UPTAKE OF CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED 25-49 YEARS; A CROSS-SECTIONAL STUDY AT KIDERA HC IV

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DECLARATION

I, **Gwokyalya Christine**, hereby declare that this is my original work, is not plagiarized, and has not been submitted to any other institution for any award.

Signed  **Date: 19/9/2024**

APPROVAL

The dissertation has been compiled and submitted with guidance and approval from my supervisor Reverend Evatt Mugarura.

Signed  **Date 16/09/2024**

Reverend Evatt Mugarura

Research supervisor

DEDICATION:

I, Gwokyalya Christine dedicate my research to my Late mother Agnes Naava Nabawanga, and my brothers Kaigwa Seith and Waligo Peter who have laboured so hard that I have reached this far in my life and studies. May God bless them for me.

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ACRONYMS

LMIC	Low Middle-Income Countries
CC	Cervical Cancer
CCS	Cervical Cancer Screen
HPV	Human Papillomavirus
WHO	World Health Organization
SDGs	Sustainable Development Goals
MoH	Ministry of Health
DALYs	Disability Adjusted Life Years
CDC	Center for Disease Control
SC	Sub- County

DEFINITION OF TERMS

OPERATIONAL DEFINITIONS

An operational definition entails how to measure or quantify a defined study variable.

Woman: A female in the age range of 25 to 49 years.

Cervical cancer screening Uptake: refers to one having to be checked for presence of the precancerous lesions of the cervix in a span of three years if falling in the age range for the population being studied.

CONCEPTUAL DEFINITION

A conceptual definition entails the meaning of the concept used in the study.

Cancer: Is a disease in which cells grow abnormally and divide without control and can invade nearby tissues.

Cervical Cancer: Is a type of cancer that occurs in the cells of the cervix.

Human Papiloma Virus Infection: Is an infection resulting into abnormal growth of tissues like warts.

VIA test: Is a test used to check any changes on the cervix.

Cervical cancer screening: Is a test used to screen for different types of cancer.

Screening: Is investigating for a disease or infection with or without symptoms.

ABSTRACT

Introduction: Cervical cancer has been noted as a major public health concern especially in developing countries. This indicates that there is need for more efforts in the developing countries like Uganda to prevent cervical cancer among women. Therefore, there is need to establish more evidence on the uptake of cervical screening uptake to facilitate the development of informed cervical prevention intervention with the country.

Objective of the study: This study aimed at determining uptake of cervical cancer screening services among women aged 25-49 years; across sectional study at Kidera HC IV.

Methodology: This study was conducted at a facility and used both qualitative and quantitative research methods. Quantitative data was collected through interviewer-administered questionnaires, while qualitative data was gathered through key informant interviews. The data was analyzed using descriptive statistics at the univariate analysis stage. The participants self-reported their uptake of cervical cancer screening services. Factors influencing the uptake of cervical cancer screening services among women aged 25-49 years were determined using binary logistic regression at the bi variate analysis stage. A multiple logistic regression model was then used to account for any confounding factors at the multivariate analysis stage. The qualitative data was analyzed using thematic analysis.

Results: The uptake of cervical cancer screening services among women aged 25-49 years was 60%, with 55% having been screened 2-3 years ago from the time of the study. Factors positively associated with uptake included being a Seventh-day Adventist (SDA), having a mother as the decision-maker at home, receiving quality services at the health facility, and having high knowledge about cervical cancer. However, having a business occupation was negatively associated with uptake ($P<0.005$). Challenges limiting access to screening services included inadequate skilled health workforce, shortages of medical supplies, lack of awareness, unwillingness to be screened, and poor community attitudes.

Conclusion: Though the uptake of cervical cancer among women aged 25-49 years was high, more interventions including sensitization and lobbying for medical supplies are needed to address most of the challenges that limit the uptake of cervical cancer screening services among women.

1 CHAPTER ONE: INTRODUCTION

1.1 Introduction and background

Cancer of the cervix uteri is the most common cancer among women worldwide. In 2022, there were an estimated 662,044 new cases and 348,709 deaths. There are significantly lower mortality rates of cervical cancer compared to its incidence with a ratio of mortality to incidence being 57% globally(GLOBOCAN, 2022).Human Papillomavirus (HPV) infections most commonly resolve on their own without symptoms. However, persistent infections can result in cervical cancer. Nearly 99 percent of HPV infections are associated to high-risk Human Papiloma Viruses (HPV), an extremely common virus transmitted through sexual contact (WHO, 2020a).

Cervical cancer has been identified as the fourth leading cause of malignancy occurring among women worldwide(GLOBOCAN, 2022). It is the most commonly diagnosed cancer in 23 countries and remains the leading cause of cancer deaths in 36 countries, the majority of which are in sub-Saharan Africa. In the same regard, the current estimates showed that new cases of the disease were 660,000, and 350,000 deaths in 2022, the highest rates of cervical cancer incidence and mortality occurred in low and middle income countries(WHO, 2024).

Similarly, cervical cancer is a significant public health issue, particularly in developing countries. The incidence of invasive cervical cancer in sub-Saharan Africa is one of the highest world over, with nearly 35 new cases per 100,000 women and 23 per 100,000 women dying from the disease annually (Seth Kwadjo Angmorterh, 2020). Within sub –Saharan Africa, the 2020 age adjusted incidence rate for cervical cancer was highest in eastern Africa where Uganda lies, estimated at 40 cases per 100,000 women-years (Lancet Global health, 2023). In Uganda, cervical cancer ranks as the first most frequent cancer among women with an estimation of 6,959 new cases and 4,607deaths annually (ICO/IARC HPV Information Centre 2023).

Dr. Tedros Adhanom Ghebreyesus, the Director-General of the World Health Organization (WHO), issued a call to action for the eradication of cervical cancer in light of these statistics. WHO launched the Global Strategy to accelerate the elimination of cervical cancer as a public health problem, with targets for 2030 in November 2020 (WHO, 2022a).

On addition, cervical cancer prevention has a major role in attaining the Sustainable Development Goals (SDGs) thus necessitating special attention to early identification and treatment of cervical cancer infections. It not only contributes to the attainment of the SDG for health and well-being (SDG 3), but also many others including SDGs 1, 2, 4, 5, 8 and 10 (WHO, 2022a).

Effective primary and secondary prevention approaches including HPV vaccination and screening, and treating precancerous lesions respectively aid in prevention of most cervical cancer cases. Early diagnosis of cervical cancer is effective with early detection and management. Late diagnosis is managed using appropriate treatment and palliative care (WHO, 2020a).

Cervical cancer screening has been listed as one of the three pillars requiring 70 percent of women being screened using a high-performance test by the age of 35 years; and again by 45 years of age. This was on addition to 90 percent of girls being vaccinated; and 90 percent of women being treated and managed for cancer (IARC, 2022). These goals are to eliminate cervical cancer as a public health problem for all countries, by reaching and maintaining an incidence rate of fewer than four new cases of cervical cancer per 100,000 women per year. Each country should attain the 90–70–90 targets by 2030 to achieve the elimination of cervical cancer by the end of this century (IARC, 2022).However, a study among developing countries enlisted persistently low uptake of cervical cancer screening services in LMIC(Catarino R, 2015). These results are consistent with WHO approximations where nearly 90 % of cervical cancer deaths result from poor access to prevention, screening, and treatment services(WHO., 2020).

Even though the age-standardized rates for the incidence, DALYs, and deaths of cervical cancer have significantly reduced worldwide from 2007 to 2017, cervical cancer remains a major public health concern. The incident rate, DALYs, and deaths have increased during this period. The challenge is more prevalent in low-middle-income settings, including Sub-Saharan Africa and East Asia. There is an urgent need to promote CCS in these regions.(Zhao M, 2021).

The global burden of cervical cancer is anticipated to continue rising, to almost 700,000 cases and 400,000 deaths in 2030, with analogous increases projected in future years (Ghebreyesus., 2019).

To avert the high burden of cervical cancer and achieve the WHO Global Strategy for the elimination of cervical cancer, it is important to prioritize cervical cancer screening which is one of the three pillars for elimination of the disease (CC)(Vaccarella). Prioritizing cervical cancer screening will also support achievement of target 3.4 of the UN Sustainable Development Goals (SDGs) through promoting reduction of premature mortality due to non-communicable diseases by 2030(SDSN, 2012). This research will thus assess uptake of cervical cancer screening among women aged 25-49 years; a cross-sectional study at Kidera HC-IV.

1.2 Problem statement

Uganda is ranked as one of the countries with the highest cervical cancer incidence rates worldwide registering over 54.8 per 100,000; and this is attributed to limited screening access and infrastructure(Bruni L and ICO/IARC, 2021). About 6,959 new cases and 4607 deaths of cervical cancer cases are diagnosed in Uganda annually as indicated by the estimations of 2020. Cervical cancer is noted as the leading cause of female cancers among women 15 to 44 years in Uganda(Bruni L and ICO/IARC, 2021).

The situation in Uganda indicates lack of organized population based cervical cancer screening programs with resultant limited access to cervical cancer screening services(MoH., 2010b).Due to limited access to CC prevention services, there has been a noted low uptake of cervical cancer screening in Eastern Uganda at 4.8 percent(Ndejjo R, 2016). These results are not any different from those from Central Uganda, a more developed region with seven percent CCS coverage (Twinomujuni C, 2015b). These findings are way below the Country's Strategic Plan target for CCS of at least 80 percent screening and treatment coverage for women aged between 25 to 49 years(MoH., 2010a).

At Rays of Hope Hospice Jinja, over 47% of the women enrolled in their palliative care program have cervical cancer (RHHJ 2024). The initiative for early detection and treatment of cervical cancer emphasizes the need to diagnose and treat women early to counteract this gross incidence rate.

Even with Uganda's Ministry of Health recommending a screening target of 80 percent for women aged 25–49 years, screening coverage persistently remains low even in the most developed region (Central Uganda) of the country(MoH., 2010b). It is against this background that this research

will aim at establishing the uptake of cervical cancer screening services among women aged 25-49 years at Kidera HC-IV since no study has been done to ascertain the uptake of cancer screening in Buyende district where Kidera HC IV is located, the findings of the study will guide in the development of evidence based interventions.

1.3 Objectives of the study

1.3.1 Main objective

This study aimed at determining the uptake of cervical cancer screening services among women aged 25-49 years; across-sectional study at Kidera HC IV.

1.3.2 Specific objectives

1. To determine the uptake of cervical cancer screening services among women aged 25-49 years at Kidera HC-IV.
2. To establish the determinants for the uptake of cervical cancer screening services among women aged 25-49 years at Kidera HC-IV.
3. To identify the challenges affecting the accessibility of cervical cancer screening services among women aged 25-49 years at Kidera HC IV.

1.4 Research Questions

1. What is the level of uptake for cervical cancer screening services among women aged 25-49 years at Kidera HC-IV?
2. What are the determinants of uptake of cervical cancer screening services among women aged 25-49 years at Kidera HC-IV?
3. What challenges affect the accessibility of cervical cancer screening services among women aged 25-49 years at Kidera HC-IV?

1.5 Scope of the study

The study will be conducted among women aged 25-49 years accessing care at Kidera HC-IV, in Buyende district. The study participants are expected to come from around Kidera sub-county, accessing health care at Kidera Health Center IV. Kidera is one of the six sub-counties; and relies on Kidera health center IV to address major referral cases while other cases are referred to Kamuli, yet access to health care is a major challenge with most sub-counties having more than 72 percent of their populations living more than 10 kilometers away from the nearest health center. According

to the 2014 National Housing Population Census, Buyende district had a population of up to 323,067 people spread across the six sub-counties(NPHC, 2017). Cervical cancer screening uptake means a woman falling in the age range of 25-49 years has had screening for cervical cancer at least once in the last five years as recommended by the World Health Organization(WHO, 2021). This study will thus aim at assessing the level and determinants of uptake of cervical cancer screening services among women aged 25-49 years at Kidera HC-IV in Buyende district as well as challenges that affect the accessibility of these services at Kidera HC-IV in Buyende district.

1.6 Justification

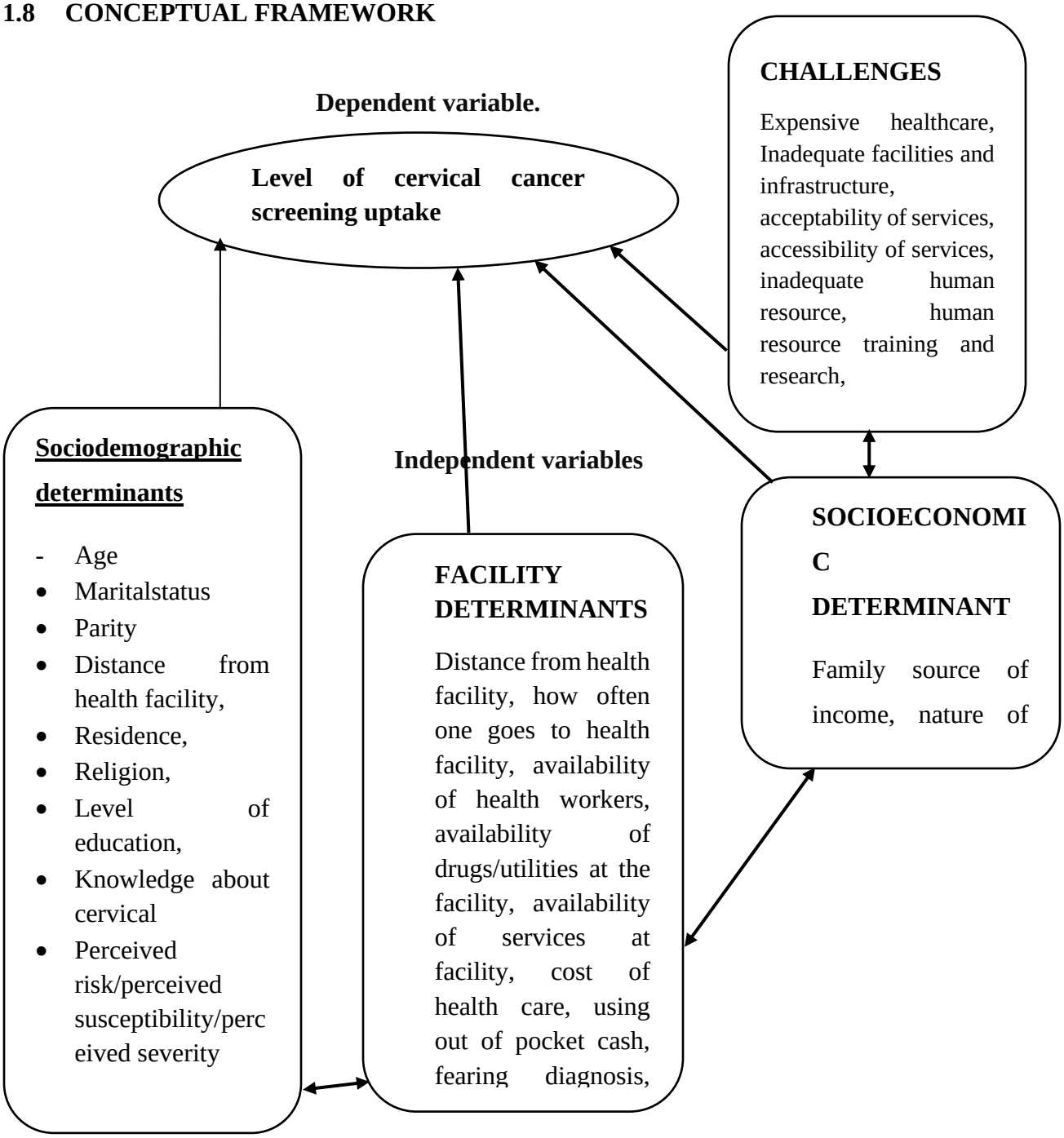
Recent studies in Eastern Uganda where Buyende district is found indicate low uptake of cervical cancer screening services, at a 4.8 percent rate (Ndejjo R, 2016). This uptake is way below the recommended 80% target screening coverage in Uganda for elimination of cervical cancer (MoH., 2010a). This research will thus not only aim at assessing the uptake and determinants of cervical cancer screening services among women aged 25-49 years but also challenges affecting the uptake of these services in Kidera HC IV. The study age group of 25-49 years is based on Uganda's Ministry of Health recommendation for cervical cancer screening that includes women aged 25–49 years (MoH., 2010b). Even with this wide age group consideration, cervical cancer screening rates remain very low, owing to persistently growing morbidity and mortality due to disease. This necessitates investigations of the determinants and challenges that affect cervical cancer screening in the country. This research will thus aim to assess the level of uptake, determinants, and challenges affecting the accessibility of cervical cancer screening services. The study will be carried out among women aged 25-49 years in support of Uganda's Ministry of Health target of 80 percent screening coverage for the elimination of cervical cancer in Uganda (MoH., 2010a).

1.7 Significance of the study

1. Findings from this study on determinants of cervical cancer screening services will be resourceful in informing Ministry of Health Key stakeholders for countrywide policy making and planning purposes. It will also inform the district health team of Buyende district about challenges, and major hindrances affecting the uptake of these services among women 25-49 years to facilitate improved service delivery.
2. Information on the level of uptake of cervical cancer screening services among women aged 25-49 will provide data to the DHO and Ministry of Health. This information will

be used for planning and policy formation to enhance service delivery.

1.8 CONCEPTUAL FRAMEWORK



1.8.1 Narrative

Figure 1: Conceptual framework

This conceptual frame work shows the relationship between independent and dependent variables of the level of uptake of cervical cancer screening services at Kidera HC-IV in Buyende District. It is conceptualized there is a low uptake of cervical cancer screening services is due to socioeconomic, socio-demographic, and facility determinants which are listed in the figure 1 above. It also shows possible challenges that affect uptake of cervical cancer screening owing to low screening uptake in the study area.

2 CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview of various studies related to the study area, highlighting the gaps in the existing literature. It covers the epidemiology and basic path physiology of cervical cancer (CC), cervical cancer screening and its adoption, factors influencing cervical cancer screening, and the obstacles to accessing cervical cancer screening services.

Cervical cancer screening aims at detecting and removing high-grade lesions by ablation or excision procedures, hence interrupting the progression to malignant disease in the screened population(Margaret Stanley, 2016). A report found that from 2007 to 2017, the rates for cervical cancer incidence, DALYs, and mortality have decreased in most regions globally. However, it was reported that CC remains a major public health concern considering the ultimate incident rates, DALYs, and deaths that have increased over the same period. The ordeal is more eminent in the LMICs from regions such as Oceania, Central and Eastern Sub-Saharan Africa, East Asia, and some countries, necessitating an urgent need to encourage Human Papiloma Virus vaccination in these regions(Zhao, 2021).

The World Health Organization (WHO) recommends using a screen-and-treat strategy as a method to decrease the incidence of cervical cancer. This strategy includes either screening with an HR-HPV test followed by visual inspection with acetic acid (VIA) and treatment with thermal ablation for women with an HR-HPV test and treatment for all HR-HPV positive cases(WHO, 2013).

2.2 Epidemiology

Although CC is highly preventable, 604,127 women were reportedly diagnosed with CC, while 341,831women died from the disease worldwide in the year 2020 (Bray F, 2020).

Regarding these statistics the global age-standardized incidence and mortality rates are 13.1 and 6.9 per 100,000 women respectively (ICO., 2019).

In LMICs, there are noted high incidence rates and high mortality rates resulting from CC, registering up to approximately 90 percent for both cases (WHO/IARC, 2022). On the contrary, CC is nearly preventable and rates have significantly dropped in developed countries. This is due to increased use of the Pap test to detect early pre-cancerous lesions thus necessitating early treatment (Society, 2022).

Cervical cancer has been noted as the leading cause of morbidity and mortality among women in LMICs, and the leading cause of cancer-related morbidity and mortality in East Africa, where incident rates stand at 40 cases per 100,000 of the population (Sung H, 2021).

In Uganda, cervical cancer is reported as the leading cancer affecting women (Bruni L and ICO/IARC, 2021). Current approximations indicate 6959 women are diagnosed with cervical cancer; while and 4607 dying from the disease annually in Uganda (ICO/IARC, 2021). In Kampala, it accounts for nearly 40 percent of all cancers reported in the Kampala Cancer Registry (KCR) (Wabinga HR, 2012).

Around 12 percent of HPV acute infections turn out to be persistent and precancerous lesions or invasive cervical cancer over time with late diagnosis and treatment (Adebamowo SN, 2017).

2.3 Etiology of cervical cancer

Persistent infections with high-risk strains of HPV most predominantly HPV 16 and 18 are the major causative agents of cervical cancer, mainly being offset by sexual contact (IARC, 2022). These can be prevented through vaccination against high-risk HPV types, and screening, early diagnosis and treatment to detect signs of disease early enough. This implies that CC should otherwise be the most preventable and treatable forms of cancer (IARC, 2022). This is very likely in highly developed countries that have embraced routine screening tests unlike the low uptake of CCS in LMICs (Society, 2022).

Other major risk factors include the use of tobacco, and lack of screening and adequate treatment of precancerous lesions, while human immunodeficiency virus (HIV) co infection quicken progression of disease towards cancer (WHO, 2011).

2.4 Diagnosis of cervical cancer

Diagnosis of cervical cancer is majorly through screening and intends to detect and remove high-grade lesions using ablation or excision procedures, to interrupt progression of the lesions to malignant disease in the screened population (Margaret Stanley, 2016).

Cervical cancer is thus a largely preventable disease, although it is largely undiagnosed till it becomes invasive. It ranks the fourth leading cause of death across the globe (Ginsburg O, 2017); with LMICs facing the highest burden of disease especially SSA (Bruni L and ICO/IARC, 2021).

It is thus important to gear efforts toward establishing determinants and challenges in cervical screening services.

Adult women are recommended to have periodic cervical cancer screening for early diagnosis. Screening aims to detect precancerous lesions or abnormal cells in the cervix to enable early treatment. These lesions if not treated can progress to cervical cancer. Screening and treatment of precancerous lesions is also referred to as secondary prevention. This is the second pillar of the recommended comprehensive approach to cervical cancer management by WHO. Early diagnosis facilitates acquiring early treatment of these lesions thus making the condition preventable(WHO, 2022b).

Regions that have embraced routine cervical cancer screening notably in the developed world have significantly reduced death rate with increased use of the Pap test. The test identifies changes in the cervix before acquiring cancer develops; and enable early cancer diagnosis at a stage when it can still be treated easily (Society, 2022).

The HPV test has been approved as another screening test for cervical cancer in the recent years because nearly all cervical cancers result from the HPV (Human Papilloma Virus). The test rules out infection caused by high-risk HPV types that are more likely to result from pre-cancers and cancers of the cervix. The test may be used alone as a primary test or together with the Pap test as a co-test (ACS, 2020).

Cervical cancer screening should start at the age of 21, regardless of the age of sexual initiation or other risk factors. Women who have been vaccinated against HPV should follow the same screening recommendations, as the long-term effectiveness of the vaccine is uncertain. For women aged 21 to 29, cervical cytology testing should be done every three years, without co-testing. For women aged 30 to 65, co-testing with cytology and HPV testing is recommended every five years, although screening with cytology alone every three years is also acceptable. (Fowler., 2020).

Whereas widespread cytology-based screening in developed countries has contributed to reduced incidence and mortality due to cervical cancer, LMICs have not realized similar improvement due to low screening rates, yet, incidence and mortality continueto rise. It is thus important to prioritize

cervical cancer screening for early diagnosis and prevention of cervical cancer in Uganda. This is because CC is largely preventable, yet it has been noted as the most frequent cause of death due to cancer amongwomen in the country (Bruni L, 2016). Basedon the above reason this study is being carried out to ascertain the determinants of low uptake of screening services in Eastern Uganda-across section study at Kidera HC IV.

2.5 Symptoms of cervical cancer

The symptoms of cervical cancer (CC) are crucial for identifying the disease. These symptoms include irregular bleeding between periods, abnormal vaginal bleeding after sexual intercourse, pelvic pain, fatigue, weight loss, loss of appetite, vaginal discomfort or unusual discharge, and swelling in one leg. The symptoms become more severe in the later stages of the disease.

2.6 Cervical cancer screening uptake

Even though Uganda's cervical cancer age-standardized incidence rate is four times the global estimate, screening rates remain low even in the most developed parts of the country (Bray F, 2018). Uganda's Ministry ofHealth recommends cervical cancer screening for all women aged 25–49 years to facilitate early diagnosis and treatment of precancerous lesions and early treatment of invasive disease (MoH., 2010b).

Cytology-based screening has greatly improved health outcomes in high-income countries. However, low uptake of CCS services in low- and middle-income countries (LMICs) has resulted in high rates of illness and death. This is particularly evident in Uganda, where these statistics continue to increase. This necessitates the need to study key determinants and challenges that affect the uptake of cervical cancer screening in the country if service delivery and health performance areto be improved(Bruni L, 2016).

2.7 Determinants of cervical cancer screening among women aged 25-49 years.

In developed regions where routine cervical cancer screening has largely been embraced, there has been a significant reduction in incidence, morbidity and mortality due to CC (ACS, 2020). This is however not the case in developing countries where CCS is still very low due to several factors. CC rates in these countries continue to rise, and in the case of Uganda, cervical cancer is notably then leading cancer affecting women, with the current statistics indicating that 6,959 women are diagnosed with cervical cancer; while 4,607 die from the disease annually(Bruni L and ICO/IARC, 2021).

Basing on the behavioral model for vulnerable populations, some of the factors that determine health care utilization for vulnerable populations include risk factors like age, education, and acculturation; enabling factors like insurance status and family income whereas the need factors include self-perception of health conditions (Gelberg L, 2000). The determinants of cervical cancer screening uptake are discussed in detail below;

2.7.1 Socioeconomic determinants

Knowledge about CCS and education status

In Ethiopia, a study about knowledge and attitudes towards CCS showed a strong association between knowledge about CC and uptake of CCS services. Women who knew CC were more likely to take up CCS unlike those who were not knowledgeable about CC. An individual's education status also affects his/her knowledge and attitude. The study concluded that Providing information, education, and counseling regarding screening services are a necessity in addressing the knowledge gap to improve attitude towards screening and its uptake for better outcomes(Geremew AB, 2018). Women who report "no consequences" of not having a Pap smear are noted to be less likely to be screened hence increasing rates of morbidity and mortality due to cervical cancer. It is therefore important to educate the general population about CCS if its uptake is to be improved (Ncube B, 2015). Therefore, this study will help to ascertain whether there is a strong association between Knowledge about CC and uptake of CCS services among women aged 25-49 years at Kidera HC IV where no study has been done to ascertain this hence addressing the problem of low uptake of CCS services.

A similar study in Masaka, a district in Uganda recommended that health education should be emphasized to provide information and improve women's attitudes and trust towards cervical cancer screening. This would help to allay anxiety and individual fears that women have towards screening for cervical cancer(Twinomujuni C, 2015a).

Source of employment

Uptake of CCS services by women is also determined by the source of employment, where women in the private setting are more likely to take the test. The private sector plays an active and essential

role in the financing and provision of health services. Various private settings also provide health insurance for their employees through self-insurance or pay for their employees' private health insurance hence making them able to afford health care and CCS services(WHO., 2006). This study will help to ascertain whether the source of employment has an association on the uptake of screening services in the Eastern region thus at Kidera HC IV.

Additionally, healthcare centers invest heavily inhealthcare and planning of preventive measures as governmental and military healthcare sectors. For private facilities that entirely depend on profits to offer health services, health care tends to be very expensive making its access even harder. This makes it difficult for women within their catchment areas fail access expensive healthcare. This thus limits uptake of CCS services hence contributing to continued rise in cases of CC incidents, morbidity and mortality(WHO., 2006). This study will enable us to ascertain whether the source of health care services has a strong association on the up take of screening services in Eastern region thus in Kidera HC IV where no study has been done to determine the cause of the low uptake of screening services.

2.7.2 Sociodemographic determinants

Marital status and years of marriage

A study among Jordanian women indicated that the number of years of a woman has been married determine the possibility of taking up CCS. It showed that increased years of marriage were strongly associated with accepting cancer screening increased. It was however unclear if the number of years of marriage strongly influenced uptake of the service due to limited studies on the reproductive characteristics of women globally. The study recommended the need for further studies on the association between years of marriage and cervical cancer screening practices of women(Suzanne Q. Al-amro, 2020). Similarly, a study done in Jamaica showed that the marital status of a woman was significant in the uptake of the Pap smear over three years; with women who were married being more likely to uptake the test compared to those who were unmarried(Ncube B, 2015).

Parity

In a study conducted in Jamaica, a strong connection was found between the number of children a woman had and her likelihood of getting screened for cervical cancer. Women with children were more likely to have undergone screening at least once compared to those who had never had children. This could be because these women had more opportunities to interact with healthcare professionals at maternal, family planning, obstetric, and gynecological clinics.(Ncube B, 2015).

There is no study carried out in Eastern Uganda particularly Kidera to determine whether there is an association between marital status, years of marriage, and uptake of CCS therefore this study will help ascertain whether there is an association.

Peer support

The study also found that peer support plays a crucial role in encouraging women to undergo cervical cancer screening. It revealed that women who knew someone with cervical cancer were more likely to have been screened within the past year. This could probably be due to being able to access information regarding the disease and its prevention. It thus recommended the need to promote peer support strategies in the screening programs to increase knowledge and uptake of cervical cancer screening(Ncube B, 2015). Therefore, the above study will help to ascertain whether peer support influencesthe uptake of CCS in the Eastern region particularly Kidera

Perceived risk and perceived susceptibility

Studies also indicate that women perception about the risk of developing cervical cancer influences their choice of taking up CCS services. Women who highly perceived risk of developing cervical cancer during the childbearing age, and that susceptibility increases with increasing parity are more likely to take up screening. CCS uptake is thus much more likely to be influenced by one's beliefs about the risk of developing the disease. These beliefs however do not reinforce the uptake of screening services(Suzanne Q. Al-amro, 2020).

The study also found that many women were aware of the severity of cervical cancer and the possibility of a cure if detected early. However, these perceptions did not influence uptake of the

CCS services. The study thus recommended the need to explore whether other factors affect the decision to comply with the screening recommendation(Suzanne Q. Al-amro, 2020). This study was however done in a different setting elsewhere and may not apply in the Ugandan setting. It is thus necessary that similar research is done in Uganda to ascertain if these findings also apply to women in the Ugandan setting. This will facilitate better strategic planning to improve screening rates and health performance in the country.

In Eastern Uganda, a study showed that even with general knowledge about cervical cancer prevention, specific knowledge about screening was low. This is coupled with undesirable perceptions and beliefs regarding cervical cancer among respondents. There is thus need for more education campaigns to bridge the knowledge gap and scale up cervical cancer screening services among women to increase service uptake(Mukama T, 2017).

Age and Awareness

A study carried out in Nepal found that the uptake of CCS services is determined by age and awareness about the service. It recommended the need for creating awareness about the service if its uptake is to be improved to facilitate better health outcomes in the population (Ghimire B, 2021). Similar to Uganda, Nepal is among the developing countries in the world although these results may not be representative to the Ugandan population, due to differences in the individual characteristics and environment. This research will thus seek to assess determinants of CCS services in Kidera HC IV, in Buyende district to assess uptake, determinants and challenges CCS uptake. The findings of the study will inform district health team, ministry of health and public health departments to facilitate planning better approaches to improve uptake of the service for improved health performance(Ghimire B, 2021).

2.7.3 Facility determinants

A weak health system, poorly equipped health facilities, shortage of trained personnel, out of pocket cost to access screening and the absence of population-based cervical cancer prevention programs limit women’s abilities in taking up cervical cancer screening services(Adedimeji, 2021).

Infrastructure and regional cancer centers

In Uganda, infrastructure challenges have slowed CCS service uptake, but regional centers for cervical cancer screening and treatment should also be considered in public health efforts against cancer.Accessibility of these services and cancer centers is vital in promoting the improvement of CCS services and reduction of incidence, morbidity and mortality due to disease (Nakisige, 2017). This research will enable us to assess the functionality of the screening unit of Kidera HC IV.

Strategies to mitigate Cervical cancer.

The WHO's new guideline aims to eliminate cervical cancer as a public health problem by maintaining an incidence rate of under 4 new cases per 100,000 women annually.As a way to achieve that goal, three key pillars have been acquired, each with its corresponding targets. The pillars comprise the 90–70–90 targets that all countries should attain by the year 2030 (WHO/IARC, 2022)toget on the path towards eliminating cervical cancer by the end of this century. These targets correspond to 90 percent HPV vaccination coverage for girls by the age of 15 years, 70 percent screening coverage for women screened using a high-performance test by 35 years of age, and again by the age of 45 years, and treatment of up to 90 percent for women found with precancerous lesions, and 90 percent of treatment coverage for all women with invasive cancer (WHO/IARC, 2022).

Strengthening government-led population-based programs and policy initiatives aimed at preventing cervical cancer, improving access to care and treatment for women at risk and implementing structural reforms to ensure women have access to appropriate, cost-effective and user-friendly options with strong health system capacity for cervical cancer prevention is essential in addition to supporting non-governmental actors in providing care to women most at risk, for improvement of cervical cancer screening uptake (Adedimeji, 2021).

2.8 Challenges of cervical cancer

According to the WHO, cervical dysplasia and early cancers will continue to be common but treatable through cervical cancer screening. Effective management of CCS is largely possible only if services are reliably accessible, with effective uptake and effective treatment of individuals found positive (WHO., 2014). It is therefore essential to assess the determinants and challenges affecting accessibility of cervical cancer screening services among women for proper planning and

setting proper strategies to address major challenges hindering effective uptake of cervical screening services.

Cytology-based screening is however not practical to be used widely in sub-Saharan Africa as its not cost effective, less sensitive, and needs efficient laboratory resources and well-trained technicians with proper follow up of complex follow-up protocols (MoH., 2010b).

Whereas cervical cancer screening services have been availed in major health facilities in Uganda and are in support by the current guidelines of Ministry of Health, Uganda continues to face challenges with infrastructure and this has greatly affected the uptake of CCS services. Accessibility of these services and regional cancer centers promotes improvement of CCS services and reduction of incidence, morbidity and mortality due to disease (Nakisige, 2017).

While promoting cervical screening services is essential, scarcity of evidence on the predictors of cervical cancer screening in the rural setting is evident, yet data from the urban setting may not be representative in hard-to-reach regions of the country. Understanding determinants and challenges of cervical cancer screening services in rural settings is however essential for planning proper strategies for delivery of services in similar settings (Alone Isabirye 2020). This research will thus aim at assessing determinants of low uptake of cervical cancer screening services among women aged 25-49 years in Eastern region- Kidera HC IV.

Gap in Literature

There is urgent need to address the high incidence of cervical cancer that has been noted at 54.8 per 100,000 Uganda; noting it as one of the countries with the highest cervical cancer incidence rates worldwide (Bruni L and ICO/IARC, 2021). It has also been noted that cervical cancer is leading cause of female cancers among women 15 to 44 years in Uganda with projections at 6400 new cervical cancer cases and 4300 deaths annually by 2025 in Uganda (Bruni L and ICO/IARC, 2021).Projections indicate (Bruni L, 2016). Basing on this literature, this research will determine the uptake of cervical cancer screening among women aged 25-49 years at Kidera HC IV.

2.9 Conclusion

Efforts to prevent cervical cancer should be prioritized in order to enable early diagnosis and treatment, preventing the progression of precancerous lesions to advanced cervical cancer. This

will significantly reduce the incidence of cervical cancer, as well as the associated morbidity and mortality. Assessing determinants of low uptake of screening services among women in Eastern region- Kidera HC IV is urgent as a way to establish factors and challenges leading to the low uptake of this service, being one of the three major pillars of reducing the burden of cervical cancer in the country. This research will thus aim at assessing up take of cervical cancer screening services among women aged 25-49 years at Kidera HC-IV.

3 CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter outlines the designs and procedures that were followed to obtain and analyze data required to achieve the research objective.

3.2 Study site/Area

This study was done in Kidera HC IV, Buyende district. The health center is a government-owned facility, located in Kidera sub-county, in Budiope West County. It is the only HC IV which also happens to be the Health Sub District (HSD). It serves as the major referral center in the district. The facility has a staffing level of 41 staff out of 48 that it requires, giving it a staffing of 85.4%, with 11 housing units. The health centre IV is over whelmed with clients from the four lower local governments of Bukungu, Nkondo, Kidera and Buyende Town Council. Health sector partners contributing towards reproductive health in the Buyende district where Kidera HC IV is found include; Marie Stopes Uganda and Reproductive Health Uganda (UBOS, 2019). Kidera sub-county (SC) is located in Budiope West which covers 876 sq. km. The SC has five parishes/wards and 38 LC1s/villages. Kidera local government has approximately 1,902 households, with a population of 9,456 people (4,622 males and 4,834 females), and an average household size of 5.1(Zhu N, 2019).

3.3 Study design

This was a facility-based cross-sectional study that employed both quantitative and qualitative methods. The quantitative method was used to assess the level of uptake of cervical cancer screening services, and determinants of uptake of cervical cancer screening services among women aged 25-49 years at Kidera HC-IV in Buyende district. Qualitative method was used to assess the challenges affecting accessibility of cervical cancer screening services among women aged 25-49 years at Kidera HC-IV in Buyende district.

3.4 Study population

For the quantitative arm, the study focused on women aged 25-49 years, who accessed health services at Kidera HC-IV in Buyende district. Women aged 25-49 years who made informed consent to take part in the study were the respondents. The qualitative arm included key informants and they included health workers working at the antenatal clinic (ANC), family planning and maternity units of the hospital.

3.5 Eligibility criteria

3.5.1 Inclusion criteria

Women aged 25-49 years accessing medical services at Kidera HC-IV, and have made informed consent were included in this study.

3.5.2 Exclusion criteria

The study excluded women who were too ill and weak to participate. It also excluded who did not consent to take part in the survey yet they qualified to take part in the study.

3.6 Sampling.

Kidera HC-IV was purposively chosen being of the highest level in the district and being a health sub-district. Quantitative data was collected from selected participants who were drawn from the outpatient department (OPD), ANC clinic, family planning clinic and inpatient maternity ward using proportionate sampling with an aim of getting a representative number of participants from each department to take part in the study. Systematic random sampling was used to select study participants; who were selected using a calculated interval from the different identified units.

For qualitative data, key informants were selected using purposive sampling, and their selection was based on their experience working in the maternal-child health clinic. A total of five key informants found available at the identified units were interviewed after obtaining their consent.

3.7 Sample size determination

Sample size was determined using the Cochrane formulae. The Cochrane formula is considered as an ideal method to calculate the sample size of a big population.

$$N = \frac{Z^2 P(1-P)}{d^2}$$

Where n=sample size required, z= 95% confidence interval, p= proportion (11.8%) and d was margin of error (5%)

$$N = \frac{1.96^2 0.118(1-0.118)}{0.05^2}$$

N= 160

When a 15% non-response rate was added,

N= 184 When a design effect of 2 was used, total sample size came to 368(Lai and Kwok, 2015)

Thus, N was **368**

For the qualitative arm, the sample size was determined by the experience of working in the Maternal and Child health department and 5 participants qualified.

3.8 Study variables

3.8.1 Dependent variable

The dependent variable was uptake of cervical cancer screening services among women aged 25-49 years.

3.9 Independent variables

Socio-demographic characteristics include age, marital status, parity, distance from health facility, residence, religion, level of education, knowledge about cervical cancer, and perceived risk/perceived susceptibility/perceived severity.

Socio-economic determinants which include; source of income

Facility factors which include; how often one goes to health facility, availability of health workers, availability of drugs/utilities at the facility, availability of services at facility, cost of health care and fearing diagnosis.

CHALLENGES; such as Expensive healthcare, Inadequate facilities and infrastructure, acceptability of services, accessibility of services, inadequate human resource, human resource training and research,

3.10 Data collection tools and procedures

Quantitative data was collected from women aged 25-49 years using an interviewer-administered questionnaire from women who consented to take part in the study. Printed hard copies of Lusoga questionnaires were used collect quantitative data. It comprised details of socio-demographics, socio-economic, and facility determinants. The informed consent form was obtained from each study participant before the questionnaire was administered by the researcher and research assistants. Interviews for each participant took 20-25 minutes and were carried out from different departments of the health centre. The filled questionnaires were stored in locker to avoid un authorized access to the filled questionnaires.

A key informant interview guide was used to collect qualitative data from the selected key informants. The researcher collected the qualitative data where the interviews were audio recoded to ensure that all data is captured during the interviews. The audios were labeled using unique IDs and stored in the computers with a password to promote confidentiality and anonymity

3.11 Data Management Plan

3.11.1 Data management

Quantitative data was entered using Epi data software. A data entry form was designed on the Epi_data software and pretested to ensure that the data entry form to captures all data that was entered into the questionnaires. The entered data was then exported to Excel format which can be imported to any statistical software for analysis. The quantitative dataset in excel format was saved in a computer with password to prevent unauthorized access. On the other hand, qualitative audios were transcribed and the transcripts were labeled using the respective IDs of their audios. After transcription, transcripts were saved in the computer with a password to avoid authored access.

3.11.2 Data analysis

Quantitative data

The quantitative data in the Excel format was imported into Stata 14 for data cleaning and statistical analysis. Descriptive statistics such frequencies, percentages, mean and standard deviation ware used to summarize data inform of tables and graphs at univariate level of analysis.

Overall knowledge of participants was established by scoring the seven parameters that were used to measure the knowledge of the participants about cervical cancer. These parameters included a) being aware of cervical cancer; b) being aware the cause of cervical cancer; c) being aware of how cervical cancer can be detected; d) Importance of early detection of the cervical cancer; e) Pap smear or VIA test; f) being aware of being aware of when to conduct Pap smear or VIA test; and g) and being aware of the purpose of Pap smear or VIA test. A score of 1 was given to a correct response while a score of zero (Ghimire B) was given wrong response. The total score was then established by adding individual scored for each parameter that was used to assess knowledge. A cut of point of 4 out 7 was used to establish the level of knowledge about survival cancer among participants. A score of 4/7 and above was considered as high knowledge wile a score of less than 4/7 was considered as low knowledge about cervical cancer. This analysis was informed by the previous studies that assessed knowledge of the study participants (Endalew et al., 2020).

At Bivariate level, binary logistic regression was used to establish factors that determined the uptake of cervical cancer screening services. A factor was considered to be significant when the P-value is less 0.05 ($P<0.05$) at 95% confidence level. The extent to which independent variables

determined the uptake of cervical cancer services among women aged 25-49 years was established using odd ratios. The odds ratios less than 1 indicated that the independent factor negatively determined the uptake of cervical cancer and the odds rations more than one indicated that the independent variable positively determined the uptake of cervical screening services.

Finally, at multivariate level, all variables with a p value less than 0.25 were fed into a multiple logistic model to adjust for the confounding factors.

Qualitative data

For qualitative data, I was able to analyze it in presence of a qualitative data analyst. Atlas.ti 6 software was used to analyze qualitative data. Interviews were recorded and transcribed. Transcripts were sorted and checked for spelling, consistence and incompleteness. The transcripts were then coded and grouped to form themes for Thematic analysis. Qualitative data was presented in form of quotes and the quotes were backed up by a narrative interpreting the qualitative data.

3.12 Quality control

3.12.1 Pretesting

The data collection tools were pre-tested in a health facility in Buyende district, which was not a study area. This aided in identifying the potential errors and inconsistencies in the data collection tool.

3.12.2 Training of research Assistants

Two research assistants were recruited and trained for data collection. They were closely monitored during the data collection process to ensure they collect quality data. The training carried out include Epicollect5 (a mobile data collecting application), study objectives, handling of study participants, probing skills, ethical guidelines on of handling research participants.

3.12.3 Ethical consideration

Ethical Clearance was sought from the Research and Ethics committee of Uganda Christian University. Permission was sought from the district health department of Buyende district and the administration of Kidera HC-IV prior to the study. Voluntary informed consent was obtained from the respondents prior to their participation in the study. Research assistants were introduced to the

unit In-charges who permitted them to start collecting data.

Privacy and anonymity of the study participants was assured by recording unique numbers as their IDs, and then interviewing the participant in an isolated place to ensure their comfort and confidentiality. Data collected was stored in a folder encrypted with a password to ensure confidentiality, and to avoid any form of unauthorized access. Permission was sought from the hospital management prior to collection of data from health workers (key informants) in the health facility. The collected data will be destroyed after a period of five years.

3.13 Dissemination of the results.

This data will be disseminated to;

1. Health Department of Buyende district.
2. The administration of Kidera HC-IV.
3. Department of Public health, Nursing and Midwifery at Uganda Christian University.
4. Uganda Christian University Library.
5. The results will be shared with the scientific community by publishing in journals.

4 CHAPTER FOUR: RESULTS

4.1 Participants' Demographics

Table 1 below shows that out of the 365 participants who were interviewed in this study, 40.0% were aged 20-29 years (mean age = 34.1, SD = 7.59) and 74.3% had 5 children and below (mean =4.1, SD=2.3). About 56.8% (n=365) of the study participants were married and 38.6% (n=365) had attained primary level of education.

Table 1 Participants' Demographics

Variable	**Frequency (n=365)**	**Percentage**
Age group		
20-29	146	40.00
30-39	129	35.34
40-49	90	24.66
Parity		
<=5	271	74.25
>5	94	25.75
Religion		
Anglican	76	20.82
Catholic	95	26.03
Muslim	74	20.27
SDA	65	17.81
Born Again	55	15.07
Marital status		
Singl	34	9.32
Married	207	56.71
Widowed	45	12.33
Divorced/Separated	69	18.90
Concubine	10	2.74
Highest level of education		
Uneducated	119	32.60
Primary	141	38.63
UCE	58	15.89
UACE	23	6.30
Vocational Institute	24	6.58
Occupation		
Government employee	43	11.78
Private employee	79	21.64
Housewife	93	25.48
Student	31	8.49
Business person	119	32.60
Decision maker at home		
Parents in law	54	14.79

Father	89	24.38
Mother	76	20.82
Husband and Wife jointly	146	40.00

4.2 Health system factors

Table 2 below shows that 78.1% (n=365) of the participants were handled well at night about 75.1% (n=365) had gotten health services when they visited the health facility. About 41.9% (n=365) of the participants resided 4-6km away from the health facility and 73.2% (n=365) had reported receiving quality care from the health facility

Table 2:Health system factors

Variable	Frequency (n=365)	Percentage
Women handled well at night		
No	80	21.92
Yes	285	78.08
Got health service when she visited the health facility		
No	91	24.93
Yes	274	75.07
Distance between residence and health facility (Solanke et al.)		
<1km	35	9.59
1-3km	106	29.04tabe
4-6km	153	41.92
7-9km	71	19.45
Quality care at the health facility		
No	98	26.85
Yes	267	73.15
Health system protocols are favourable		
No	95	26.03
Yes	270	73.97

4.3 Cervical cancer knowledge

Table 3 below shows that about 57.8% (n=365) of the participants were aware about cervical cancer and 55.6% (n=365) knew that cervical cancer is caused by HPV. About 58.1% (n=365) reported that Early detection of cervical cancer makes it curable while 55.3% (n=365) noted that they know the purpose of Papsmear or VIA test.

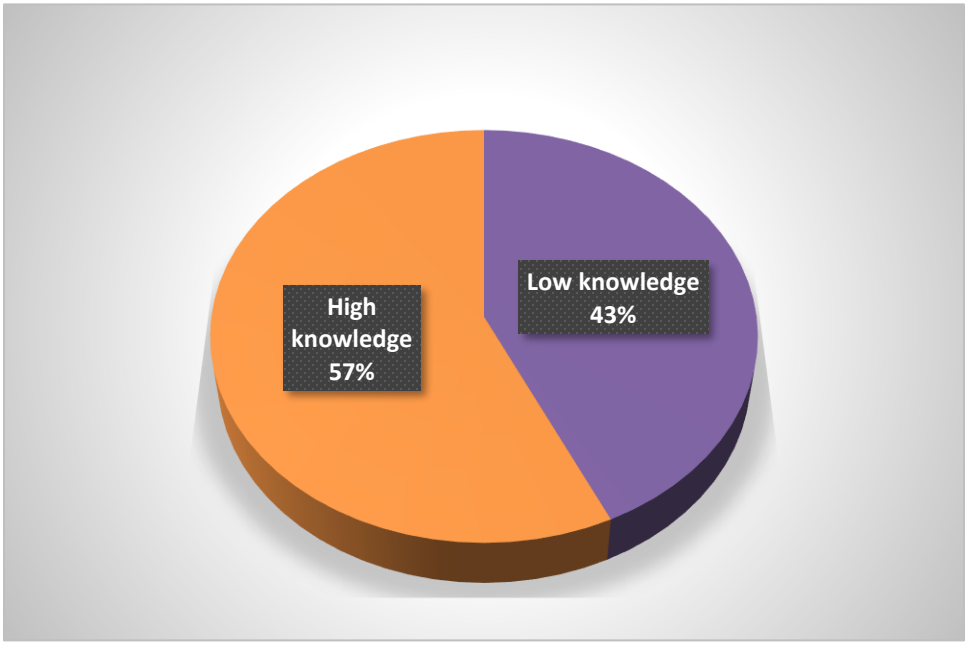
Table 3: Cervical cancer screening knowledge

Variable	Frequency (n=365)	Percentage
Ever heard of cervical cancer		
No	154	42.19
Yes	211	57.81
Cervical cancer is caused by HPV		
No	162	44.38
Yes	203	55.62
Early detection of cervical cancer makes it curable		
No	153	41.92
Yes	212	58.08
Ever heard of Pap smear or VIA test		
No	153	41.92
Yes	212	58.08
Do you know the purpose of Pap smear or VIA test		
No	163	44.66
Yes	202	55.34
Pap smear or VIA test should be done at least once1-3 years		
No	158	43.29
Yes	207	56.71
Pap smear or VIA test can find changes in the cervix before they become cancer		
No	160	43.84
Yes	205	56.16

4.4 Overall knowledge about cervical cancer

Figure 1 below shows that about 57% (n=365) of the study population had high knowledge regarding cervical screening about cervical cancer

Figure *2*: Overall knowledge about cervical cancer screening



4.5 Perceived barriers to having Pap smear or VIA test

Table 4 below shows that 54.8% (n=365) of the study participants either agreed or strongly agreed that they are physically healthy, so they have no need for Pap smear or VIA test and 56.4% (n=365) either agreed or strongly agreed that it is not important for a woman to have a Pap smear or VIA test. About 54.0% (n=365) of the participants either agreed or strongly agreed that Woman who has not had sex; Pap smear will take away her virginity and 57.0% (n=365) either agreed or strongly agreed that Pap smear or VIA test is painful.

Table 4: Perceived barriers to having Pap smear or VIA test

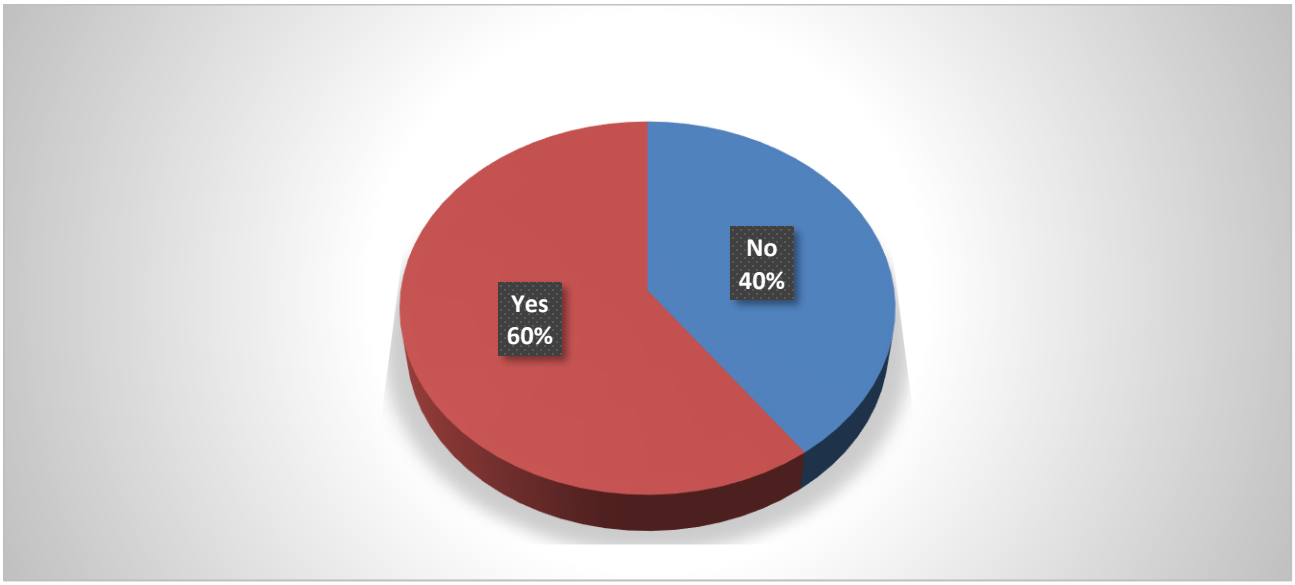
Variable	**Frequence (n=365)**	**Percentage**
I am physically healthy, so I have no need for Pap smear or VIA test.		
Strongly disagree	87	23.84
Disagree	113	30.96
Not sure	104	28.49
Agree	52	14.25
Strongly Agree	9	2.47
It is not important for a woman to have a Pap smear or VIA test.		

Strongly disagree	94	25.75
Disagree	112	30.68
Not sure	109	29.86
Agree	34	9.32
Strongly Agree	16	4.38
It is too embarrassing to do a Pap smear or VIA test.		
Strongly disagree	90	24.66
Disagree	109	29.86
Not sure	102	27.95
Agree	42	11.51
Strongly Agree	22	6.03
Woman who has not had sex; Pap smear will take away her virginity		
Strongly disagree	86	23.56
Disagree	111	30.41
Not sure	104	28.49
Agree	44	12.05
Strongly Agree	20	5.48
Pap smear or VIA test is painful		
Strongly disagree	91	24.93
Disagree	117	32.05
Not sure	105	28.77
Agree	44	12.05
Strongly Agree	8	2.19
Doing Pap smear or VIA test will only make one worry		
Strongly disagree	100	27.40
Disagree	104	28.49
Not sure	95	26.03
Agree	46	12.60
Strongly Agree	20	5.48
Lack of female screeners in health facilities is a reason for not doing a Pap smear or VIA test.		
Strongly disagree	92	25.21
Disagree	106	29.04
Not sure	99	27.12
Agree	47	12.88
Strongly Agree	21	5.75

4.6 Uptake of cancer screening services

Figure 2 below shows that the uptake of survival screening services among women aged 25-49 years in Kidera HCIV was at 60%.

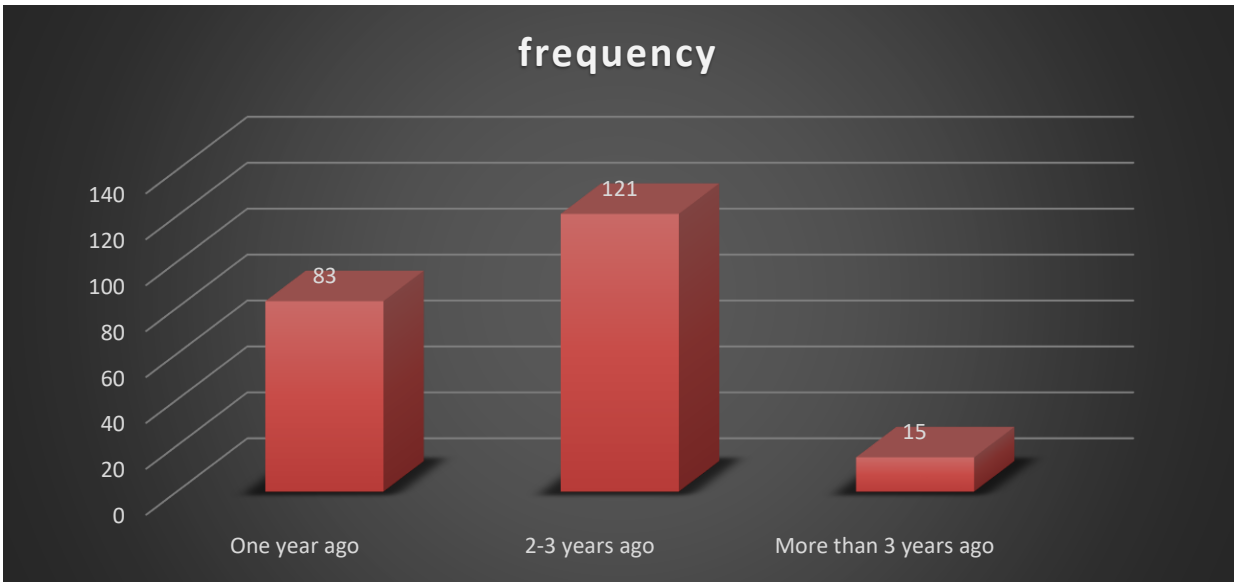
Figure 3: Uptake of cervical cancer screening services



Time when the participants last screened for cancer

Figure 3 below shows that out of the 219 participants who had screened for cervical cancer, 121 were screened 2-3 years ago, 81 were screened one ago and 15 were screened more than three years ago from the time of the study

Figure *4*: Time when the participants last screened for cancer



4.7 Factors associated with uptake of cervical cancer screening services at bivariate analysis

4.7.1 Socio-demographic factors associated with uptake of cervical cancer screening services

Table 5 below shows that religion, occupation and decision maker at home were the socio-demographic factors that significantly determined the uptake of cervical cancer screening services among women aged 25-49 years at bi variate analysis (P<0.05).

Table 5: Factors determining uptake of cervical cancer screening services at bi variate analysis

Variable	Uptake of cancer screening services				COR at 95% CI	P-value
	No		Yes			
	Frequency	%	Frequency	%		
Age group						
20-29	63	43.15	83	37.90		
30-39	50	34.25	79	36.07	1.19 (0.74-1.94)	0.460
40-49	33	22.60	57	26.03	1.31 (0.74-2.25)	0.325
Parity						
<=5	113	77.40	158	72.15		
>5	33	22.60	61	27.85	1.32 (0.81-2.15)	0.262
Religion						
Anglican	35	23.97	41	18.72		
Catholic	40	27.40	55	25.11	1.17 (0.39-2.16)	0.605
Muslim	30	20.55	44	20.09	1.25 (0.66-2.39)	0.496
SDA	17	11.64	48	21.92	2.41 (1.18-4.92)	**0.016***
Born Again	24	16.44	31	14.16	1.10 (0.55-2.22)	0.784
Marital status						
Single	14	9.59	20	9.13		
Married	79	54.11	128	58.45	1.14 (0.54-2.37)	0.783
Widowed	17	11.64	28	12.79	1.15 (0.46-2.87)	0.759
Divorced/Separated	30	20.55	39	17.81	0.91 (0.39-2.09)	0.824
Concubine	6	4.11	4	1.83	0.47 (0.11-1.97)	0.299
Highest level of education						
Uneducated	50	34.25	69	31.51		
Primary	58	39.73	83	37.90	1.04 (0.63-1.70)	0.886
UCE	20	13.70	38	17.35	1,38 (0.72-2.64)	0.337
UACE	5	3.42	18	8.22	2.61 (0.91-7.49)	0.075
Vocational Institute	13	8.90	11	5.02	0.61 (0.25-1.48)	0.277
Occupation						
Government employee	9	6.16	34	15.53		

Private employee	31	21.23	48	21.92	0.41 (0.17-0.97)	**0.043***
Housewife	38	26.03	55	25.11	0.38 (0.16-0.89)	**0.026***
Student	12	8.22	19	8.49	0.42 (0.15-1.17)	0.098
Business person	56	38.36	63	28.77	0.29 (0.13-0.67)	**0.004***
Decision maker at home						
Parents in law	25	17.12	29	13.24		
Father	43	29.45	46	21.00	0.92 (0.47-1.82)	0.815
Mother	22	15.07	54	24.66	2.12 (1.02-4.38)	**0.044***
Husband and Wife jointly	56	38.36	90	41.10	1.38 (0.74-2.60)	0.311

4.7.2 Health facility factors associated with the uptake of cancers screening services at Bivariate analysis

Table 6 shows below shows that women being handed well at night, getting a health service when visited the health facility, having quality care at the health facility and having health system protocols are favourable were the health factors associated with the uptake of cervical cancer screening services among women aged 25-49 years (P<0.05).

Table 6: Health facility factors associated with the uptake of cancers screening services at bivariate analysis

Variable	**Uptake of cancer screening services**				**COR**	**P-value**
	No		**Yes**			
	Frequency	**%**	**Frequency**	**%**		
Women handled well at night						
No	41	28.08	39	17.81		
Yes	105	71.92	180	82.19	1.80 (1.09-2.97)	**0.021***
Got health service when she visited the health facility						
No	49	33.56	42	19.18		
Yes	97	66.44	177	80.82	2.13 (1.32-3.44)	**0.002***
Distance between residence and health facility (Solanke et al.)						
<1km	15	10.27	20	9.13		

1-3km	40	27.40	66	30.14	1.24 (0.57-2.68)	0.591
4-6km	56	38.36	97	44.29	1.30 (0.62-2.74)	0.492
7-9km	35	23.97	36	16.44	0.77 (0.34-174)	0.533
Quality care at the health facility						
No	60	41.10	38	17.35		
Yes	86	58.90	181	82.65	3.32 (2.06-5.37)	**0.000***
Health system protocols are favourable						
No	50	34.25	45	20.55		
Yes	96	65.75	174	79.45	2.01 (1.25-3.23)	**0.004***

4.7.3 Cervical cancer screening knowledge factors associated with uptake of cancer screening services at bivariate analysis

Table 7 shows that knowledge of the women aged 25-49 years about cervical cancer was significantly associated with the uptake of cervical cancer screening services at bi variate analysis.

Table 7: Cervical cancer screening knowledge factors associated with uptake of cancer screening services at bi variate analysis

Variable	Uptake of cancer screening services				COR	P-value
	No		Yes			
	Frequency	%	Frequency	%		
Overall knowledge						
Low knowledge	91	62.33	66	30.14	1	
High knowledge	55	37.67	153	69.86	3.84 (2.47-5.97)	**0.000****

4.8 Factors associated with uptake of cervical cancer screening services at multivariate analysis

Table 8 below shows that religion, occupation, decision maker at home, having quality health care at the health facility and knowledge of women aged 25-49 years about cervical cancer maintained at their significant association with the uptake of cervical cancer screening services after adjusting for the confounders at multiple logistic regression.

Women who were SDA (P=0.003, AOR=3.47, CI=95%) were 3.47 times more likely to uptake cervical cancer screening services as compared to other women of any other religion at 95% confidence interval.

Women who were business persons (P=0.014, AOR=0.29, CI=95%) were 0.29 times less likely to uptake cervical cancer screening services as compared to women with any other occupation at a 95% confidence interval.

Women from homes where mothers were decision-makers (P-0.026, AOR= 2.61, CI=95%) were 2.61 times more likely to uptake cervical cancer screening services as compared to women homes where any other person was a decision maker at 95% confidence interval.

Women who reported to have quality health care services when they visited the health facility (P-0.002; AOR=3.17, CI=95%) 3.17 times more likely to uptake cervical cancers screening survives as compared to their counterparts in the same reference category at 95% confidence interval.

Women who had high knowledge about cervical cancer (P-0.000, AOR=3.99, CI=95%) were 3.99 times more likely to uptake cervical cancer screening services as compared to women with low knowledge about cervical cancer at 95% confidence interval.

Table 8: Factors associated with uptake of cervical cancer screening services at multivariate analysis

Variable	Uptake of cancer screening services				AOR at 95% CI	P-value
	No		Yes			
	Frequency	%	Frequency	%		
Religion						
Anglican	35	23.97	41	18.72		
Catholic	40	27.40	55	25.11	1.30 (0.65-2.59)	0.451
Muslim	30	20.55	44	20.09	1.35 (0.64-2.84)	0.424
SDA	17	11.64	48	21.92	**3.47 (1.53-7.89)**	**0.003***
Born Again	24	16.44	31	14.16	1.10 (0.50-2.42)	0.806
Occupation						
Government employee	9	6.16	34	15.53		
Private employee	31	21.23	48	21.92	0.49 (0.18-1.32)	0.159
Housewife	38	26.03	55	25.11	0.47 (0.17-1.28)	0.139
Student	12	8.22	19	8.49	0.61 (0.81-2.07)	0.432
Business person	56	38.36	63	28.77	0.29 (0.11-0.78)	**0.014***

Decision maker at home						
Parents in law	25	17.12	29	13.24		
Father	43	29.45	46	21.00	0.98 (0.45-2.14)	0.964
Mother	22	15.07	54	24.66	2.61 (1.12-6.07)	**0.026***
Husband and Wife jointly	56	38.36	90	41.10	1.35 (0.65-2.82)	0.426
Quality care at the health facility						
No	60	41.10	38	17.35		
Yes	86	58.90	181	82.65	3.17 (1.54-6.50)	**0.002***
Overall knowledge						
Low knowledge	91	62.33	66	30.14		
High knowledge	55	37.67	153	69.86	3.99 (2.41-6.61)	**0.000***

4.9 Challenges affecting accessibility of cervical cancer screening services among women aged 25-49 years at Kidera HC IV

Five quantitative key informant interviews were conducted on health workers offering cancer screening services in Kidera HC IV.

Six subthemes emerged from the analysis of the interview transcripts and these included; Limited number of health workers; awareness of women about cervical cancers screening services; availability of medical equipment; willingness of the clients; lack of training for health workers; and attitude of the community towards cercal cancers screening services. These subthemes are expounded as follows;

Limited number of health workers

Despite Kidera HC IV being able to deliver cancer screening services to women aged 25 to 49 years, the number of staffs to the deliver the service are very few as compared to the numbers of women who come to come to the health facility for to seek health services. This makes the health workers to be overloaded with work which jeopardizes the quality of the services delivered at the health facility

"*The medical persons are capable of delivering the services; however, we are very few in number as compared to the women we receive at this facility. I think it is important to recruit more staff for us to manage to contain the workload."*

"We try to deliver the cervical cancer screening services but sometimes the numbers of the patients are over whelming which can be served by the available few staff. Just like most of the health facilities in the region, we also face a challenge of inadequate staffing"

Awareness of women about cancer screening services

Generally, most women are aware about cervical cancer and the availability of the cancer screening services at the health facility. However, there some few women who are totally green about cervical cancer and the available services at the health facility. This makes them to delay to come for the service and others don't even come at all until they get serious complications. Given the fact that there are fewer staffs in the health facility, health works cannot consistently mobilize women from the community to come for cancer screening at the health facility.

"In most cases you find that those who don't come to the health facility are unaware of the cancers screening services and actually some don't even know that cervical cancer exists. Such category of women delays to come to the health facilities even when they getting warning signs"

"Some women are not aware that we actually offer free cancer screening services in this health facility. I had that some travel to other places to get cancer screening services. I think it is because women in the community out there to have access to the health information and as a facility we lack mobilizing force"

Availability of the Equipment

Kidera HC IV is also faced with a challenge of shortages in medical equipment that are needed for cervical cancer screening which is normally brought about by consistent delays in supply. This deters the health facility from providing satisfactory cervical cancer screening services to the women at the health facility.

"We sometimes have an issue of stock outs of medical equipment and this really affects our ability to deliver cancer screening services to our clients when the com to the facility. We some time advise them to come back later as we are waiting the facility to be restoked with such medical equipment"

Willingness of the clients.

Some women who go the health facility are not willing to be screen for cancer which really affects the uptake of the service. This because they have not really grasped the importance of periodic cervical cancer screening.

"They do not accept to be screened for cancer; there are a few women who willing accept to be screened for cervical cancer and you find that most of those will to be screened have health complication already"

"But in this place, you find that some women don't want to be screened for cervical cancer. This is because considering it is not very common that you will find women who have cervical cancer.

Lack training of health workers on cervical cancer screening

Some of the health workers are not yet trained on how to screen for cervical cancer and this makes health workers to deliver quality cancer screening services to their clients. This limits the accessibility of cervical cancer screening services especially for women who are will be screened.

"Generally speaking, some of us have not really received any training on cervical cancer screening and this affects our ability to deliver as far as cervical cancer screening is concern"

"Personally, I took an initiative to learn from colleagues on how to effective screen for cervical cancer. It would be very good in we received training on cancer screening at most especially us who deal with women"

Attitude of the community towards cervical cancer screening services

The community in Buyende district has negative attitude towards cancer screening as some community members claim that it is a waste of time to go for cervical cancer screening. This is because there are rare cases of cervical cancer in their community and thus, they don't actually see the importance of going for cervical cancer screening and this limits accessibility of the services by the women.

"*People in this community have poor attitude towards cervical cancer just because they don't see patients with cervical cancer around their community"*

"Some women in this community perceive cervical cancer screening as a waste of money and time as opposed to help them ascertain whether they are at risk of cervical cancer or not."

5 CHAPTER FIVE: DISCUSSION

Cervical cancer screening is one of the strategies that can be used to prevent and reduce morbidity and mortality due to cervical cancer among women(Bruni et al., 2016). This can only be achieved through the effective uptake of cervical screening services by women, the provision of quality screening tests, and the administering an appropriate treatment to women who are diagnosed with cervical cancer which can be informed by evidence-based interventions. This study assessed the uptake of cervical cancer screening services and associated factors among women aged 25-49 years receiving health services in Kidera HCIV, Buyende district.

This study reveals that the uptake of cervical cancer screening services among women aged 25-49 years receiving health care services in Kidera HCIV was at 60% percent out of which 55.3% were last screened for cervical cancer 2-3 years ago from the time when this study was done. Though the uptake reported in this study is slightly higher, a gap still needs to be bridged to achieve the recommendation of the Ugandan Ministry of Health and the World Health Organization. According to the Ugandan Ministry of Health, all women aged 25–49 years should be screened for cervical cancer to facilitate early diagnosis and treatment of precancerous lesions and early treatment of invasive disease (MoH., 2010b). On the other hand, the World Health Organization recommends that at least 70% of women should be screened for cervical cancer. (WHO, 2020b).

The findings on the uptake of cervical cancer screening services reported in this study were much higher than the findings of a survey conducted in rural settings of Bugiri and Mayuge which reported that only 1.8% of women were ever screened for cervical cancer.This discrepancy in the result is because the previous study was conducted in a community setting while this study was conducted at a health facility. Women who come to the health facility for general health services can be easily informed and encouraged by health workers to be screened for cervical cancer as compared to those who remain in the community and don't interface with health care providers. The findings of this study were still higher than those reported in Masaka (7%) (Twinomujuni et al., 2015), Kenya (6%)(Sudenga et al., 2013). This can also be explained by the fact these studies were conducted more than 8 years ago and there has been a lot of changes that have occurred in the health system such in improvement in access, availability but also quality of the cervical cancer screening services.

In this study, uptake of cervical cancer screening services was significantly determined by religion, occupation, decision maker at home, having quality health care at the health facility, and knowledge of women aged 25-49 years about cervical cancer.

It has been evident in previous studies that religion has an overarching influence on the promotion of public health. Religion teachings can have different moral-ethical codes that believers are obligated to follow effectively which may have positive or negative impacts on the uptakes of health services in general (Mpofu, 2023). Indeed, revealed a significant association between religion and uptake of cervical cancer screening services among women where those who were SDA showed more likelihood to uptake cervical cancer screening services than any other religion. This perhaps indicates that religious leaders of SDA have been encouraging their followers to follow the Ministry of Health's recommendations regarding cervical cancer screening services. Previous evidence has shown that religious leaderscan influence health behaviors at both individual and community levels(Heward-Mills et al., 2018). However, it is also important to note that some religious beliefs act as a barrier to the uptake of health services in general, and such beliefs should be identified and addressed accordingly (Yusuf et al., 2019)

This study found an association between occupation and uptake of cervical cancer screening services where women who were business persons were times less likely to uptake cervical cancer screening services as compared to women with any other occupation. This is perhaps because most women in business are in the informal sector which keeps them busy throughout the year and this hinders them to go health facilities for medical checkups including cervical cancer screening. Such women only go to the health facility when they are sick to an extent that cannot be managed by the local private clinics and drug shops. However, a study conducted elsewhere in Rwanda revealed that no association between occupation and uptake of cervical screening (Ndateba et al., 2021). This is perhaps because these studies were conducted in different geographic locations which have variations in terms of cultural values and beliefs which can potentially affect the findings reported by the two studies.

Women from homes where mothers were decision-makers were 2.61 times more likely to uptake cervical cancer screening services as compared to women's homes where any other person was a decision-maker at a 95% confidence interval.

Good quality health care services is noted to promote utilization of the health care services among clients (Gage et al., 2018). This is consistent with the finding of this study which found that women receiving quality health care services when they visited the health facility positively determined the uptake of cervical cancer screening services among women. Ensuring quality cervical cancer screening services that satisfy clients should be one of the strategies to improve the uptake of cervical cancer careening services among women.

This study noted that having high knowledge about cervical cancer positively determined the uptake of cervical cancer screening services among women aged 25-49 years. This finding was in agreement with the findings of a similar study conducted in Rwanda which found a significant association between mothers' knowledge about cervical cancer and uptake of cervical cancer screening services. This study shows that the odds of cervical cancer screening uptake increased by 26% for every unit increases in knowledge which indicates that participants whore more knowledge were more likely to uptake cervical cancer screening services(Ndateba et al., 2021). People with high knowledge about cervical cancer in general are most likely to be informed about cervical cancer as a disease and ways to prevent it of which one way is through screening. These findings suggest increasing awareness about cervical cancer improves the uptake of cervical cancer screening services among women.

In this study, several perceived barriers to having Pap smear or VIA test were heightened. For instance, 54.8% of participants that there was no need Pap smear or VIA since they were physically fit. This finding was also reported by a systematic review on Barriers affecting the uptake of cervical cancer screening in low and middle-income countries which noted that 6.45% of women believed that it is unnecessary to screen for cervical cancer for unmarried women(Devarapalli et al., 2018). Other perceived barriers highlighted by this study included fear of loss of virginity and pain associated with Pap smear and VIA test. These barriers have been linked to low knowledge about cervical cancer and its screening services among women(Devarapalli et al., 2018). Indeed, about 45% of the women in this study had low knowledge regarding cervical cancer screening services. This thus suggests that there is a need to conduct more sensitization on cervical cancer screening among women to address the issue of perceived barriers to having Pap smear or VIA test.

This study also highlighted challenges that hinder the access of women to cervical screening services. These challenges included an inadequate skilled health workforce to conduct the screening, shortages of cervical cancer screening medical supplies, unawareness among women, unwillingness to be screened, and poor attitude of the community towards cervical cancer screening. The finding of this study is consistent with the findings of the systematic review study in Africa which reported the same finding(Mantula et al., 2024). Such challenges interfere with the delivery of cervical cancer screening services to women limiting access to these services. Addressing these challenges based on informed decisions should be a priority of the health facility management to improve access to cervical cancer screening services.

6 CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The uptake of cervical cancer screening services among women aged 25-49 years was at 60% out of which 55% had screen 2-3 years ago from the time of the study. A woman being an SDA, coming from a home where a mother is a decision-maker, receiving quality services from the health facility, and having high knowledge about cervical cancer was positively associated with the uptake of cervical cancer screening services among women in Kidera HCIV. However, business as an occupation was negatively associated with the uptake of cervical cancer among women in Kidera HC IV

The perceived barriers to uptakes of cervical cancer screening include; fear of loss of virginity and pain associated with Pap smear and VIA test, seeing no need for screening, and perceiving that it is embarrassing to be screened using a Pap smear or VIA test.

Challenges limiting access to cervical cancer screening services were inadequate skilled health workforce to conduct the screening, shortages of cervical cancer screening medical supplies, unawareness among women, unwillingness to be screened, and poor attitude of the community towards cervical cancer screening.

6.2 Recommendations

1. The facility management of Kidera HCIV should conduct more sensitization regarding cervical cancer and the available screening services to improve women's knowledge about cervical cancer but also address the issue of perceived barriers that limit the uptake of cervical cancer screening services among women.
2. The facility should also lobby for medical supplies on a timely basis to address the issue to shortages of medical supplies used for cervical cancer screening among women.
3. The education department of the district should promoteGirl-child education to ensure that women have the capacity and confidence to make informed decisions regarding their health. This will reduce the negative perception and attitude of women regarding cervical cancer screening.
4. The district should recruit more healthcare workers to address the issue of staff shortage most especially those involved in cervical cancer screening.

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APPENDICES

Appendix I: CONSENT FORM

Name of assessor: Gwokyalya Christine

Name of Institution: Uganda Christian University

Name of Proposal and version: Uptake of cervical cancer screening among women aged 25-49 years at Kidera HC-IV ; a cross-sectional study.

PART I: Information Sheet

Introduction

I am Gwokyalya Christine, a student at Uganda Christian University. I am carrying out a study on uptake of cervical cancer screening among women aged 25-49 years at Kidera HC-IV. I am going to give you information and invite you to participate in this study. However, before you decide, make inquiries regarding the study from anyone you trust.

There may be some words that you do not understand, please ask me to stop so that we go through the information, so that I make clarity where you do not understand. If you have questions later, you can still consult me for further explanation.

Purpose Cervical cancer screening has been listed as one of the three pillars requiring 70 percent of women being screened using a high-performance test by the age of 35 years; and again by 45 years of age. These goals are to eliminate cervical cancer as a public health problem for all countries, by reaching and maintaining an incidence rate of fewer than four new cases of cervical cancer per 100 000 women per year. Uganda's ministry of health recommended screening target of 80 percent screening rates for women aged 25–49 years, although screening coverage persistently remains predominantly low even in the most developed regions of the country. The purpose of this study is to assess uptake of cervical cancer screening services among women aged 25-49 years at Kidera HC-IV in Buyende district.

Participant selection

The study will focus on women aged 25-49 years who come and access medical services in the out-patient, and maternity units of Kidera HC-IV.

Voluntary Participation

Your decision to participate in this study is completely voluntary. It is your choice whether or not to participate in this study. If you choose not to participate, all the services and support you receive from the facility will not be affected in any way.

Procedures

There is no procedure that will cause pain or discomfort to you. You will be given a questionnaire with a set of questions. Please feel free to attempt all questions that you are comfortable with.

Duration

Once we complete filling this form (questionnaire) with you, there will be no more assessments in relation to this study that will be required from you.

Benefits

If you participate in this study, you will have no immediate benefits but your participation will enable to assess uptake of cervical cancer screening services among women aged 25-49 years at Kidera HC-IV in Buyende district. The study may not be of any benefit to you at this stage, but it may benefit you in future.

Confidentiality

The information that we collect from this study project will be kept confidential. Identifying information (i.e. names) about you will not be captured at any point. All other information that will be collected from the study will be put away and no-one but the researchers will be able to see it. Any information about you will have a log number on it instead of your names. We will lock that information up in a safe place that cannot be easily accessed by anyone, and will be destroyed once the data has been used to serve the purpose of the study.

Sharing of the results

The knowledge and understanding that we get from this study will be shared with health center administration. However, confidential information will not be shared.

Right to Refuse

You do not have to agree to take part in this research if you do not wish to do so. Refusing to participate will not affect the support you get from the health facility at all.

Who to Contact?

If you have any questions, you may ask them now or later, even after the study has started. If you wish to ask questions later, you may contact the following: **Gwokyalya Christine, 0770538537.**

This proposal has also been reviewed and approved by Uganda Christian University school of public Health Research Ethics Committee, to make sure that study participants are protected from harm.

I hereby consent to participate in this study

Participant Signature only……

Emaliriza II: Ebibuzo

A. Ebifa kuyetabyemu

1. Emyaka: ……

2. Ezalo: ☐

3. Eidhini

☐ Mupolositanti

☐ Mukatolika

☐ Musilamu

☐ Abakyedimya

☐ Mulokole

☐ Oba erindi

4. **Oyemerere otya mumakaggo**

☐ Muwulu

☐ Mufumbo

☐ Namwandu

☐ Yanoba

☐ Yayawukana

☐ Omukyala w'okubali

5. **Obuwanu bwo Misomo**

☐ Ezira

☐ Kyamusanvu

☐ Kya ikumi nabibiri

☐ Kya ikumi na bina

☐ Byamikono

☐ Digiri

6. **Omulimo**

☐ Wa gavumenti

☐ Wakitongole

☐ Mukazi mufumbo

☐ Musomi

☐ Musubuzi

☐ Oba ebindi

7. **Emyaka omuntu gyakoze**

☐ Kitundu kya mwaka

☐ Mwaka mulala

☐ Myaka ebiri

☐ Myaka etano

☐ Oba gisinga mwe etano

8. **Ani asalawo ewaka**

☐ Inazaala

☐ Babba

☐ Maama

☐ Omwami n’omukyala walala

B. Ebifa kuntabuza y’ebyobulamu

9. Abakazi bagemebwa bulungi obwiire

☐ Iyi

☐ Mbee

10. Wafuna obwidhadabi nga okyalire eirwaliro

☐ Iyi

☐ Mbee

11. Olugendo kuva ewaka kwirwaliro (Solanke et al.)

☐ Tewera kilomita

☐ Kilo mita ndala kwi isatu awo

☐ Kilo mita Ina ku mukaga awo

☐ Kilo mita musanvu ku mwenda awo

12. Wakolebwaku bulungi kwi dwaliro

☐ Iyi

☐ Mbee

13. Amateeka gebyobulamu gasanusa

☐ Iyi

☐ Mbee

Assessing cervical cancer screening knowledge

14. Wawuliraku ku kokolo w'omunywa gwa nabaana

☐ Iyi

☐ Mbee

15. Kokolo w'omunywa gwa nabaana aletebwa akawuka ka HPV.

☐ Iyi

☐ Mbee

16. Okwizula amangu kokolo wo munywa kiyaba okuwona

☐ Iyi

☐ Mbee

17. Wawuliraku okukebera kwe beeta Papsmear oba VIA

☐ Iyi

☐ Mbee

18. Oyindhi omugaso gwokukebera kokolo w'omunwa gwa nabaana

☐ Iyi

Mbee

19. Okukebera kokolo w'omunwa gwa nabana kukoleibwa oluva inuma kwa mwaka ku satu

☐ Yes

☐ No

20. Enkebeera eyo osobola okubona ekyuka yona ku munywa gwa nabaana nga kaali ffuka kokolo

Iyi

☐ Mbee

Assessing the uptake of cervical cancer screening

21. Wakomali okukebera kokolo w'omunywa gwa nabana……..

☐ Mwaka mulala einuma

☐ Myaka ebiri ku esatu einuma

☐ Gisinga emyaka esatu

Assessing perceived barriers to having Pap smear or VIA test

22. Nze obulamu bwange nga bulungi, kale tyetaga kwekebezza kokolo .

☐ Tikiriza ilala

☐ Tikiriza

☐ Tikakasa

☐ Ndikiriza

☐ Ndikirizza ilala

23. Tikyetaga mukazi kwekebeza kokolo w’omunwa gwa nabaana.

☐ Tikiriza ilala

☐ Tikiriza

☐ Tikakasa

☐ Ndikiriza

☐ Ndikiriza ilala

24. Kiswazza inho kwekebezza kokolo w’omunywa gwanabana.

☐ Tikiriza ilala

☐ Tikiriza

☐ Tikakasa

☐ Ndikiriza

☐ Ndikiriza ilala

25. Omukazi ateigaitangaku kwekebezza kokolo ena mutolaku embuzi ye.

☐ Tikiriza ilala

☐ Tikiriza

☐ Tikakasa

☐ Ndikiriza

☐ Ndikiriza ilala

26. Enkebeera eya kokolo w’omunywa gwa nabana eruma inho.

☐ Tikiriza ilala

☐ Tikiriza

☐ Tikakasa

☐ Ndikiriza

☐ Ndikiriza ilala

27. Okwekebezza kokolo owo munywa gwanabana kwelalikirizza.

☐ Tikirizza ilala

☐ Tikirizza

☐ Tikakasa

☐ Ndikiriza

☐ Ndikiriza ilala

28. Abasawo obutaba mwirwaliro yekizzizza okugya kwekebezza kokolo w’anabana.

☐ Tikiriza ilala

☐ Tikiriza

☐ Tikakasa

☐ Ndikiriza

☐ Ndikiriza ilala

Appendix III: Key informant interview guide

1. What do you know about cervical cancer?

…….

…….

2. Does the health facility have a cervical cancer screening unit?

……

3. If yes, when is cervical cancer screening done?

…….

4. What strategies are in place to help health workers improve cervical cancer screening services?

……

……

……

……

5. What is there in place to promote cervical cancer screening services at the screening unit of the health facility?

……

……

……

……

……

6. When was the last time you had training about cervical cancer screening?

……

7. What strategy is there at the facility to enable patients to seek cervical cancer services?

……..

8. What challenges are affecting the health facility to deliver cervical cancer screening services?

……
……
……
…….

THANK YOU FOR YOUR TIME.

Appendix1V: **A map of Uganda showing the location of Buyende district**

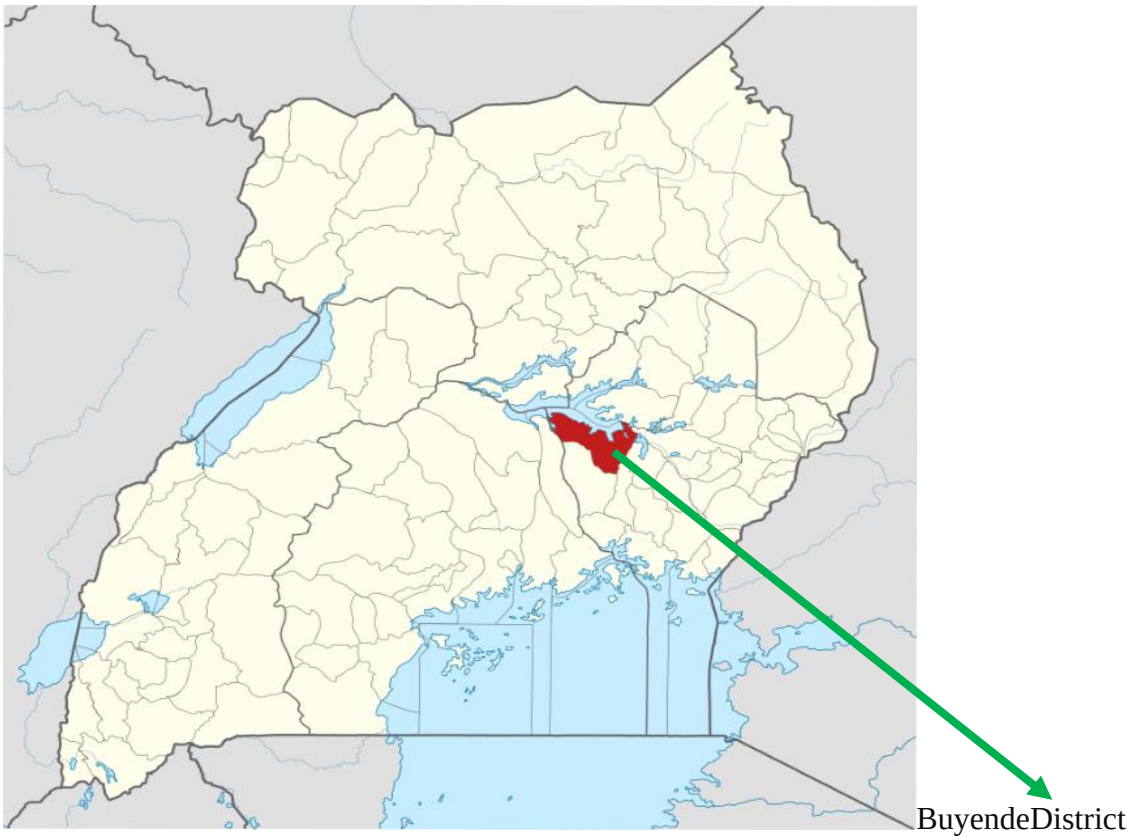

Figure 5: A map of Uganda showing the location of Buyende district

File: Buyende District in Uganda.svg

Created: 25 June 2017

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SCHOOL OF RESEARCH & POSTGRADUATE STUDIES

DISSERTATION CORRECTION COMPLIANCE REPORT BY THE CANDIDATE (POST VIVA FORM)

Date: 28/4/2025

Name of Candidate: Gwokyalya Christine **RegNo:** RJ20M21/072

Title of Dissertation Uptake of cervical cancer screening among women aged 25-49years; A cross sectional study at Kidera HC IV

SN	COMMENTS BY EXTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	State the framework that guided the qualitative study	Incorporated in the existing frame work	Conceptual frame work.
2	Describe sample size consideration for qualitative, how &who conducted the interview and qualification.	- Mentioned the sampling technique / procedure used& gave reasons for using it. Hence guiding the sample size consideration.	Methodology i.e. Sampling & sample size determination.
3	Quotioned on the language in which the interview was done and the time frame observed while filling the questionnaire	-Included in the data collection section.	-Methodology.

SN	COMMENTS BY INTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	Need to have regional & local context in the background	Added the regional context within the background.	Report; Chapter 1.
2	Clearly spell the knowledge gap.	Indicated the knowledge gap	Problem Statement.
3	Need to conclude some significant findings	Conclusion was done on all significant findings	Conclusion section.
4	Need to make recommendations on significant findings	Recommendations have been done on all significant findings.	Recommendations.
5			

SN	COMMENTS BY VIVA VOCE PANNEL	ACTION TAKEN	INDICATOR
1	Inclusion of translation tool	It was included	Appendix: Data collection tool
2	Utilize the qualitative findings to interpret quantitative	-Used the qualitative findings to interpret quantitative.	Discussions
3			
4			
5			

Gwokyalya Christine Candidate's Name — Signature

Rev. Canon Evatt Mugarura Supervisor's Name — Signature — 29/04/2025