

ENSIGN GLOBAL UNIVERSITY, KPONG

EASTERN REGION, GHANA

**KNOWLEDGE, ATTITUDES AND BARRIERS TOWARDS CERVICAL CANCER
SCREENING AMONG WOMEN OF REPRODUCTIVE AGE IN LOWER MANYA KROBO
MUNICIPALITY, EASTERN REGION**

BY

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**A THESIS SUBMITTED TO THE DEPARTMENT OF COMMUNITY HEALTH, FACULTY
OF PUBLIC HEALTH, ENSIGN GLOBAL UNIVERSITY IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE
MASTER OF PUBLIC HEALTH DEGREE**

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DECLARATION

I, Belinda Narteh, hereby certify that, except for references to other people's work, which I have duly cited, this project submitted to the Department of Community Health, Ensign Global University, Kpong is the result of my own investigation, and has not been presented for any other degree elsewhere.

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DEDICATION

This work is dedicated to all women of reproductive age whose experiences and participation made this study possible.

It is also dedicated to women in Ghana and elsewhere who still struggle to get cervical cancer screening services. It is hoped that this study will help raise awareness, enhance access, and improve health outcomes. Finally, this work is lovingly dedicated to my family for their unwavering support, encouragement, and sacrifices throughout my academic journey.

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
AOR	Adjusted Odds Ratio
CI	Confidence Interval
CDC	Centers for Disease Control and Prevention
CHPS	Community-based Health Planning and Services
COR	Crude Odds Ratio
GHS	Ghana Health Service
GSS	Ghana Statistical Service
HPV	Human Papillomavirus
IRB	Institutional Review Board
KAP	Knowledge, Attitudes, and Practices
LMICs	Low- and Middle-Income Countries
STATA	Statistical Software for Data Analysis
VIA	Visual Inspection with Acetic Acid
WHO	World Health Organization

ABSTRACT

Background: Cervical cancer is a serious public health concern globally, with a disproportionately high burden in low- and middle-income countries, including Ghana. Despite the availability of effective screening methods, uptake remains low, particularly in peri-urban and rural settings. Limited knowledge, negative attitudes, and multiple socio-cultural and health system barriers continue to hinder participation in screening programs. Understanding these factors at the Municipality level is essential for designing context-specific interventions.

Aim: This study aimed to assess the knowledge, attitudes, and barriers towards cervical cancer screening among women of reproductive age in the Lower Manya Krobo Municipality, Eastern Region of Ghana.

Methods: A quantitative cross-sectional study design was employed among 314 women aged 15–49 years. Data were collected using a structured interviewer-administered questionnaire. Descriptive statistics were used to summarize variables, while chi-square tests and logistic regression analyses were conducted to examine associations between independent variables and cervical cancer screening uptake. Statistical significance was set at $p < 0.05$.

Results: Overall, 55.41% of respondents had good knowledge of cervical cancer and screening, while 44.59% had poor knowledge. Although 65.61% had heard of cervical cancer screening, awareness of specific screening methods was low, with 61.78% unable to identify any method. Attitudes towards screening were generally positive, with the majority agreeing that screening is necessary and expressing willingness to participate if services were free. However, screening uptake was low, with only 23.25% of respondents

having ever undergone screening. The most commonly reported barriers were lack of knowledge about where screening services are provided (30.57%), not being informed about screening (28.66%), perceived lack of need due to absence of symptoms (27.71%), and fear of screening results (27.39%). Knowledge level was significantly associated with screening uptake ($p < 0.001$), while socio-demographic factors and attitudes were not statistically significant.

Conclusion: Despite moderate levels of awareness and generally positive attitudes, cervical cancer screening uptake remains low among women in the Lower Manya Krobo Municipality. Knowledge gaps and informational barriers play a critical role in limiting screening participation. There is a need for targeted health education, improved dissemination of information on screening services, and community-based interventions to enhance screening uptake.

Keywords:

Cervical cancer, screening uptake, knowledge, attitudes, barriers, women of reproductive age, Ghana

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Cervical cancer is a malignant tumor originating from the epithelial lining of the cervix (WHO, 2025). This condition is primarily caused by persistent infection with high-risk oncogenic types of the human papillomavirus (HPV) (Okunade, 2020), particularly HPV types 16 and 18 (WHO, 2025; Okunade, 2020). The disease typically progresses slowly through a series of precancerous changes known as cervical intraepithelial neoplasia (CIN), which may possibly progress to invasive cancer if undetected or untreated (Bray et al., 2018). This prolonged latency offers a critical window for preventive intervention, making cervical cancer one of the most preventable malignancies affecting women (Bray et al., 2018; WHO, 2025).

Globally, cervical cancer ranks as the fourth most common cancer among women, with an estimated 604,000 new cases and 342,000 deaths recorded in 2020 (Sung et al., 2021). Notably, nearly 90% of these deaths occur in LMICs (Arbyn et al., 2020), where the health systems are often constrained by insufficient infrastructure, inadequate screening programs, and sociocultural barriers to health-seeking behavior (Arbyn et al., 2020). The sub-Saharan Africa region carries a disproportionate burden, accounting for nearly one-quarter of global cervical cancer deaths despite representing a much smaller of the world population (WHO, 2018). In Malawi, the age-standardized mortality rate is the highest globally at 51.5 deaths per 100,000 women annually (Gerstl et al., 2022). Similarly, in Mozambique, cervical cancer accounts for 21.4% of all cancer-related mortalities among women, with a significant proportion of cases diagnosed at an advanced stage and many patients dying without receiving oncologic care (Batman et al., 2023).

In Ghana, after breast cancer, cervical cancer is the second most common cause of cancer-related deaths among women (ICO/IARC, 2024). According to Effah et al. (2022), approximately 2,797 new cases and 1,699 deaths were recorded in 2020. The burden is worsened by regional disparities in healthcare access, socioeconomic inequality, and the uneven distribution of diagnostic and screening services. For instance, Donkoh et al. (2022) reported a high HPV prevalence rate of 37.2% in a cross-sectional screening study in Kumasi, with an age-standardized prevalence of 40.9%. The Ghana Atomic Energy Commission (2021) estimated the age-standardized cervical cancer prevalence rate in Ghana at 35.4 per 100,000 women, higher than in neighboring countries such as Benin (29.0), Burkina Faso (23.3), and Côte d'Ivoire (21.7) (GAEC, 2021).

In contrast, high-income countries (HICs) have seen significant reductions in cervical cancer incidence and mortality, largely due to widespread screening and successful implementation of HPV vaccination programs. For instance, in Canada, the age-standardized incidence rate (ASIR) was 8.3 per 100,000 women in 2018, and the age-standardized mortality rate (ASMR) stood at 2.0 per 100,000 in 2019 (Canadian Partnership Against Cancer, 2020). Similarly, a nationwide Swedish cohort study found that HPV vaccination reduced invasive cervical cancer incidence by up to 88% among women vaccinated before age 17 (Lei et al., 2020).

Cervical cancer screening remains the cornerstone of prevention, as it enables the early detection and treatment of precancerous lesions before they progress to invasive cancer. Common screening methods include human papillomavirus (HPV) DNA testing, visual inspection with acetic acid (VIA), and the Papanicolaou (Pap) smear (WHO, 2021; Arbyn et al., 2020).

The World Health Organization recommends that women between the ages of 30 and 49 undergo at least one cervical cancer screening in their lifetime. The frequency of follow-up screening is

determined by individual risk factors, age, and the availability of health system resources (WHO, 2021).

Evidence shows that well-organized screening programs can significantly reduce cervical cancer incidence and mortality by enabling early detection and timely intervention (Arbyn et al., 2020). It has been demonstrated that organized screening programs can lower the incidence and death of cervical cancer by as much as 70–80% (Wu et al., 2025). However, in Ghana, screening remains largely opportunistic and concentrated in urban areas. Calys-Tagoe et al. (2020) noted that fewer than 3% of eligible women had ever been screened, falling significantly short of national and global targets. Tawiah et al. (2022) found that even where free services were available in the Ashanti Region, only 24.6% of women had undergone screening, with uptake influenced by factors such as age, marital status, formal employment, and knowledge level. Similarly, Pearce, Aziato and Achempim-Ansong (2023) observed that despite moderate awareness among young adults in the Western Region, misconceptions about eligibility and limited knowledge about screening procedures led to zero screening uptake.

Despite awareness campaigns and policy efforts, cervical cancer screening uptake remains largely low in many parts of Ghana, mainly due to persistent barriers related to knowledge, culture, and health system limitations. Basic information regarding cervical cancer, its causes, and the advantages of early detection is often lacking among women (Tawiah et al., 2022; Pearce, Aziato and Achempim-Ansong, 2023). Ken-Amoah et al. (2022) highlighted that many rural Ghanaian women are unaware of HPV's role in cervical cancer development. Misconceptions, such as the belief that screening is only for sexually promiscuous women or that it causes infertility, further discourage participation. Cultural and religious beliefs often link gynecological illnesses to spiritual punishment or shame, fueling stigma (Binka, Doku and Awusabo-Asare, 2017). In many

communities, embarrassment about the screening procedure, especially when conducted by male providers, also acts as a strong deterrent (Adzigbli et al., 2025).

These individual and societal factors are further compounded by systemic and structural challenges. Even when cervical cancer screening services are available, utilization remains critically low due to barriers such as poor health literacy, high indirect costs, long distances to facilities, and limited trust in healthcare systems (Ken-Amoah et al., 2022). In Kenya, Rosser et al. (2015) identified lack of awareness as the most frequently cited reason for not participating in cervical screening. Research by Ebu et al. (2014) in Ghana's Central Region found that women with better knowledge of cervical cancer symptoms and prevention were significantly more likely to undergo screening. Yet, Calys-Tagoe et al. (2020b) reported that only 12% of women had ever been screened, citing socioeconomic challenges and lack of awareness. Similarly, Tawiah et al. (2022) found that psychosocial and structural constraints limited screening even among women who have access to free services.

However, increased knowledge does not always lead to screening behavior. Emotional and perceptual barriers such as fear, stigma, and distrust of the health system continue to discourage uptake (Williams, 2016). These challenges reinforce the need for comprehensive, context-specific strategies that deal with not just knowledge but also the broader social and structural determinants of health behavior. Such an approach is vital to improving screening coverage and reducing cervical cancer morbidity and mortality in Ghana.

1.2 Problem Statement

Cervical cancer remains a significant public health concern globally, particularly in low- and middle-income countries (LMICs), where the disease burden is disproportionately high (World

Health Organization, 2020; Sung et al., 2021). According to WHO (2020), cervical cancer is the fourth most common cancer among women worldwide, with nearly 90% of deaths occurring in LMICs due to limited access to prevention, screening, and treatment services (WHO, 2020). In Ghana, cervical cancer is the second leading cause of cancer deaths in females, with an estimated 3,151 new cases and 2,119 deaths annually (Drokow et al., 2020).

Despite the preventable nature of cervical cancer through timely screening and early treatment, screening uptake in Ghana remains low across various regions and demographic groups (WHO, 2020; Ghana Statistical Service (GSS), Ghana Health Service (GHS) and ICF, 2023). Even more concerning, the survey reveals regional disparities, with some areas such as the Western, Oti, Savannah, and North East regions reporting significantly lower screening rates compared to the national average (Adzibli et al., 2025).

In peri-urban areas, where services may be relatively more accessible, uptake still remains below optimal levels. For example, a 2022 study conducted in the Asokore-Mampong Municipality of the Ashanti Region reported that only 24.6% of women had ever been examined for cervical cancer, despite access to free screening services (Tawiah et al., 2022). In urban underserved communities, the situation appears even more critical, as disparities in access to screening services and health information persist (World Health Organization, 2020; Arbyn et al., 2020). A study conducted in 2019 in Korle Gonno found that only 2.3% of women had participated in cervical cancer screening, highlighting issues of inaccessibility and limited awareness in such settings (American Society for Colposcopy and Cervical Pathology (ASCCP), 2019).

Among all reproductive-age women in the country (15–49 years), a separate 2022 analysis (Anaba et al., 2024) reported that only 5% had ever had cervical cancer screening, highlighting the widespread nature of the low uptake problem across age groups and regions. This low uptake

persists even where screening services are available, indicating that factors beyond service availability contribute to underutilization (Adzigbli et al., 2025).

Among the critical determinants of low screening uptake is the lack of knowledge and awareness about cervical cancer and its prevention (Petersen et al., 2022). A study conducted in rural Ghana found that 68.2% of women had poor knowledge of human papillomavirus (HPV) and cervical cancer, with only 18.2% having prior awareness of HPV infection (Ken-Amoah et al., 2022). Similarly, research in the Ajumako-Eyan-Essiam Municipality revealed that a significant number of women held misconceptions about cervical cancer, with 46.7% believing it cannot be cured and 48.8% avoiding screening due to fear (WHO, 2021).

Attitudinal barriers further aggravate the problem. A systematic review of barriers to cervical cancer screening in Africa highlighted that socio-cultural and religious beliefs, along with the gender and age of service providers, pose significant cultural barriers to participation in screening programs. Women often feel ashamed, shy, embarrassed, anxious, and uncomfortable if males provide the service, particularly if they have no gynecological problems (Mantula, Toefy and Sewram, 2024). A 2022 study focusing on Muslim women in southern Ghana also found that Islamic modesty norms, including discomfort with male healthcare providers and concerns about exposing intimate body parts, were associated with decreased intention and self-efficacy regarding screening (Enyan et al., 2022). These cultural and religious beliefs contribute to the low participation rates in cervical cancer screening programs among this population. Health system limitations also contribute to the low screening rates. Barriers such as inadequate education about the disease, lack of funding, and limited access to screening facilities have been identified as constraints to cervical cancer screening and management in rural Ghana (Binka et al., 2019).

In spite of the growing body of literature on cervical cancer, there is limited Municipality-level evidence from non-urban sub-Saharan settings, particularly in areas such as the Lower Manya Krobo Municipality in Ghana. Therefore, this study aims to fill the existing knowledge gap by assessing the knowledge and attitudes towards cervical cancer screening among women of reproductive age in the Lower Manya Krobo Municipality in Ghana. The findings will provide empirical evidence to inform public health strategies and interventions aimed at enhancing awareness, realigning perceptions, and increasing the utilization of cervical cancer screening services in the Municipality.

1.3 Rationale of the Study

While Ghana has made some strides by incorporating cervical cancer prevention into health policies, the real impact at the community level has been limited. Studies have demonstrated that screening methods such as Pap smears, HPV DNA testing, and visual inspection with acetic acid (VIA) are effective in detecting precancerous changes early and reducing mortality when followed by timely treatment (Sampson, Nkpeebo and Degley, 2021; Enyan et al., 2022; Mantula, Toefy and Sewram, 2024).

However, the uptake of these services across many areas in the country remains critically low (Enyan et al., 2022; Mantula, Toefy and Sewram, 2024). Barriers such as fear, stigma, misinformation, and cultural beliefs continue to discourage many women from getting screened, even when services are offered for free or at low cost (Drokow et al., 2020; Donkoh et al., 2022; Adzigbli et al., 2025).

This study is important because it seeks to better understand the reasons behind the low screening rates. The study's findings will be used as strategic evidence for designing interventions to improve

cervical cancer screening uptake in among women of reproductive age the Lower Manya Krobo Municipality and other areas in sub-Saharan Africa with similar characteristics. Additionally, the findings will contribute to the global body of literature on cervical cancer.

1.4 Theoretical Framework

This study has adopted a socioecological framework to determine the multifaceted factors influencing cervical cancer screening uptake among women in the Lower Manya Krobo Municipality. The framework captures barriers and facilitators across multiple layers from individual-level determinants such as knowledge and income to broader policy-level determinants like lack of government support and infrastructure. By organizing the variables into these levels, the model provides a comprehensive way to analyze how personal, interpersonal, institutional, community, and policy-level factors interact to influence women's screening behaviors.

At the individual level, women's knowledge, socioeconomic status, and personal health beliefs shape their understanding and decision to undergo cervical cancer screening (Drokow et al., 2020). Knowledge plays an important role in influencing cervical cancer screening behavior. Many women in Ghana lack accurate information about the causes, risk factors, and prevention of cervical cancer, particularly awareness of human papillomavirus (HPV) as the primary cause (Ken-Amoah et al., 2022; Drokow et al., 2020).

In addition, misconceptions and limited understanding of screening methods and eligibility reduce perceived risk and delay uptake of screening services (WHO, 2021; Tawiah et al., 2022).

For this study, individual-level factors include knowledge, personal beliefs, and perceived susceptibility, which influence women's decisions to participate in cervical cancer screening. A study by Ken-Amoah et al., (2022) found that over 60% of women surveyed in rural Municipalities

were unaware that HPV is the primary cause of cervical cancer. This knowledge gap is compounded by widespread misconceptions, such as the belief that screening is only for sexually active or promiscuous women, or that it may cause infertility (Pearce, Aziato and Achempim-Ansong, 2023).

At the interpersonal and community levels, stigma, shame, and social norms exert considerable influence. In many Ghanaian communities, cultural and religious beliefs often associate reproductive health conditions with spiritual punishment or moral failure, leading to silence and delayed care-seeking (Binka, Doku and Awusabo-Asare, 2017). The presence of male healthcare providers, lack of privacy, and embarrassment about undergoing pelvic examinations are additional deterrents that limit women's willingness to engage in screening services (Sampson, Nkpeebo and Degley, 2021).

At the organizational or institutional level, systemic barriers further inhibit access. Even in areas with technically accessible screening services, utilization remains low due to financial constraints, logistical hurdles, and poor service quality (Mantula, Toefy and Sewram, 2024). For example, Tawiah et al., (2022) reported that in peri-urban Municipalities, screening uptake was significantly hampered by travel distance, waiting times, and inconsistent availability of trained staff, even when services were offered for free. Women also reported limited trust in health workers, lack of culturally sensitive care, and inadequate follow-up mechanisms.

At the policy level, the absence of a nationally implemented, population-based screening program significantly undermines prevention efforts. Cervical cancer services in Ghana are often delivered through donor-funded pilot programs or isolated facility-based initiatives, lacking the scale, coordination, and continuity necessary for long-term impact (Calys-Tagoe *et al.*, 2020b).

Budgetary constraints, competing health priorities, and inadequate health information systems further hinder the development of an effective national response (Binka *et al.*, 2019).

The persistent underutilization of cervical cancer screening services in Ghana, despite their proven effectiveness and growing policy attention, reflects the need for more comprehensive and context-sensitive strategies. These must not only improve public awareness but also address the sociocultural, economic, and systemic barriers that operate across multiple levels of influence. The application of the Socioecological Model in this context highlights the need for multi-level interventions that integrate community engagement, structural investment, and health system reforms to ensure that no woman is left behind in the effort to eliminate cervical cancer as a public health problem.

1.5 Conceptual Framework

Based on the socioecological framework and existing literature on cervical cancer uptake, the study developed a conceptual framework (See figure 1.1) that illustrates the relationship between knowledge, attitudes, barriers, and cervical cancer screening uptake among women of reproductive age in the Lower Manya Krobo Municipality.

In this framework, cervical cancer screening uptake (ever screened: yes/no) is the dependent variable. The independent variables include knowledge of cervical cancer and screening, attitudes toward cervical cancer screening, and perceived barriers to screening. Knowledge in this study comprises of awareness of cervical cancer, its causes, symptoms, and available screening methods. Attitudes refer to women's perceptions of susceptibility, perceived benefits of screening, fear of results, and willingness to undergo screening. Barriers include factors such as cost, lack of

information, accessibility challenges, stigma, and cultural values that could hinder participation in screening.

Socio-demographic characteristics, including age, educational level, marital status, occupation, religion, and number of children, are considered as background variables that influence both the independent variables and cervical cancer screening uptake.

The framework assumes that higher levels of knowledge and positive attitudes are associated with increased likelihood of screening uptake, while the presence of barriers reduces the likelihood of participation. Additionally, socio-demographic factors shape women's knowledge, attitudes, and exposure to barriers, thereby indirectly influencing screening uptake.

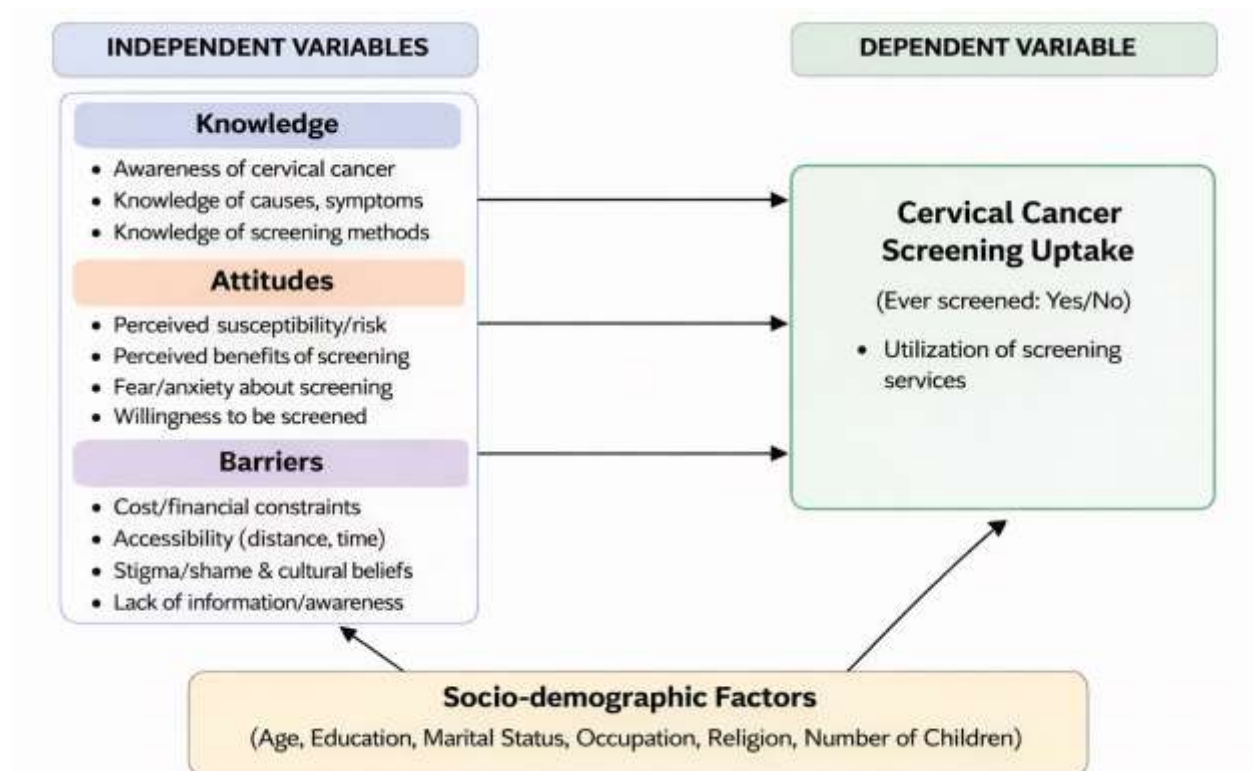


Figure 0.1: Conceptual Framework

Source: Author's Construct, April 2026

1.6 Research Questions

1. What is the level of knowledge about cervical cancer and its screening among women of reproductive age in the Lower Manya Krobo Municipality?
2. What are the attitudes of women of reproductive age towards cervical cancer screening in the Municipality?
3. What barriers influence women's participation in cervical cancer screening in the Municipality?
4. What are the factors influencing cervical cancer screening uptake among women of reproductive age in the Lower Manya Krobo Municipality?

1.7 General Objective

To assess the knowledge and attitudes of women of reproductive age towards cervical cancer screening in the Lower Manya Krobo Municipality.

1.7.1 Specific Objectives

1. To examine the of knowledge of cervical cancer screening among women in the Lower Manya Krobo Municipality.
2. To assess the attitudes of women of reproductive age towards cervical cancer screening in the Lower Manya Krobo Municipality.
3. To investigate the barriers that hinder women's participation in cervical cancer screening services.
4. To determine socio-demographic factors influencing cervical cancer screening uptake among women of reproductive age in the Lower Manya Krobo Municipality.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

Cervical cancer is among the most preventable yet persistently burdensome cancers affecting women worldwide. Although effective screening technologies have been available for many years, uptake continues to vary significantly across regions and within countries. Understanding this disparity requires more than reporting prevalence figures; it demands a careful examination of what women know about the disease, how they perceive screening, and the structural and social factors that inform their decisions.

2.2 Knowledge of Cervical Cancer and Its Screening Methods

Knowledge occupies a foundational position in cervical cancer prevention because screening is, by nature, a preventive behavior one that demands action in the absence of symptoms rather than in response to them (WHO, 2021). This places an unusual cognitive demand on potential participants: women must understand why intervention is necessary before any perceived threat materializes. Effective knowledge therefore cannot be reduced to simple disease recognition. It encompasses understanding that persistent infection with high-risk human papillomavirus (HPV) is the primary causal pathway, recognising that early cervical cancer is largely asymptomatic and therefore will not announce itself through physical experience, knowing what screening methods exist and where they can be accessed, and understanding the recommended age and frequency of participation (WHO, 2021; Sung et al., 2021). Each of these knowledge dimensions has a distinct

bearing on whether a woman is likely to seek screening. Awareness without this broader conceptual grounding leaves women insufficiently equipped to act, regardless of service availability.

This distinction between surface awareness and actionable knowledge is theoretically significant. Health behavior frameworks, including the Health Belief Model, consistently identify perceived susceptibility and perceived benefit as key determinants of preventive action (Rosenstock, 1974). Both constructs are knowledge-dependent: a woman who lacks understanding of HPV transmission cannot accurately assess her own susceptibility, and a woman unaware of the asymptomatic trajectory of the disease has limited basis for perceiving screening as personally beneficial. Knowledge gaps therefore do not simply reflect information deficits in a neutral sense they structurally undermine the cognitive preconditions for preventive behavior. This positions knowledge not merely as one variable among many, but as a prerequisite through which other enabling factors, such as access and affordability, become actionable.

Globally, this theoretical relationship finds empirical support. The WHO's strategy to eliminate cervical cancer identifies insufficient awareness of HPV and screening services as a major structural obstacle to achieving elimination targets, noting that even where services exist, limited understanding of when and why to screen continues to suppress participation (WHO, 2020). This is particularly acute in low- and middle-income countries, where organised screening programs remain underdeveloped and women are less likely to encounter accurate information through routine health system contact. In these settings, knowledge gaps function not only as individual-level barriers but as population-level determinants of persistently low coverage.

Across sub-Saharan Africa, this pattern is extensively documented. Systematic reviews examining screening barriers across the region consistently report that while awareness of cervical cancer as a disease is relatively widespread, it rarely extends to accurate understanding of HPV aetiology,

risk factors, or the preventive logic of screening (Mantula, Toefy and Sewram, 2024). Gerstl et al. (2022), studying women in Malawi, found that comprehensive knowledge was substantially lower than general awareness, with the gap most common among women with limited formal education. This recurring pattern, awareness without depth, is analytically important because it suggests that headline awareness figures may overstate the degree to which populations are genuinely equipped to make informed, consented decisions regarding screening participation.

The Ghanaian evidence reflects and reinforces these regional trends. Nationally representative analysis shown that fewer than one in ten women aged 30–49 had ever been screened, with education emerging as a significant and consistent predictor of both knowledge and screening participation (Adzigbli et al., 2025; Calys-Tagoe et al., 2020). Community-based studies add granularity to these patterns. Ken-Amoah et al. (2022), examining rural Ghanaian women, found very low understanding of HPV and its causal relationship to cervical cancer, with many participants unaware that the disease could develop silently over years. Drokow et al. (2020) similarly identified limited awareness of both HPV vaccination and available screening procedures across both urban and rural respondents, suggesting that knowledge gaps are not confined to geographically or educationally marginalised groups alone. Critically, Tawiah et al. (2022) proven that women with greater screening knowledge were significantly more likely to make use of services when made available free of charge; a finding that directly illustrates the behavioral consequences of knowledge disparities. When structural barriers such as cost are removed, knowledge emerges as a primary differentiating factor in uptake, reinforcing its theoretical centrality to preventive behavior.

Notwithstanding this growing body of evidence, important gaps remain in the literature. The existing Ghanaian evidence base is largely drawn from either nationally representative surveys,

which by design smooth over sub-national and community-level variation, or from studies conducted in urban and peri-urban settings where health literacy and service proximity may not reflect conditions elsewhere. Municipalities such as Lower Manya Krobo, which combine semi-urban and rural characteristics, remain empirically underexamined. It is therefore not possible to determine from existing research whether national knowledge patterns accurately reflect local realities in such settings, or whether they mask important community-specific variations that carry implications for targeted intervention.

A further gap concerns the depth at which knowledge has been measured. Many studies rely on binary or low-resolution measures of awareness, whether women have ever heard of cervical cancer or HPV rather than assessing the accuracy and completeness of understanding across multiple relevant dimensions. This methodological limitation means that the extent of actionable knowledge, the kind that directly enables informed preventive decision-making, remains poorly characterised at the local level. Addressing this gap requires scientific work that moves beyond awareness and examines whether women possess the specific knowledge necessary to translate intent into behavior. This study was designed to address precisely that need within the Lower Manya Krobo Municipality.

2.3 Attitudes Towards Cervical Cancer Screening

While knowledge provides the informational foundation for preventive action, attitudes determine whether that knowledge translates into behavior (Arbyn et al., 2020). Within health behavior frameworks, attitudes toward screening are understood to operate through several interrelated constructs: perceived susceptibility to disease, perceived severity, confidence in the benefits of early detection, and emotional responses to the screening procedure itself (Rosenstock, 1974).

These constructs are theoretically distinct from knowledge a woman may accurately understand HPV transmission and still hold attitudes that inhibit action, whether through fear of diagnosis, embarrassment, or a belief that asymptomatic health equates to safety. This gap between knowing and being willing to act is well established in preventive behavior literature and positions attitudes as an independent determinant of screening participation rather than a simple downstream consequence of information exposure.

Empirically, this theoretical relationship is consistently supported across sub-Saharan African and Ghanaian contexts. Fear of a positive result, discomfort during pelvic examination, low perceived susceptibility among asymptomatic women, and cultural norms around modesty and gender of the provider recur as attitudinal barriers across multiple settings and study designs (Mantula, Toefy and Sewram, 2024; Gerstl et al., 2022; Enyan et al., 2022; Sampson, Nkpeebo and Degley, 2021). National-level Ghanaian data further indicate that perceived risk and health information exposure are associated with screening behavior, yet persistently low uptake suggests that negative or ambivalent attitudes remain widespread even among informed women (Adzigbli et al., 2025).

However, the existing evidence has notable limitations. Most attitudinal data from Ghana derives from studies conducted in specific municipal or urban settings, leaving the generalisability of these findings to other community contexts, including Lower Manya Krobo Municipality, unclear. Furthermore, many studies treat attitudes as a secondary variable rather than a primary focus of investigation, measuring them through limited or composite indicators that do not fully capture the multidimensional nature of attitudinal barriers. The extent to which specific attitudinal constructs particularly perceived susceptibility and emotional deterrents independently predict screening behavior at the local level therefore remains insufficiently examined. This study addresses the gap by treating attitudes as the main analytical concern within the Lower Manya Krobo Municipality.

2.4 Barriers to Cervical Cancer Screening

Barriers to cervical cancer screening operate across multiple levels simultaneously, and understanding them needs a framework that goes beyond individual decision-making to explain for the interaction of psychological, sociocultural, and health system factors (Mantula, Toefy and Sewram, 2024). This multilevel perspective is theoretically important: it establishes that screening behavior is not simply a product of individual willingness but is structurally conditioned by the environments within which women make health decisions. Even where knowledge is adequate and attitudes are favourable, barriers at the service delivery or community level can prevent participation entirely (WHO, 2020). Barriers are therefore analytically distinct from knowledge and attitudinal constructs and warrant independent examination.

The empirical literature consistently supports this multilevel conceptualisation. Across sub-Saharan Africa, structural barriers including geographic distance, inconsistent service availability, inadequate provider capacity, and limited facility privacy interact with sociocultural deterrents such as fear of diagnosis, embarrassment during examination, stigma, and the perceived need for partner approval to produce compounding effects on uptake (Mantula, Toefy and Sewram, 2024; Gerstl et al., 2022). Ghanaian evidence reinforces this picture: financial and logistical constraints, fear of results, and provider-related concerns around modesty and gender have each been identified as significant deterrents across rural, peri-urban, and Muslim community contexts (Binka et al., 2019; Tawiah et al., 2022; Enyan et al., 2022). Critically, Tawiah et al. (2022) demonstrated that low uptake persisted even when services were offered free of charge, establishing that cost removal alone is insufficient and that experiential and informational barriers retain independent explanatory weight. At the systems level, Ghana's absence of a fully implemented population-based screening programme means that participation remains largely opportunistic and dependent on individual

initiative, a structural condition that amplifies the influence of all other barrier types (Adzigbli et al., 2025; WHO, 2020).

Despite this evidence base, context-specific barrier data for municipalities such as Lower Manya Krobo remain largely absent. Existing Ghanaian studies are concentrated in specific rural or peri-urban settings and do not adequately capture the variation in barrier profiles that is likely to exist across communities with differing infrastructure, economic conditions, and cultural composition. Without locally grounded data, interventions risk targeting only the most visible barriers while overlooking more subtle but equally influential deterrents such as perceived disrespect within facilities, misinformation, or community-level social norms. This study aims to address this gap by providing a context-specific assessment of barriers within the Municipality.

2.5 Factors Influencing Attitudes Towards Cervical Cancer Screening

The relationship between knowledge and attitudes in preventive health behavior is theoretically well established but empirically complex. Within health behavior frameworks, knowledge is understood to influence attitudes by shaping the cognitive appraisals through which women evaluate personal risk and the perceived benefit of screening — two constructs central to the Health Belief Model (Rosenstock, 1974). Where women accurately understand HPV transmission, the asymptomatic progression of cervical cancer, and the protective value of early detection, they are theoretically better positioned to develop favourable attitudes toward screening. However, this relationship is not linear. Knowledge may improve cognitive appraisal of risk without resolving the emotional and social responses — fear of diagnosis, embarrassment, mistrust of services — that independently shape screening intention (WHO, 2020; Arbyn et al., 2020). The influence of knowledge on attitudes is therefore best understood as conditional rather than deterministic,

mediated by contextual factors including cultural norms, prior healthcare experiences, and service accessibility.

Empirical evidence from sub-Saharan Africa and Ghana broadly supports this conditional relationship. Women with greater cervical cancer knowledge are more likely to express willingness to screen, yet actual participation frequently remains constrained by attitudinal and structural barriers that knowledge alone cannot adequately address (Gerstl et al., 2022; Mantula, Toefy and Sewram, 2024). In the Ghanaian context, Tawiah et al. (2022) demonstrated that informed women were significantly more inclined to utilize services when cost barriers were removed, suggesting that knowledge enhances behavioral readiness most effectively when compounding obstacles are simultaneously reduced. Enyan et al. (2022) further found that the influence of knowledge on screening intention was strengthened by perceived self-efficacy, indicating that information becomes most actionable when accompanied by confidence and a supportive social environment. National-level data corroborate these patterns, with educational attainment a proxy for health literacy consistently associated with both screening knowledge and participation (Adzigbli et al., 2025).

Nevertheless, the nature of this relationship at the community level in contexts such as Lower Manya Krobo Municipality remains empirically unexamined. Existing Ghanaian studies do not adequately establish whether knowledge gaps are the primary drivers of unfavourable screening attitudes in this setting, or whether emotional, sociocultural, and structural factors exert stronger independent influence. This distinction carries direct intervention implications: if knowledge deficits are the dominant mechanism, information-based strategies may be sufficient; if attitudinal barriers persist independently of knowledge, more targeted behavioral and structural approaches

are required. This study contributes to the evidence base by empirically examining the knowledge-attitude relationship within the local context.

2.6 Summary

This chapter examines literature on cervical cancer knowledge, attitudes toward screening, the barriers that shape participation, and the way these elements interact. The evidence presents a clear but complex picture. Cervical cancer is largely preventable, and screening has been proven effective across different contexts. Yet, across many low- and middle-income settings, including Ghana, participation in screening remains far below recommended levels.

One of the strongest themes emerging from literature is the difference between awareness and understanding. Many women may have some level of awareness of cervical cancer, but fewer possess detailed knowledge on its viral cause, absence of early symptoms, or the significance of routine screening even when feeling healthy. Studies across sub-Saharan Africa and Ghana repeatedly show that educational level and access to reliable health information shape this knowledge gap. This distinction is important because preventive health behavior depends not just on recognition of a disease, but on understanding why early detection matters and when it should occur.

At the same time, knowledge alone does not explain screening behavior. Attitudes toward cervical cancer screening are deeply influenced by emotional responses and social context. Fear of diagnosis, embarrassment during pelvic examination, perceived low personal risk, and concerns about modesty frequently shape women's decisions. In Ghana, as in other African settings, these attitudes are often intertwined with cultural expectations, gender dynamics, and trust in healthcare providers.

The literature on barriers reinforces this. Financial costs, transportation challenges, and inconsistent service availability certainly play a role. However, evidence from Ghana shows that even when services are free, uptake may still remain low. This suggests that structural accessibility must be accompanied by psychological readiness and culturally sensitive service delivery. Barriers are therefore not only economic or logistical; they are also experiential and relational.

The review highlights that the relationship between knowledge and attitudes is meaningful but conditional. Greater knowledge is often correlated with more favorable attitudes and higher likelihood of screening, yet this relationship is mediated by fear, stigma, and contextual constraints. Women may understand the importance of screening but still hesitate due to anxiety, social pressure, or previous negative healthcare experiences. This interaction underscores the importance of examining knowledge and attitudes together rather than in isolation.

By synthesizing global, regional, and Ghanaian findings, this chapter provides the foundation for the present study. It demonstrates that improving screening uptake requires more than expanding services; it requires understanding how women in a specific community perceive risk, interpret information, and navigate structural barriers.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Design

This study adopted a quantitative cross-sectional design, which was ideal for examining the current levels of knowledge, attitudes, and barriers regarding cervical cancer screening among women of reproductive age. The cross-sectional approach enabled the collection of data at the specific time of this study.

3.2 Study Site

The Lower Manya Krobo Municipality is located in the Eastern Region of Ghana. It covers a land area of approximately 651 square kilometers and has Odumase-Krobo as its administrative capital. According to the 2021 Population and Housing Census, the Municipality has an estimated population of 121,478, with women of reproductive age (15–49 years) making up a significant proportion (GSS, 2021).

The Municipality is characterized by a mix of urban, peri-urban, and rural settlements, with livelihoods predominantly based on farming, trading, and artisanal activities. Health infrastructure in the Municipality includes one government hospital, several health centers, Community-based Health Planning and Services (CHPS) compounds, and private clinics. However, access to specialized reproductive health services, including cervical cancer screening, remains limited, especially in rural communities (GHS, 2023).

The Municipality has been targeted by several public health interventions, yet disparities remain in access to health education and screening programs. This makes Lower Manya Krobo an important area for studying the knowledge, attitudes, and barriers related to cervical cancer screening among women of reproductive age.

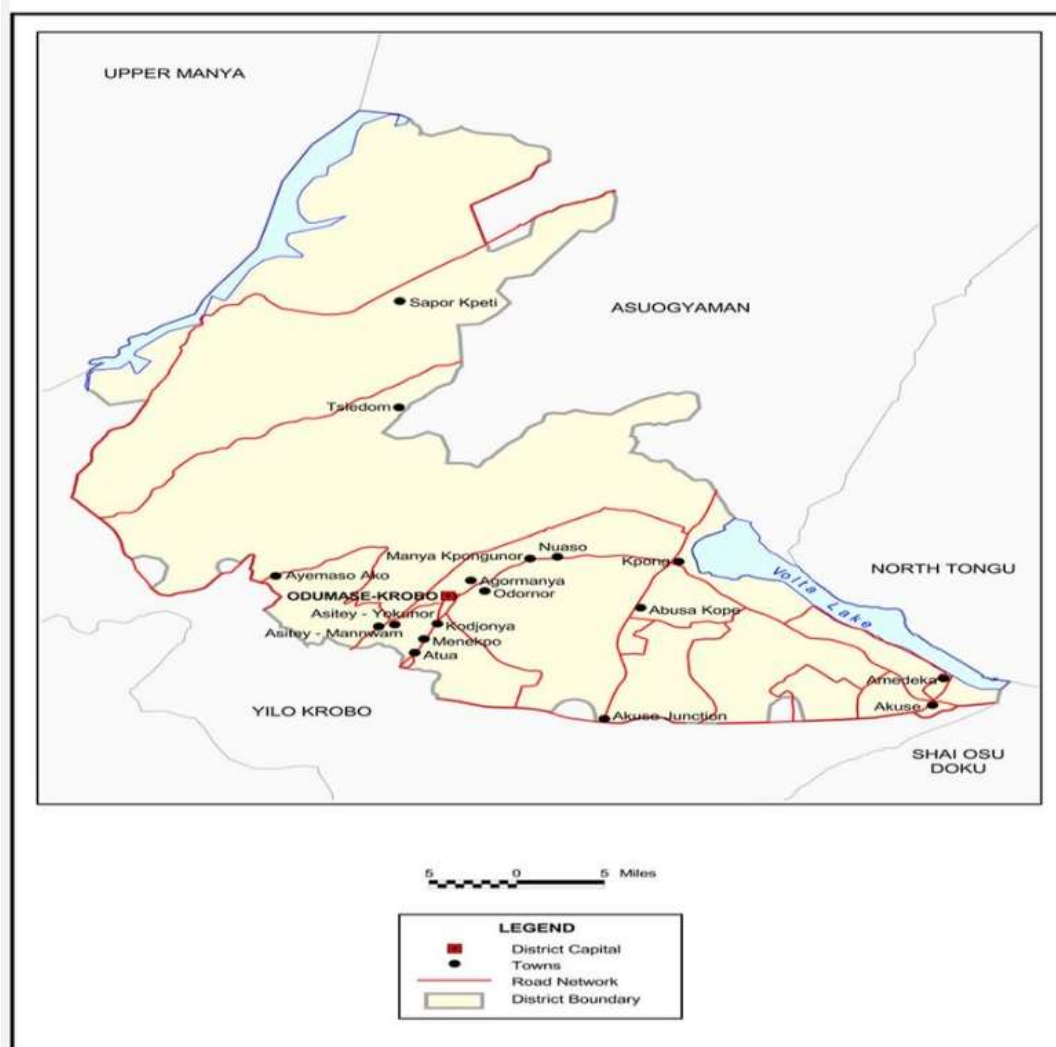


Figure 0.1: Map of Lower Manya Krobo Municipal

Source: (GSS, 2021)

The study was carried out in three towns (Odumase, Atua, and Agormanya) within the Lower Manya Krobo Municipality in the Eastern Region of Ghana. The municipality lies within the eastern corridor of the country and is characterized by a mix of urban, peri-urban, and rural communities, reflecting diverse socio-demographic and economic conditions.

The selected towns were chosen to capture this diversity. Odumase serves as the municipal capital and is relatively more urbanized, with better access to social services and healthcare facilities. Atua and Agormanya, on the other hand, represent peri-urban settings where access to healthcare services may be comparatively limited and influenced by infrastructural and socio-economic factors.

The municipality has a growing population, with a significant proportion comprising women of reproductive age. Health services in the area are provided through a network of public and private health facilities, including hospitals, health centres, and Community-based Health Planning and Services (CHPS) compounds. However, the distribution of these health resources is uneven across communities, which may affect access to essential services such as cervical cancer screening (Berete et al., 2024).

Economic activities in the municipality are predominantly trading, farming, and small-scale enterprises, which may influence women's health-seeking behavior and ability to access screening services. Cultural and social norms within the Krobo communities may also shape attitudes toward reproductive health services. The selection of these three towns therefore provides a suitable setting for examining the knowledge, attitudes, and barriers influencing cervical cancer screening uptake among women of reproductive age in the municipality.

3.3 Study Population

The study population comprised women aged 15 to 49 years residing within the Lower Manya Krobo Municipality.

3.4 Inclusion and Exclusion Criteria

Inclusion Criteria:

- Women aged 15–49 years
- A Resident of Lower Manya Krobo Municipality for six months or more
- Able and willing to provide informed consent

Exclusion Criteria:

- Non- residents of the Lower Manya Krobo Municipality
- Residents of the Lower Manya Krobo Municipality for less than six months Visitors or temporary residents

3.5 Sample Size Determination

The sample size was calculated using Cochran's formula for estimating proportions in large populations:

$$n = \frac{Z^2 \times pq}{e^2}$$

Where:

- $Z = 1.96$ (for 95% confidence interval)

- $p = 0.246$ (estimated cervical cancer screening uptake from Tawiah et al., 2022, in Asokore-Mampong, Ghana)
- $e = 0.05$ (margin of error)

$$n = \frac{(1.96)^2 \times (0.246 \times 0.74)}{(0.05)^2} \cong 285$$

To account for a 10% non-response rate: $285 \times 0.1 = 28.5 + 285 = 314$

Therefore, a total sample size of 314 women were targeted for the study.

3.6 Sampling Procedure

Three towns (Odumase, Atua, and Agormanya) were selected from the municipality to reflect demographic and geographic diversity. Within each selected town, key public locations such as markets, transport terminals, and community gathering points were identified for data collection. At these sites, women aged 15 to 49 years were approached using a systematic convenience sampling, where every third eligible woman encountered was invited to participate, based on participant willingness. This method aimed to reduce selection bias and to ensure representativeness.

3.7 Data Collection Methods and Instruments

Data was collected using a structured, interviewer-administered questionnaire designed specifically to address the study's objectives. The questionnaire contained both closed and open-ended questions and was organized into four key sections:

1. **Socio-demographic characteristics** – including age, marital status, level of education, employment status, religion, and place of residence.
2. **Knowledge of cervical cancer and screening methods** – assessing awareness of the disease, risk factors, signs and symptoms, screening methods, and recommended screening frequency.
3. **Attitudes towards cervical cancer screening** – exploring perceptions of personal risk, perceived benefits, cultural beliefs, misconceptions, and trust in the healthcare system.
4. **Barriers to screening** – identifying factors that discourage or prevent participation in cervical cancer screening services, such as cost, access, fear, stigma, and misinformation.

The questionnaire was developed in English and translated into local languages (Dangme and Ewe) for non-English speaking participants. Data was collected using **KoboCollect**, allowing for efficient data management.

3.8 Pre-testing

A pre-test of the questionnaire was conducted in Akosombo with approximately 30 respondents. Feedback was used to refine question clarity, translation accuracy, and instrument reliability before the main data collection.

3.9 Data Handling

Researchers were trained on ethical practices, including confidentiality and secure data handling. Completed data were uploaded daily to a secure KoboCollect server. The data were backed up and stored on a secure drive, and only the principal investigator and project supervisor had access to

the data. Cleaned data were exported to STATA 18 for statistical analysis. The data would be kept for a maximum of 5 years after which it would be deleted.

3.10 Data Analysis

All collected data were cleaned and analyzed using Stata version 18. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the socio-demographic characteristics of respondents and other key study variables.

Knowledge of cervical cancer screening was assessed using responses to the knowledge-related questionnaire items. Each correct response was scored as one point 1, while incorrect or "don't know" responses were awarded a score of 0. Individual scores were summed up to obtain a composite knowledge score for each respondent. Participants who scored at or above the mean score were categorized as having good knowledge, whereas those scoring below the mean were categorized as having poor knowledge.

Similarly, attitude toward cervical cancer screening was assessed using attitude-related questionnaire items. Responses reflecting a positive attitude were assigned a score of 1, while negative responses were assigned to a score of 0. The scores were summed to generate a composite attitude score. Participants who scored at or above the mean score were classified as having a positive attitude, while those scoring below the mean were classified as having a negative attitude.

Bivariate analysis was conducted using cross-tabulations to test associations between categorical independent variables and the dependent variable, cervical cancer screening uptake (ever screened: yes/no). The independent variables included age group, educational level, marital status, occupation, religion, number of children, knowledge level, and attitude toward cervical cancer screening. Chi-square (χ^2) tests were used to assess the statistical significance of these associations.

Socio-demographic variables with a p-value less than 0.20 were considered for inclusion at the bivariate analysis stage in the multivariable logistic regression model. A logistic regression model was used to identify independent predictors of cervical cancer screening uptake. Crude odds ratios (COR) and adjusted odds ratios (AOR) with 95% confidence intervals were reported. Statistical significance in the final model was set at $p < 0.05$. Results were presented using tables and graphs for clarity.

3.11 Ethical Considerations

Ethical clearance was obtained from the Institutional Review Board (IRB) of Ensign Global University prior to the commencement of the study to ensure that the research upheld established ethical standards. In addition, permission was sought from the Lower Manya Krobo Municipal Health Directorate and relevant community gatekeepers to conduct the study within selected communities.

Informed consent was obtained from all participants after they had been fully informed on the purpose, procedures, potential risks, and benefits of the study. Participation was entirely voluntary, and participants were assured of their right to withdraw from the study at any point without facing any negative consequences. For participants below the age of 18, both parental or guardian consent and the adolescent's assent were required before participation.

To ensure privacy and confidentiality, no personal identifiers were collected during the survey. Each respondent was assigned a unique numeric code, and all data collected were anonymized. Data were securely stored, with access limited to the principal investigator and the designated data manager. All research personnel involved in data collection were trained in accordance with ethical research principles, including confidentiality, respectful engagement, and secure data handling.

The study posed minimal risk to participants and was conducted in a manner that fully respected their rights, dignity, and cultural values. Ethical safeguards were prioritized throughout the research process to maintain trust and integrity within the communities involved.

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CHAPTER FOUR

4.0 RESULTS

4.1 Socio-Demographic Characteristics of Respondents

4.1.1 Age Distribution of Study Respondents

Age is an important determinant of an individual's accumulated exposure to disease risk factors (Teye, 2013). It also has both direct and indirect influence on an individual's acquisition and use of knowledge (Beier et al., 2005). This implies that a woman's exposure to cervical cancer risk factors, her level of knowledge, attitudes, and screening uptake may be influenced by her age (Mupepi et al., 2011). In this regard, the age distribution of the study respondents is presented in Table 4.1. The findings show that the study population was evenly distributed across all age groups. The highest proportion of respondents was within the 20–24 age group (16.88%), followed by those aged 25–29 years (14.65%) and 30–34 years (14.33%). Respondents aged 35–39 years and 45–49 years each constituted 13.69% of the sample, while those aged 15–19 years and 40–44 years both accounted for 13.38%.

Table 4.1 Age Distribution of Study Respondents

Variable	Category	Percentage	
		Frequency (n)	(%)
Age group	15–19	42	13.38
	20–24	53	16.88
	25–29	46	14.65
	30–34	45	14.33
	35–39	43	13.69
	40–44	42	13.38

4.1.2 Marital Status of Study Respondents

Marital status is an important socio-demographic factor that can influence health-seeking behavior and access to healthcare services. It may affect decision-making autonomy, spousal support, and exposure to health information, all of which can impact cervical cancer screening uptake (Tawiah et al., 2022; Adzigbli et al., 2025). The marital status of the study respondents is presented in Table 4.2.

Regarding marital status, nearly half of the respondents were single (46.18%), while 37.26% were married. Smaller proportions were divorced (6.05%), widowed (6.05%), and separated (4.46%). This shows that the majority of participants were not currently married.

Table 4.2 Marital Status of Study Respondents

			Percentage
Variable	Category	Frequency (n)	(%)
Marital status	Single	145	46.18
	Married	117	37.26
	Divorced	19	6.05
	Widowed	19	6.05
	Separated	14	4.46

4.1.3 Educational Level of Study Respondents

Educational level is a key determinant of health literacy and influences individuals' understanding of disease prevention and health-seeking behavior (WHO, 2021). Higher levels of education are often associated with better knowledge of cervical cancer, more positive attitudes toward

screening, and increased likelihood of utilizing screening services (Tawiah et al., 2022). In this regard, the educational level of the study respondents is presented in Table 4.3.

With respect to educational attainment, the largest proportion of respondents had completed Senior High School (34.08%), followed by those with Junior High School education (31.53%). Respondents with primary education accounted for 17.20%, while 10.19% had tertiary education. A smaller proportion of respondents (7.01%) had no formal education.

Table 4.3 Educational Level of Study Respondents

Variable	Category	Frequency (n)	Percentage
			(%)
Educational level	No formal education	22	7.01
	Primary	54	17.2
	Junior High School (JHS)	99	31.53
	Senior High School (SHS)	107	34.08
	Tertiary	32	10.19

4.1.4 Occupation of Study Respondents

Occupation plays a significant role in determining an individual's economic status, access to healthcare, and exposure to health-related information. Women who are employed or engaged in income-generating activities are more likely to afford healthcare services and may have increased awareness of cervical cancer screening (Drokow et al., 2020; Donkoh et al., 2022). The occupation of the study respondents is presented in Table 4.4.

In terms of occupation, trading was the most common occupation (32.80%), followed by farming (18.79%) and self-employment (16.24%). Other respondents were students (14.33%), unemployed (10.83%), and civil servants (7.01%).

Table 4.4 Occupation of Study Respondents

Variable	Category	Frequency (n)	Percentage
			(%)
Occupation	Trader	103	32.8
	Farmer	59	18.79
	Self-employed	51	16.24
	Student	45	14.33
	Unemployed	34	10.83
	Civil servant	22	7.01

4.1.5 Religion of Study Respondents

Religion is a primary socio-cultural variable that can influence health beliefs, perceptions, and behaviors. Religious doctrines and norms may shape attitudes toward cervical cancer screening, particularly in relation to modesty, stigma, and acceptance of medical procedures (Binka, Doku and Awusabo-Asare, 2017; Enyan et al., 2022). The religious affiliation of the study respondents is presented in Table 4.5.

Regarding religion, the majority of respondents identified as Christians (78.03%), while 16.24% were Muslims. Smaller proportions practiced traditional religion (3.50%) or other religions (2.23%), suggesting that Christianity was the dominant religion among the study population.

Table 4.5 Religion of Study Respondents

	Variable	Category	Frequency (n)	Percentage
				(%)
Religion		Christianity	245	78.03
		Islam	51	16.24
		Traditional	11	3.5
		Other	7	2.23

4.1.6 Parity of Study Respondents

Number of children (parity) is an important reproductive factor that may influence women's interaction with healthcare services. Women with higher parity have a higher likelihood to have increased contact with health facilities, which may enhance their exposure to information on cervical cancer and screening services (Tawiah et al., 2022). In this regard, the number of children of the study respondents is presented in Table 4.6.

Concerning the number of children, nearly half of the respondents (47.45%) had 1–2 children, followed by 31.53% who had 3–4 children. Additionally, 13.06% had no children, while 7.96% had five or more children.

Table 4.6 Parity of Study Respondents

Number of children	None	41	13.06
	1–2 children	149	47.45
	3–4 children	99	31.53
	5+ children	25	7.96

4.2 Knowledge of Cervical Cancer

Table 4.7 presents respondents' knowledge of cervical cancer. In terms of knowledge of risk factors, respondents demonstrated partial understanding of the causes of cervical cancer. While multiple sexual partners (48.09%) and early sexual activity (44.90%) were commonly identified, less than half of the respondents recognized human papillomavirus (HPV) (42.99%), which is the primary cause of cervical cancer. The identification of factors such as poor genital hygiene (35.35%) and family history (38.54%) indicates the presence of misconceptions. This suggests that although general awareness exists, accurate and comprehensive knowledge remains limited.

Regarding symptoms, postcoital bleeding was the most recognized symptom (50.64%), followed by foul-smelling vaginal discharge (42.04%) and bleeding between menstrual periods (41.40%). While this reflects some awareness of warning signs, the relatively low proportions and the 12.74% who were unable to identify any symptoms indicate gaps in symptom recognition. This may delay early detection, as women may not seek care promptly when symptoms occur.

Finally, the main sources of information were radio/television (25.16%) and health workers (24.84%), suggesting that both media and healthcare systems play important roles in information dissemination. However, the high proportion of respondents (41.72%) who had not heard of cervical cancer screening indicates gaps in outreach and health education efforts. This demonstrates the need for more targeted and comprehensive awareness strategies.

Table 4.7 Knowledge of Cervical Cancer Among Women of Reproductive Age

Variable	Category	Frequency (n)	Percentage (%)
Risk factors of cervical cancer	Early sexual activity (Yes)	141	44.9
	Multiple sexual partners (Yes)	151	48.09
	Human Papillomavirus (HPV) (Yes)	135	42.99
	Poor genital hygiene (Yes)	111	35.35
	Smoking (Yes)	93	29.62
	Family history (Yes)	121	38.54
	Do not know risk factors	14	4.46
Symptoms of cervical cancer	Vaginal bleeding after sex (Yes)	159	50.64
	Foul-smelling vaginal discharge (Yes)	132	42.04
	Lower abdominal pain (Yes)	112	35.67
	Bleeding between periods (Yes)	130	41.4
	Do not know symptoms	40	12.74
Sources of information	Health worker	78	24.84
	Radio/TV	79	25.16
	Social media	57	18.15
	School	60	19.11
	Friends/Family	69	21.97
	Never heard about it	131	41.72

4.2.1 Knowledge of Screening

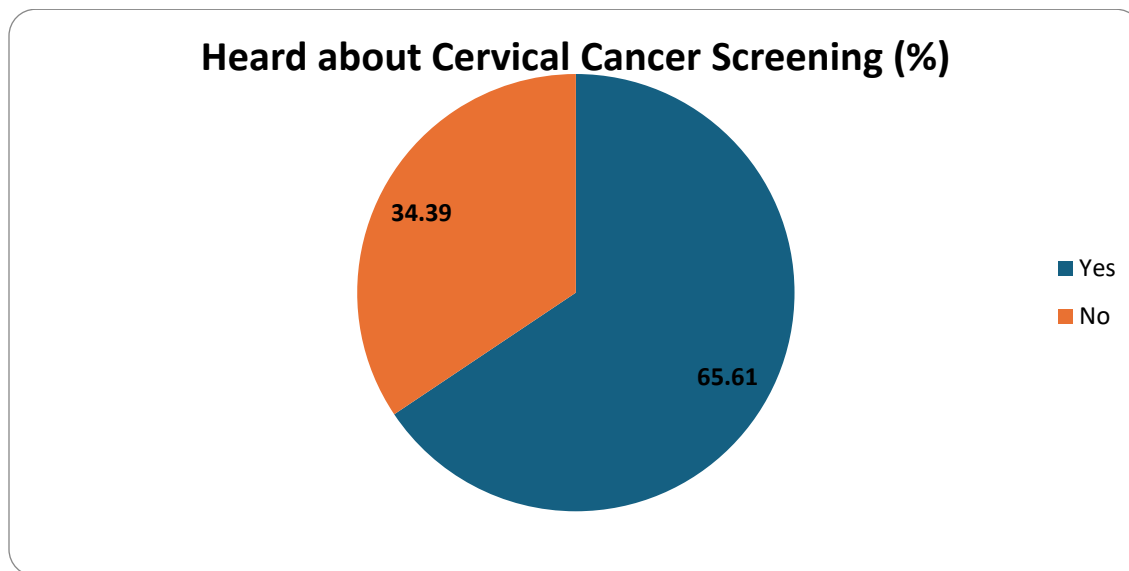


Figure 0.1: Awareness of Cervical Cancer Screening Among Women of Reproductive Age in the Lower Manya Krobo Municipality

Figure 4.1 revealed that overall, 65.61% of respondents had heard about cervical cancer screening, and over one-third (34.39%) had never heard about cervical cancer screening.

4.2.2 Knowledge of Screening Methods

Awareness of screening methods was considerably low, with only 42.68% of respondents indicating awareness of any method. Furthermore, a majority (61.78%) were unable to identify any specific screening method, highlighting a critical knowledge gap. Even among those who were aware, knowledge of specific methods such as VIA (28.03%), Pap smear (22.61%), and HPV DNA testing (13.69%) remained limited. This suggests that awareness does not necessarily translate into actionable knowledge.

Similarly, while 39.81% correctly identified the recommended screening interval of every three years, over one-quarter (26.75%) were unaware. These findings reveal that knowledge of when and how often to screen is inadequate.

Table 4.8 Knowledge of Screening

Knowledge of screening			
methods			
Pap smear (Yes)	71	22.61	
Visual Inspection with Acetic Acid (VIA) (Yes)	88	28.03	
HPV DNA test (Yes)	43	13.69	
Do not know any method	194	61.78	

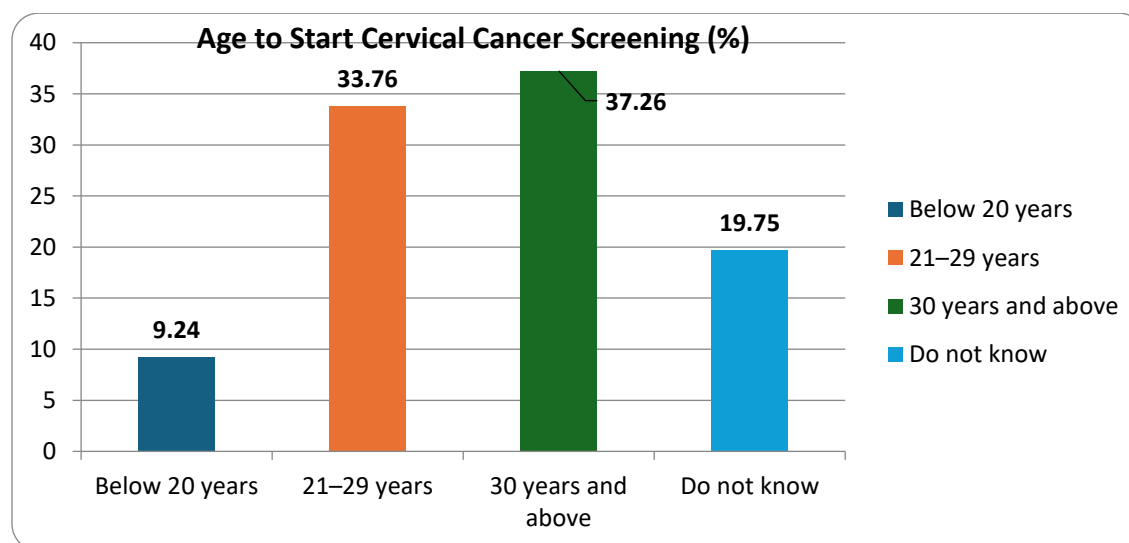


Figure 0.2: Knowledge of Appropriate Age to Initiate Cervical Cancer Screening in the Lower Manya Krobo Municipality

Knowledge of screening guidelines was inconsistent. Although 37.26% correctly identified that screening should begin at 30 years and above, a considerable proportion either selected incorrect age groups or did not know the appropriate age (19.75%).

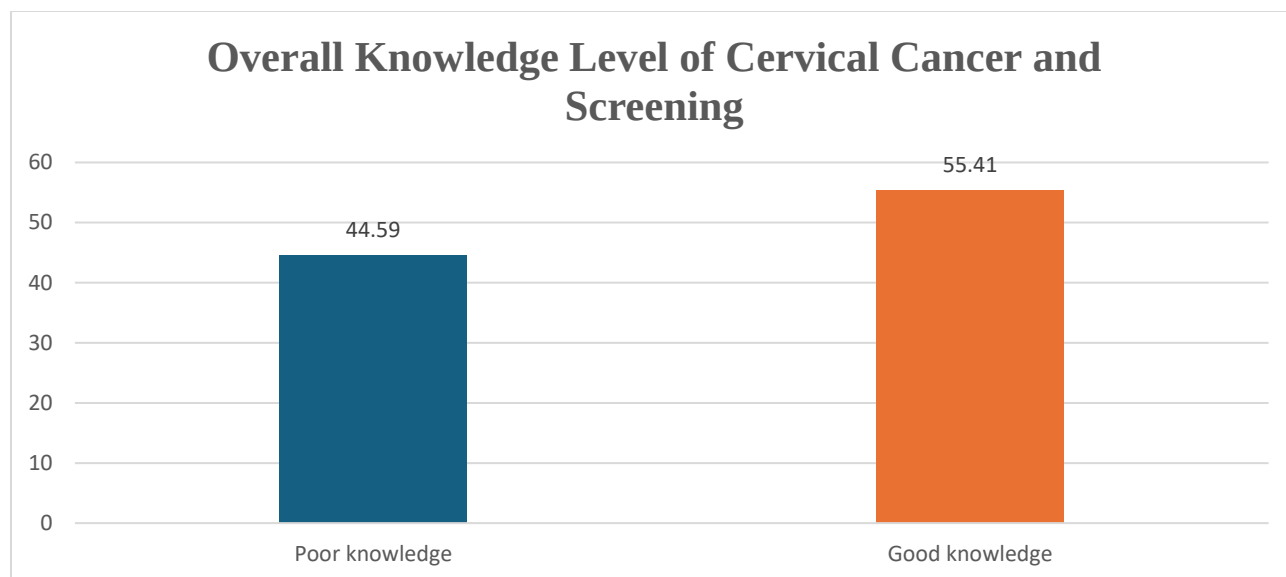


Figure 0.3: Overall Knowledge Level of Cervical Cancer and Screening

Figure 4.3 shows the overall knowledge level of respondents regarding cervical cancer and its screening methods. The results indicate that 55.41% of Respondents had a good level of knowledge regarding cervical cancer and screening, while 44.59% had poor knowledge.

4.3 Attitudes Toward Cervical Cancer Screening Among Respondents

Table 4.9 presents respondents' attitudes toward cervical cancer and its screening. Regarding the perception that cervical cancer screening is necessary for all women, the majority of respondents expressed positive attitudes, with 39.81% agreeing and 27.07% strongly agreeing with the statement. However, 10.51% disagreed and 6.69% strongly disagreed. When asked if they would participate in screening if the service was free, 40.45% of respondents agreed and 20.70% strongly agreed to participate in screening. However, 9.87% disagreed and 8.28% strongly disagreed.

With regard to embarrassment associated with screening, 28.34% of respondents disagreed and 18.15% strongly disagreed that they would feel embarrassed undergoing screening, while 17.20% agreed and 10.51% strongly agreed.

Table 4.9 Attitudes Toward Cervical Cancer Screening Among Respondents

Variable	Category	Frequency	Percentage (%)
Cervical cancer screening is necessary for all women	Strongly disagree	21	6.69
	Disagree	33	10.51
	Agree	125	39.81
	Strongly agree	85	27.07
	Strongly		
If cervical cancer screening is free, I will participate	disagree	26	8.28
	Disagree	31	9.87
	Agree	127	40.45
	Strongly		
	agree	65	20.7
I feel embarrassed to undergo cervical cancer screening	Strongly disagree	57	18.15
	Disagree	89	28.34
	Agree	54	17.2
	Strongly		
	agree	33	10.51

4.4 Barriers Hindering Women’s Participation in Cervical Cancer Screening

4.4.1 Undergone Cervical Cancer Screening

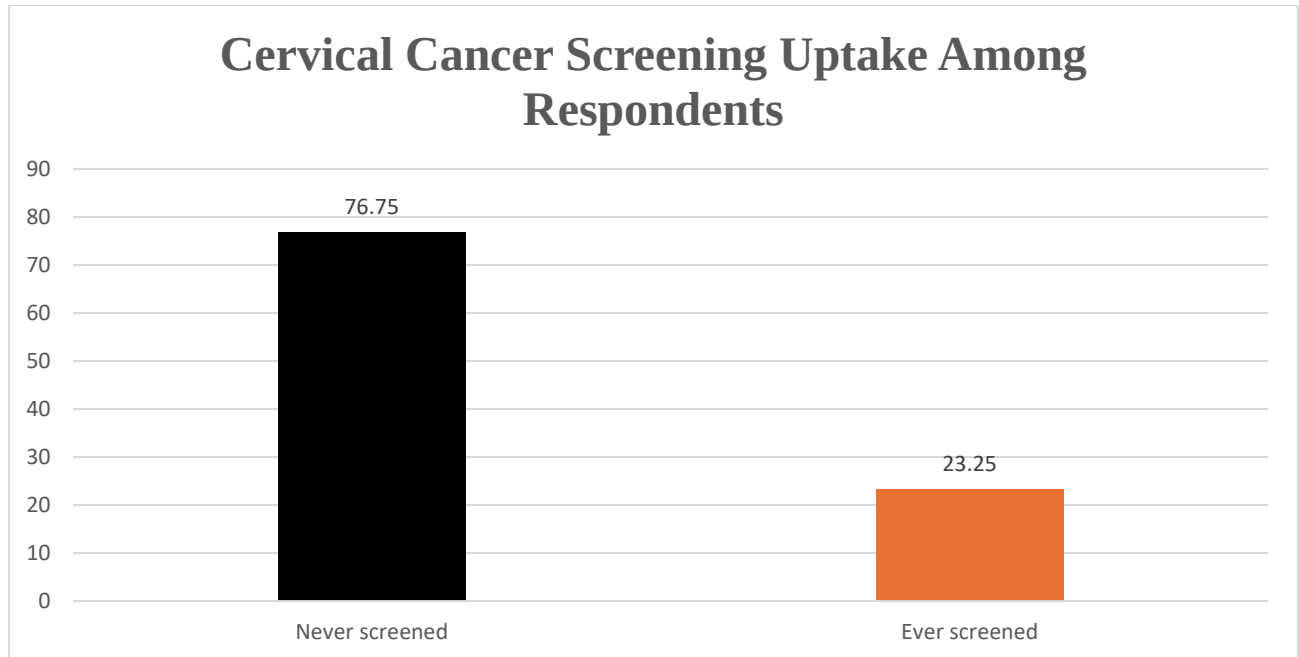


Figure 0.4: Cervical Cancer Screening Uptake Among Respondents

Figure 4.4 illustrates the uptake of cervical cancer screening among respondents. The findings show that only 23.25% of respondents reported that they had ever undergone cervical cancer screening, whereas a large majority, 76.75%, had never been screened.

4.4.2 Barriers to Cervical Cancer Screening

Table 4.10 presents the barriers that hinder women’s participation in cervical cancer screening. The findings show that lack of information about where screening services are provided was the most commonly reported barrier, with 30.57% of respondents indicating that they were not aware of where screening could be done. Similarly, 28.66% reported that they had never been told about cervical cancer screening.

A considerable proportion of respondents (27.71%) reported that they did not consider screening necessary because they were not ill. Additionally, 27.39% reported fear of screening results as a barrier. Financial constraints also played a role, as 22.93% of respondents reported that the cost of screening prevented them from participating. Personal and emotional factors were also identified, including embarrassment during screening (18.47%) and fear of pain associated with the procedure (17.52%). Social influences appeared to be less prominent barriers. Only 10.83% of respondents indicated that partner disapproval hindered their participation in screening. Health system–related factors were also relatively less reported, with 8.92% citing rude health staff as a barrier. Religious beliefs were the least reported barrier, with only 7.64% of respondents indicating that religion prevented them from undergoing screening.

Table 4.10 Barriers Hindering Women’s Participation in Cervical Cancer Screening

Variable	Category	Frequency	Percentage (%)
Do not know where screening is done	Yes	96	30.57
Never told about screening	Yes	90	28.66
Not sick so screening not necessary	Yes	87	27.71
Fear of screening results	Yes	86	27.39
Cost of screening	Yes	72	22.93
Embarrassment during screening	Yes	58	18.47
Fear of pain	Yes	55	17.52
Partner disapproval	Yes	34	10.83
Rude health staff	Yes	28	8.92
Religious beliefs	Yes	24	7.64

4.5 Factors Influencing Cervical Cancer Screening Uptake In The Lower Manya Krobo Municipality

4.5.1 Socio-demographic Characteristics Associated with Cervical Cancer Screening Uptake

Table 4.11 presents the bivariate analysis examining the association between selected variables and cervical cancer screening uptake among respondents. Age group ($\chi^2 = 4.65$, $p = 0.585$), education level ($\chi^2 = 6.52$, $p = 0.164$), marital status ($\chi^2 = 5.54$, $p = 0.237$), occupation ($\chi^2 = 8.54$, $p = 0.129$), religion ($\chi^2 = 2.25$, $p = 0.523$) and number of children ($\chi^2 = 0.57$, $p = 0.904$). In contrast, knowledge level demonstrated a significant association with cervical cancer screening uptake ($\chi^2 = 22.24$, $p < 0.001$). Participants with good knowledge had a substantially higher screening uptake (33.33%) compared with those with poor knowledge (10.71%), suggesting that knowledge plays a major role in influencing screening behavior. Attitude toward cervical cancer screening was also not significantly associated with screening uptake ($\chi^2 = 0.88$, $p = 0.349$).

Table 4.11 Socio-demographic Characteristics Associated with Cervical Cancer Screening Uptake

Variables	Ever screened – Ever screened		Chi-square	
	Yes n (%)	– No n (%)	(χ^2)	P-value
Age group			4.68	0.585
15–19	10 (23.81%)	32 (76.19%)		
20–24	15 (28.30%)	38 (71.70%)		
25–29	13 (28.26%)	33 (71.74%)		
30–34	11 (24.44%)	34 (75.56%)		

35–39	11 (25.58%)	32 (74.42%)		
40–44	7 (16.67%)	35 (83.33%)		
45–49	6 (13.95%)	37 (86.05%)		
Education			6.52	0.164
No formal	6 (27.27%)	16 (72.73%)		
Primary	6 (11.11%)	48 (88.89%)		
JHS	22 (22.22%)	77 (77.78%)		
SHS	30 (28.04%)	77 (71.96%)		
Tertiary	9 (28.13%)	23 (71.87%)		
Marital status			5.54	0.237
Single	35 (24.14%)	110 (75.86%)		
Married	26 (22.22%)	91 (77.78%)		
Divorced	1 (5.26%)	18 (94.74%)		
Widowed	6 (31.58%)	13 (68.42%)		
Separated	5 (35.71%)	9 (64.29%)		
Occupation			8.54	0.129
Civil servant	5 (22.73%)	17 (77.27%)		
Farmer	17 (28.81%)	42 (71.19%)		
Self-employed	5 (9.80%)	46 (90.20%)		
Student	8 (17.78%)	37 (82.22%)		
Trader	29 (28.16%)	74 (71.84%)		
Unemployed	9 (26.47%)	25 (73.53%)		
Number of children			0.57	0.904

None	8 (19.51%)	33 (80.49%)		
1–2 children	34 (22.82%)	115 (77.18%)		
3–4 children	25 (25.25%)	74 (74.75%)		
5+ children	6 (24.00%)	19 (76.00%)		
Knowledge level			22.24	0.000
Poor knowledge	15 (10.71%)	125 (89.29%)		
Good knowledge	58 (33.33%)	116 (66.67%)		
Attitude level			0.88	0.349
Negative attitude	27 (20.61%)	104 (79.39%)		
Positive attitude	46 (25.14%)	137 (74.86%)		
Religion			2.25	0.523
Christianity	58 (23.67%)	187 (76.33%)		
Islam	12 (23.53%)	39 (76.47%)		
Traditional	3 (27.27%)	8 (72.73%)		

4.5.2 Association Between Knowledge and Cervical Cancer Uptake

Knowledge of other risk factors including, early sexual activity ($\chi^2 = 1.97$, $p = 0.161$), multiple sexual partners ($\chi^2 = 2.48$, $p = 0.115$), smoking ($\chi^2 = 1.12$, $p = 0.289$), family history of cervical cancer ($\chi^2 = 0.10$, $p = 0.756$), and poor genital hygiene ($\chi^2 = 0.11$, $p = 0.739$) were not significantly associated with screening uptake. Similarly, lack of knowledge of risk factors overall did not show a statistically significant relationship with screening behavior ($\chi^2 = 0.66$, $p = 0.417$), although screening uptake was lower among those who lacked such knowledge. Knowledge of screening ($\chi^2 = 2.95$, $p = 0.086$), and screening methods ($\chi^2 = 3.42$, $p = 0.064$) were not also not significantly associated with cervical cancer uptake.

Table 4.12 Association Between Knowledge and Cervical Cancer Uptake

Variable	Category	Ever screened	Ever screened	Chi- square	P-value
		Yes n (%)	No n (%)		
Early sexual activity	No	35 (20.23)	138 (79.77)	1.97	0.161
	Yes	38 (26.95)	103 (73.05)		
Multiple sexual partners	No	32 (19.63)	131 (80.37)	2.48	0.115
	Yes	41 (27.15)	110 (72.85)		
HPV	No	33 (18.44)	146 (81.56)	5.40	0.020
	Yes	40 (29.63)	95 (70.37)		
Poor genital hygiene	No	46 (22.66)	157 (77.34)	0.11	0.739
	Yes	27 (24.32)	84 (75.68)		
Smoking	No	55 (24.89)	166 (75.11)	1.12	0.289
	Yes	18 (19.35)	75 (80.65)		
Family history	No	46 (23.83)	147 (76.17)	0.10	0.756
	Yes	27 (22.31)	94 (77.69)		
Do not know risk factors	No	71 (23.67)	229 (76.33)	0.66	0.417
	Yes	2 (14.29)	12 (85.71)		
Heard about screening	No	19 (17.59)	89 (82.41)	2.95	0.086
	Yes	54 (26.21)	152 (73.79)		
Aware of screening methods	No	35 (19.44)	145 (80.56)	3.42	0.064
	Yes	38 (28.36)	96 (71.64)		

4.5.3 Association Between Attitude and Cervical Cancer Uptake

The association between willingness to engage in cervical cancer screening if the service is free and actual screening uptake was examined using chi-square analysis. The findings indicated no statistically significant association between the two variables ($\chi^2 = 0.09$, $p = 0.999$). Screening uptake was relatively similar across all response categories, with 23.08% among those who strongly disagreed, 22.58% among those who disagreed, 23.08% among those who agreed, 22.83% among those who strongly agreed, and 24.62% among those who very strongly agreed.

Table 4.13 Association Between Attitude and Cervical Cancer Uptake

Variable	Category	Ever screened Yes n (%)	Ever screened No n (%)	Chi- square	P-value
willingness to participate in screening if free	Strongly disagree	6 (23.08)	20 (76.92)	0.09	0.999
	Disagree	7 (22.58)	24 (77.42)		
	Agree	15 (23.08)	50 (76.92)		
	Strongly agree	29 (22.83)	98 (77.17)		
	Very strongly agree	16 (24.62)	49 (75.38)		

4.5.4 Association Between Barriers and Cervical Cancer Uptake

The association between perceived barriers and cervical cancer screening uptake was examined using chi-square analysis. The results showed that all the assessed barriers were significantly

associated with screening uptake. Lack of knowledge about where screening is conducted was strongly associated with uptake ($\chi^2 = 41.88$, $p < 0.001$), as was not being informed about screening ($\chi^2 = 38.21$, $p < 0.001$). Similarly, the perception that screening is unnecessary in the absence of illness was significantly associated with uptake ($\chi^2 = 36.45$, $p < 0.001$).

Financial and psychological barriers also demonstrated significant associations. Cost of screening ($\chi^2 = 28.30$, $p < 0.001$), fear of screening results ($\chi^2 = 35.88$, $p < 0.001$), and fear of pain ($\chi^2 = 20.20$, $p < 0.001$) were all significantly related to screening behavior. In addition, embarrassment during the screening process was significantly associated with uptake ($\chi^2 = 21.55$, $p < 0.001$).

Socio-cultural and interpersonal factors were also important. Religious beliefs ($\chi^2 = 7.87$, $p = 0.005$), partner disapproval ($\chi^2 = 11.55$, $p = 0.001$), and negative attitudes of health staff ($\chi^2 = 9.31$, $p = 0.002$) were all significantly associated with screening uptake.

Overall, these findings indicate that multiple barriers play a significant role in influencing cervical cancer screening uptake. The strong statistical significance across nearly all variables suggests that these barriers are key determinants of the low utilization of screening services among women.

Table 4.14 Association Between Barriers and Cervical Cancer Uptake

Variable			Chi-square	
	Yes n (%)	No n (%)	(χ^2)	P-value
Do not know where screening is done	73 (33.49)	145 (66.51)	41.88	0.000
Never told about screening	73 (32.59)	151 (67.41)	38.21	0.000
Not sick so screening not necessary	73 (32.16)	154 (67.84)	36.45	0.000
Cost of screening	73 (30.17)	169 (69.83)	28.3	0.000
Fear of pain	73 (28.19)	186 (71.81)	20.2	0.000
Fear of results	73 (32.02)	155 (67.98)	35.88	0.000
Religious beliefs	73 (25.17)	217 (74.83)	7.87	0.005

Embarrassment	73 (28.52)	183 (71.48)	21.55	0.000
Partner disapproval	73 (26.07)	207 (73.93)	11.55	0.001
Rude health staff	73 (25.52)	213 (74.48)	9.31	0.002

4.5.5 Logistic regression of Socio-demographic Factors Influencing Cervical Cancer Screening Uptake

Table 4.15 presents the logistic regression analysis examining the influence of knowledge on the attitude of women on cervical cancer screening uptake among respondents. After adjusting for other variables, knowledge level remained the only significant predictor of cervical cancer screening uptake among the respondents. Respondents with good knowledge were approximately four times more likely to have undergone cervical cancer screening compared with those with poor knowledge (AOR = 4.12; 95% CI: 2.11–8.04; $p < 0.001$).

Table 4.15 Multivariable Logistic Regression Analysis of Factors Influencing Cervical Cancer Screening Uptake

Variable	Category	COR CI)	(95% COR p-value	AOR CI)	(95% AOR p-value
Age group	Reference: 15–19				
	20–29	1.26 (0.55– 2.91)	0.584	1.54 (0.61– 3.89)	0.360
	30–39	1.07 (0.45– 2.52)	0.883	0.92 (0.36– 2.32)	0.861
	40–49	0.58 (0.23– 1.46)	0.244	0.64 (0.24– 1.74)	0.384
Education level	Reference: JHS				
	No formal	1.31 (0.46– 3.75)	0.612	2.02 (0.64– 6.37)	0.231
	Primary	0.44 (0.17– 1.16)	0.096	0.43 (0.15– 1.20)	0.108
	SHS	1.36 (0.72– 2.57)	0.338	1.07 (0.53– 2.15)	0.849

	Tertiary	1.37 3.38)	(0.55– 0.496	1.08 2.84)	(0.41– 0.882
Occupation	Reference: Civil servant				
	Farmer	1.38 4.33)	(0.44– 0.585	1.27 4.45)	(0.37– 0.704
	Self-employed	0.37 1.44)	(0.09– 0.151	0.34 1.46)	(0.08– 0.147
	Student	0.74 2.58)	(0.21– 0.631	0.70 2.69)	(0.18– 0.600
	Trader	1.33 3.95)	(0.45– 0.604	1.23 3.97)	(0.38– 0.729
	Unemployed	1.22 4.29)	(0.35– 0.752	0.96 3.73)	(0.25– 0.952
Knowledge level	Reference: Poor knowledge				
	Good knowledge	4.17 7.76)	(2.24– 0.000	4.12 8.04)	(2.11– 0.000

CHAPTER FIVE

5.0 DISCUSSION

5.1 Knowledge of Cervical Cancer Screening

The knowledge findings from this study present a nuanced picture that resists simple characterisation. On the surface, the relatively high proportion of women reported having heard about cervical cancer screening 65.61% might suggest that awareness efforts in the Municipality have achieved meaningful reach. Yet awareness, as this study's deeper findings reveal, is a poor proxy for the kind of knowledge that actually enables preventive action. When respondents were assessed on the specific dimensions of knowledge that matter for screening participation understanding of HPV as the causal agent, familiarity with available screening methods, and knowledge of appropriate timing and frequency, the gaps became considerably more pronounced. The majority of respondents were unable to identify any specific screening method, and uncertainty about when to initiate screening and how often to return was widespread. This divergence between surface awareness and actionable knowledge is not merely a measurement artefact; it reflects a substantive limitation in women's capacity to translate general familiarity with the disease into informed health-seeking behavior (WHO, 2021; Arbyn et al., 2020).

The overall distribution of knowledge levels where 55.41% were classified as having good knowledge against 44.59% with poor knowledge warrants careful interpretation. While it is tempting to read the slight majority with adequate knowledge as an encouraging finding, the fact that nearly half of respondents lacked sufficient understanding to effectively engage with preventive services represents a significant public health concern. Moreover, aggregate classifications of this kind can obscure important within-group variation: a woman classified as

having good overall knowledge may still hold critical misconceptions about specific procedural aspects of screening that would deter or delay her participation. The aggregate figure therefore likely overstates the population's readiness to act.

The pattern of information sources identified in this study offers a plausible structural explanation for this knowledge profile. Radio, television, and informal social networks emerged as the dominant channels through which women encountered information about cervical cancer. These platforms are effective vehicles for broad awareness-raising but are structurally ill-suited to delivering the layered, specific, and practically oriented information that moves women from awareness to action. Health workers who are uniquely positioned to provide structured, individualised education and to correct misconceptions in real time were cited as an information source by a comparatively smaller proportion of respondents. This imbalance suggests that the health information environment in the Municipality is weighted toward generalist messaging at the expense of targeted education, a pattern consistent with findings from other Ghanaian and African contexts (Drokow et al., 2020; Mantula, Toefy and Sewram, 2024). Improving screening knowledge in this setting may therefore depend less on increasing the volume of information and more on restructuring how and through whom that information is delivered.

The significant association between knowledge and screening uptake observed in this study — with women possessing good knowledge substantially more likely to have undergone screening ($p < 0.001$), and knowledge of HPV as the causal agent specifically associated with uptake ($p = 0.020$) carries important theoretical and practical implications. Theoretically, it supports the Health Belief Model's proposition that accurate understanding of disease causation and susceptibility is a meaningful precondition for preventive behavior (Rosenstock, 1974). Practically, it suggests that the content of health education matters, not just its reach. Women who understood the viral origin

of cervical cancer were more likely to act, indicating that moving beyond general disease awareness toward causal and mechanistic understanding may be a particularly productive target for educational intervention. This aligns with evidence from Tawiah et al. (2022) and Ebu et al. (2014), who similarly found that more specific and accurate knowledge was associated with higher screening participation in Ghanaian contexts.

Situating these findings within the broader literature reveals both consistency and some tentative evidence of progress. The pattern of high awareness alongside limited procedural knowledge mirrors what has been repeatedly documented across Ghana and sub-Saharan Africa more broadly (Calys-Tagoe et al., 2020; Drokow et al., 2020; Gerstl et al., 2022; Mantula, Toefy and Sewram, 2024). In this respect, the Lower Manya Krobo Municipality does not appear to be an outlier but rather reflects a regional pattern in which public health campaigns have succeeded in putting cervical cancer on women's radar without equipping them with the specific knowledge needed to navigate screening services. However, in comparison with earlier Ghanaian findings; notably Binka et al. (2019), who reported generally low knowledge levels even at the level of basic disease awareness among rural women, the present study's findings may indicate some incremental improvement attributable to expanding media exposure and ongoing public health campaigns. This improvement, while meaningful, should not be overstated. The persistence of significant knowledge deficits across a substantial proportion of the study population suggests that current information strategies, however improved, remain insufficient to achieve the depth of understanding that effective prevention requires.

Taken together, these findings suggest that the knowledge challenge in the Lower Manya Krobo Municipality is not primarily one of awareness but of depth, accuracy, and practical applicability. Addressing it will require health education strategies that move beyond broadcasting general

messages toward structured, provider-led, and community-embedded approaches capable of equipping women with the specific information they need to make informed decisions regarding screening participation.

5.2 Attitudes Toward Cervical Cancer Screening

The attitudinal findings from this study present an instructive paradox that merits careful interpretation. A majority of respondents; 58.28%; demonstrated positive attitudes toward cervical cancer screening, and more than two-thirds acknowledged screening as necessary for all women. Willingness to participate when services were offered free of charge exceeded 60%. On the surface, this attitudinal profile appears encouraging. Yet attitude toward screening was not significantly associated with actual screening uptake ($p = 0.349$), a finding that fundamentally complicates any straightforward reading of the positive attitudinal data. The central analytical question this study must therefore address is not whether women hold favourable attitudes, but why those attitudes fail to translate into behavior.

This attitude-behavior gap is not unique to this setting, but its presence here is theoretically significant. The Health Belief Model and related frameworks treat favourable attitudes particularly perceived benefit and positive screening intention as necessary precursors to preventive action (Rosenstock, 1974). The finding that positive attitudes did not predict uptake in this population suggests that attitudinal constructs, while present, are not operating with sufficient strength or specificity to drive behavior independently. One interpretive possibility is that the positive attitudes expressed by many respondents are relatively shallow formed on the basis of generalised health messaging rather than grounded in accurate, detailed knowledge of the screening process. Where understanding of screening is incomplete, expressed willingness may

reflect social desirability or vague approval of the concept rather than genuine readiness to act. This interpretation is consistent with the study's knowledge findings, which has shown that awareness was considerably more widespread than procedural or causal understanding, and aligns with WHO observations that expressed willingness to screen does not reliably predict participation in the absence of adequate information (WHO, 2021).

The persistence of emotional and perceptual reservations within an otherwise broadly positive attitudinal profile adds further complexity to this picture. Although outright fear and embarrassment were not the dominant responses, a considerable proportion of respondents either endorsed these concerns or responded neutrally across multiple attitude items. This pattern of ambivalence deserves particular analytical attention. Neutral responses are frequently treated as benign in attitudinal analysis, but in the context of preventive health behavior, ambivalence is functionally closer to a barrier than to a facilitator. A woman who is neither convinced of the necessity of screening nor actively opposed to it is unlikely to overcome the practical and logistical obstacles that stand between intention and participation. The high proportion of neutral responses observed in this study may therefore reflect not indifference but uncertainty — a population that has encountered enough information to avoid outright rejection of screening but not enough to develop the conviction that motivates action.

These findings resonate with and extend the existing Ghanaian and African literature in important ways. Binka, Doku and Awusabo-Asare (2017) found that while women frequently recognised the importance of screening, fear, shame, and discomfort shaped their practical willingness to participate a distinction between abstract endorsement and embodied readiness that this study's findings clearly echo. Enyan et al. (2022) similarly documented that positive screening intentions among Muslim women in southern Ghana were moderated by cultural norms around modesty and

concerns about procedural exposure, illustrating how community-level social norms can attenuate the behavioral influence of individually held positive attitudes. At the regional level, Mantula, Toefy and Sewram's (2024) systematic review identified embarrassment, fear of pain, and anxiety about outcomes as persistent attitudinal barriers across African settings even among women who intellectually endorsed screening's value. Gerstl et al. (2022) added a further dimension by noting that women who perceived themselves as healthy frequently considered screening unnecessary despite holding generally favourable views a manifestation of low perceived susceptibility that is particularly relevant in a setting like Lower Manya Krobo, where knowledge of the asymptomatic nature of early cervical cancer was shown to be limited. Taken together, this body of evidence suggests that the attitude-behavior gap observed in this study is not anomalous but rather reflects a consistent regional pattern in which the emotional and cultural dimensions of screening attitudes systematically undermine the behavioral influence of positive cognitive appraisals.

Considered within a socio-ecological framework, the attitudinal patterns observed in this study reflect influences operating simultaneously across multiple levels. At the individual level, incomplete knowledge constrains the depth and conviction of positive attitudes, leaving them vulnerable to being overridden by emotional reservations. At the community level, cultural norms around modesty, gender roles, and the social meaning of reproductive health create hesitancies that coexist with, and ultimately compete against, broadly favourable perceptions of screening. At the institutional level, concerns about privacy, provider behavior, and the quality of the service experience further shape women's confidence in and comfort with engaging screening services. The non-significant association between attitudes and uptake is perhaps best understood as the cumulative product of these compounding influences: positive attitudes exist, but they are insufficiently reinforced at any level to generate consistent behavioral follow-through. This

multilevel interpretation also cautions against overly individualistic readings of the attitudinal data — the gap between intention and behavior in this population is not simply a matter of personal conviction but reflects the structural and cultural conditions within which individual attitudes are formed and enacted.

This has direct implications for how interventions in this setting should be designed. Strategies that focus exclusively on improving attitudes through awareness campaigns or motivational messaging are unlikely to be sufficient if the underlying knowledge deficits that limit attitudinal depth remain unaddressed, and if the community-level and institutional factors that generate ambivalence and emotional hesitancy are not simultaneously tackled. The findings suggest that attitudinal change, to be behaviorally meaningful, must be grounded in accurate knowledge, normalised through community engagement, and supported by service environments that women experience as respectful, private, and genuinely accessible. Positive attitudes, this study demonstrates, are a necessary but far from sufficient condition for screening participation.

5.3 Barriers Hindering Women's Participation in Cervical Cancer Screening

The barrier findings from this study reveal a profile of constraints that is both multifaceted and internally coherent, and that collectively explains much of the low screening uptake observed in the Lower Manya Krobo Municipality. What is particularly striking is that informational barriers specifically, not knowing where screening is conducted (30.57%) and never having been told about screening at all (28.66%) emerged as the most frequently reported deterrents. This finding deserves more than a passing observation. In a setting where the study has already demonstrated that general awareness of cervical cancer is relatively widespread, the prominence of service-location ignorance and provider silence as barriers suggests that the health information environment in this

Municipality is characterised by a specific and consequential asymmetry: women have encountered enough information to know that cervical cancer exists, but not enough to know what to do about it or where to go. This is precisely the gap between awareness and actionable knowledge that has been theorised as a critical mechanism through which information deficits translate into non-participation (WHO, 2021).

The statistical significance of these informational barriers ($p < 0.001$) strengthens this interpretation considerably. It establishes that the association between informational gaps and non-screening is not incidental but systematic, pointing toward structural weaknesses in how health services are communicated and promoted within the Municipality. Where screening is not actively incorporated into routine primary care encounters and healthcare providers do not consistently initiate conversations about cervical cancer prevention, women are effectively left to seek out information and services independently a burden that falls disproportionately on those with the least health literacy and fewest social resources. This aligns with patterns documented across Ghana and sub-Saharan Africa more broadly, where poor dissemination of service information has been identified as a major obstacle to uptake even in areas where screening infrastructure technically exists (Calys-Tagoe et al., 2020; Mantula, Toefy and Sewram, 2024). The implication is that expanding service availability without simultaneously strengthening provider-initiated communication is unlikely to produce meaningful improvements in participation.

The finding that 27.71% of participants did not consider screening necessary because they were not ill and that This perception showed a significant association with non-uptake ($p < 0.001$) speaks to a deeper conceptual barrier that informational strategies alone may struggle to address. The belief that screening is a response to illness rather than a preventive measure reflects a fundamental misunderstanding of the logic of early detection, one that is particularly consequential for cervical

cancer given its characteristically asymptomatic early progression. A woman who equates health with the absence of symptoms has no experiential basis for perceiving herself as at risk, and therefore no internally compelling reason to seek screening. This is not simply a knowledge gap in the narrow sense; it represents a divergence between biomedical and lay models of health and illness that has been documented across multiple African settings (Gerstl et al., 2022). Addressing it requires educational approaches that explicitly challenge and reframe the symptom-based logic of health-seeking, rather than simply adding more information to an already incomplete picture.

Emotional barriers fear of results (27.39%), embarrassment (18.47%), and fear of pain (17.52%) while reported less frequently than informational barriers, were also significantly associated with screening uptake ($p < 0.001$), and their influence should not be minimised on the basis of their relative prevalence. Emotional deterrents operate differently from informational ones: they are not resolved by providing more or better information, but persist as affective responses that can override rational appraisal even when knowledge is adequate. The co-occurrence of fear, embarrassment, and pain anxiety in this population reflects a screening experience that many women anticipate as threatening physically, emotionally, and socially. This anticipatory threat shapes behavior at the point of decision, often in ways that are not immediately apparent to health systems operating primarily through informational channels. These findings echo those of Binka et al. (2019) and Enyan et al. (2022), who similarly found that emotional concerns around the procedure itself and its potential outcomes were significant deterrents among Ghanaian women, and are consistent with the broader African evidence base reviewed by Mantula, Toefy and Sewram (2024). Collectively, these findings suggest that the emotional dimensions of screening participation require dedicated attention in intervention design, not as a secondary consideration but as a primary target.

Financial barriers, reported by 22.93% of respondents and significantly associated with uptake ($p < 0.001$), add a further and important layer to this picture. Cost operates as a particularly insidious barrier because it interacts with and amplifies other constraints: a woman who is already uncertain about the necessity of screening and anxious about the procedure is considerably less likely to incur financial costs to access it. The significance of cost in this setting is consistent with Anaba et al. (2024) and with WHO's broader documentation of financial constraints as persistent obstacles to preventive healthcare utilisation in low- and middle-income countries (WHO, 2020). It also raises an important policy question about the degree to which Ghana's largely opportunistic and facility-based screening model places the financial burden of prevention on individual women rather than distributing it across the health system.

Perhaps most analytically interesting are the social and institutional barriers — partner disapproval, negative attitudes of health staff, and religious beliefs — which, while less frequently reported, were each statistically significant ($p = 0.001$, $p = 0.002$, and $p = 0.005$ respectively). The significance of these less prevalent barriers suggests that their influence on screening behavior is disproportionate to their frequency, likely because they operate at the level of interpersonal and institutional relationships that carry particular social weight. A woman whose partner disapproves of screening, or who has encountered dismissive or disrespectful provider behavior, faces a qualitatively different kind of obstacle than one who simply lacks information — one that engaging in screening requires actively contradicting a social relationship or a prior negative experience. Binka, Doku and Awusabo-Asare (2017) have similarly shown that interpersonal dynamics and cultural norms exert meaningful influence on health-seeking behavior in Ghanaian women, and the present findings add to this body of evidence in the specific context of Lower Manya Krobo.

Considered through a socio-ecological lens, What is evident from these findings is not a hierarchy of barriers in which some matter and others do not, but a system of mutually reinforcing constraints operating across individual, interpersonal, institutional, and structural levels simultaneously. Informational gaps limit the cognitive basis for action; perceptual misconceptions undermine perceived necessity; emotional fears create anticipatory avoidance; financial costs raise the practical threshold for participation; and social and institutional dynamics erode the confidence and support that might otherwise enable women to overcome these obstacles. The fact that most identified barriers were statistically significant is not coincidental; it reflects the reality that low screening uptake in this setting is not driven by any single dominant factor but by the compounding effect of multiple constraints that reinforce one another. This has a direct implication for intervention: fragmented approaches that address one barrier category in isolation are unlikely to produce substantial or sustained improvements. What is required instead is a comprehensive and multilevel response that simultaneously strengthens health communication, reduces financial obstacles, improves the quality and cultural responsiveness of the service experience, and engages community and interpersonal dynamics that shape women's confidence and willingness to screen.

5.4 Predictors of Cervical Cancer Screening Uptake

The results of this study reveal an important and somewhat unexpected pattern regarding the factors influencing cervical cancer screening uptake among women in the Lower Manya Krobo Municipality. Contrary to what is often reported in the literature, none of the socio-demographic variables examined showed a significant association with screening uptake. Instead, knowledge level emerged as the only significant predictor, both at the bivariate level and after adjustment in the logistic regression model.

More with good knowledge had undergone screening (33.33%) compared to those with poor knowledge (10.71%), and were approximately four times more likely to screen (AOR = 4.12; 95% CI: 2.11–8.04). This strong association highlights the critical role of knowledge as a determinant of preventive health behavior. It suggests that beyond background characteristics, what women know about cervical cancer and its screening plays a decisive role in shaping their actions.

One likely explanation for the lack of association between socio-demographic characteristics and screening uptake in this study is the relatively homogeneous nature of the study population. The respondents were largely similar in terms of educational attainment, occupation, and socio-cultural background, which may have reduced variability and limited the ability to detect statistically significant differences. Additionally, in contexts where access to screening is generally low across all groups, socio-demographic advantages such as higher education or employment may not necessarily translate into increased utilization if structural and informational barriers persist (Tawiah et al., 2022).

This finding contrasts with several studies conducted in Ghana and other settings, where socio-demographic factors, particularly education and age, have been found to significantly influence screening uptake. For example, Anaba et al. (2024), using nationally representative data, reported that higher educational attainment and increasing age were associated with greater likelihood of cervical cancer screening among Ghanaian women. Similarly, Adzigbli et al. (2025) found that socio-demographic factors such as employment status and marital status significantly predicted screening uptake.

However, the strong and consistent association between knowledge and screening uptake observed in this study is well supported by existing evidence. Studies across Ghana and sub-Saharan Africa have repeatedly demonstrated that Women who are more knowledgeable about cervical cancer and

its prevention are more likely to use screening services. For instance, Drokow et al. (2020) shown that knowledge of cervical cancer and screening procedures was a key determinant of screening behavior among women. Similarly, Calys-Tagoe et al. (2020) revealed that women with greater awareness and understanding of screening were significantly more likely to have been screened. Additional evidence from Tawiah et al. (2022) also supports the finding that informed women are more likely to utilize screening services, particularly when access barriers are minimized.

Interestingly, attitude toward cervical cancer screening was not significantly associated with uptake of the outcome in this study. This suggests that while women may perceive screening as important, such perceptions alone are insufficient to drive behavior. Women may believe that screening is necessary yet lack the information, confidence, or access required to act on that belief. This observation is consistent with broader evidence suggesting that the relationship between attitudes and behavior is often mediated by other factors, including knowledge, perceived accessibility, and structural constraints. For example, Mantula, Toefy and Sewram (2024) showed that even when women expressed favourable attitudes toward screening, actual participation remained low due to informational and systemic barriers.

From a socio-ecological perspective, These results emphasize the critical role of individual-level cognitive factors in influencing health behavior, while also underscoring the limited influence of socio-demographic characteristics in this specific context. At the individual level, knowledge appears to directly influence decision-making and action, as evidenced by its strong predictive effect. At the same time, the absence of significant associations with socio-demographic variables suggests that broader structural and contextual factors may be constraining behavior across all groups, thereby overshadowing individual differences. At the institutional level, gaps in health education and service delivery may limit opportunities for screening, regardless of a woman's

background. This reinforces the idea that improving knowledge alone must be accompanied by efforts to address access and system-level barriers (WHO, 2021).

While socio-demographic characteristics are often important determinants of health behavior, their influence may be diminished in settings where knowledge gaps and structural barriers are pervasive. In contrast, knowledge emerges as a critical and consistent driver of cervical cancer screening uptake. The strong association observed in this study underscores the importance of targeted health education interventions that not only raise awareness but also provide clear, practical information to support informed decision-making.

CHAPTER SIX

6.1 Conclusion

This study set out to assess the knowledge, attitudes, and barriers influencing cervical cancer screening among women of reproductive age in the Lower Manya Krobo Municipality, as well as the factors associated with screening uptake. The findings present a clear but complex picture of cervical cancer prevention within the study context.

Overall, the study found that knowledge of cervical cancer among respondents was moderate but unevenly distributed. While a majority of women had heard about cervical cancer, important gaps remained in knowledge related to screening methods, eligibility, and recommended screening intervals. This gap between general awareness and actionable knowledge suggests that many women are not adequately equipped to make informed decisions regarding screening.

Attitudes toward cervical cancer screening were generally positive, with most respondents acknowledging the importance of screening and expressing willingness to participate, particularly if services were free. However, the presence of emotional concerns such as fear, embarrassment, and uncertainty indicates that positive attitudes alone may not be sufficient to drive screening behavior. This is supported by the finding that attitude was not significantly associated with screening uptake.

Screening uptake among respondents was low, with less than one-quarter of women reporting having ever been screened. This low utilization persists despite moderate knowledge and generally favourable attitudes, highlighting the influence of other barriers.

The study identified multiple barriers to screening, all of which were found to be statistically significant determinants of screening uptake. Informational barriers, particularly lack of knowledge about where screening services are available and not being informed about screening, emerged as the most prominent challenges. Perceptual barriers, including the belief that screening is unnecessary in the absence of symptoms, as well as emotional factors such as fear of results, embarrassment, and fear of pain, also significantly influenced participation. Financial constraints further contributed to low uptake, while social and religious barriers, although less frequently reported, were also statistically significant.

Importantly, the study found that knowledge was the only significant independent predictor of cervical cancer screening uptake. Women with good knowledge were significantly more likely to have undergone screening compared to those with poor knowledge. In contrast, socio-demographic characteristics and attitudes were not significantly associated with screening behavior.

In conclusion, cervical cancer screening uptake in the Lower Manya Krobo Municipality remains low and is primarily driven by gaps in practical knowledge and multiple intersecting barriers, rather than negative attitudes or socio-demographic disadvantages. Addressing these knowledge gaps, improving communication about available screening services, and reducing informational, emotional, and financial barriers are essential to improving screening uptake and reducing the burden of cervical cancer in the Municipality.

6.2 Recommendations

1. The Ghana Health Service (GHS) should design and implement community-based cervical cancer education programs that go beyond general awareness to provide detailed, practical

information on screening methods, eligibility, frequency, and service locations. These programs should particularly target women in peri-urban and rural communities, where gaps in actionable knowledge were identified.

2. The Municipal Health Directorate should strengthen health communication strategies by ensuring that women are consistently informed about where and how to access cervical cancer screening services, including integrating screening information into routine healthcare interactions such as antenatal and outpatient services.
3. The Ministry of Health (MoH) should consider subsidizing or fully covering cervical cancer screening services under national health initiatives, including the National Health Insurance Scheme (NHIS), to reduce financial barriers and improve uptake among low-income women.
4. The Municipal Health Directorate should implement regular community outreach and mobile screening programs to bring services closer to women in underserved areas. This will help address both access-related and informational barriers identified in the study.
5. Health facilities should incorporate culturally sensitive service delivery approaches, including the availability of female healthcare providers where possible, to reduce embarrassment and improve acceptability of screening services.
6. Public health interventions should address misconceptions about cervical cancer, particularly the belief that screening is only necessary when symptoms are present, by emphasizing the preventive nature of screening through targeted education campaigns.
7. Develop standardized local terms for cervix and cervical cancer through Ministry of Health and GHS collaboration.

8. Train Muslim female nurses to improve culturally acceptable cervical cancer screening uptake

Limitations

1. Lack of local terminology for cervix and cervical cancer affected understanding and communication.
2. Translation from local languages to English may have led to loss of meaning

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APPENDIX

INFORMED CONSENT

Title of Study:	Knowledge, Attitudes and Barriers Towards Cervical Cancer Screening Among Women of Reproductive Age in Lower Manya Krobo Municipality, Eastern Region
Principal Investigator:	Belinda Narteh

GENERAL INFORMATION ABOUT THE RESEARCH

I am Belinda Narteh, a Master of Public Health candidate at the Ensign Global College, Kpong. I am carrying out a study titled: “Knowledge, Attitudes and Barriers Towards Cervical Cancer Screening Among Women of Reproductive Age in Lower Manya Krobo Municipality”. The study women aged 15-49 years. During this study, you will need to answer some questions. You will answer the questions by selecting the options that best fit your case.

The questionnaire includes five main sections, demographic information, knowledge of cervical cancer screening, attitudes towards cervical cancer screening and barriers to cervical cancer screening.

The answers you provide in this study will be analyzed and used purely for academic reasons only. Should you agree to join this study, it will take you a maximum of 25 minutes to finish the interview.

Benefits/Risks of the study

There will be no anticipated risk connected with the study. However, an inconvenience may be the time and effort the participants will take to join in this study. There will be no direct benefits for participating in the study but indirectly, but the findings from this study will help improve women's access to cervical cancer screening services in your community and beyond.

Confidentiality

Your anonymity and privacy will be ensured throughout the study in the sense that data obtained from you will be treated anonymously. We will not use your name or any other personal information that would identify you in the study. Your information will be saved in a file that is protected by a password that is only known to the researcher and his boss.

Compensation

Taking part in this study will be purely optional. There will be no pay for you for engaging in the study. There will be no form of monetary payment as a reward for your participation in the study. However, we will thank you for your time and effort to join in the study.

Withdrawal from Study

You may decide or not to join and leave the study at any point in time without any penalty or loss of any gain. You are also free to ask questions now and at any other time concerning this study.

PARTICIPANT AGREEMENT

If you agree to take part in the study, please sign the consent form.

I have read the information on the sheet/ the information on the sheet has been read to me. I have been informed that I will be required to give responses to some questions related to the use of digital media to access sexual reproductive health information. I have had the opportunity to ask questions about the study and any question I have asked has been answered to my satisfaction. I understand that I have the right not to take part in this study without in any way affecting me. I have understood the explanation given to me and I voluntarily agree to take part in the study.

Name of Participant

Signature of Participant

Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

Name of Person who Obtained Consent

Signature of Person Who Obtained Consent

Date

ASSENT FORM FOR PARTICIPATION IN RESEARCH

Title of Study: Knowledge, Attitudes and Barriers Towards Cervical Cancer Screening Among Women of Reproductive Age in Lower Manya Krobo Municipality, Eastern Region.

Principal Investigator: Belinda Narteh

Master of Public Health Student, Ensign Global University

Email: belinda.narteh@st.ensign.edu.gh

Phone: 0245495557

Purpose of the Study

You are being invited to take part in a study that aims to understand what women know and feel about cervical cancer and the reasons why some women may not go for screening. The information gathered will help health workers and leaders design better education and services to encourage women to get screened early.

What Will Happen If You Take Part

If you agree to take part, you will be asked some questions about your knowledge, beliefs, and experiences regarding cervical cancer and screening. This will take about 20–25 minutes. You will not be given any medicine or undergo any medical procedure.

Possible Benefits

You may not receive any direct benefit from joining this study. However, what you share will help improve education and screening programs for cervical cancer in your community and across Ghana.

Possible Risks or Discomforts

There are no known risks in taking part in this study. You may skip any question you are not comfortable answering or stop the interview at any time.

Confidentiality

Everything you say will be kept private. Your name will not be written on the form, and no one will know which answers are yours. The information will be used only for academic and health improvement purposes.

Voluntary Participation

You are free to decide whether or not you want to take part. You can stop at any time, even after starting, and nothing bad will happen to you. You will still receive the same care and treatment as before.

Questions

If you have any questions about this study, you can ask the researcher now or at any time. You may also contact the principal investigator using the phone or email provided above.

Assent Statement

I have read (or have had read to me) the information about this study. I understand what it is about and what I will be asked to do. I know that I can choose not to participate or stop at any time. All my questions have been answered to my satisfaction. I agree to take part in this study.

Name of Participant

Signature of Participant

Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

Name of Person who Obtained Consent

Signature of Person Who Obtained Consent

Date

QUESTIONNAIRE

Knowledge, Attitudes and Barriers Towards Cervical Cancer Screening Among Women of Reproductive Age in Lower Manya Krobo Municipality, Eastern Region

SECTION A: SOCIO-DEMOGRAPHIC DATA

(Please tick or fill as appropriate)

1. Age: _____ years

2. Marital Status:

☐ Single ☐ Married ☐ Divorced ☐ Widowed ☐ Separated

3. Educational Level:

☐ No formal education ☐ Primary ☐ Junior High ☐ Senior High ☐ Tertiary

4. Occupation: _____

5. Religion:

☐ Christianity ☐ Islam ☐ Traditional ☐ Other (Specify): _____

6. Number of children: _____

SECTION B: KNOWLEDGE OF CERVICAL CANCER AND SCREENING

8. Have you heard of cervical cancer screening?

☐ Yes ☐ No

9. What are the known causes/risk factors of cervical cancer? *(Select all that apply)*

☐ Early sexual activity

- ☐ Multiple sexual partners
- ☐ Human Papillomavirus (HPV)
- ☐ Poor genital hygiene
- ☐ Smoking
- ☐ Family history
- ☐ I don't know

10. What are the symptoms of cervical cancer? *(Select all that apply)*

- ☐ Vaginal bleeding after sex
- ☐ Foul-smelling vaginal discharge
- ☐ Lower abdominal pain
- ☐ Bleeding between periods
- ☐ I don't know

11. Are you aware of any screening methods for cervical cancer?

- ☐ Yes ☐ No

12. If yes, which of the following methods are you aware of? *(Select all that apply)*

- ☐ Pap smear
- ☐ Visual Inspection with Acetic Acid (VIA)
- ☐ HPV DNA test
- ☐ Don't know any method

13. At what age should women start cervical cancer screening?

☐ Below 20 ☐ 21–29 ☐ 30 and above ☐ I don't know

14. Where did you get your information about cervical cancer? (*Select all that apply*)

☐ Health worker

☐ Radio/TV

☐ Internet/Social media

☐ School

☐ Friends/Family

☐ Never heard about it

SECTION C: ATTITUDES TOWARDS CERVICAL CANCER SCREENING

16. Cervical cancer screening is necessary for all women.

☐ Strongly agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly disagree

17. If cervical cancer screening is free, I will participate.

☐ Strongly agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly disagree

18. I feel embarrassed to undergo cervical cancer screening.

☐ Strongly agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly disagree

SECTION D: BARRIERS TO CERVICAL CANCER SCREENING

19. Have you ever undergone cervical cancer screening?

☐ Yes ☐ No

20. If no, why haven't you been screened? *(Select all that apply)*

- ☐ I don't know where to go
- ☐ I have never been told to screen
- ☐ I don't feel sick
- ☐ Screening is too expensive
- ☐ Fear of pain
- ☐ Fear of results
- ☐ Religious/cultural beliefs
- ☐ Embarrassment
- ☐ My partner disapproves
- ☐ Health workers are rude
- ☐ Other (specify): _____

21. Do you know any health facility in this Municipality that offers cervical cancer screening?

- ☐ Yes ☐ No

ETHICAL CLEARANCE



OUR REF: ENSIGN/IRB/EL/SN-341/02
YOUR REF:

December 4, 2025.

INSTITUTIONAL REVIEW BOARD SECRETARIAT

Belinda Narteh
Ensign Global University
Kpong.

Dear Belinda,

ETHICAL CLEARANCE TO UNDERTAKE POSTGRADUATE RESEARCH

At the General Research Proposals Review Meeting of the *INSTITUTIONAL REVIEW BOARD (IRB)* of Ensign Global University held on Wednesday, December 3, 2025, your research proposal entitled "**Knowledge, Attitudes and Barriers Towards Cervical Cancer Screening Among Women of Reproductive Age in the Lower Manya Krobo District, Eastern Region, Ghana**" was considered.

You have been granted Ethical Clearance to collect data for the said research under academic supervision within the IRB's specified frameworks and guidelines.

We wish you all the best.

Sincerely,

A handwritten signature in black ink, appearing to read "Rebecca Acquah-Arhin", with a stylized flourish at the end.

Dr. (Mrs.) Rebecca Acquah-Arhin
IRB Chairperson