience shapes their ability to promote preventive measures effectively. Drossman et al. (2021), in a practice-based observational study, found that working experience improved healthcare workers' ability to refine patient communication and interaction. Similarly, Laukka et al. (2020), in a survey of clinicians in Finland, showed that experienced professionals were better at conveying complex medical information empathetically and clearly. Exposure to diverse patient concerns and barriers equips healthcare workers with the skills to address misconceptions about cervical cancer and tailor their communication to patient needs. Skilled communication builds trust and positively influences women's healthcare-seeking behavior (Li et al., 2024).

Working experience also exposes healthcare professionals to varied cultural, socioeconomic, and personal contexts that influence patient safety and care. Isaac et al. (2024), in a mixed-methods

study, demonstrated that experienced healthcare workers recognized contextual barriers more effectively and adapted their approaches accordingly. Kebenei et al. (2024) further argued that healthcare workers who considered individual needs and preferences were better positioned to design personalized strategies that promoted engagement in cervical cancer prevention. Lott et al. (2021), in a hospital-based study, confirmed that professionals with greater experience positively influenced women's intentions toward screening, thereby increasing uptake.

Additionally, healthcare workers with significant working experience have accumulated expertise in their field, which can enhance their confidence in discussing CC prevention and screening (Lott et al., 2021). Experienced healthcare professionals are more likely to possess in-depth knowledge about the disease, potential dangers, diagnostic procedures, and safety measures (Lott et al., 2020). This expertise and confidence can positively influence their ability to communicate and educate patients, instilling trust and encouraging individuals to seek preventive care (Lott et al., 2020). Haas et al., (2021) examined the influence of primary care providers' experience on the provision of preventive services, including CCSs. The study showed that healthcare providers were very pivotal in the enhancement of knowledge on cancer screening. The study showed that providers with more working experience had higher adherence to screening guidelines and were more effective in promoting preventive care among patients. Many patients relied on healthcare workers as the main source of information for CC making them critical in the prevention and management of the disease.

Healthcare workers with extensive working experience have likely built professional networks and collaborations with other specialists, healthcare facilities, and community organizations (Schot et al., 2020). These networks can facilitate access to resources, promote best practices, and provide opportunities for continuous learning and professional development. Through these connections,

experienced healthcare workers can stay updated on the latest advancements in CC prevention and engage in collaborative efforts to promote screenings and preventive measures (Oware et al., 2024). Additionally, professional networks and collaborations facilitate access to significant resources and referral pathways. Healthcare workers can leverage their connections to connect patients with appropriate screening services, diagnostic facilities, treatment options, and support services. According to Oluwaseun and Chung, (2024), collaborations with other healthcare providers, specialists, and community organizations enable a seamless continuum of care, ensuring that individuals receive the necessary support and follow-up throughout their CC prevention journey.

Elsewhere, Schot et al. (2020) reason that professional networks and collaborations allow healthcare workers to engage in interdisciplinary discussions, share insights, and coordinate care. Cervical cancer prevention calls for a multidisciplinary approach for effectiveness. The professionals involved in managing the disease are gynecologists, oncologists, nurses, and public health experts (Qin et al., 2023). This multidisciplinary approach ensures comprehensive and well-coordinated preventive measures, addressing not only screening but also risk assessment, vaccination, and education. This study would therefore seek to explore how the different professional networks influence the utilization of CCS in Thika Sub-County.

2.6 Theoretical Framework

2.6.1 Health Belief Model

Created in the 1950s by social psychologists Irwin, Godfrey, Stephen and Howard created the while working for the US Public Health Service, the HBM was meant to assess and predict health behavior with regards to TB screening (Alyafei & Easton-Carr, 2024). Even though mobile X-ray

cars visited neighborhoods at the time, scholars were concerned that fewer clients were accessing TB screening services (Bisgaard et al., 2022). The HBM has been utilized to forecast a myriad of health-related behaviors, including getting checked out for the early diagnosis of sickness and getting inoculated.

The widely recognized psychological framework posits that health-related actions are affected by their perceptions and perceptions regarding the health risks posed by an illness as well as the perceived advantages and disadvantages of treating the condition of engaging in preventive behaviors (Alyafei & Easton-Carr, 2024). In the context of screening cancer of the cervix, the HBM can be applied to assess the factors promoting or discouraging women from using screening services. The model has six components which are potential influencers to the health-seeking behavior of people which include:

Perceived Susceptibility: This is the perception of a person regarding their risk of developing a particular health condition. For CC, women perceiving themselves to be at a higher risk due to factors such as family history, sexual behavior, or exposure to risk factors have a higher likelihood of considering and engaging in screening of cancer of the cervix. Assessing perceived susceptibility helps identify the degree to which women perceive themselves to be at risk and how this perception influences their decision to undergo screening.

Perceived Severity: This refers to perception of an individual on the seriousness and consequences of the health condition. Women who understand the potential severity of CC and its consequence on their health are more likely to prioritize screening. Assessing perceived severity helps determine whether women have accurate knowledge about the potential consequences of CC and whether they perceive it as a significant threat. This can have a significant impact on their health-seeking behavior and attitudes towards health and wellness.

Perceived Benefits: This is the belief of an individual in the effectiveness of the recommended preventive behavior. In the case of CCS, women who perceive the advantages of early detection, such as increased chances of successful treatment or prevention of advanced-stage cancer, are more likely to undergo screening. Assessing perceived benefits helps identify women's beliefs about the effectiveness of screening and how this perception influences their decision-making process.

Perceived Barriers: This is the perception on the hurdles or drawbacks associated with engaging in the recommended behavior. Common drawbacks to CCS are fear, embarrassment, limited access to screening facilities, cost, or concerns about discomfort. Assessing perceived barriers helps identify the specific obstacles women perceive and how these barriers impact their decision to seek screening services.

Cues to Action: These are stimuli in the environment that motivate individuals to implement specific actions on a health-related behavior. These include recommendations from healthcare providers, reminders through media campaigns, encouragement from family or friends, or personal experiences with CC. Assessing cues to action helps identify the influential things that prompt women to seek screening of cancer of the cervix.

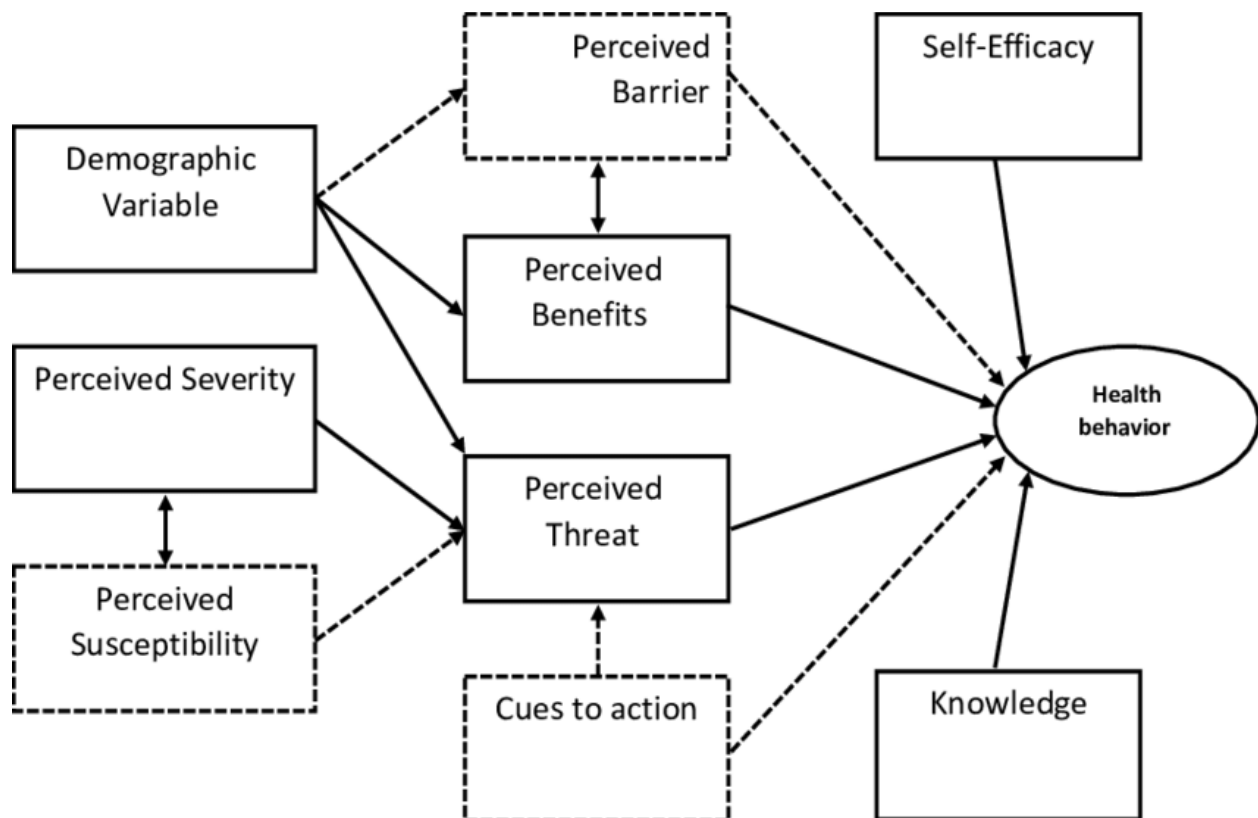
Self-Efficacy: This is one's belief in his or her own ability to effectively conduct a health activity. Women with higher self-efficacy on CCS can overcome perceived hurdles and act. Assessing self-efficacy helps identify women's confidence levels and their belief in their ability to undergo screening despite any potential challenges.

In efforts to determine what factors affect the use of CCS programs using the HBM, researchers can employ surveys, interviews, or questionnaires to measure women's perceptions of susceptibility, severity, benefits, barriers, cues to action, and self-efficacy. By understanding

women's beliefs and attitudes related to these components, interventions can be tailored to address specific barriers, enhance perceived benefits, and leverage cues to action, ultimately promoting the uptake of screening services.

Figure 2.1

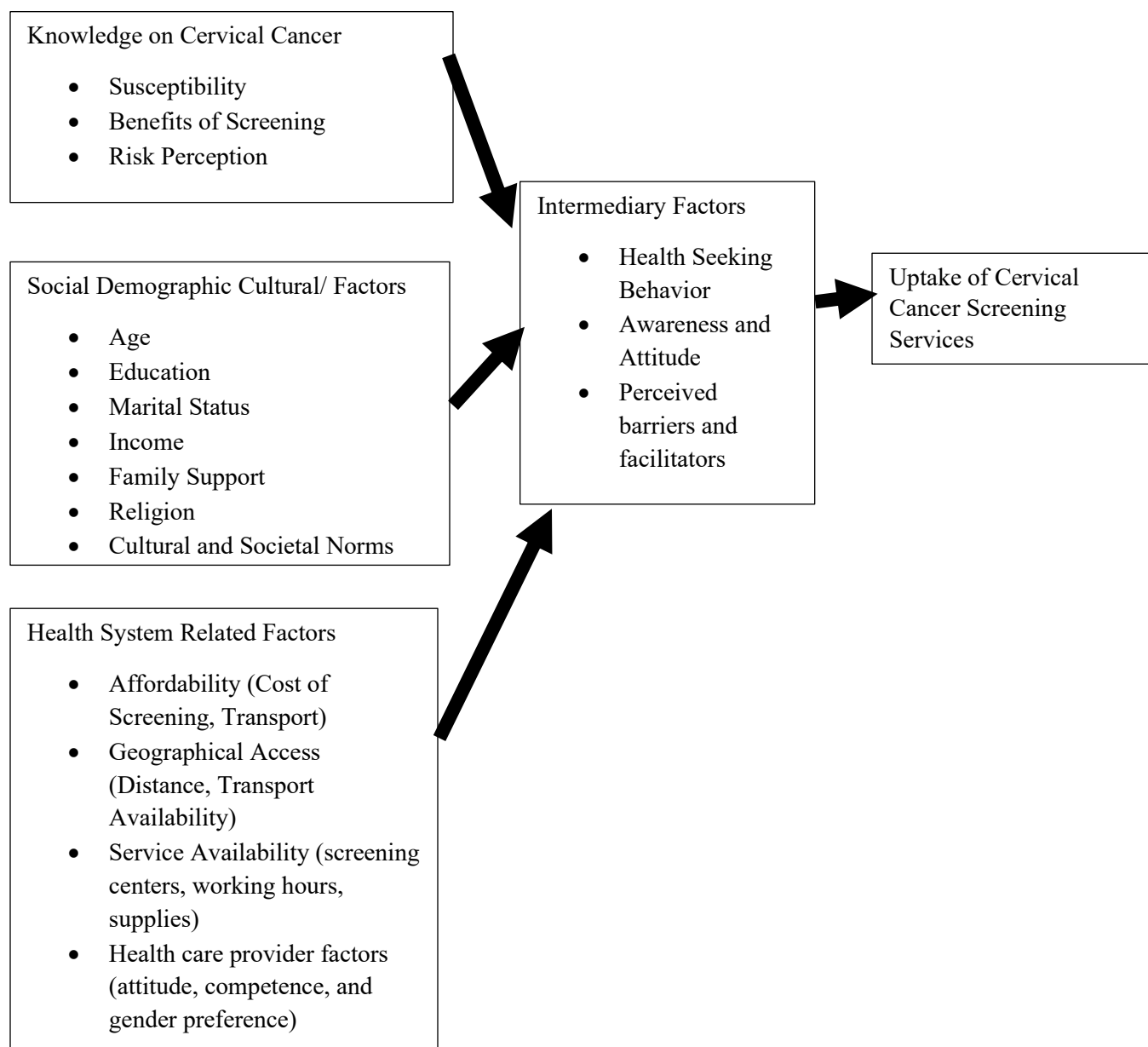
Health Belief Model



Source: Mehrabian et al., (2018)

2.7 Conceptual framework

Figure 2.2
Conceptual framework



CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter presents the study's research methodology, detailing the design, data sources, sampling procedures, participant selection criteria, data collection tools, and analysis techniques used to ensure accurate and meaningful results.

3.2 Study Design

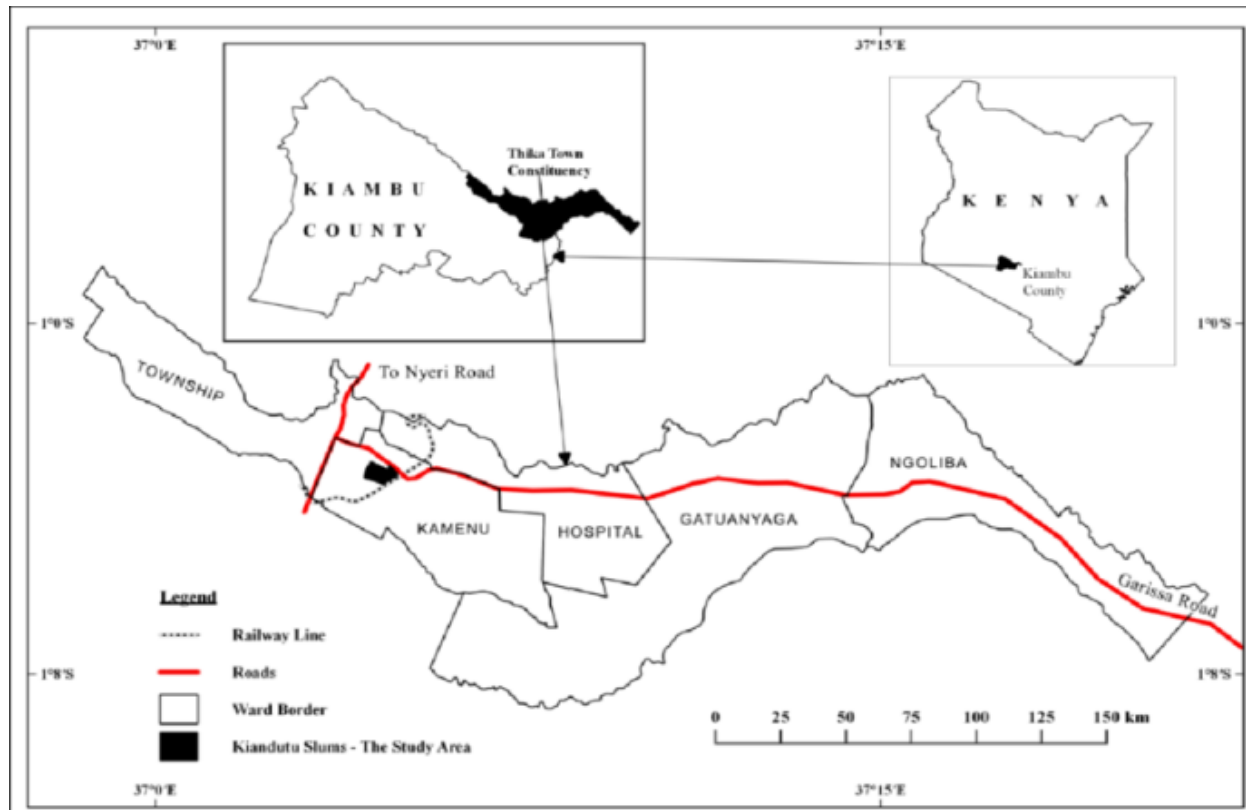
The study incorporated a cross-sectional design to assess the correlation between independent and dependent variables in a natural, unmodified context. This approach was particularly suitable for observing the association between various factors and sexually active women's use of Cervical Cancer Screening Services (CCSS) without influencing or altering the conditions under which these factors operate.

3.3 Study Area

Located in the Central region of Kenya, Thika Sub- County covers an area of 538.6 km² according to a Geo-mapping report by the Kenya Lands Commission (2015). Thika Sub- County is home to 831,514 (420,750 male and 410,764 female) people spread across the five electoral wards in it constitutes of, translating to a population density of 92 people per square kilometer (Kenya National Bureau of Statistics [KNBS], 2019).

Figure 3.1:

Thika Sub-county



3.4 Target Population

This study targeted sexually active women aged 25 to 49 years living in Thika Sub-County, a high-risk group for cervical cancer, consistent with screening guidelines from the World Health Organization and the Kenyan Ministry of Health.

3.4.1 Inclusion Criteria:

The study included women aged between 25 and 49 years who were sexually active. Eligible participants were required to be residents within the study area for at least six months to ensure adequate exposure to local health services. In addition, only those who were willing and able to provide informed consent were considered. Women who were not pregnant at the time of recruitment were also included, as pregnancy may influence participation in cervical cancer screening.

3.4.2 Exclusion Criteria

Women were excluded from the study if they had a prior history of cervical cancer, had undergone a hysterectomy, or presented with medical conditions that contraindicated cervical cancer screening procedures. Furthermore, women with decisional impairment, and therefore unable to provide informed consent, were excluded. Those with severe illness at the time of the study, which could hinder participation in the screening process, were also not considered.

3.5 Sampling Methodology

3.5.1 Sample size

This study employed the Cochran formula in determining size of the sample to be included. This model comes in handy for our situation where the target population under study was not finite.

$$n_0 = \frac{Z^2 \cdot p \cdot (1 - p)}{e^2}$$

Where:

$e = 0.05$, is the desired precision level or the margin of error

$p = 0.5$ the fraction of the population (as percentage) that displays the attribute

$z = 1.96$ is the z -value, extracted from a z -table at 95% confidence level

$$n_0 = \frac{1.96^2 \times 0.5(1 - 0.5)}{0.05^2}$$

$$n_0 = \frac{0.9604}{0.0025} = 284.16$$

This study pursued to include 284 participants.

Table 3.1

Sample Size distribution

Area	Sample population using Cochran formula
Township	57
Kamenu	57
Hospital	57
Gatuanyaga	57
Ngoliba	57

3.5.1 Sampling Techniques

This study adopted a stratified random sampling methodology to select the sample respondents from the target population. The stratified sampling technique was employed to ensure that different

subgroups within the population were represented in a way that reflects the geographical distribution of the participants. Specifically, the population was divided into strata based on the five wards within Thika Sub- County, with each ward representing a distinct subgroup. This approach allowed for uniform representation across the various regions of the Sub- County, which enhances the study's inferential accuracy and generalizability of the findings.

The sample size was calculated to ensure even distribution across the five strata, with each ward contributing an equal number of respondents. This ensured that no ward was over- or under-represented in the study. The stratification process was clear-cut, ensuring that each respondent was only included in one of the strata, which mitigated the potential for overlap and provided a higher chance of selection for participants in the targeted strata.

Once the strata were established, respondents were selected within each stratum using simple random sampling. This approach was crucial for minimizing selection bias and ensuring that each individual within a stratum had an equal chance of being selected. By combining stratified and simple random sampling techniques, the methodology minimized the risk of bias while ensuring a comprehensive and representative sample, which is essential for the validity and reliability of the study's findings.

3.6 Validity and Reliability

The study conducted a pilot study in Thika's Makongeni residential area, where data was collected from 5% of the total sample size. This pilot study was carried out by the research team to assess the effectiveness of the data collection tools. The pilot study tested the clarity of the questions and their ability to accurately capture the desired information from the respondents. It also ensured that there was a uniform understanding of the questions among the respondents. Based on the

challenges identified during the pilot study, meaningful revisions were made to the data collection tools. These revised tools were then used for the actual research.

Reliability of the data collection tool was assessed to determine its internal consistency. Cronbach's alpha coefficient was applied to items measuring similar constructs such as knowledge, perceptions, and health-seeking behavior. The results indicated that the tool achieved an acceptable level of internal consistency ($\alpha \geq 0.70$), confirming that the instrument was reliable and capable of consistently measuring the intended variables.

3.7 Data Collection

The study utilized a closed-ended questionnaire to collect information from the sample respondents. The questionnaire was designed and distributed using Google Forms and shared with respondents through a digital link. Participants accessed the form via smartphones or other internet-enabled devices. Support and guidance were provided, particularly for less literate women, to ensure they understood the questions. However, the researcher refrained from influencing responses in order to maintain the integrity of the data.

Once responses were submitted, the data was collected electronically for analysis. The process was conducted remotely, with the researcher available to help when needed while maintaining a hands-off approach to avoid bias.

The reliance on smartphones or other internet-enabled devices introduced potential selection bias, as individuals without access to such technology could have been excluded from the study. To mitigate this limitation, the researcher provided shared devices to participants where necessary and assisted those with limited digital literacy in completing the questionnaire. In some cases, responses were collected with the help of a research assistant who administered the form verbally

on behalf of participants without smartphones. These measures ensured that women without personal access to internet-enabled devices were still able to take part in the study.

The data collection was carried out by the researcher from a designated location, such as an office or home, where the process was monitored, and assistance was provided as needed.

3.8 Data Analysis and Presentation

The data collected through the questionnaires was input into an Excel spreadsheet, ensuring that the distinct strata were maintained. The dataset was then cleaned to remove irrelevant responses and address any gaps or missing data. The cleaned data was coded for analysis using SPSS software. Following the guidance of the conceptual framework, the relationships between the independent and dependent variables were examined. Statistical techniques were applied to analyze the data, and relevant graphs and tables were generated to visualize and interpret the relationships between variables. This process allowed for a comprehensive analysis of the factors influencing the uptake of cervical cancer screening services in the study population.

3.9 Data Analysis Methods

The Pearson's Chi-Square test of independence was used to examine the relationship between categorical variables and cervical cancer screening uptake. This test determined whether there was a statistically significant association between categorical factors and the likelihood of a respondent participating in cervical cancer screening.

3.10 Ethical Consideration

To ensure confidentiality and adhere to research ethics, the study strictly followed the Kenya Methodist University Ethical Committee (KMU-EC) protocol, which governs the handling of individuals' personal data. Prior to data collection, the research proposal was submitted to and approved by the KMU-EC. Additionally, approval was sought and granted by the National

Commission for Science, Technology, and Innovation (NACOSTI), under the Ministry of Education.

The purpose of the study was clearly explained to all participants before their enrollment. Written informed consent was obtained from each participant, emphasizing that participation was voluntary and that they could withdraw from the study at any time without consequences. Interviews were conducted in private spaces to ensure participant comfort and confidentiality. To further protect anonymity, participants' names were not recorded or associated with their responses.

The study avoided intruding on the personal space of participants, and in cases where any questions were distressing or uncomfortable, participants were given the option to skip those questions. The data collection was primarily done through a Google Form, where respondents accessed the survey via smartphones or other devices. The researcher also provided support where needed, particularly for less literate participants, ensuring they understood the questions but refrained from influencing their responses.

In terms of data collection, the researcher was the primary person responsible for administering the survey remotely. There were no additional data collectors on the ground; however, the researcher remained available to offer guidance and assistance to participants during the process. This approach helped ensure the integrity of the data collection while maintaining ethical standards throughout the study.

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1 Introduction

This section of the paper presents the findings of the qualitative factors that affect the uptake of CCSS in women 25-49 years old in Thika Sub-County. This study included 285 participants.

A chi-square test and correlation analysis were run to examine the link between different factors and CCS behavior. The investigated domains include social demographics, perceived CC risks, and health systems. These domains were chosen as they provide a complete picture of how individual factors, social norms, and healthcare availability may influence women's choice around CCS.

4.2 Uptake of Cervical Cancer Screening Services

The cervical cancer screening uptake in Thika Sub-County, as observed from the interviewed respondents, reveals a concerning trend in preventive healthcare. A significant majority, 68% (194 respondents), have never been screened for cervical cancer, indicating a substantial gap in awareness or access to screening services. Only 13% (37 respondents) reported being screened within the past 1-3 years, and 11% (30 respondents) were screened in the last year, suggesting some engagement with preventive measures, though still limited. Meanwhile, 5% (14 respondents) were screened more than five years ago, and 4% (10 respondents) reported screening between 3-5 years ago, highlighting a lack of consistent adherence to recommended screening schedules. Overall, the data points to a low uptake of cervical cancer screening, emphasizing the need for increased education, accessibility, and motivation to encourage regular screenings for early detection and prevention.

Lack of awareness about cervical cancer screening (56%) is a major barrier to participation in Thika Sub-County, along with fear and anxiety about the screening process, which affects 72.6%

of respondents. Other obstacles include expensive hospital charges (11.5%), long waiting times (6.4%), and the distance to health facilities (10.2%). Additionally, unfriendliness of health workers (5.3%), cultural (0.8%), and religious (0.4%) factors further discourage women from seeking screening. Addressing these issues—particularly fear and anxiety, increasing awareness, and reducing costs—could significantly boost the uptake of cervical cancer screening in the region.

Figure 4.1

When did you do your last cervical cancer screening?

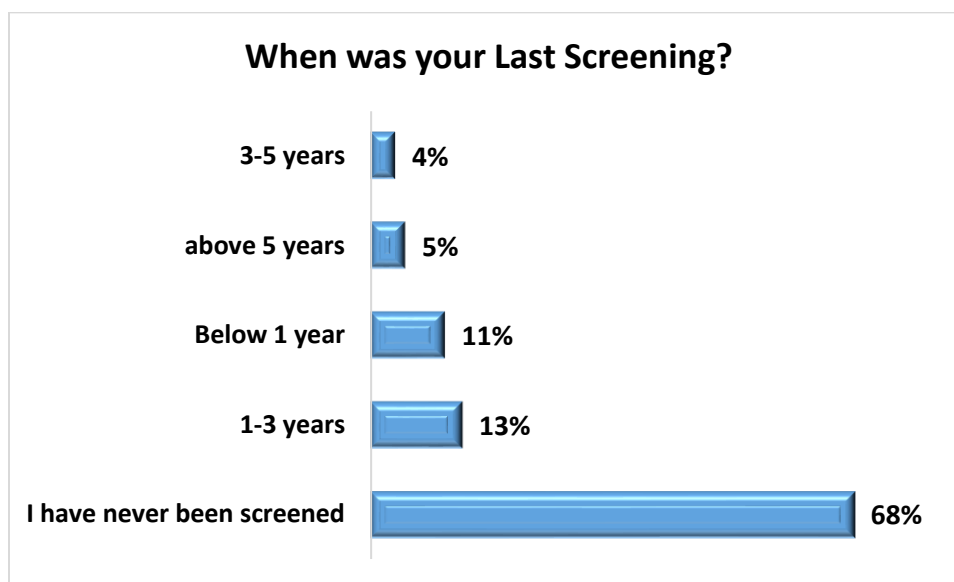
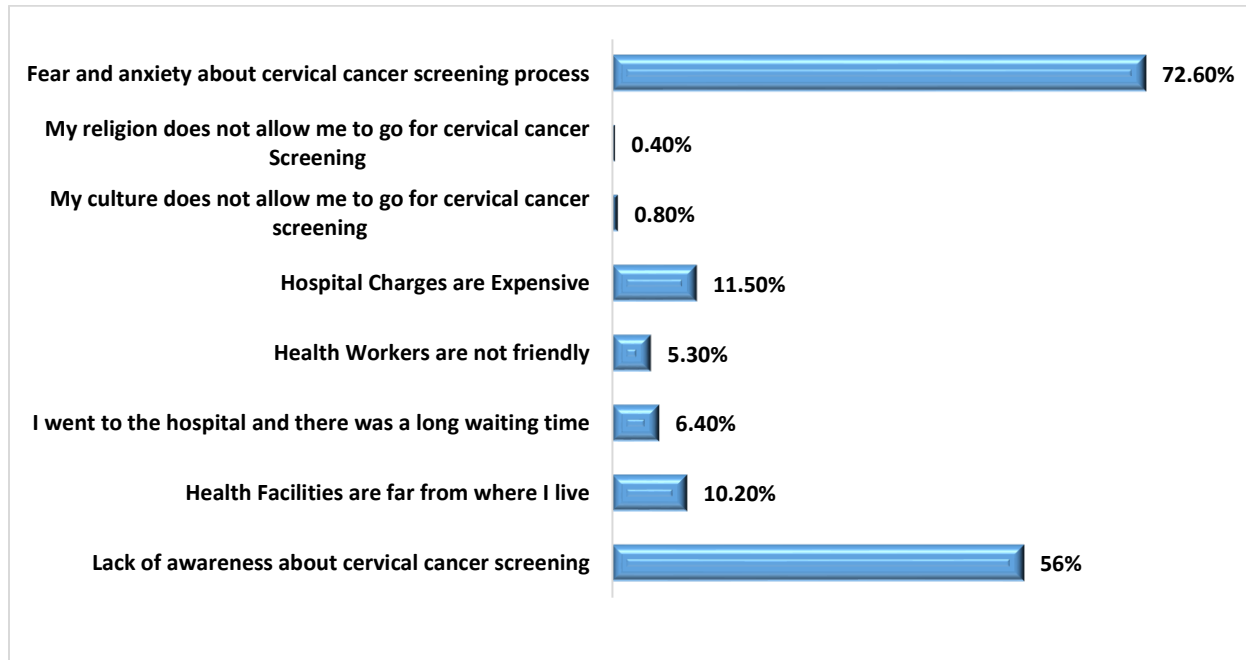


Figure 1.2

Reasons for not taking cervical cancer screening



4.3 Social Demographic Factors

4.3.1 Social-Demographic Characteristics of the Study Population

The study population included 285 individuals, with the prevalent age group being young adults from 25 to 30, constituting 45.14% of all the respondents. Most individuals follow Christianity, which consists of 78.47% of the total respondents, and the second largest group is the followers of Islam, accounting for 18.75% of the total respondents. Hindus and other religions were less frequent and comprised the smallest number of participants. Most respondents were married, accounting for 55.10% of all respondents; single individuals accounted for 39.20% of all respondents. Divorced individuals constitute the lowest number of participants, with only 5.60%. As for people's level of education, there is a significant number of highly educated participants. Thus, the first degree constituted 40.60% of the respondents, and vocational college education

accounted for 34.30%. Respondents who attained secondary education accounted for 21.30% of the total respondents; primary education, which had the most minor proportion, accounted for 3.50% of the respondents. People's average daily incomes varied, with 38.6% earning less than 1000 Kenyan shillings daily, 24.9% earning between 1000-2000, 19.6% earning between 2000-5000, and 16.8% earning daily income above 5000. The information we obtained allows us to gain a picture of the social and economic features of the target population.

Table 4.1

Social-Demographic Characteristics of the study population

Characteristics	% (n=285)
Age (Years	
25-30	45.14 (130)
31-35	27.08 (78)
36-40	13.19 (38)
41-45	9.72 (28)
46-49	3.82 (11)
Religion	
Christians	78.47 (226)
Muslim	18.75 (54)
Hindus	2.43 (7)
Other	0.35 (1)
Marital Status	
Married	55.10 (157)
Single	39.20 (112)
Divorced	5.60 (16)
Level of Education	
First Degree Holder and above	40.60 (116)
Vocational College	34.30 (98)

Secondary Education	21.30 (61)
Primary Education	3.50 (10)
Average daily income	
Below 1000	38.6 (110)
Between 1001-1999	24.9 (71)
Between 2000- 5000	19.6 (56)
Above 5000	16.8(48)

4.3.2 Social-Demographic and Cervical Cancer Correlation

The correlation matrix of social-demographic factors and CCS depicts varying strengths and directions of the link between social-demographic issues and CCS. The variables ranged between -1 and 1, denoting the strength of the associations. Values near 1 or -1 indicate a stronger correlation, with values close to 0 denoting a weaker one. As per the results, age weakly correlates with receiving a CCS test, as indicated by a weak positive correlation of 0.092. This finding suggests there is a small likelihood that a person can undertake CCS based on their age. The highest level of education positively correlates with screening, with a moderate positive link of 0.216. Religion also demonstrates a moderate positive link with CCS of 0.279, suggesting that people involved in certain religious practices are more likely to undergo screening. The correlation is negative for marriage status and CCS, indicated by -0.082, and weak for employment status, and indicated by -0.113. Average daily income presents a weak, positive correlation of 0.008 with CCS. The results imply that there is an association between a range of social-demographic factors and the potential for an individual to seek CCS. However, all of these correlations are weak, supporting the assumption that broader determinants may influence cervical cancer screening behaviors.

Table 4.2*Correlation between Cervical Cancer Screening Uptake and Socio-Demographic Factors*

Variable	1	2	3	4	5	6	7
1. Screened for Cervical Cancer (CC)	1						
2. Age	0.092	1					
3. Highest Level of Education	0.216		1				
4. Religion	0.279			1			
5. Marital Status	-0.082				1		
6. Employment Status	-0.113					1	
7. Average Daily Income	0.008						1

***Note:** CC = Cervical Cancer. Cell values represent Pearson correlation coefficients (r). Coefficients range from -1 to +1, where values closer to +1 indicate a strong positive relationship, values closer to -1 indicate a strong negative relationship, and values near 0 indicate no linear relationship.*

4.3.3 The Effect of Social Demographic factors to CCS

The results in Table 3 present a chi-square analysis that examines the social demographic factors influencing screening for CC. There was a critical link between the individuals with higher levels of education and CCS as indicated by (Chi-square = 21.659, $P < 0.01$); those that are employed

also presented some critical correlation with CCS shown by (Chi-square = 7.099, $P = 0.029$) indicating employed individuals sought CC services more frequently. Religious affiliation is also strongly correlated with individuals being screened for CC, as indicated by (Chi-square = 23.841, $P < 0.01$). In contrast, age (Chi-square = 2.816, $P = 0.589$), average daily income (Chi-square = 5.573, $P = 0.134$), and marital status (Chi-square = 1.981, $P = 0.371$) did not indicate a statistical relationship with CCS.

The findings illustrate the intricate interplay between socioeconomic and cultural factors and the dynamics of healthcare utilization, especially in preventing CC. Since the identified patterns may be addressed by designing an intervention and imposing suitable healthcare policies on the target population, further research is required to explore the underlying details of the identified relationships. Moreover, additional studies might produce information that will create a more efficient mode of promoting people's uptake of CCS.

Table 4.3

The Effect of Social Demographic factors to CCS

Social Demographic Factor	Pearson Chi Square (Xi)	$P < 0.05$
Age	2.816	0.589
Highest Level of Education*	21.659	< 0.01
Religion*	23.841	< 0.01
Marital Status	1.981	0.371
Average Daily Income	5.573	0.134
Employment Status*	7.099	0.029

Statistical testing by chi square for contingency presentations ($P < 0.05$)

4.4 Perceived Risk of cervical Cancer

4.4.1 Perceived Risk Characteristics of the study population.

The perceived risk of developing CC by the study population suggests a high level of awareness and concern for the disease, 41.6% of the population, agrees that having multiple sex partners increases the chances of developing CC, 20.3% gave a neutral response, and 7.0% disagreed. Similarly, 33.2% of the total respondents with the highest frequency agree that having a family history increases the chances of acquiring CC, 23.8% of the respondents gave a neutral response, and 16.1% strongly agreed. These findings suggest that the population recognizes behavioral and genetic chances of acquiring the disease, although varying proportions are unsure of the answers or disagree with reality. Also, the belief that one possesses higher risk for CC is identified by 7.0%, who strongly agree, and 37.8.0%, who agree with the question. At the same time, 26.2% gave a neutral response, and 16.1% disagreed. On the question of the belief that CC kills, 46.2% and 27.3% agree and strongly agree that CC kills, respectively, but 20.6% gave a neutral response to this survey question; this indicates that an excess of fifty percent of the population agrees that CC kills. Also, 48.3% agree, and 34.6% strongly agree that their fears about CC can motivate them to participate in awareness campaigns. These results indicate a high level of participation in the awareness campaigns resulting from their perceived risk.

Table 4.4*Perceived Risk*

Characteristics	%(n=285)
Multiple sex workers may increase risk of CC	
Agree	41.6 (119)
Neutral	20.3 (58)
Disagree	7.0 (20)
Strongly Disagree	4.9 (14)
A family history of CC increases the risk for CC	
Agree	33.2 (95)
Neutral	28.3 (81)
Strongly Agree	16.1 (46)
Disagree	14.3 (41)
Strongly Disagree	7.7 (22)
I believe that I am at risk of developing CC	
Agree	37.8 (108)
Neutral	26.2 (75)
Disagree	16.1 (46)
Strongly Disagree	12.6 (36)
Strongly Agree	7.0 (20)
Cervical cancer kills	
Neutral	20.6 (59)
Agree	46.2 (132)
Strongly Agree	27.3 (78)
Disagree	2.8 (8)
Strongly Disagree	2.8 (8)
I am more likely to participate in awareness campaigns because of my concerns about my CC risk	
Agree	48.3 (138)
Strongly Agree	34.6 (99)
Neutral	11.9 (34)
Strongly Disagree	3.1(9)
Disagree	1.4(4)

4.4.2 Perceived risk and CCS Correlation matrix

The correlation matrix between the perceived risk factors and CCS offers essential views into how perception and belief influence the probability of CCS. The analysis indicated that the individuals who felt that multiple sexual partners increased their risk of CC had a moderate positive correlation with CCS, indicated by ($r=0.337$). It was evident that those with positive familial histories of CC disease had a weak positive correlation with the screening indicated by ($r=0.167$). The same could be said about those who believe that CC kills, which presented a moderate positive correlation of ($r=0.218$.) with CCS. However, personal risk of contracting the disease and its screening perception correlated ($r=0.000$), indicating no correlation, meaning that the belief that one's risk is low does not influence CCS amongst the study population. It was also evident that taking part in the awareness campaigns triggered by one's concern about having CCS presented a weak positive correlation of ($r=0.121$.) with CCS.

Table 4.5

Perceived Risk Correlation Matrix

Variable	1	2	3	4	5	6
1. Screened for Cervical Cancer	1					
2. Belief that Multiple Sexual Partners Increase CC Risk	0.337	1				
3. Belief that Family History Increases CC Risk	0.167		1			
4. Personal Belief of Being at Risk for CC	0			1		
5. Belief that CC is a Lethal Disease	0.218				1	
6. Likelihood to Participate in Awareness Campaigns Due to Personal Concern	0.121					1

Note: CC = Cervical Cancer. Cell values represent Pearson correlation coefficients (r). Coefficients range from -1 to +1, where values closer to +1 indicate a strong positive relationship, values closer to -1 indicate a strong negative relationship, and values near 0 indicate no linear relationship.

4.4.3 Influence of the perceived CC risks to CCS

The result indicated some vital association between the perception that multiple sex partner increases CC risk and actual CCS shown a significant relationship shown by (Chi-square = 35.117, $P < 0.01$). Individuals who believe that cervical cancer kills and this influences their decision to undertake CCS present a significant association shown by (Chi-square = 19.601, $P < 0.01$). Additionally, perception of a positive familial history of cervical cancer can influence screening for the disease, indicating a significant association of (Chi-square = 11.394, $P = 0.022$). On the other hand, personal susceptibility to CC (Chi-square = 3.614, $P = 0.461$) and the willingness of participants to participate in awareness campaigns due to concern about cancer risk (Chi-square = 8.292, $P = 0.081$) were not statistically significantly correlated with CCS habits.

The findings highlighted that perceived risk perceptions are crucial in determining health-related behaviors such as CCS. General public education concerning explicit risk factors, especially those that correlate positively with screening uptake, that is, knowledge of the risk associated with sexual behavior and perceived seriousness of the condition as a life-threatening disease, might help in increasing the number of people participating in CCS. Health education promotional programs specific to the perceived risk might help in reducing the incidences and fatalities of CC and enhance people's information about the importance of the early detection of the disease and prevention procedures such as screening. Future studies could examine how perceived risk influences people's decisions concerning Pap smear screening. These studies could help identify future interventions and formulate policies to promote comprehensive CC prevention

Table 4.6*Influence of the perceived CC risks to CCS*

Perceived Risk	Pearson (Xi)	Chi-Square	P<0.05
Multiple Sex partners increase risk of CC.*	35.117		<0.01
Family History of CC increase risk of CC.*	11.394		0.022
I believe I am at a risk of developing CC.	3.614		0.461
CC Kills.	19.601		<0.01
I am more likely to participate in awareness campaign because of my concerns of CC risk.	8.292		0.081

Statistical testing by chi square for contingency presentations (P<0.05)

4.5 Social Cultural Factors

4.5.1 Social Cultural Characteristics of the Study Population

The finding regarding the social-cultural aspects influencing screening habits for CC among the study population reveals that religion, culture, and family have different roles in influencing the decision for CCS. Specifically, 64.3% noted that their religion does not affect their decision to screen for CC, while 35.3% indicated that it does. Similarly, regarding cultural influence, 69.2% claimed that their cultural background does not affect their decision to screen, and 30.4% noticed that it does. Family members appear to have the most minor influence, and 71% indicated that family does not affect their decision to undertake CCS, while 28.7% said that it does. Therefore, while social and cultural factors affect a considerable proportion of the population, the majority decide to screen independently of these factors.

Table 4.7*Social Cultural Characteristics of the Study Population*

Characteristics	% (n=285)
Does your religion influence CCS?	
No	64.3 (184)
Yes	35.3 (101)
Does your culture influence CCS?	
No	69.2 (198)
Yes	30.4 (87)
Do your family members influence your decision to go for CCS?	
No	71 (203)
Yes	28.7 (82)

4.5.2 Social Cultural Factors and CCS Correlation matrix

The correlation matrix between the social-cultural aspects influencing screening habits for CC shows how different social and cultural influences factors affect the likelihood of a person getting the screening for CC. The analysis shows a weak positive correlation of ($r=0.248$) for the influence of religion on CCS. Culture similarly indicated a moderate positive correlation of ($r=0.249$), which means that it had little effect on the potential to seek screening services for CC. On the other hand, a positive moderate correlation of ($r=0.313$) was recorded for family influence. In general, family, cultural, and religious influences all have some impact on CCS. However, the outcome indicates that family influence has the highest direct correlation, meaning that it directly influences the likelihood of individuals getting screened for CC. In addition, it can be concluded that since

cultural and religious influences also correlate with CCS, highlighting significant impacts of these factors combined on the decision to undertake CCS.

Table 4.8:

Pearson Correlation Coefficients between Cervical Cancer Screening (CCS) Uptake and Socio-Cultural Factors in the Study Population

Variable	1	2	3	4
1. Screened for Cervical Cancer (CC)	1			
2. Perceived Influence of Religion on Screening Decision	0.248	1		
3. Perceived Influence of Culture on Screening Decision	0.249		1	
4. Perceived Influence of Family on Screening Decision	0.313			1

Note: CCS = Cervical Cancer Screening. Cell values represent Pearson correlation coefficients (*r*). All correlations are positive, indicating that as the perceived influence of a factor increases, the likelihood of being screened also tends to increase.

4.5.3 Influence of Social cultural factors to CCS

The result indicates a significant association between religious beliefs and CCS indicated by (Chi-square = 17.505, $P < 0.01$). There was also a significant relationship between cultural norms and CCS, as shown by (Chi-square = 17.636, $P < 0.01$). Also, a family member's influence in undertaking and taking CCS indicated a statistically significant result as shown by (Chi-square = 27.894, $P < 0.01$). These results suggest that the social and cultural factors significantly influenced the decision of the respondents in the study to undertake screening services for CC.

It can be concluded that socio-cultural factors should be considered in the effective public health intervention design for promoting CCS. Outreach measures should consider and respect religious, cultural, and family aspects to encourage engagement with the screening programs.

Comprehensive understanding and implication of these influences allow healthcare providers and policymakers to design culturally competent strategies that target diverse communities. These approaches, in turn, will improve screening program uptake and contribute to better CC outcomes. Future research can also focus on the cultural and family factors to refine these interventions and ensure equal accessibility of preventive healthcare to all individuals.

Table 4.9

Influence of Social cultural factors to CCS

Social Cultural Factors	Pearson (xi)	Chi-Square	P<0.05
Does Religion influence CCS?*	17.505		<0.01
Does Culture Influence CCS?*	17.636		<0.01
Does family member influence your decision to go for CCS?*	27.894		<0.01

Statistical testing by chi square for contingency presentations (P<0.05)

4.6 Health System Factors

4.6.1 Health System Characteristics of the Study population

The results indicate that 18.18% of the 285 respondents received sensitization about CC from the Ministry of Health. About 158 respondents, representing 44.8%, stated no CC sensitization activity in this area. The Ministry of Health and NGOs sensitized 17.54% of the total respondents. Also, the results below show the frequency of the study participants having information about CC from healthcare facilities or health workers. The majority of the respondents, 59.4% of 285, stated that they had no verbal information about CC from their healthcare providers, about 57.54% rarely heard verbal information about CC from their healthcare providers, 20.35% often heard verbal

information about CC from their healthcare providers, 15.44%. The respondents who heard about CC very usually were 4.56%. The respondents were asked about the health factors that encouraged them to undertake CCS 61.4% of the respondents indicated that access to screening facilities encourages them, 17.54% of the respondents stated health providers could enable them to undertake CCS, 15.79% indicated reduced cost could encourage them to undertake CCS. 5.26% indicated that the duration of CCS could enable them to be screened, when research participants were asked if there were CCS programs in their area, 53.33% of the study participants indicated that their regions lacked adequate and effective screening facilities for CC, and 46.67% of the study participants indicated that their area had active cases of CC.

Table 4.10*Health System Factors*

Characteristics	% (n=285)
Which among these have carried out sensitization activities to discuss CC in your area?	
None	44.8 (128)
Ministry of Health	18.2 (52)
Ministry of health, NGOs	17.5 (50)
Healthcare Providers	9.1 (26)
Hospitals	9.1 (26)
NGOs	0.7 (2)
How often do you hear of CC from healthcare facilities or health workers?	
Never	59.4 (170)
Rarely	20.3 (58)
Often	15.4 (44)
Very Often	4.5 (13)
Which among these would encourage you to undergo CCS in the future?	
Access to screening facilities	61.40 (175)
Health provider	17.54 (50)
Reduced cost	15.79 (45)
Duration of screening	5.26 (15)
Are There any CCS programs in your area?	
No	53.33 (152)
Yes	46.67 (133)

4.6.2 Health System and CCS correlation

The correlation matrix between health system-related aspects and screening for CCS shows the extent to which the various dimensions are related to the likelihood that an individual will undergo CCS. The outcome of the study showed that there is a moderately positive correlation of 0.414 between CCSs being present in the area and CCS, which implies that the presence of CCS programs in the region is enhances the potential for seeking screening services for CC. Sensitization activities that discuss CC in the area have a moderate positive relationship of 0.224 with CCS. There is also a weak positive relationship of 0.140 between health workers and facilities in the regions talking about CC and the chance that one is screened for the disease. The correlation between factors that would encourage future screening and the likelihood that an individual will be screened is indicated by a negative correlation, which is indicated by the correlation score of - 0.050. In conclusion, the results above highlight that system-related factors may help influence CCS.

Table 4.11:*Correlation between Cervical Cancer Screening Uptake and Health System Factors*

Variable	1	2	3	4	5
1. Screened for Cervical Cancer (CC)	1				
2. Awareness of CCS Programs in Local Area	0.414	1			
3. Exposure to CCS Sensitization Activities	0.224		1		
4. Trust in Encouraging Institutions for Future CCS	-0.05			1	
5. Frequency of Hearing about CC from Health Workers	0.14				1

***Note:** CCS = Cervical Cancer Screening. Cell values represent Pearson correlation coefficients (r). Coefficients range from -1 to +1, where values closer to +1 indicate a strong positive relationship, values closer to -1 indicate a strong negative relationship, and values near 0 indicate no linear relationship.

4.6.3 Influence of Health System factors to CCS

The study findings point towards a positive association between CCS and the presence of programs to screen CC as indicated by (Chi-square = 49.172, $P < 0.01$). This result indicates that the availability of cervical screening programs can encourage individuals to undertake CCS. Also, the involvement of health providers in sensitization about CC indicated a significant relationship with CCS indicated by (Chi-square = 52.143, $P < 0.01$). These findings suggest that outreach and community engagement can influence CCS significantly. Further factors like access to screening

facilities, health provider recommendations, or reduced costs indicate statistical significance with CCS (Chi-square = 9.896, P = 0.019).

These results indicate that health system interventions, like improving accessibility, affordability, and awareness, can promote CCS. Both availability and access factors, like robust infrastructure and appropriate promotion measures, positively correlate with screening rates. Further efforts should focus on extensive capacity building, screening program expansion, and community outreach for timely identification and management of target lesions and cancer. Improving preventive healthcare utilization is valuable, as early detection reduces mortality rates.

Table 4.12

Influence of Health System factors to CCS

Health System Factors	Pearson Square (xi)	Chi- P<0.05
Are there CCS programs in your area?*	49.172	<0.01
Which among these encourages you to undergo CCS (Access to screening facilities, Health provider, or Reduced cost Duration of screening)*	9.896	0.019
Which Health provider carried cervical screening sensitization in your area?*	52.143	<0.01

Statistical testing by chi square for contingency presentations (P<0.05)

CHAPTER 5: CONCLUSION AND RECOMMENDATION

5.1 Summary of the Findings

This study examined the factors influencing cervical cancer screening uptake among women aged 25–49 years in Thika Subcounty. The findings highlighted the role of socio-demographic characteristics, cultural beliefs, family and peer influence, and health system factors in shaping screening behaviors. Each objective revealed specific barriers and enablers that affect women's decisions to undergo cervical cancer screening.

5.2 Discussion of findings

5.2.1 Influence of Socio-demographic factors

The study established that age, education, and marital status significantly influenced screening uptake. Women with higher levels of education were more likely to have undergone screening, consistent with findings by Li et al. (2020), who emphasized the role of education in promoting preventive health behaviors. These results suggest that education enhances awareness and understanding of cervical cancer risks and the benefits of early detection. However, younger women reported lower screening rates, which may be attributed to perceptions of low risk or competing life priorities.

5.2.2 Role of Cultural Beliefs and Norms

Cultural beliefs emerged as a moderate predictor of screening uptake. Women expressed concerns linked to modesty and the perceived appropriateness of discussing reproductive health, which created barriers to seeking care. This aligns with findings by Kahsay et al. (2022), who reported that sociocultural norms in Ethiopia discouraged women from participating in screening. Unlike

studies conducted in more urbanized contexts, where stigma is less pronounced, the Thika findings suggest that cultural norms remain a persistent barrier to screening.

5.2.3 Family and Peer Influence

Family and peer support played a strong role in healthcare-seeking behavior. Women who received encouragement from relatives or peers were more likely to undergo screening, supporting the observations of Khuzaiyah et al. (2023) and Ward et al. (2022). These findings reinforce Bandura's (1977) Social Learning Theory, as women modeled health-seeking behaviors observed in their immediate networks. Conversely, discouragement or negative experiences within family and peer circles contributed to avoidance of screening.

5.2.4 Health System Factors

Health system barriers such as long waiting times, limited screening centers, and negative staff attitudes were reported as major challenges in Thika Subcounty. These findings echo those of Arakelyan et al. (2021), who underscored the importance of trust in shaping healthcare decisions. Participants emphasized that unfriendly or dismissive staff discouraged them from returning for services. This indicates that beyond physical access, the quality of patient-provider interactions plays a central role in encouraging screening uptake.

5.3 Conclusion

The study concludes that cervical cancer screening uptake among women in Thika Subcounty is influenced by a combination of socio-demographic, cultural, social, and health system factors. Education emerged as a key enabler, while cultural beliefs and stigma remain significant barriers. Family and peer networks provided strong motivational support, underscoring the importance of social influence in health-seeking behavior. At the health system level, both structural challenges

and staff attitudes hindered screening participation. Overall, the findings highlight the need for multifaceted interventions that address both individual and systemic determinants of screening.

5.4 Recommendations

5.4.1 Policy Recommendations

- i. Develop targeted health education campaigns that address sociocultural barriers and emphasize the importance of early screening.
- ii. Integrate cervical cancer screening into community health strategies at the county level to increase accessibility in Thika Subcounty.
- iii. Institute policies promoting regular training of healthcare workers on respectful and culturally sensitive service delivery.

5.4.2 Practice Recommendations

- i. Strengthen community engagement by involving families and peer networks in awareness campaigns to normalize screening.
- ii. Expand mobile screening services to reach underserved populations and reduce geographic barriers.
- iii. Improve patient-provider communication through continuous professional development focused on empathy and trust-building.

5.4.3 Recommendations for Further Research

- Future studies should explore the role of male partners and family decision-making dynamics in influencing women's screening behavior.
- Longitudinal studies are needed to assess the effectiveness of community-based interventions in improving screening uptake.
- Comparative research across counties could provide insights into regional differences and inform national-level strategies.

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APPENDIX 1: CONSENT FORM

Title: Factors Influencing the Uptake of Cervical Cancer Screening Services Among Women Aged 25-49 in Thika Sub-County

Sponsor: Self

Principal Investigator: Fridah Nkatha Kathurima

Address: Kenya Methodist University, Nairobi Campus, P.O. Box 45240 – 00100, Nairobi, Kenya

1. Introduction

This form provides details about the study. Please read it carefully or have the researcher read it for you. By signing, you indicate your voluntary consent to participate. You will receive a copy of this form. Feel free to ask for clarification.

2. Purpose of the Research

This study explores factors affecting the uptake of cervical cancer screening services among women aged 25-49 in Thika Sub-County.

3. Research Overview

Cervical cancer causes high morbidity and mortality, especially in low- and middle-income countries. Although cervical cancer screening services are available in Kenya, uptake remains low. This study aims to understand the factors influencing participation and provide evidence for policy and advocacy.

4. Your Role

You will complete an online questionnaire via computer or phone, taking approximately 20 minutes. About 290 women will participate.

5. Risks

You may experience minor discomfort when discussing personal health experiences, but risks are minimal.

6. Benefits

There are no direct benefits, but your input may contribute to improving cervical cancer screening services.

7. Voluntary Participation

Participation is voluntary, and you may withdraw at any time without penalty.

8. Confidentiality

Your information will remain confidential. Only authorized Kenya Methodist University staff may access it for official purposes.

9. Compensation

There is no compensation for participation.

10. Leaving the Study

You may leave the study at any time. You may also be withdrawn if necessary for research integrity.

11. Questions or Concerns

For any questions, contact Fridah Nkatha at 0716807263

12. Your Rights as a Participant

If you have any questions about your rights as a research participant you may contact Fridah Nkatha, phone number: 0716807263 and IRB Kenya Methodist University, Nairobi Campus, P.O. Box, 45240 – 00100, Nairobi, Kenya .

Volunteer Agreement

I voluntarily agree to participate and understand that I may withdraw at any time.

Date: _____

Signature or Mark of Volunteer: _____

Witness Certification (if applicable)

I was present when this form was read, and the participant agreed to take part.

Date: _____

Signature of Witness: _____

Consent Administrator Certification

I confirm that I have explained the study, including benefits and risks, to the participant.

Date: _____

Signature of Person Obtaining Consent: _____

APPENDIX II: QUESTIONNAIRE

Dear respondent,

I am Fridah Nkatha, a Master of Public Health (MPH) student in the Public Health department of Kenya Methodist University, undertaking a study on factors associated with CCS uptake in Thika Sub-County. In identifying contributing factors, this study will be important in advising the actions of policy makers in the health sector and planners of vaccination programs. I hereby ask you to participate in a research study which involves answering questions on a questionnaire. Participation in the study is optional and you are free to opt out from the study at any point. No names should be written on the questionnaire, and the information you will give will be anonymous and confidential. I highly implore you to give information that is complete, correct and truthful to the best of your ability.

Study: To Explore the Factors Influencing the Uptake of CCSS Among Women Aged Between 25 And 49 Years in Thika Sub-County.

This questionnaire is to investigate the uptake CCS is influenced by various factors. Assistance with honest and accurate information will be much appreciated.

Fill in the questions and tick the boxes as appropriate.

SECTION A: Demographic Data

1. Age

☐ 25-30 years

☐ 30-35 years

☐ 35-40 years

☐ 40-45 years

☐ 45-49 years

☐ Above 49 years

2. Highest level of education?

☐ KCPE

☐ KCSE

☐ Vocational College

☐ First Degree Holder And Above

3. Religion

☐ Christian

☐ Muslim

☐ Hindu

☐ Others

4. Marital status

☐ Single

☐ Married

☐ Divorced

SECTION B: Knowledge level

5. Have you ever heard about cervical cancer?

☐ Yes

☐ No

6. Where did you first learn about cervical cancer?

☐ News Media (Television, Radio, Magazines)

☐ Postures, Brochures

- ☐ Family, Friends, Community members
- ☐ Health workers
- ☐ School
- ☐ Place of worship
- ☐ Others. Please Specify.....

7. Do you know how a person gets cervical cancer?

- ☐ Bel contact
- ☐ kissing
- ☐ Exposure to sun
- ☐ Mosquito bite
- ☐ Human Papilloma Virus(HPV)
- ☐ Bacterial infections
- ☐ Sexual Contact
- ☐ I don't know

8. In your opinion, what factors listed below are likely to put one at risk of getting cervical cancer/ cancer of the cervix? Select all that apply

- ☐ Smoking
- ☐ Family history of cervical cancer
- ☐ Beginning sexual activity before 18 years of age
- ☐ Multiple sexual partners
- ☐ Weak Immune system
- ☐ Not getting regular CCS
- ☐ Lack of HPV Vaccination

- ☐ Use of birth control
- ☐ Having many children
- ☐ Overweight
- ☐ Poor diet and nutrition
- ☐ Not sure

9. What cervical cancer treatments do you know of?

- ☐ Surgery
- ☐ Traditional Healing
- ☐ Radiotherapy
- ☐ Chemotherapy
- ☐ None of the above

10. What measures do you think one needs to take to protect themselves from getting cancer of the cervix?

- ☐ Regular Screening
- ☐ Safe Sex
- ☐ Avoiding smoking
- ☐ Healthy diet
- ☐ Not having many sexual partners
- ☐ I don't know

Perceived Risk

11. In the following section, select the best option

Multiple sexual partners may increase the risk for cervical cancer

- ☐ Strongly disagree

☐ Disagree

☐ Agree

☐ Strongly agree

A Family History of Cervical Cancer increases the risk for cervical cancer

☐ Strongly disagree

☐ Disagree

☐ Agree

☐ Strongly agree

I Believe that I am at risk of developing cervical cancer

☐ Strongly disagree

☐ Disagree

☐ Agree

☐ Strongly agree

Cervical cancer kills

☐ Strongly disagree

☐ Disagree

☐ Agree

☐ Strongly agree

I am more likely to participate in awareness campaigns because of my concerns about my cervical cancer risk

☐ Strongly disagree

☐ Disagree

☐ Agree

☐ Strongly agree

SECTION C: Uptake of CCSS

12. When was your last screening?

☐ Below 1 year

☐ 1-3 years

☐ 3-5 Years

☐ above 5 years

☐ I have never been screened

13. Reasons for not taking CCS? (Check all that apply)

☐ Lack of awareness about screening

☐ The health facility is far from where I live

☐ I went to the hospital and did not find any help

☐ I went to the hospital and there was long waiting time.

☐ The health workers are not friendly people

☐ The CCSservice was expensive

☐ My Culture does not allow one to go for screening

☐ My religion does not allow CCS

☐ Fear or anxiety about the screening process

SECTION D: Health System factors

14. Are there any CCSprograms in your area?

☐ Yes

☐ No

15. Which among these have carried out sensitization activities to discuss cervical cancer in your area?

☐ Ministry of Health

☐ Non-Governmental organizations

☐ Community health workers

☐ Hospitals

☐ Others

16. How often do you hear of cervical cancer from healthcare facilities or Healthcare workers?

☐ Very Often

☐ Often

☐ Rarely

☐ Never

17. Which among these would encourage you to undergo CCS in the future? (Check all that apply)

☐ Healthcare provider

☐ Access to screening facilities

☐ Reduced Cost

☐ Duration of screening

SECTION E: Sociocultural Factors

18. Does your religion influence CCS?

☐ Yes

☐ No

19. Does your culture influence CCS?

☐ Yes

☐ No

20. Do your family members influence CCS?

☐ Yes

☐ No

SECTION F: Economic Factors

21. I am Currently:

☐ Employed

☐ Self employed

☐ Unemployed

22. What is your average daily income?

☐ Below 1000

☐ Between 1000-2000

☐ Between 2000-5000

☐ above 5000

23. Cancer screening is:

☐ Cheap

☐ Affordable

☐ Expensive

APPENDIX III: ETHICAL CLEARANCE



KENYA METHODIST UNIVERSITY
P. O. BOX 267 MERU - 60200, KENYA FAX: 254-64-30162
TEL: 254-064-30301/31229/30367/31171 EMAIL: INFO@KEMU.AC.KE

September 29, 2023

KeMU/ISERC/PHT/04/2023

FRIDAH NKATHA KATHURIMA
PHT-3-2643-3/2021

Dear Fridah,

SUBJECT: FACTORS INFLUENCING THE UPTAKE OF CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED BETWEEN 25 AND 49 YEARS IN THIKA SUB-COUNTY

This is to inform you that Kenya Methodist University Institutional Scientific Ethics and Review Committee has reviewed and approved your research proposal. Your application approval number is KeMU/ISERC/PHT/04/2023. The approval period is 29th September, 2023 – 29th September, 2024.

This approval is subject to compliance with the following requirements:-

- I. Only approved documents including (informed consents, study instruments, MTA) will be used.
- II. All changes including (amendments, deviations, and violations) are submitted for review and approval by Kenya Methodist University Institutional Scientific Ethics and Review Committee.
- III. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to KeMU ISERC within 72 hours of notification.
- IV. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to KeMU ISERC within 72 hours.
- V. Clearance for export of biological specimens must be obtained from relevant institutions.

- VI. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- VII. Submission of an executive summary report within 90 days upon completion of the study to KeMU ISERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://oris.nacosti.go.ke> and also obtain other clearances needed.

Yours sincerely,



APPENDIX IV: Research Permit

 REPUBLIC OF KENYA National Commission for Science, Technology and Innovation Ref No: 175877	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION Date of Issue: 19/October/2023
RESEARCH LICENSE	
	
This is to Certify that Ms., Fridah Nkatha Kathurima of Kenya Methodist University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kiambu on the topic: FACTORS INFLUENCING THE UPTAKE OF CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED BETWEEN 25 AND 49 YEARS IN THIKA SUB-COUNTY for the period ending : 19/October/2024.	
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