

ENSIGN GLOBAL UNIVERSITY
KPONG, EASTERN REGION, GHANA

FACULTY OF PUBLIC HEALTH
DEPARTMENT OF COMMUNITY HEALTH

KNOWLEDGE, ATTITUDES AND PRACTICES TOWARDS VAGINAL CANDIDIASIS
PREVENTION AND TREATMENT AMONG GIRLS AT SELECTED SENIOR HIGH
SCHOOLS IN THE HO MUNICIPALITY OF THE VOLTA REGION OF GHANA

BY

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JUNE, 2025

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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 REQUIREMENT FOR THE MASTERS OF PUBLIC
HEALTH DEGREE**

JUNE, 2025

DEDICATION

This thesis is dedicated to my lovely mother (Madam Grace Yawa Dormenu) and all my siblings for their love and support.

ACKNOWLEDGEMENT

First and foremost, I extend my deepest gratitude to God Almighty for granting me strength, wisdom and resilience throughout this research journey. I sincerely appreciate my supervisor, Dr Edward Kofi Sutherland, for their invaluable guidance, patience, and constructive feedback, which have been instrumental in shaping this study. I am also grateful to the faculty and staff of Ensign Global University, whose unwavering support and dedication have enriched my academic experience. To my good friend, Mr. McLord Selassie Azalekor, thank you for your unwavering support during the most trying moment of my time at Ensign Global University.

I extend a heartfelt appreciation to my family and friends for their continuous encouragement, prayers and emotional support. Your unwavering believe in me has kept me going through the challenges of this journey. May God bless you all.

ABBREVIATIONS/ACRONYMS

AOR	Adjusted Odd Ratio
CHPS	Community-based Health Planning and Services
CI	Confidence Interval
COR	Crude Odds Ratio
DHIMS	District Health Information System
EPC	Evangelical Presbyterian Church
HBM	Health Belief Model
HCP	Health Care Professionals
HIV	Human Immunodeficiency Virus
KAP	Knowledge, Attitude and Practices
OLA	Our Lady of Apostles
RVCC	Recurrent Vulvovaginal Candidiasis
SDG	Sustainable Development Goal
SHS	Senior High School
SRH	Sexual and Reproductive Health
VC	Vaginal Candidiasis
VCC	Vulvovaginal Candidiasis
WHO	World Health Organization

ABSTRACT

Background: Vaginal candidiasis is one of the commonest fungal gynecological conditions affecting the lower genital tract of women. The condition is often linked to poor hygiene practices, lack of knowledge, lifestyle choices, and misconceptions about reproductive health.

Aim: To assess the knowledge, attitudes and practices towards vaginal candidiasis and its prevention among girls in selected Senior High Schools in the Ho Municipality.

Methodology: A cross-sectional design and a multi-stage sampling was adopted, using a self-administered questionnaire, to collect data from a sample of 393 SHS students randomly selected from two senior high school (OLA Girls Senior High School and EPC Mawuko Girls Senior High School) in the Ho Municipality in February. The data collected was analyzed using STATA version 18. Descriptive statistics were used to summarize the data and logistic regression analyses were performed to identify predictors of good knowledge, positive attitudes and proper practices.

Result: Overall, the study found that 50.4% of the students had good knowledge regarding vaginal candidiasis. Approximately, 84.2% had a positive attitude towards vaginal candidiasis prevention and treatment while 15.5% exhibited negative attitude. A total of 51% had good practice towards vaginal candidiasis prevention. Logistic regression showed that course of study was significantly associated with knowledge and practices, and knowledge predicted good health practices.

Conclusion: The findings revealed that awareness was high, and the girls exhibited good knowledge but they were misconceptions and gaps in preventive measures. Attitudes was generally positive, though stigma and embarrassment hindered care. Over half practiced good hygiene and diet habits, but self-medication and delayed care were common.

Keywords: Knowledge, Attitudes, Practices, Vaginal Candidiasis, Senior high school girls.

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CHAPTER ONE

INTRODUCTION

1.1 Background

Vaginal Candidiasis (VC) also known as Vulvovaginal candidiasis (VVC) is one of the most common causes of vaginitis (Huang *et al.*, 2023). Vaginal candidiasis is a common fungal infection that affects the vaginal area, caused by an overgrowth of *Candida* species, particularly *Candida albicans*. While *Candida* naturally exists as part of the vaginal flora, it can become pathogenic when certain conditions disrupt the normal balance, leading to infection. These conditions include antibiotic use, uncontrolled diabetes, weakened immune system and hormonal changes such as pregnancy and menopause. The symptoms include abnormal vaginal discharge, intensive irritation, dyspareunia, dysuria, burning sensation and vulva redness (Bitew and Abebaw, 2018; Ray *et al.*, 2022). The condition usually affects women of reproductive age, including adolescents (Picheta *et al.*, 2024) due to hormonal fluctuations, hygiene practices, lifestyle factors, and inadequate health education (EL-Tawab, 2024). The established risk factors for vaginal candidiasis include the use of antibiotics, hormonal contraceptives, pregnancy, diabetes (Willems *et al.*, 2020), and wearing tight-fitting clothing that retains moisture (Agana, Ryali and Patel, 2019). During adolescence, the physical and hormonal changes associated with puberty can increase susceptibility to this infection. While not life-threatening, vaginal candidiasis can substantially impact the quality of life, particularly in younger women. Limited education on reproductive health and poor access to sanitary products further exacerbate the risk, especially in developing regions where such resources are often insufficient (Mann and Byrne, 2023).

The World Health Organization (WHO) emphasizes the importance of health education in preventing such infections and improving the overall reproductive health of adolescents.

Adolescents, especially girls, are a vulnerable group when it comes to reproductive health issues (WHO, 2018). In Ghana, adolescent girls often face significant challenges in accessing accurate information about their sexual and reproductive health. Cultural norms and taboos surrounding discussions on sexual health further inhibit their ability to seek help or discuss their concerns (Agyei, Kaura and Bell, 2023).

Reproductive health education in schools has been identified as an effective way to address this gap. However, the extent and depth of education provided in Ghanaian schools remain limited. VC is frequently self-diagnosed or empirically diagnosed by healthcare providers, and no public health surveillance for these infections exists in the United States, making incidence and prevalence calculations challenging (Yano *et al.*, 2019; Benedict *et al.*, 2022).

Worldwide, an analysis done by Picheta *et al.*(2024) on phytotherapy of vaginal candidiasis showed that approximately 75% of women have at least one episode per year in their lifetimes, more than 50% experience a second episode and about 10-15% of these women are found to be asymptotically colonized by *Candida albicans*. These women may become unwell four or more times a year (Picheta *et al.*, 2024). The Centers for Disease Prevention and Control (CDC) defines a woman having three or more episodes of symptomatic episodes of Vulvovaginal Candidiasis (VVC) in less than twelve months as having Recurrent Vulvovaginal Candidiasis (RVVC) (Yano *et al.*, 2019; Otoo-Annan and Senoo-Dogbey, 2024).

Moreover, a systematic review done by Denning *et al.* (2018) revealed that recurrent vulvovaginal candidiasis affects about 138 million women annually, with a global annual prevalence of 3871 per 100 000 women. By 2030, the population of women with recurrent vulvovaginal candidiasis each year is estimated to increase to almost 158 million with current trends using base case estimates in parallel with an estimated growth in females from 3.34 billion to 4.181 billion. The

high prevalence and substantial morbidity of recurrent vulvovaginal candidiasis require better solutions and improved quality of care for affected women (Denning *et al.*, 2018).

In Pune, India, Ray *et al.*(2022) revealed that many female adolescents possess limited knowledge regarding vaginal candidiasis. A majority of their participants were also unaware of the specific causes and preventive measures associated with the condition, and this lack of knowledge can lead to misconceptions and inadequate preventive practices (Akweley *et al.*, no date; Ray *et al.*, 2022).

In Ghana, infection among teenagers (between the ages of 13-19) at the Tamale Teaching Hospital had shown that the prevalence of *Candida albicans* infection among adolescents who reported to the Hospital with vaginal discharge problems was 43.33% (Oliver and Adetunde, 2011). And adolescent females in Adenta, Ghana have good knowledge on vaginal candidiasis.

The issue of recurrent vulvovaginal candidiasis (RVVC) in Ghana may be even more pronounced than in developed countries due to the country's less robust and advanced health systems. Limited access to laboratory diagnostics, such as vaginal swabs, culture, and sensitivity testing, combined with challenges in accessing healthcare services and specialist care, can negatively impact treatment outcomes. Furthermore, these barriers hinder the collection of accurate statistics necessary for developing effective interventions (Otoo-Annan and Senoo-Dogbey, 2024).

1.2 Problem Statement

Vaginal candidiasis is a prevalent gynecological condition yet often overlooked among young women, particularly in sub-Saharan Africa. According to Picheta *et al.* (2024) about 75% of women will experience at least one episode of vaginal candidiasis in their lifetime, with many experiencing recurrent infections, particularly during adolescence when hormonal changes increase susceptibility. About 90% of cases of vaginal infections can lead to premature labor,

preterm delivery, low birth weight, increase prenatal mortality as well as predisposing them to HIV/AIDs and cervical cancer (Shuaibu Bukhari Isah *et al.*, 2020).

In Ghana, data from the DHIMS shows that 642,628 cases of vagina discharge were recorded from the year 2017 - 2019. About 25% of women are evaluated to be infected with vaginal Candidiasis (DHIMS, 2024). Another study found that only 18% of girls had comprehensive knowledge about reproductive health, and less than 30% felt comfortable discussing such issues with their parents or teachers. This barrier may limit access to accurate information and appropriate healthcare services for adolescent girls (Berhe *et al.*, 2024; Sidamo *et al.*, 2024). Despite these high rates, limited research has been conducted on the prevalence and awareness of this condition among young girls in Ghana, and specifically within the Volta Region. This gap in understanding potentially perpetuates misconceptions, inadequate preventive practices, and delayed treatment-seeking behaviors, leading to increased morbidity and diminished quality of life for affected adolescents. This study was thus undertaken as a case study among girls at selected SHS in the Volta Region. It sought to assess knowledge, attitudes and practices towards vaginal candidiasis.

1.3 Rationale of the Study

The rationale for this study is rooted in the fact that vaginal candidiasis is a common yet under researched condition that significantly impacts the quality of life and overall well-being of girls (Agana, Ryali and Patel, 2019). This study aims to bridge the knowledge gap, providing valuable insights to the Ministry of Health, hospitals, clinics and directorates so as to inform targeted health education and context-specific strategies to address vaginal candidiasis.

Moreover, the focus on adolescent girls in educational settings offers a unique opportunity to assess and potentially influence health behaviors at a critical developmental stage. This research aligns closely with the United Nations Sustainable Development Goal 3 (SDG 3): "Ensure healthy

lives and promote well-being for all at all ages." Specifically, it addresses target 3.7, which aims to ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programs by 2030 (Long, 2022).

Additionally, the findings from this study have the potential to inform policies and practices in school health programs, contributing to the development of more effective and targeted interventions. This aligns with the SDG principle of leaving no one behind (Winkler and Satterthwaite, 2018), as it addresses the specific health needs of a vulnerable group - adolescent girls in a developing country context.

1.4 Conceptual Framework

The conceptual framework for this study is grounded in the interplay between socio-demographic factors, knowledge, attitudes, and practices regarding the prevention of vaginal candidiasis among girls in Senior High Schools in the Ho Municipality. As illustrated in figure 1, the framework encompasses three primary domains: socio-demographics, knowledge of vaginal candidiasis, and attitudes towards vaginal candidiasis. These domains collectively influence the practices towards vaginal candidiasis prevention.

The socio-demographic factors form the foundation of this framework, including variables such as age, class, marital status, religion, ethnicity, and family's socioeconomic status. These factors directly impact both the knowledge and attitudes domains, as well as the practices towards vaginal candidiasis. The knowledge domain encompasses critical aspects such as causation (etiology), risk factors, symptoms, transmission, prevention methods, diagnosis, complications, and treatment options. Attitudes towards vaginal candidiasis, as depicted in the framework, include perceived

susceptibility, severity, and threat. These attitudinal factors, along with the knowledge base, significantly influence the practices adopted by girls towards vaginal candidiasis. The framework outlines these practices as screening/diagnosis, hygiene practices, appropriate clothing choices, dietary practices, avoiding risk factors, self-medication, seeking medical advice, and prevention of recurrent infections. The synergy between knowledge, attitudes, and practices, as informed by socio-demographic factors, ultimately contributes to the prevention of vaginal candidiasis among the target population of girls in Senior High Schools in the Ho Municipality.

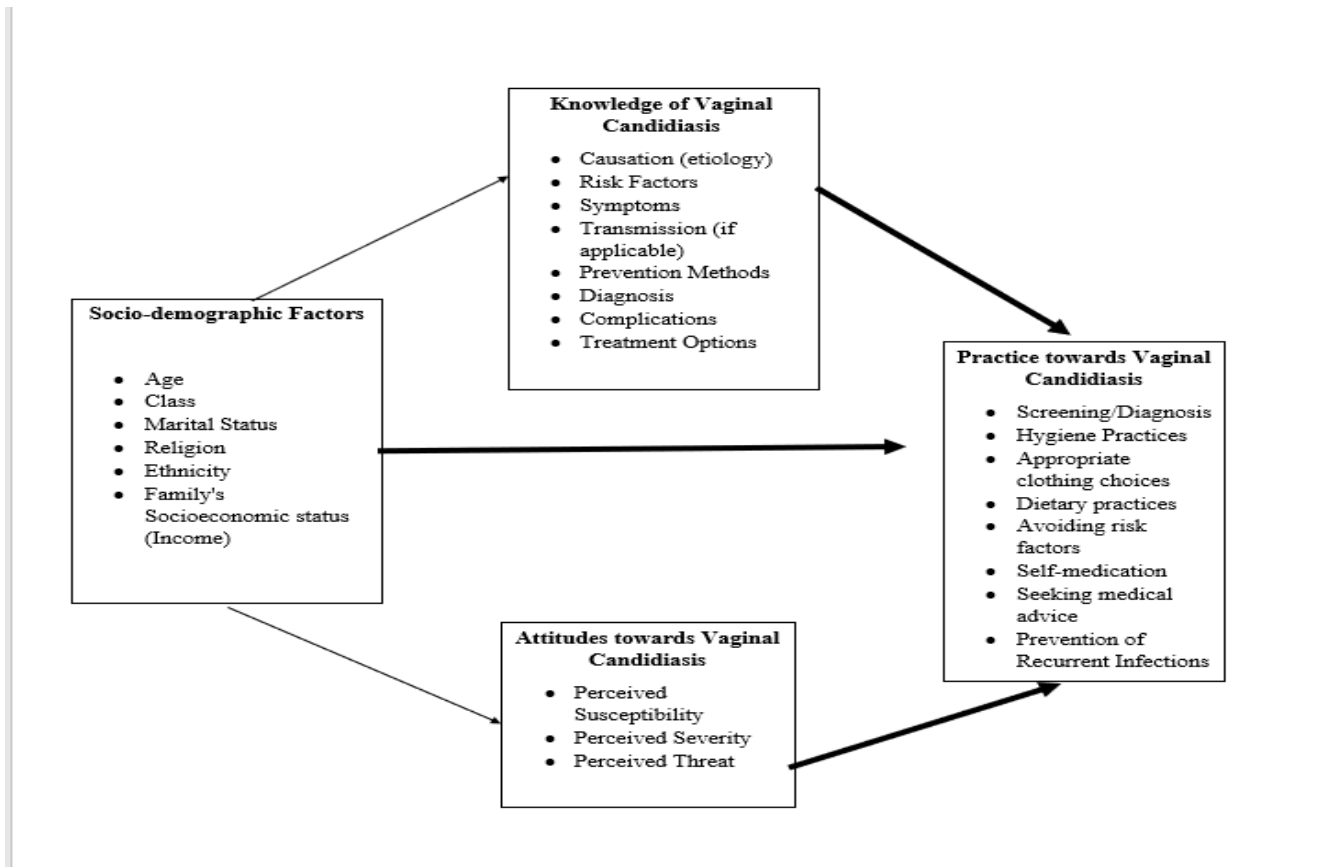


Figure 1.1: A modified Conceptual Framework of Study based on KAP model (Source: Dwiartama et al., (2022))

1.5 Research Questions

1. What is the level of knowledge about vaginal candidiasis prevention and treatment among senior high Schools (SHS) girls in the Ho Municipality?
2. What are the attitudes of the senior high school girls in the Ho Municipality towards vaginal candidiasis prevention and treatment?
3. What are the practices of senior high school girls in the Ho municipality towards vaginal candidiasis prevention?
4. What factors are associated with the knowledge, attitudes, and practices of SHS girls in the Ho municipality towards vaginal candidiasis prevention and its treatment?

1.6 General Objectives

To assess knowledge, attitudes, practices towards vaginal candidiasis prevention and its treatment among girls at selected Senior High Schools in the Ho Municipality of the Volta Region of Ghana.

1.7 Specific Objectives

1. To examine the level of knowledge on vaginal candidiasis prevention and its treatment among girls in selected Senior High Schools (SHS) in the Ho Municipality.
2. To assess the attitudes of the girls towards vaginal candidiasis prevention and its treatment in the selected SHS in the Ho Municipality.
3. To investigate practices of the girls towards vaginal candidiasis prevention in selected SHS in the Ho Municipality.
4. To determine the factors associated with knowledge, attitudes, practices towards vaginal candidiasis prevention and treatment among the girls in selected SHS in the Ho Municipality.

1.8 Profile of the Study Area

This study was conducted in the Ho Municipality, located in the Volta Region of Ghana. The Ho Municipal Assembly was established in 2012 by Legislative Instrument L.I 2074, following the split of the Ho West District Assembly. Ho, the municipality's capital, also serves as the regional capital of the Volta Region and its economic hub. The municipality is situated between latitudes 6°20'N and 6°55'N and longitudes 0°12'E and 0°53'E. It covers a total land area of 2,361 square kilometers, representing 11.5% of the Volta Region's total land area.

The municipality shares boundaries with Adaklu District to the south-east and south, Hohoe District to the North, South-Dayi District to the west and the Republic of Togo to the East. It is made up of total land size of 2.361 square kilometers thus representing 11.5 % of the region's total area. As of 2021, the population of Ho Municipality was estimated at 180,420, with 84,843 males (47.03%) and 95,577 females (52.97%). The 2022 projected population was 269,456, comprising 105,721 males and 145,465 females.

The municipality boasts 61 health facilities, including a teaching hospital, municipal hospitals, private hospitals, polyclinic, health centers, and CHPS compounds. As of 2022, there were 752 health workers, including 725 nurses, 13 physician assistants, and 14 medical officers serving the population. The educational landscape comprises 245 public basic schools, 162 private schools, and 7 tertiary institutions. In the 2021/2022 academic year, there were 2,831 trained teachers and 1,511 classrooms serving a total student enrollment of 55,360 across all levels of education (Assembly, 2024).

DISTRICT MAP OF HO MUNICIPAL

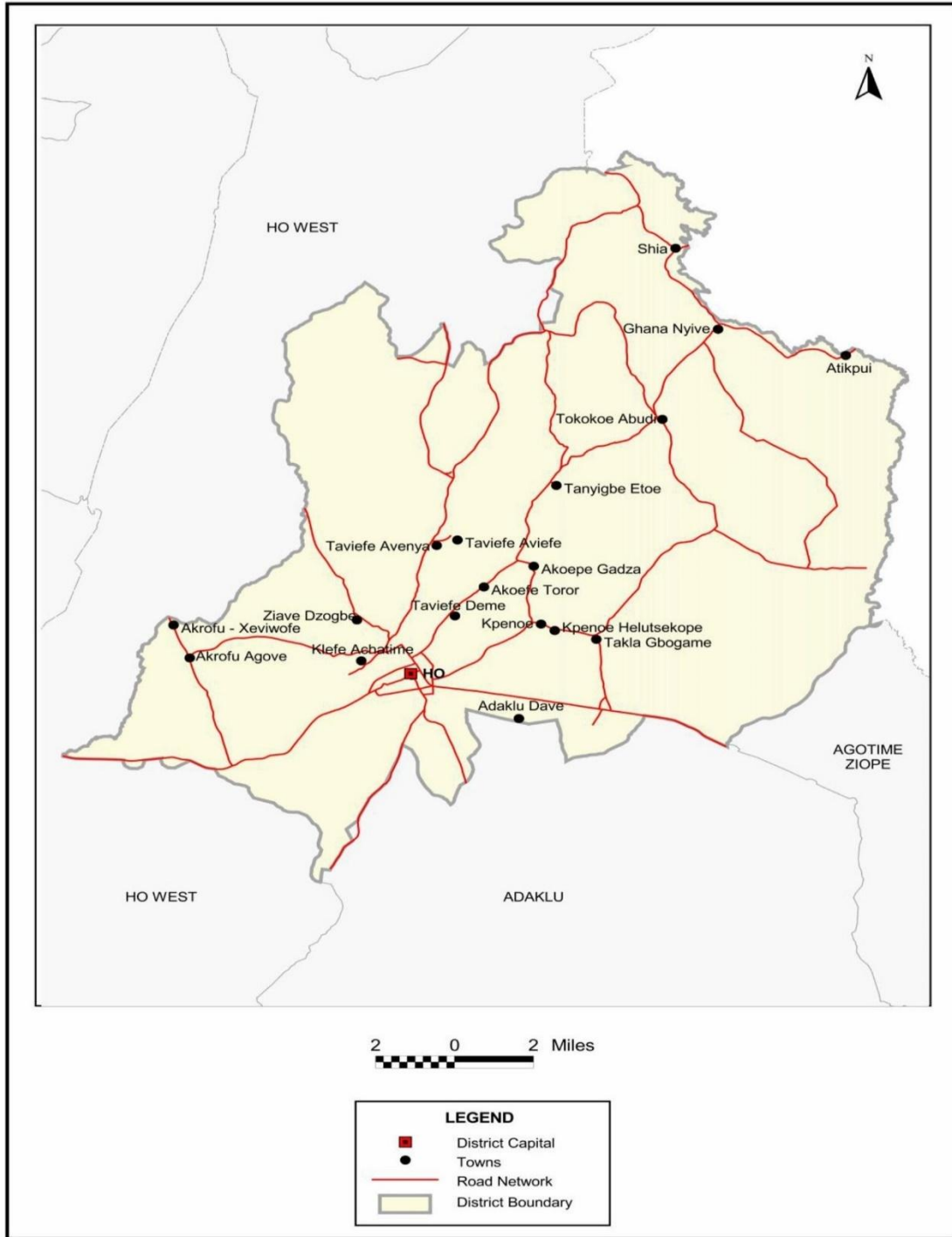


Figure 1.2: A Map of the Ho Municipality

Source: Ghana Statistical Service

1.9 Scope of study

This study covers female students from the two public all-girls senior high schools namely; Our Lady of Apostles (OLA) Girls SHS and Evangelical Presbyterian College (EPC) Mawuko Girls SHS in the Ho Municipality. The study investigated the knowledge, attitude and practices of SHS girls towards vaginal candidiasis treatment and prevention in Ho, Ghana.

1.10 Organization of Report

This thesis comprises of six parts. The introductory chapter, chapter one outlines a detailed background on vaginal candidiasis. It explores the causes and effects identified by previous studies globally and contextualizes them within the African context. Subsequently, the problem statement emphasizes the need for this study in the Ho municipality of Ghana. The second chapter examines empirical literature on vaginal candidiasis, considering the various factors that contribute to it on a global scale. Chapter three outlines the methodology employed in the current study, encompassing both the research methods and design. It delineates the essential procedures necessary for the successful execution of the research project.

Chapter four presents the findings, comprising a summary of the socio-demographic, knowledge, attitudes and practices related to vaginal candidiasis prevention and treatment and factors influencing them among SHS girls in the Ho municipality.

In Chapter five of this thesis, the key findings are discussed by placing them in context and establishing connections with previous research on VC among SHS girls.

In conclusion, Chapter six provides the study's final insights and offers recommendations for public health practice, policy, and further research concerning vaginal candidiasis among SHS girls in the Ho Municipality.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed literature related to the topic under study as documented by authorities, researchers and educationists. This chapter discusses other research on female students' attitudes and understanding of vaginal candidiasis. The review is discussed under the following sub-headings; overview of vaginal candidiasis, what the female students know about it, how they feel about it and what they do to prevent it.

2.2 Overview of Vaginal Candidiasis Prevention and Treatment

Vaginal Candidiasis (VC) is one of the most common causes of vaginitis. Candidiasis is a fungal infection caused by *Candida albicans*, a polymorphic opportunistic fungus; vulvovaginitis secondary to candidiasis is also known as vaginal candidiasis. In women of childbearing age, yeast infections due to *Candida albicans* are particularly common. This yeast normally resides on the skin or in the intestine. From these areas, it can spread to the vagina. Yeast infections are not transmitted sexually. Typical clinical features include vulvar and vaginal erythema, excoriations, thick white adherent discharge, and swelling. The condition is primarily diagnosed by clinical examination and diagnostic studies, including vaginal wet prep, pH testing, and cultures to exclude other etiologies of vaginal discharge and infection (e.g. bacterial vaginosis and gonococcal and chlamydial disease). Women who are at high risk of a yeast infection may need to take an antifungal medication by mouth to help prevent yeast infections. Also, keeping the vulva dry and wearing loose, absorbent cotton clothing that allows air to circulate can reduce moisture, which encourages the growth of yeast, and thus help prevent yeast from growing (*Vaginal Yeast Infection*

(*Candidiasis*) - *Women's Health Issues - MSD Manual Consumer Version*, no date). This activity for healthcare professionals is designed to enhance the individual's competence when managing vaginal candidiasis, equipping them with updated knowledge, skills, and strategies for timely identification, effective interventions, and improved coordination of care, leading to better outcomes for patients (Jeanmonod, Chippe and Jeanmonod, 2024).

2.3 Knowledge on Vaginal Candidiasis Prevention and Treatment

Research indicates varying levels of awareness of vaginal candidiasis among female adolescent. Knowledge is the aggregated information, facts, skills, and understanding about a subject that a person gains through education, experience, and reasoning (*The 7 Types of Knowledge: Definitions, Examples, & More | Guru*, no date). Knowledge of female genital anatomy and physiology is often inadequate or incorrect among women (Graziottin, 2024). Knowledge on vaginal candidiasis includes knowing and understanding the causes, risk factors and preventive measures which is influenced by one's familiarity with it. *Candida* is part of the normal flora in many women, identified in 10% of asymptomatic women (Martin Lopez, 2015). The development of VVC is usually attributed to the disturbance of the balance between *Candida* vaginal colonization and host environment by physiological or non-physiological changes (Gonçalves *et al.*, 2016). Women's lack of knowledge regarding the causes leads to inability in differentiating normality of vaginal discharge (Practices and Info, 2006). Complications secondary to vaginal candidiasis are rare but, in severe cases, may cause extensive vulvar erythema, edema, excoriation, and vaginal or vulvar fissures (Workowski *et al.*, 2021).

A study conducted in India, Pune City among girls with the aim to identify the level of knowledge regarding vaginal candidiasis showed that out of 100 girls who were interviewed, 51% of the girls had below average, followed by average 36%, poor 12% and good 1% knowledge regarding

vaginal Candidiasis. The study concluded that the girls were having below average knowledge ((PDF) *Knowledge Regarding Vaginal Candidiasis*, no date).

A study done in Fayoum general hospital, Egypt among women in the outpatient department revealed that over ninety percent of women lacked satisfactory knowledge regarding the definition, causes, color, and consistency of vaginal discharge in instances of vaginal yeast infection. The study concluded that 96% of the studied women had unsatisfactory level of knowledge regarding vaginal yeast infection (Mohamed *et al.*, 2024).

The study done in Cape Coast Metropolis involving 700 female students from two all-female senior high schools which were purposively sampled and two mixed-sex senior high schools found prevalence level to be quite high among the adolescent girls. Ninety-three percent of the respondents knew that vulvovaginal candidiasis could affect the reproduction system but 77% had no knowledge on the causative organism and the appropriate medications used in treating the condition. The study found that most respondents attached a lot of importance to personal hygiene stating that lack of personal hygiene predisposes them greatly to acquiring vulvovaginal candidiasis (Ayebi-Arthur, 2021).

2.4 Attitudes towards Vaginal Candidiasis Prevention and Treatment

Attitudes play a crucial role in health-seeking behavior. Health attitude refers to the attitude individuals have towards their own health, including both health-risk attitudes and health-promoting attitudes (Rew and Wong, 2006). Adolescents girls have very specific views and practices about their vaginas and their attitudes and perceptions towards vaginal infections are often shaped by societal norms and cultural beliefs (Francis *et al.*, 2016).

A study done in Fayoum General Hospital, Egypt among women in the outpatient department found that about 77% of them had a negative attitude regarding hygiene and personal habits to prevent vaginal yeast infection (EL-Tawab, 2024).

A study by Akweley et al. (2023) explored female adolescent attitudes in the Adenta Municipality of Ghana towards vaginal candidiasis and revealed that many young women attributed the infection to supernatural causes, poor hygiene and dietary habits rather than recognizing microbial imbalance or antibiotic use as risk factor.

2.5 Practices towards Vaginal Candidiasis Prevention

Studies have found many different self-care practices towards vaginal discharge including avoidance of wearing tight trousers, hot baths and perfumed soaps or bubble bath, buying over-the-counter medicines, washing perineal area more frequently, use of salt baths, following a diet with restricted sugar, coffee, mushrooms and other foods (Sumudrika Ilankoon *et al.*, 2018). Before reaching hospital, many women seek advice and get treatment from other methods as traditional healers, other health care providers (nurses, chemist shop) and self-treatments or faith healers, homeopathic treatment and ayurvedic (Kaur, Jaieus, and Samuel, 2013).

Adolescents have very specific views and practices about their vaginas. However, very little about how girls view their vaginal health is known. Beyond douching, even less is known about the specific vaginal hygiene practices or attitudes of adolescents about the use of products within the vagina (Francis *et al.*, 2016).

2.6 Factors influencing Knowledge, Attitudes, Practices towards Vaginal Candidiasis

2.6.1 Knowledge

Knowledge about vaginal candidiasis plays a crucial role in early detection, appropriate treatment and prevention. Studies have shown that the level of knowledge varies significantly based on factors such as educational attainment, age, access to health information and socioeconomic status.

A study conducted by Ray et al.,(2022) on the knowledge of adolescent girls regarding vaginal candidiasis in Pune city, India looked at the factors that influence their knowledge on VC of which a chi-square test revealed that education is significantly associated with knowledge level ($\chi^2 = 7.22, p < 0.05$).

Another study by Ogunfowokan, Ibrahim and Akintaju, (2013) on the knowledge and management of vulvovaginal candidiasis in Nigeria among undergraduate young women revealed that those taking health-related courses in the university had poorer knowledge of VCC than the other students. Similarly, poor menstrual hygiene, however, can pose serious health risks, like reproductive and urinary tract infections which can result in future infertility and birth complications. Neglecting to wash hands after changing menstrual products can spread infections, such as hepatitis B and thrush (*Menstrual Health and Hygiene*, no date).

Media exposure and access to reproductive health services have also been positively associated with knowledge levels. Findings indicate that adolescents who were exposed to social media platforms were likely to have more SRH knowledge compared to those who were not. Socio-demographic factors like place of residence, for example residing in urban areas, higher levels of education and high wealth index acted as facilitators of social media exposure as well as SRH knowledge (Saha *et al.*, 2022).

2.6.2 Attitudes

Attitude is a personal respond toward a stimulus or a specific object which is involved personal opinion or emotion (happy-unhappy, agree-disagree, good-bad, etc.). Attitudes towards vaginal candidiasis are influenced by cultural beliefs, personal experiences, and perceived severity and susceptibility. The Health Belief Model (HBM) suggests that a person's likelihood of taking preventive actions is influenced by how serious they perceive the disease to be and how susceptible they feel to it (Jones *et al.*, 2014).

A study by Akweley et al.(2023) explored female adolescent attitudes in the Adenta Municipality of Ghana towards vaginal candidiasis and revealed that many young women attributed the infection to supernatural causes, poor hygiene and dietary habits rather than recognizing microbial imbalance or antibiotic use as risk factor.

2.6.3 Practices

The practices of girls towards vaginal candidiasis prevention and treatment are closely linked with to levels of knowledge and attitude. Good hygiene, proper clothing, safe sexual practices and prompt treatment are essential behaviors to reduce the risk of VC.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section outlines the methodological approach employed in conducting the study on knowledge, attitudes and practices towards vaginal candidiasis prevention and treatment among girls in Senior High Schools in the Ho Municipality of the Volta Region, Ghana. The methodology has been carefully designed to address the research objectives and to ensure the collection of reliable and valid data that will contribute meaningfully to the understanding of VC.

3.2 Research Methods and Design

This study employed an analytical cross-sectional survey design to assess the knowledge, attitudes and practices towards vaginal candidiasis prevention and treatment in selected senior high schools in the Ho municipality. The purpose of this study design was to gather data that would represent a population's snapshot at a specific point in time, allowing for efficient measurement of knowledge levels, attitudes and practices among the target population.

3.3 Data Collection Techniques and Tools

Primary data was obtained from the only two all-girls public senior high schools in the Ho municipality. Kobo Collect, a mobile data collection application, was used to administer a structured questionnaire by the researcher and the locally trained research assistants, ensuring that questions can be clarified in the local language if necessary. Before giving the questionnaire, the students were informed about the nature of the study. They were assured that their replies would be anonymous and confidential. Each questionnaire took around 10-15 minutes to interview each student. The questionnaire gathered information in four sections; thus socio-demographic

characteristics of the students in section one, it gathered information on their age, class, religion, ethnicity, course of study, housing status, sexual and reproductive health education and if they have had health education on vaginal candidiasis.

Section two assessed their knowledge on vaginal candidiasis, the section three relates to their attitudes and the fourth section assessed their practices towards vaginal candidiasis prevention and treatment.

3. 4 Study Setting

The study was carried out in Ho, the capital of the Volta Region. The municipality has 252 public schools, made up eight (8) SHS, seventy-eight (78) JHS, seventy-eight (78) Primary schools, eighty-four (84) preschools and four (4) Technical and Vocational Educational Training (TVET). The eight senior high schools in the municipality are OLA Girls SHS, Mawuli SHS, EPC Mawuko SHS, Sokode SHS, Ziavi SHTS, Taviefe SHS, Tanyigbe SHS and Shia SHS. Our Lady of Apostle (OLA) Girls SHS and Evangelical Presbyterian Church (EPC) Mawuko Girls were chosen because they are the girls-only public second cycle institutions in the municipality. OLA Girls Senior High School was established on February 1st, 1954 by Bishop Anthony Konings. It has a day and boarding housing status. The school offers academic courses including General science, General Arts, Business, Visual Arts, and Home Economics (*OLA Girls Senior High School (Ho)* - *Wikipedia*, no date). EPC Mawuko Girls Senior High School was founded by the Late Reverend Professor Noah Komla Dzobo of the Evangelical Presbyterian Church, Ghana. The school was established in 1983 and gained the status of a Boarding School in 1997. The School was absorbed into the public system in 1989 by GES, it is one of only two single sex schools in the Ho Municipality. The School shares boundary with Mawuli School and opposite Ho Kpodzi Basic School. Traditionally, the area where the school is situated is Ho, Have. The school also offers

academic courses including Agricultural Science, General science, General Arts, Business, Visual Arts, and Home Economics (*E.P.C. Mawuko Girls' SHS*, no date).

3.5 Study Population

Female students from Ola Senior High School and EPC Mawuko Girls Senior High School in Ho made up the study population.

3.6 Inclusion and Exclusion Criteria

3.6.1 Inclusion Criteria

1. Female students in the OLA and EPC Mawuko Girls SHS in the Ho Municipal.
2. Female students who assent and showed willingness to participate in the study.

3.6.2 Exclusion Criteria

1. Female students who did not consent or demonstrate readiness to participate.
2. Female students not in the selected senior high schools.

3.7 Study Variables

3.7.1 Dependent Variables

The dependent variables for this study was the knowledge, attitude and practices of senior high school girls towards vaginal candidiasis prevention and treatment.

3.7.2 Independent Variables

The independent variables that were used in this study were socio-demographic characteristics of the students such as; age, class level, course, religion, ethnicity and housing status.

3.8 Sampling

A multi-stage sampling technique was used to select the girls from the total school population and representative samples were obtained from each of the two public senior high schools. A multi-stage technique was used because purposive sampling, proportional allocation and simple random sampling techniques were used. Purposive sampling, also known as judgmental sampling, is a non-probability sampling method in which the researcher deliberately selected the senior high schools based on specific characteristics or qualities that align with the purpose of the study. The sample size was calculated using the Cochran's formula (Cochran, 1977).

$$n = [Z^2 * p(1-p)] / e^2$$

where;

n = required sample size

z = reliability co-efficient (1.96 for 95% confidence interval)

p = estimated prevalence of adequate candidiasis knowledge

e = margin of error (5% or 0.05)

A study by Akweley *et al.*, (2024) conducted in the Adenta Municipality of the Greater Accra Region of Ghana revealed that 54.7% of female adolescents had good overall knowledge of vaginal candidiasis. Therefore, p = 0.547 was used.

$$n = (1.96)^2 * 0.547 * (1 - 0.547) / (0.05)^2$$

$$n = 3.8416 * 0.547 * 0.453 / 0.0025$$

$$n = 0.95095968 / 0.0025$$

$$n = 380.38 \approx 380$$

Adding a 10% non-response rate ($380 \times 0.1 = 38 \approx 38$) gives $380 + 38 = 418$. Therefore, a total of 418 students were recruited for the study.

The study used proportional allocation to obtain the sample size for each senior high school using their estimated population (Table 3.1).

Table 3.1: Population in the schools and required sample size

Name of Senior High School	Estimated population of students	Proportional allocation of sample
OLA Girls SHS	3,000	$\frac{3000}{5500} \times 418 = 228$
EPC Mawuko Girls SHS	2,500	$\frac{2500}{5500} \times 418 = 190$
Total	5500	418

Based on the proportional allocation of the samples, students were furthered sample by class levels.

Sample size per grade =

$$\frac{\text{Number of students per grade}}{\text{Total number of students in the grade in both schools}} \times \text{Population sample size}$$

Table 2.2: Proportional Allocation of SHS 2 in the selected SHS

Grade SHS 2	Estimated population based on grade = 2,868	Proportional allocation of sample
OLA SHS 2	1552	$\frac{1552}{2868} \times 218 = 118$
EPC M SHS 2	1316	$\frac{1316}{2868} \times 218 = 100$

Table 3.3: Proportional Allocation of SHS 3 In the selected SHS

Grade SHS 3	Estimated population based on grade = 2,632	Proportional allocation of sample
OLA SHS 3	1448	$\frac{1448}{2632} \times 200 = 110$
EPC Mawuko SHS 3	1184	$\frac{1184}{2632} \times 200 = 90$

Using simple random sampling, 100 and 90 students were selected from SHS 2 and SHS 3 respectively from EPC Mawuko Girls and 118 and 110 students from SHS 2 and SHS 3 respectively from OLA Girls. This was done by numbering 2 and 4 on folded pieces of paper and asking students to pick. All those who picked number 4 were chosen to participate in the study.

3.9 Pretesting

Pretest of the study's questionnaire were concluded at Mawuli Senior High School, which is located in the Volta Region's Ho municipality. This school was considered because they have similar characteristics with the study population. The pretest made it possible to assess the clarity, comprehensibility, and cultural appropriateness of the questionnaire. Feedback from this pre-test

was used to refine the questionnaire before data collection. Results from the pretesting were not included in the main study.

3.10 Data Handling

Data collected through Kobo Collect were automatically synchronized to a secure, cloud-based server. Data cleaning procedures were implemented to identify and rectify any inconsistencies, missing data, duplicates, or potential errors that may have occurred during the data collection process. The dataset was subsequently exported into STATA version 18 for analysis.

3.11 Data Analysis

The questionnaire was collected and crosschecked for completeness and consistency. The data was extracted into an excel sheet and was cleaned. It was then transferred to STATA 18 for additional cleaning and analysis. The data was presented using descriptive statistics including frequencies, percentages, tables and charts. The next analyses involved the derivation of the composite scores for each dependent variable. This was measured by adding all the responses and determining the median score between responses given per the knowledge assessment, attitude assessment and practices assessment. The variables knowledge, attitudes and practices towards vaginal candidiasis prevention and treatment were measured with ten questions (10), five (5) and five (5) respectively. Responses in the knowledge section were scores as one (1) for correct answers and zero (0) for incorrect or unknown responses. A score of <5.3 was considered poor and ≥ 5.3 good. For attitudes section, responses were rated on a three-point scale, with “Agree” scored as two (2), “Don’t know” as one (1), and “Disagree” as zero (0), except for the negatively worded item on embarrassment, which was reverse-coded. In the practice section, most appropriate behaviors were scored as one (1), while inappropriate behaviors were scored as zero (0); for the item on medical advice-seeking, responses were weighted such that “Always” was scored as two (2), “Sometimes” as one (1), and

“Not at all” as zero (0). All composite score for each dependent variable was further categorized into 2 (poor level which was scored as “< [median score]”, and good level which was scored “≥ [median score]”). Relationships between sociodemographic characteristics and respondents’ Knowledge, Attitudes, and Practices (KAP) towards vaginal candidiasis were investigated using logistic regression analysis. In order to accomplish this, a chi-square test analysis between the independent factors and the result variable was first conducted. In the final logistic regression models, sociodemographic factors with p-values ≤ 0.05 in the chi-square analysis were fitted. This allowed us to examine the Adjusted Odd Ratio (AOR) with a 95% confidence interval (CI) and determine degree of relationship.

3.12 Ethical Consideration

Ethical approval was sought from the Institutional Review Board of Ensign Global University. Authorization and consent were obtained from the headmasters or headmistresses of the participating schools. Informed consent and assent where applicable were also obtained from all participants, with assurances of anonymity and confidentiality.

Each respondent was given the choice to choose not to answer any of the question and that they can discontinue the study at any time.

3.13 Limitation of the study

Despite the important information this study provides, it has some limitation.

- All participants were from SHS 2 and SHS 3. The SHS 1 were excluded due to their unavailability during the data collection. This will limit the generalizability of the current findings to all SHS students. Their exclusion could potentially overlook valuable insights on the study topic of this particular cohort.

CHAPTER FOUR

RESULTS

4.1 Introduction

The quantitative analysis of the study data is presented in this chapter. It highlights some discoveries of senior high school girls' knowledge, attitudes and practices towards vaginal candidiasis prevention and treatment. The findings of the study are presented in tables and figures. They are categorized into the sociodemographic characteristics data, the knowledge regarding vaginal candidiasis prevention and treatment, attitudes towards vaginal candidiasis prevention and treatment, the practices towards vaginal candidiasis prevention and treatment and the factors associated with knowledge, attitudes and practices (KAP) of SHS girls regarding Vaginal Candidiasis. A total of 418 questionnaires were administered to the SHS girls. However, 393 of them were retrieved as cleaned data and was used for the final analysis, thereby yielding a 94% response rate.

4.2 Socio-Demographic Characteristics of Respondents

The study included 393 respondents from selected Senior High Schools (SHS) in the Ho Municipality. The response rate for the study was 94.02%. The mean age of respondents was 16.84 ± 1.23 years. The majority of respondents (77.35%) were between the ages of 14 and 17 years, with the remaining 22.65% falling within the 18 to 22-year age group.

In terms of class distribution, the respondents were nearly evenly divided between SHS 2 (49.11%) and SHS 3 (50.89%) students. The religious composition of the respondents is predominantly Christian, with 96.69% identifying as such. A smaller proportion identified as Muslim (2.54%), while 0.76% practiced African Traditional Religion.

Ethnic representation among the respondents was diverse, though a significant majority (74.81%) identified as Ewe. Other ethnic groups, including Akan (13.49%), Ga-Dangme (6.11%), Guan (2.80%), and Mole-Dagbani (2.80%), were also represented, albeit in smaller proportions.

The academic courses pursued by respondents were varied, with the majority enrolled in General Arts (37.66%) and General Science (26.72%). Other courses such as Home Economics (23.41%), Business (6.87%), Visual Arts (5.09%), and Agriculture (0.25%) were less common. Finally, the housing arrangements of respondents revealed that the majority (94.40%) were boarders, while only 5.60% were day students.

Table 4.1: Socio-demographic Characteristics of Respondents

Characteristic	Category	Frequency (n)	Percentage (%)
(N=393)			
Age Group	14–17 years	304	77.35
	18–22 years	89	22.65
Mean Age (yrs)		16.84	SD = 1.23
Class	SHS 2	193	49.11
	SHS 3	200	50.89
Religion	African Traditional Religion	3	0.76
	Christianity	380	96.69
	Islam	10	2.54
Ethnicity	Akan	53	13.49
	Ewe	294	74.81
	Ga-Dangme	24	6.11

	Guan	11	2.80
	Mole-Dagbani	11	2.80
Course	Agriculture	1	0.25
	Business	27	6.87
	General Arts	148	37.66
	General Science	105	26.72
	Home Economics	92	23.41
	Visual Arts	20	5.09
	Housing	Boarding	371
Day		22	5.60

Source: *Field Data, 2025*

4.3 Knowledge of Vaginal Candidiasis Prevention and Treatment Among Respondents

Table 4.2 shows an overview of the OLA and EPC Mawuko SHS girls' understanding about vaginal candidiasis prevention and treatment. Awareness of vaginal candidiasis was high, with 97.71% of respondents reporting that they had heard of the condition. However, when asked about the cause of VC, only 20.10% correctly identified fungi as the causative agent. A majority (53.44%) incorrectly attributed VC to bacteria, while 22.39% admitted they did not know the cause.

When asked to identify the specific organism responsible for VC, only 38.17% correctly named *Candida albicans*. A substantial proportion (52.42%) indicated they did not know, and smaller percentages incorrectly named *Chlamydia trachomatis* (6.36%), *Escherichia coli* (0.76%), or *Trichomonas vaginalis* (2.29%).

Knowledge of how VC is diagnosed was relatively better, with 54.20% of respondents identifying "testing of vaginal discharge" as the correct diagnostic method. However, 25.45% incorrectly believed that VC could be diagnosed through "testing of urine," and 20.36% admitted they did not know how the condition is diagnosed.

In terms of treatment, 56.49% of the respondents correctly identified antifungal medications as the appropriate therapy for VC. However, misconceptions were prevalent, with 15.78% believing antibiotics are effective, 10.18% favouring herbal remedies, and 15.27% admitting they did not know how VC is treated. Alarming, 2.29% of respondents believed that the condition resolves on its own.

A significant majority of the respondents (82.19%) reported that sexual and reproductive health (SRH) education is provided in their schools. However, 17.81% of respondents indicated that SRH education was not provided in their schools. Also, the data reveal that only 31.55% of respondents had attended a health education session on vaginal candidiasis, while the majority (68.45%) had not.

There were varying levels of awareness regarding the clinical manifestations of vaginal candidiasis among respondents. The most widely recognized symptom was itching in the vaginal area, identified by 88.8% of participants, closely followed by thick, white, odourless discharge at a recognition rate of 81.2%.

A moderate level of awareness was observed regarding burning sensation during urination, with 50.9% of respondents correctly identifying this symptom. However, there was more substantial knowledge deficits regarding less common or non-specific symptoms. Redness and swelling of the

vulva were recognized by only 32.6% of respondents, while genital ulcers or open sores which are not typically associated with uncomplicated vaginal candidiasis—were incorrectly identified by 28.5% of participants. Additionally, blood in urine, which is not a characteristic symptom of vaginal candidiasis, was misidentified by 5.3% of respondents.

Table 4.2: Responses to Questions on Knowledge of Vaginal Candidiasis

Question	Response	Frequency (n)	Percentage (%)
(N=393)			
Have you ever heard of vaginal candidiasis (white)?	No	9	2.29
	Yes	384	97.71
What causes vaginal candidiasis?	Bacteria	210	53.44
	Fungi	79	20.10
	Virus	16	4.07
	Don't know	88	22.39
Which specific organism is responsible for vaginal candidiasis?	Candida albicans	150	38.17
	Chlamydia trachomatis	25	6.36
	Escherichia coli	3	0.76
	Trichomonas vaginalis	9	2.29
	Don't know	206	52.42
How is vaginal candidiasis diagnosed?	Testing of urine	100	25.45
	Testing of vaginal discharge	213	54.20
	Don't know	80	20.36

How is vaginal candidiasis typically treated?	Antibiotics	62	15.78
	Antifungal medications	222	56.49
	Herbal remedies	40	10.18
	Don't know	60	15.27
	It goes away on its own	9	2.29
Level of Knowledge of Vaginal Candidiasis	Good Knowledge	198	50.38
	Poor Knowledge	195	49.62

4.3.1 Respondents' Awareness of Risk Factors Associated with Vaginal Candidiasis

The survey results also provide insights into respondents' awareness of various risk factors associated with vaginal candidiasis. Among the listed factors, poor hygiene (85%) and a high-sugar diet (73.3%) were the most widely recognized as contributing to the risk of developing the condition. Unnecessary antibiotic use (43%) was acknowledged by less than half of the respondents. Similarly, weakened immunity (20.9%), diabetes (18.6%), and the use of contraceptives (17%) were identified by a smaller proportion of participants. Notably, pregnancy (4.6%) and menstruation (5.6%) were the least recognized risk factors.

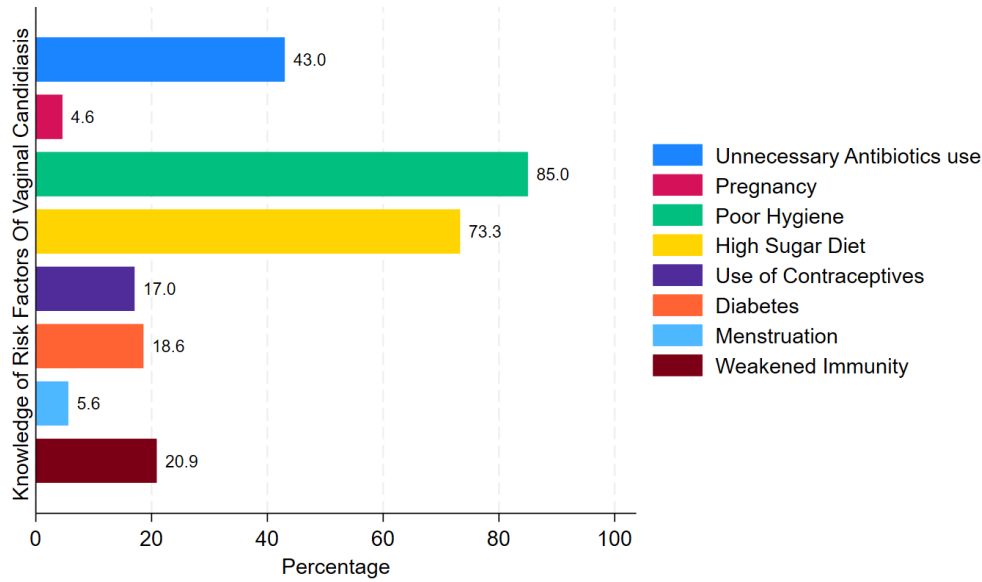


Figure 4.3.1: Responses to the Knowledge on Risk Factors of Vaginal Candidiasis

4.3.2 Respondents’ Awareness of Complications of Untreated Vaginal Candidiasis

This study also indicated a varied level of awareness among respondents regarding the potential complications of untreated vaginal candidiasis (VC). According to the data presented, infertility was the most recognized complication, with 66.2% of respondents identifying it as a potential consequence of untreated VC.

Conversely, awareness of other potential complications appears to be substantially lower. For instance, only 20.1% of respondents acknowledged ectopic pregnancy as a possible outcome of untreated VC. Similarly, awareness of the risk of premature birth was notably low, with just 8.7% of respondents recognizing this complication. Furthermore, 55.2% of respondents identified cervical cancer as a complication of untreated VC.

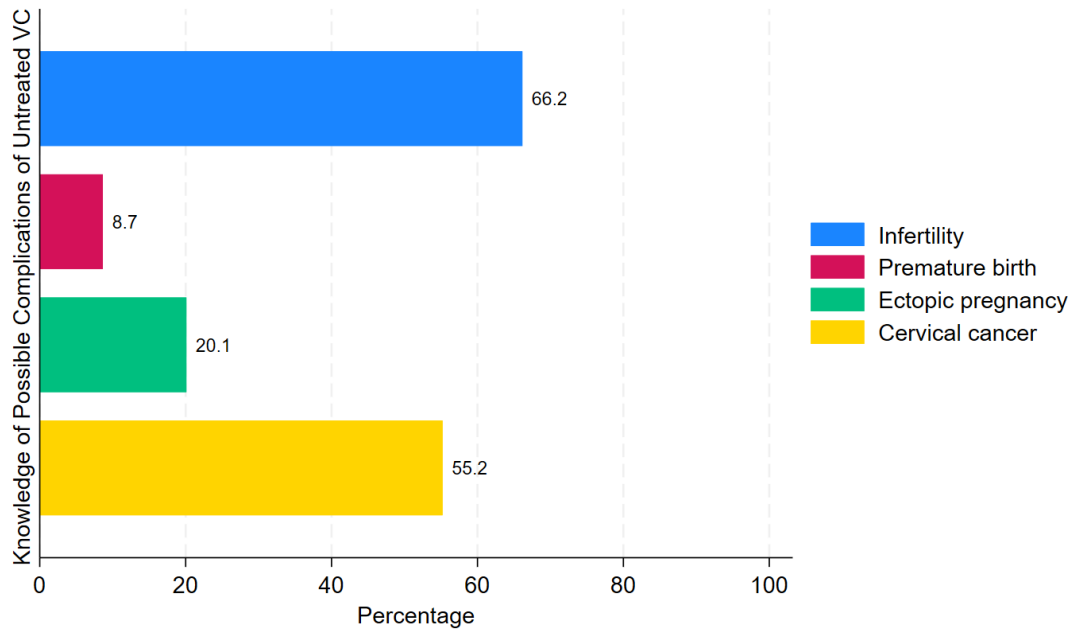


Figure 4.3.2: Responses to Possible Complications of Untreated Vaginal Candidiasis

4.3.3 Respondents' Awareness of Medications for Vaginal Candidiasis Treatment

Respondents were aware that Vaginal candidiasis (VC) is a common fungal infection often treated with antifungal medications. The findings revealed that Fluconazole was the most frequently identified antifungal medication, with 27.2% of respondents selecting it as a suitable treatment for vaginal candidiasis. Clotrimazole was the second most commonly identified medication, with 16.8% of respondents recognizing its use. In contrast, Miconazole was the least identified, with only 4.3% of respondents choosing it.

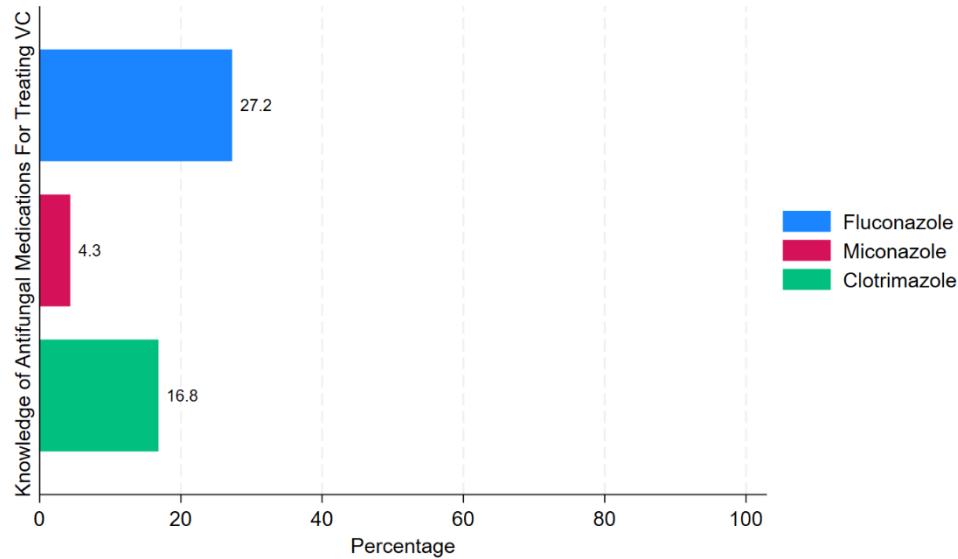


Figure 4.3.3: Responses to Antifungal Medications for Treating Vaginal Candidiasis

4.3.4 Respondents' Knowledge of Preventive Measures Associated with Vaginal Candidiasis

With regards to respondents' knowledge regarding the prevention of vaginal candidiasis, the most widely recognized preventive measure is maintaining hygiene, which was selected by 88.8% of respondents. Avoiding unnecessary antibiotics was the second most commonly chosen preventive measure, with 56.0% of respondents acknowledging its relevance. Additionally, maintaining a balanced diet was recognized by 48.9% of respondents as a preventive measure, while only 38.7% of respondents identified avoiding scented hygiene products as a preventive measure.

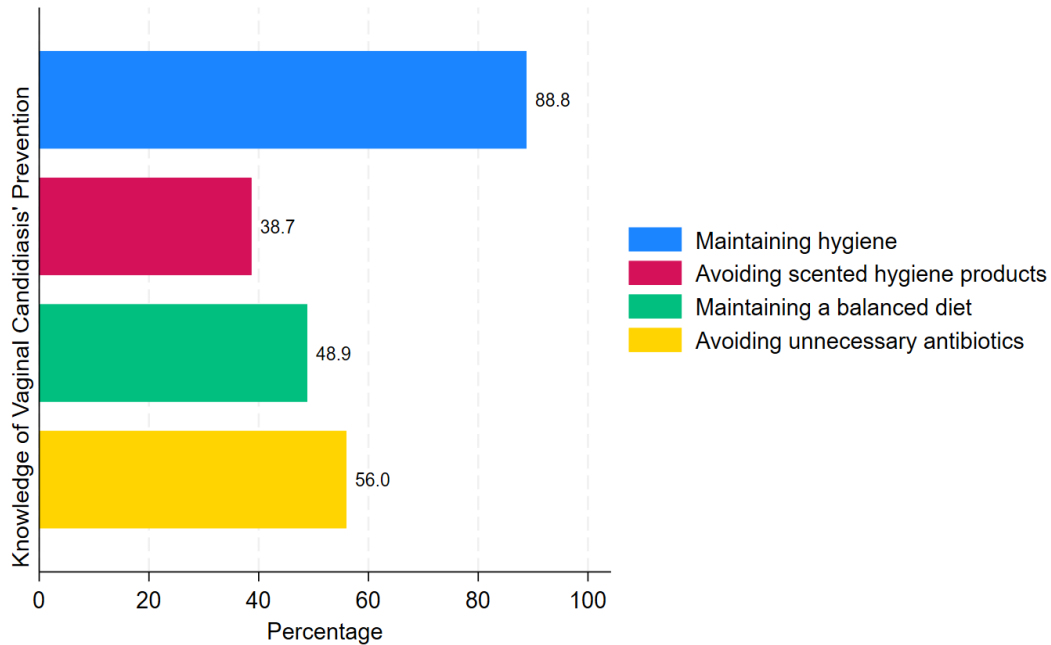


Figure 4.3.4: Responses to Prevention of Vaginal Candidiasis

4.3.5 Sources of Information on Vaginal Candidiasis

Educational institutions emerged as the predominant information channel, with 72.3% of respondents indicating they received information from school settings. This finding underscores the crucial role of formal education in health literacy. Digital platforms also demonstrate considerable influence, with 53.9% of respondents citing the internet as an information source.

Similarly, interpersonal networks play a substantial role, with family (52.4%) and friends (50.9%) serving as frequent sources of information. Traditional media demonstrates varying degrees of influence: television remains relatively significant (49.4%), while radio (16.0%) and magazines (18.8%) show markedly lower impact. Healthcare institutions, represented by hospitals and clinics, serve as information sources for 46.8% of respondents, suggesting that formal healthcare settings,

while important, are not the primary channel through which individuals learn about vaginal candidiasis. Additionally, youth clubs (27.7%) represent a less common but still notable source of information.

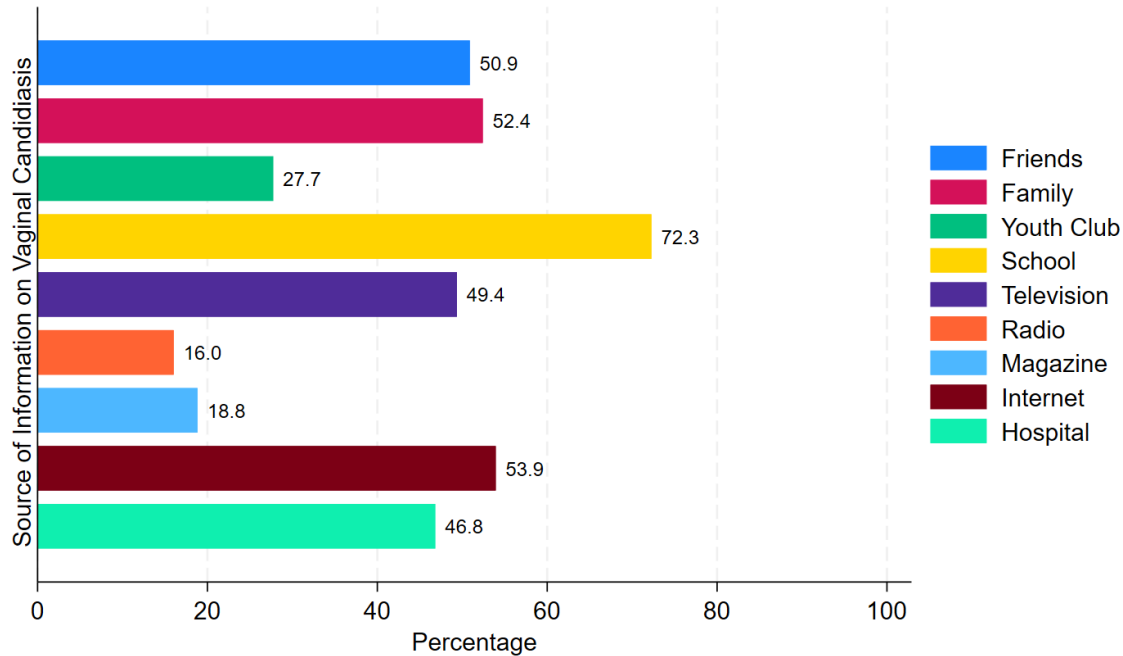


Figure 4.3.5: Responses on the Information Sources of Vaginal Candidiasis

4.3.6 Overall Level of Knowledge of Vaginal Candidiasis Prevention and Treatment

Overall, the level of knowledge among participants was divided, with 50.38% demonstrating "Good Knowledge" of VC, while 49.62% were categorized as having "Poor Knowledge."

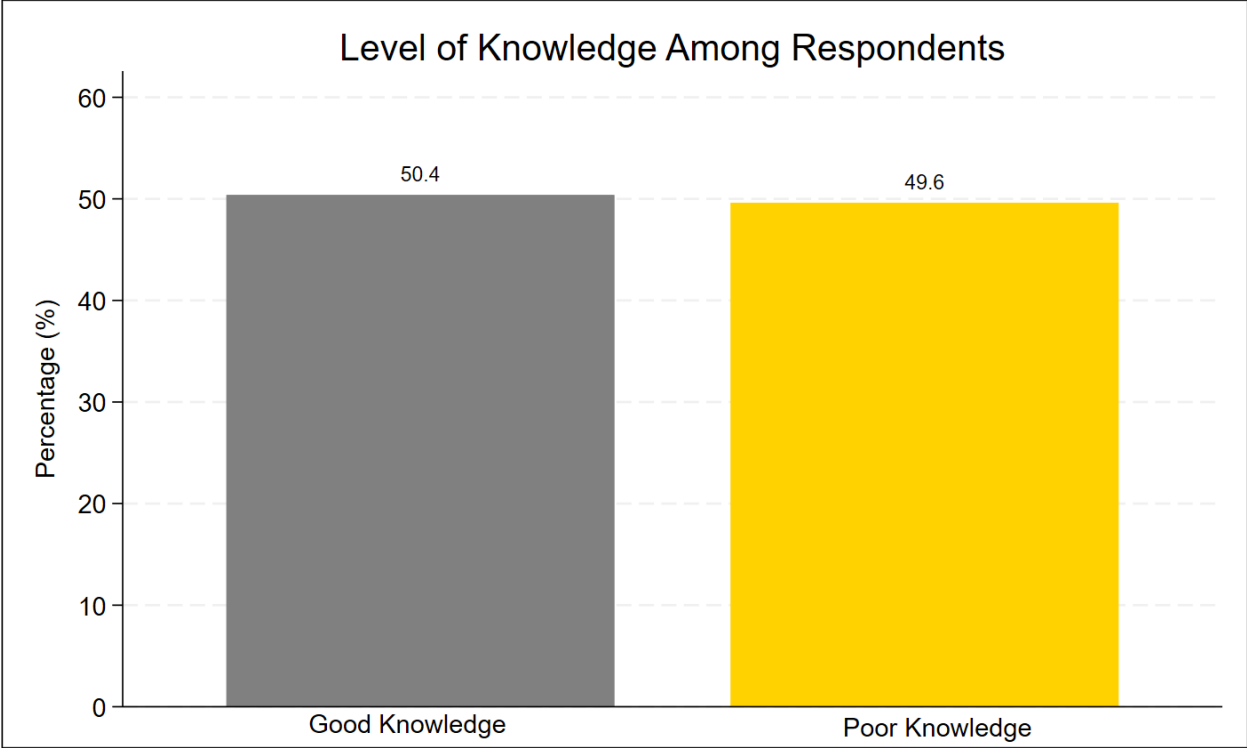


Figure 4.3.6: *The levels of knowledge among the respondents regarding Vaginal Candidiasis Prevention and Treatment*

4.4 Attitudes Towards Vaginal Candidiasis Prevention and Treatment

The findings on attitudes towards vaginal candidiasis (VC) reveal important insights into participants' perceptions and beliefs about the condition. A majority of respondents (98.73%) agreed that vaginal candidiasis is a serious health issue that requires medical attention. Only a negligible proportion of participants (0.25%) disagreed, while 1.02% expressed uncertainty.

Similarly, an overwhelming majority (97.96%) believed that they are at risk of developing VC if they fail to practice good hygiene. However, 1.53% disagreed with this statement, and 0.51% were unsure.

When asked about the hygiene practices of individuals experiencing recurrent vaginal infections, 70.99% of respondents agreed that such infections may be linked to carelessness in hygiene. A notable 24.17% of participants disagreed, and 4.83% were uncertain.

Furthermore, 93.89% of respondents agreed that untreated VC can lead to complications. Only 2.54% disagreed, and 3.56% were unsure.

In terms of comfortably discussing VC with healthcare providers, the responses show a mixed attitude. While 50.64% disagreed with the statement that they feel embarrassed to discuss VC with a healthcare provider, 45.29% admitted to feeling embarrassed. A small proportion (4.07%) were uncertain about their feelings on this matter.

Table 4.3: Responses to Questions on Attitudes Towards Vaginal Candidiasis

Question	Response	Frequency (n)	Percentage (%)
(N=393)			
Vaginal candidiasis is a serious health issue that requires medical attention	Agree	388	98.73
	Disagree	1	0.25
	Don't know	4	1.02
I believe I am at risk of getting VC if I do not practice good hygiene	Agree	385	97.96
	Disagree	6	1.53
	Don't know	2	0.51
Girls who get recurrent vaginal infections are careless about their hygiene	Agree	279	70.99
	Disagree	95	24.17
	Don't know	19	4.83

I believe that untreated VC can lead to complications	Agree	369	93.89
	Disagree	10	2.54
	Don't know	14	3.56
I feel embarrassed to talk about VC to my healthcare provider	Agree	178	45.29
	Disagree	199	50.64
	Don't know	16	4.07
Level of Attitude Towards VC	Poor Attitude	62	15.78
	Good Attitude	331	84.22

4.4.1 Overall Attitude towards Vaginal Candidiasis Prevention and Treatment

Overall, the attitude towards VC was assessed, with 84.22% of participants demonstrating a good attitude and only 15.78% classified as having a poor attitude.

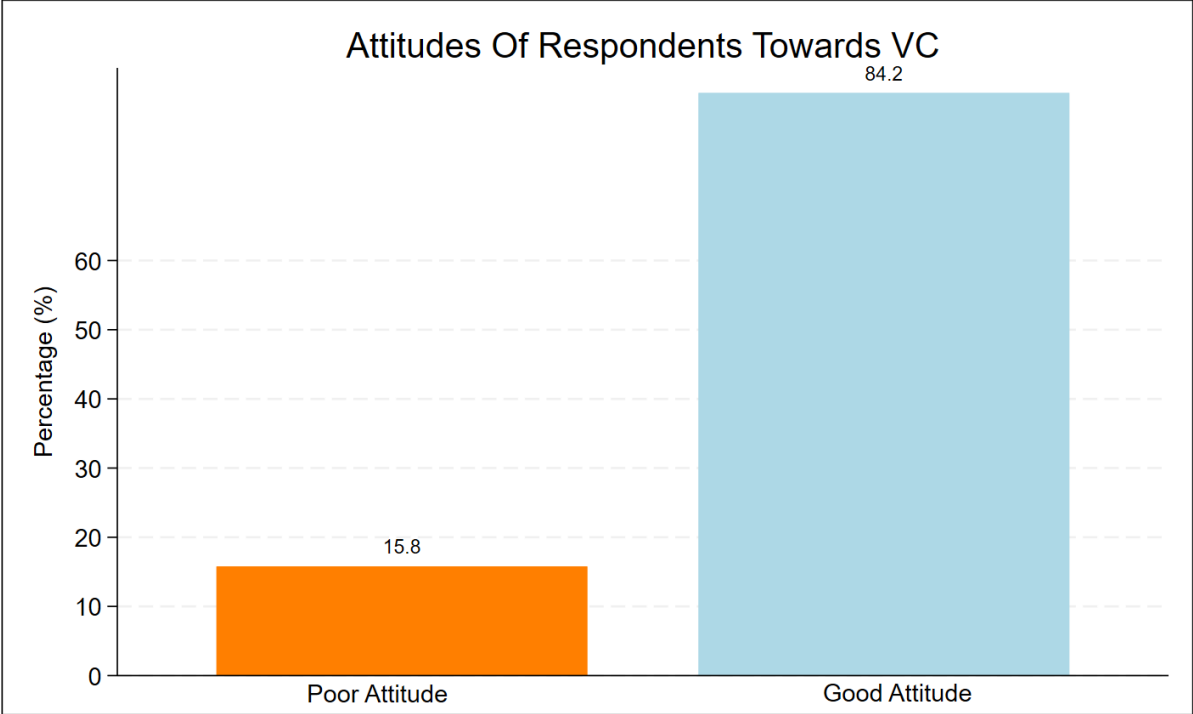


Figure 4.4.1: The attitudes of respondents towards vaginal candidiasis prevention and treatment

4.5 Practices of Respondents Towards Vaginal Candidiasis Prevention

A significant proportion of the respondents (52.16%) reported that they "always" seek medical advice when symptoms of vaginal candidiasis occur, while 22.65% indicated they only "sometimes" seek care. Notably, 25.19% of participants admitted they do not seek medical advice at all. Additionally, 43.00% of respondents reported engaging in self-medication for vaginal infections.

Interestingly, the majority of participants (82.19%) acknowledged the role of dietary practices in preventing infections. However, 17.81% did not consider diet as part of effective prevention.

In terms of treatment, 56.49% of participants correctly identified antifungal medications as the appropriate therapy for vaginal candidiasis. However, a notable proportion of respondents 15.78% believed antibiotics are effective, 10.18% favouring herbal remedies, and 15.27% admitting they did not know how VC is treated. Alarming, 2.29% believed the condition resolves on its own.

The survey also assessed participants' understanding of the recurrence of vaginal candidiasis after treatment. While 84.99% of respondents correctly identified that VC can recur, 8.91% were uncertain, and 6.11% believed recurrence was not possible.

Respondents employ a combination of strategies to prevent recurrent infections, with adherence to prescribed treatment emerging as the most commonly practiced measure. Specifically, 60.3% of participants reported strictly following their prescribed treatment regimen. Moreover, avoiding risk factors, such as wearing tight clothing or maintaining poor hygiene practices, was the second most prevalent preventive measure, with 58.3% of respondents identifying it as a key step. Additionally, regular gynaecological check-ups were reported by 56.2% of respondents.

The most commonly followed preventive measure was practicing good hygiene, with 94.4% of respondents indicating adherence to this practice. The second most frequently reported practice respondents follow to prevent vaginal candidiasis (VC) infections was wearing breathable underwear, with 62.6% following this measure. Additionally, 52.7% of participants reported avoiding unnecessary antibiotic use. Conversely, douching was the least common practice, with only 9.4% of respondents engaging in it.

Table 4.4: Responses to Questions Regarding Practices Towards Vaginal Candidiasis Prevention

Question	Response	Frequency (n)	Percentage (%)
(N=393)			
Do you seek medical advice when symptoms of vaginal candidiasis occur?	Not at all	99	25.19
	Sometimes	89	22.65
	Always	205	52.16
Have you ever self-medicated for vaginal infections?	No	224	57.00
	Yes	169	43.00
Do you consider your dietary practices as part of preventing infections?	No	70	17.81
	Yes	323	82.19
How is vaginal candidiasis typically treated?	Antibiotics	62	15.78
	Antifungal medications	222	56.49
	Herbal remedies	40	10.18
	I don't know	60	15.27
	It goes away on its own	9	2.29
Can vaginal candidiasis recur after treatment?	Don't know	35	8.91
	No	24	6.11
Practice Towards Vaginal Candidiasis	Poor Practice	194	49.36
	Good Practice	199	50.64

4.5.1 Overall Practice Towards Vaginal Candidiasis Prevention

Regarding their overall level of practice towards VC, slightly over half of the participants (50.64%) demonstrated "Good Practice," while the remaining 49.36% were categorized as having "Poor Practice."

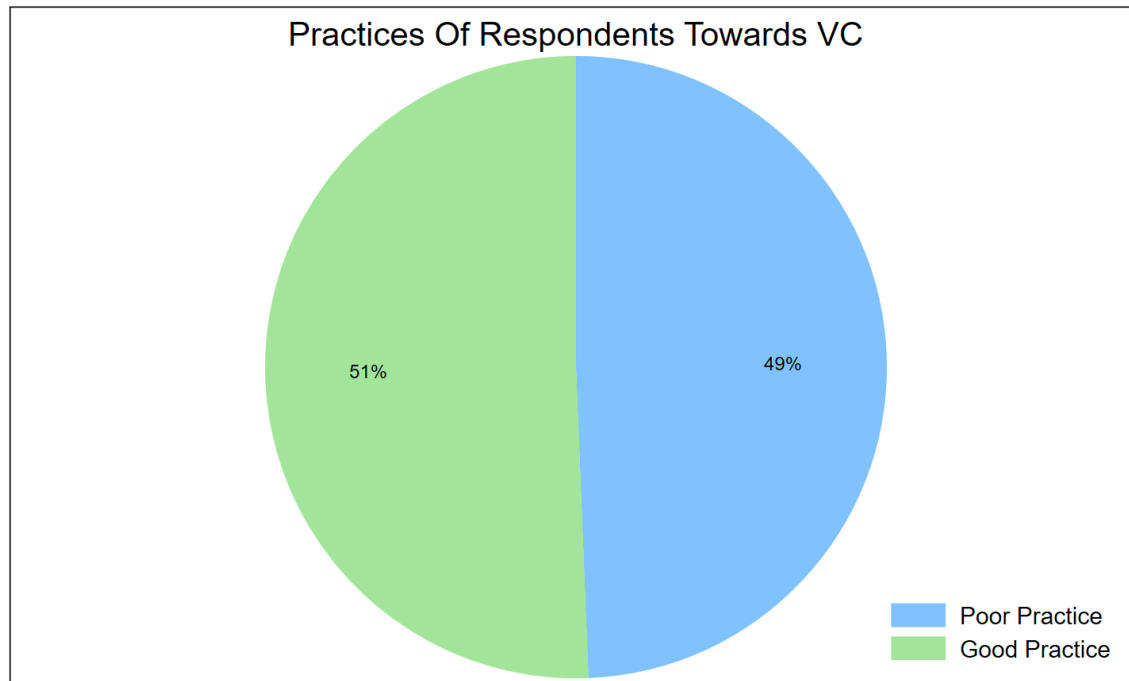


Figure 4.5.1: The practices of respondents towards vaginal candidiasis prevention

4.6 Bivariate Analysis of Variables on Knowledge Levels of Vaginal Candidiasis Prevention and Treatment

The bivariate analysis examined the relationship between respondents' knowledge of Vaginal Candidiasis (VC) and various sociodemographic characteristics, attitudes, and practices. Age group did not show a significant association with the level of knowledge of VC ($\chi^2 = 0.041$, $p = 0.840$). Respondents aged 14–17 years had almost equal proportions of good knowledge (50.66%)

and poor knowledge (49.34%), similar to those aged 18–22 years, where good knowledge (49.44%) and poor knowledge (50.56%) were evenly distributed.

Similarly, class level (SHS 2 and SHS 3) was not significantly associated with knowledge levels ($\chi^2 = 0.924, p = 0.336$). SHS 2 students had slightly higher proportions of good knowledge (52.85%) compared to SHS 3 students (48.00%), but this difference was not statistically significant. Religion also demonstrated no significant relationship with knowledge levels ($\chi^2 = 0.321, p = 0.852$).

Across all religious groups, the proportions of respondents with good and poor knowledge were comparable. Christianity, as the predominant religion, reflected a balanced distribution of good knowledge (50.26%) and poor knowledge (49.74%). Ethnicity likewise did not yield a statistically significant association with knowledge of VC ($\chi^2 = 2.464, p = 0.651$). However, notable variations were observed across ethnic groups, with Mole-Dagbani and Guan respondents having higher proportions of good knowledge (63.64%) compared to Ga-Dangme respondents, who had a lower proportion of good knowledge (41.67%).

Course of study emerged as a significant factor associated with knowledge of VC ($\chi^2 = 20.915, p = 0.001$). Respondents studying General Science had the highest proportion of good knowledge (61.90%), followed by Home Economics (52.17%) and Business (51.85%). Conversely, Visual Arts students had the lowest proportion of good knowledge (10.00%), indicating a potential disparity in awareness across academic disciplines.

Housing type was not significantly associated with knowledge levels ($\chi^2 = 1.832, p = 0.176$). Boarding students demonstrated a slightly higher proportion of good knowledge (51.21%) compared to day students (36.36%). However, this difference was not statistically meaningful.

Attitude towards VC showed a statistically significant association with knowledge levels ($\chi^2 = 4.012, p = 0.045$). Respondents with a good attitude towards VC were more likely to have good knowledge (52.57%) compared to those with a poor attitude (38.71%). The strongest association was observed between practice towards VC and knowledge levels ($\chi^2 = 22.951, p < 0.001$). Respondents who demonstrated good practices towards VC had a substantially higher proportion of good knowledge (62.31%) compared to those with poor practices (38.14%).

Table 4.5: Bivariate Analysis of Selected Variables on Knowledge Levels of Vaginal Candidiasis Prevention and Treatment

Variables	Knowledge Levels (N=393)		χ^2 (p-Value)
	Poor N (%)	Good N (%)	
Age groups (In years)			0.041 (0.840)
14–17 years	150 (49.34)	154 (50.66)	
18–22 years	45 (50.56)	44 (49.44)	
Class			0.924 (0.336)
SHS 2	91 (47.15)	102 (52.85)	
SHS 3	104 (52.00)	96 (48.00)	
Religion			0.321 (0.852)
African Traditional	1 (33.33)	2 (66.67)	
Christianity	189 (49.74)	191 (50.26)	

Islamic	5 (50.00)	5 (50.00)	
Ethnicity			2.464 (0.651)
Akan	25 (47.17)	28 (52.83)	
Ewe	148 (50.34)	146 (49.66)	
Ga-Dangme	14 (58.33)	10 (41.67)	
Guan	4 (36.36)	7 (63.64)	
Mole-Dagbani	4 (36.36)	7 (63.64)	
Course of Study			20.915 (0.001) *
Agriculture	0 (0.00)	1 (100.00)	
Business	13 (48.15)	14 (51.85)	
General Arts	80 (54.05)	68 (45.95)	
General Science	40 (38.10)	65 (61.90)	
Home Economics	44 (47.83)	48 (52.17)	
Visual Arts	18 (90.00)	2 (10.00)	
Housing			1.832 (0.176)
Boarding	181 (48.79)	190 (51.21)	
Day	14 (63.64)	8 (36.36)	
Attitude Towards VC			4.012 (0.045)
Poor Attitude	38 (61.29)	24 (38.71)	
Good Attitude	157 (47.43)	174 (52.57)	
Practice Towards VC			22.951 (<0.001) *
Poor Practice	120 (61.86)	74 (38.14)	

Good Practice	75 (37.69)	124 (62.31)
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4.7 Bivariate Analysis of Variables on Levels of Attitude towards Vaginal Candidiasis Prevention and Treatment

Regarding age groups, respondents aged 14–17 years exhibited a slightly lower proportion of poor attitudes (15.13%) compared to those aged 18–22 years (17.98%). However, this difference was not statistically significant ($\chi^2 = 0.42$, $p = 0.517$). Similarly, no significant association was observed between the respondents' housing status and attitudes toward VC, with boarding students showing a slightly lower prevalence of poor attitudes (15.36%) compared to day students (22.73%) ($\chi^2 = 0.85$, $p = 0.357$).

The analysis of class levels revealed a significant association between respondents' class and attitudes toward VC ($\chi^2 = 6.84$, $p = 0.009$). Students in SHS 2 exhibited a lower prevalence of poor attitudes (10.88%) compared to SHS 3 students (20.50%), suggesting potential differences in exposure or understanding of VC between class levels.

Religion and ethnicity did not show significant associations with attitudes toward VC. Among religious groups, poor attitudes were observed at comparable rates in Christianity (15.79%), Islam (20.00%), and African Traditional Religion (0.00%) ($\chi^2 = 0.70$, $p = 0.706$). Similarly, ethnicity was not significantly associated with attitudes, with poor attitudes ranging from 8.33% among Ga-Dangme respondents to 17.01% among Ewe respondents ($\chi^2 = 3.82$, $p = 0.430$).

The course of study also showed no significant association with attitudes, with poor attitudes being more prevalent among General Arts students (17.57%) compared to other courses such as General

Science (13.33%) and Visual Arts (15.00%) ($\chi^2 = 1.06$, $p = 0.957$). Knowledge levels, however, showed a significant association with attitudes toward VC ($\chi^2 = 4.01$, $p = 0.045$). Respondents with good knowledge of VC were less likely to exhibit poor attitudes (12.12%) compared to those with poor knowledge (19.49%). This suggests that knowledge plays a critical role in shaping positive attitudes toward VC.

Practice levels were also not significantly associated with attitudes ($\chi^2 = 0.44$, $p = 0.507$). Nonetheless, respondents with poor practice showed slightly higher proportions of poor attitudes (17.01%) compared to those with good practice (14.57%).

Table 4.6: Bivariate analysis of Selected Variables on Levels of Attitude towards Vaginal Candidiasis Prevention and Treatment

Variables	Attitude Levels (N=393)		χ^2 (p-Value)
	Poor N (%)	Good N (%)	
Age groups (years)			
14–17 years	46 (15.13)	258 (84.87)	0.42 (0.517)
18–22 years	16 (17.98)	73 (82.02)	
Class			
SHS 2	21 (10.88)	172 (89.12)	6.84 (0.009) *
SHS 3	41 (20.50)	159 (79.50)	
Religion			
African Traditional	0 (0.00)	3 (100.00)	0.70 (0.706)
Christianity	60 (15.79)	320 (84.21)	
Islam	2 (20.00)	8 (80.00)	
Ethnicity			
Akan	9 (16.98)	44 (83.02)	3.82 (0.430)
Ewe	50 (17.01)	244 (82.99)	

Ga-Dangme	2 (8.33)	22 (91.67)	
Guan	0 (0.00)	11 (100.00)	
Mole-Dagbani	1 (9.09)	10 (90.91)	
Course of Study			
Agriculture	0 (0.00)	1 (100.00)	1.06 (0.957)
Business	4 (14.81)	23 (85.19)	
General Arts	26 (17.57)	122 (82.43)	
General Science	14 (13.33)	91 (86.67)	
Home Economics	15 (16.30)	77 (83.70)	
Visual Arts	3 (15.00)	17 (85.00)	
Housing			
Boarding	57 (15.36)	314 (84.64)	0.85 (0.357)
Day	5 (22.73)	17 (77.27)	
Knowledge Levels			
Good Knowledge	24 (12.12)	174 (87.88)	4.01 (0.045)
Poor Knowledge	38 (19.49)	157 (80.51)	
Practices			
Poor Practice	33 (17.01)	161 (82.99)	0.44 (0.507)
Good Practice	29 (14.57)	170 (85.43)	

4.8 Bivariate Analysis of Variables on Practices towards Vaginal Candidiasis prevention

The analysis revealed no statistically significant association between age groups and levels of practice concerning VC ($\chi^2 = 0.05$, $p = 0.822$). Respondents aged 14–17 years exhibited nearly equal proportions of poor (49.67%) and good practices (50.33%). Similarly, those aged 18–22 years showed comparable levels, with 48.31% demonstrating poor practices and 51.69% demonstrating good practices.

The relationship between class level and VC practice was also not statistically significant ($\chi^2 = 0.30$, $p = 0.582$). Among SHS 2 students, 50.78% reported poor practices, while 49.22% reported good practices. Among SHS 3 students, 48.00% demonstrated poor practices, compared to 52.00% with good practices. These results indicate that class level does not significantly affect respondents' practices.

However, religion was significantly associated with levels of practice towards VC ($\chi^2 = 7.05$, $p = 0.029$). Respondents practicing African Traditional Religion had the highest proportion of poor practices (100.00%). Those identifying as Christians showed a more balanced distribution, with 48.16% reporting poor practices and 51.84% reporting good practices. Among Islamic respondents, 80.00% reported poor practices, while only 20.00% demonstrated good practices.

Ethnicity did not show a statistically significant relationship with practice levels ($\chi^2 = 3.60$, $p = 0.463$). The Akan ethnic group demonstrated better practices, with 62.26% reporting good practices compared to 37.74% reporting poor practices. However, the Ewe ethnic group exhibited a higher proportion of poor practices (51.02%) compared to good practices (48.98%). Other ethnic groups, including Ga-Dangme, Guan, and Mole-Dagbani, displayed varying proportions, but none reached statistical significance.

The course of study did not significantly influence levels of practice ($\chi^2 = 8.06$, $p = 0.153$). Respondents studying Agriculture reported no poor practices (0.00%) and 100.00% good practices. Conversely, Visual Arts students had the poorest performance, with 75.00% reporting poor practices and only 25.00% demonstrating good practices. Students in Business, General Arts, General Science, and Home Economics displayed more balanced distributions, but the differences were not statistically significant.

Housing type was not significantly associated with VC-related practices ($\chi^2 = 0.00$, $p = 0.951$). Among boarding students, 49.33% reported poor practices, while 50.67% reported good practices. Day students exhibited an equal proportion of poor and good practices (50.00% each).

Knowledge level was significantly associated with practice levels ($\chi^2 = 22.95$, $p = 0.000$). Respondents with good knowledge of VC demonstrated better practices, with 62.63% reporting good practices compared to 37.37% reporting poor practices. In contrast, respondents with poor knowledge were more likely to exhibit poor practices (61.54%) than good practices (38.46%). This indicates that a higher level of knowledge is a key factor in promoting better VC-related practices.

Attitude was not significantly associated with practice levels ($\chi^2 = 0.44$, $p = 0.507$). Respondents with poor attitudes demonstrated slightly higher proportions of poor practices (53.23%) compared to good practices (46.77%). Similarly, respondents with good attitudes showed a marginally higher proportion of good practices (51.36%) compared to poor practices (48.64%).

Table 4.7: Bivariate Analysis of Selected Variables on Practices towards Vaginal Candidiasis prevention

Variables	Practice Levels (N = 393)		χ^2 (p-Value)
	Poor N (%)	Good N (%)	
Age groups (years)			0.05 (0.822)
14–17 years	151 (49.67)	153 (50.33)	
18–22 years	43 (48.31)	46 (51.69)	
Class			0.30 (0.582)
SHS 2	98 (50.78)	95 (49.22)	

SHS 3	96 (48.00)	104 (52.00)	
Religion			7.05 (0.029)
African Traditional	3 (100.00)	0 (0.00)	
Christianity	183 (48.16)	197 (51.84)	
Islamic	8 (80.00)	2 (20.00)	
Ethnicity			3.60 (0.463)
Akan	20 (37.74)	33 (62.26)	
Ewe	150 (51.02)	144 (48.98)	
Ga-Dangme	13 (54.17)	11 (45.83)	
Guan	5 (45.45)	6 (54.55)	
Mole-Dagbani	6 (54.55)	5 (45.45)	
Course of Study			8.06 (0.153)
Agriculture	0 (0.00)	1 (100.00)	
Business	12 (44.44)	15 (55.56)	
General Arts	77 (52.03)	71 (47.97)	
General Science	47 (44.76)	58 (55.24)	
Home Economics	43 (46.74)	49 (53.26)	
Visual Arts	15 (75.00)	5 (25.00)	
Housing			0.00 (0.951)
Boarding	183 (49.33)	188 (50.67)	
Day	11 (50.00)	11 (50.00)	
Knowledge Level			22.95 (0.000) *
Good Knowledge	74 (37.37)	124 (62.63)	

Poor Knowledge	120 (61.54)	75 (38.46)	
Attitudes			0.44 (0.507)
Poor Attitude	33 (53.23)	29 (46.77)	
Good Attitude	161 (48.64)	170 (51.36)	

4.9 Factors associated with Knowledge, Attitudes and Practices regarding Vaginal

Candidiasis

Multivariate Logistic Regression Analysis of Variables on Levels of Knowledge on Vaginal Candidiasis

Course of study demonstrated the strongest association with knowledge levels. Students enrolled in General Science showed significantly higher odds of having good knowledge compared to those in General Arts (AOR = 14.34, 95% CI: 3.02-68.01, $p = 0.001$). Similarly, students in Business (AOR = 9.26, 95% CI: 1.70-50.27, $p = 0.010$) and Home Economics (AOR = 9.32, 95% CI: 1.95-44.40, $p = 0.005$) courses also exhibited significantly higher odds of possessing adequate knowledge about vaginal candidiasis.

Practices emerged as another significant predictor of knowledge levels. Students with good practice behaviors demonstrated significantly higher odds of having good knowledge compared to those with poor practices (AOR = 2.59, 95% CI: 1.69-3.99, $p < 0.001$).

Conversely, several socio-demographic variables showed no significant association with knowledge levels in the adjusted model. Age groups did not demonstrate a significant relationship, with students aged 18-22 years showing similar odds of having good knowledge compared to the younger cohort (AOR = 1.18, 95% CI: 0.67-2.06, $p = 0.565$). Class level also

showed no significant association, as SHS 3 students had comparable knowledge levels to SHS 2 students (AOR = 0.76, 95% CI: 0.48-1.20, p = 0.236).

Religion and ethnicity did not significantly influence knowledge levels. Islamic students (AOR = 1.26, 95% CI: 0.07-22.37, p = 0.877) and those practicing African Traditional Religion (AOR = 0.59, 95% CI: 0.05-7.42, p = 0.686) showed no significant differences compared to Christian students. Similarly, ethnic variations among Ga-Dangme, Mole-Dagbani, and Guan groups did not reach statistical significance when compared to Ewe students.

Housing and attitudes also failed to demonstrate significant associations with knowledge levels in the multivariate model. Day students showed comparable knowledge levels to boarding students (AOR = 0.48, 95% CI: 0.18-1.29, p = 0.147), while students with good attitudes did not significantly differ from those with poor attitudes (AOR = 1.62, 95% CI: 0.89-2.95, p = 0.112) after adjusting for other variables.

Table 4.8: Multivariate Logistic Regression Analysis of Variables on Levels of Knowledge on Vaginal Candidiasis

Variables	COR	(95% CI)	p-value	AOR	(95% CI)	p-value
Age groups (In years)						
14–17	Ref	-	-	Ref	-	-
18–22	0.95	0.59 – 1.53	0.840	1.18	0.67 – 2.06	0.565
Class						
SHS 2	Ref	-	-	Ref	-	-
SHS 3	0.82	0.55 – 1.22	0.337	0.76	0.48 – 1.20	0.236

Religion						
Christianity	Ref	-	-	Ref	-	-
Islamic	0.50	0.03 – 7.45	0.615	1.26	0.07 – 22.37	0.877
African Tradition	0.51	0.05 – 5.62	0.579	0.59	0.05 – 7.42	0.686
Course						
General Arts	Ref	-	-	Ref	-	-
Business	9.69	1.87 – 50.19	0.007	9.26	1.70 – 50.27	0.010*
General Science	14.63	3.22 – 66.40	0.001	14.34	3.02 – 68.01	<0.001*
Home Economics	9.82	2.15 – 44.76	0.003	9.32	1.95 – 44.40	0.005*
Housing						
Boarding	Ref	-	-	Ref	-	-
Day	0.54	0.22 – 1.33	0.182	0.48	0.18 – 1.29	0.147
Attitude						
Poor	Ref	-	-	Ref	-	-
Good	1.75	1.01 – 3.06	0.047	1.62	0.89 – 2.95	0.112
Practice						
Poor	Ref	-	-	Ref	-	-
Good	2.68	1.78 – 4.03	<0.001	2.59	1.69 – 3.99	<0.001*

Note: Ref: Reference category, COR: Crude Odds Ratio, AOR: Adjusted Odds Ratio, CI: Confidence Interval.

Multivariate Logistic Regression Analysis of Variables on Levels of Attitudes towards Vaginal Candidiasis Prevention and Treatment

Respondents aged 18–22 years showed no significant association with attitude levels compared to the reference group of 14-17 years (AOR = 1.05, 95% CI: 0.52-2.10, p = 0.896).

Class level emerged as the only statistically significant predictor in the multivariate model.

Students in **SHS 3** demonstrated significantly **lower odds of having positive attitudes** towards vaginal candidiasis prevention and treatment compared to SHS 2 students (AOR = 0.42, 95% CI: 0.23-0.77, $p = 0.005$). This represents a 58% reduction in the odds of having favorable attitudes among senior students.

Ethnicity variables demonstrated no significant. Ga-Dangme students showed higher but non-significant odds compared to Ewe students (AOR = 2.55, 95% CI: 0.49-13.29, $p = 0.268$), while Mole-Dagbani students similarly showed non-significant associations (AOR = 2.38, 95% CI: 0.24-24.07, $p = 0.463$).

Course of study variables revealed no significant associations with attitude levels. All academic disciplines, including General Science (AOR = 0.74, 95% CI: 0.17-3.11, $p = 0.677$), Business (AOR = 0.67, 95% CI: 0.12-3.63, $p = 0.639$), and Home Economics (AOR = 0.54, 95% CI: 0.13-2.24, $p = 0.393$), showed non-significant associations compared to General Arts students.

Housing showed no significant association with attitude levels, as day students demonstrated non-significant odds compared to boarding students (AOR = 0.72, 95% CI: 0.24-2.20, $p = 0.567$).

Interestingly, while knowledge level showed a significant association in the crude analysis (COR = 1.75, 95% CI: 1.01-3.06, $p = 0.047$), this relationship became non-significant in the adjusted model (AOR = 1.61, 95% CI: 0.88-2.95, $p = 0.124$). Similarly, practice levels showed no significant association with attitudes in both crude and adjusted analyses (AOR = 1.10, 95% CI:

0.61-1.98, $p = 0.748$), indicating that current practices do not significantly predict attitude levels towards vaginal candidiasis prevention and treatment.

Table 4.9: Multivariate Logistics Regression Analysis of Variables on Levels of Attitudes towards Vaginal Candidiasis Prevention and Treatment

Variables	COR	(95% CI)	p-value	AOR	(95% CI)	p-value
Age groups (years)						
14–17	Ref	-	-	Ref	-	-
18–22	0.81	0.44 – 1.52	0.518	1.05	0.52 – 2.10	0.896
Grade level						
SHS 2	Ref	-	-	Ref	-	-
SHS 3	0.47	0.27 – 0.84	0.010	0.42	0.23 – 0.77	0.005*
Course of Study						
General Arts	Ref	-	-	Ref	-	-
Business	1.01	0.20 – 5.14	0.986	0.67	0.12 – 3.63	0.639
General Science	1.15	0.30 – 4.43	0.842	0.74	0.17 – 3.11	0.677
Home Economics	0.91	0.24 – 3.48	0.886	0.54	0.13 – 2.24	0.393
Housing						
Boarding	Ref	-	-	Ref	-	-
Day	0.62	0.22 – 1.74	0.361	0.72	0.24 – 2.20	0.567
Knowledge levels						
Poor	Ref	-	-	Ref	-	-
Good	1.75	1.01 – 3.06	0.047	1.61	0.88 – 2.95	0.124

Practices

Poor	Ref	-	-	Ref	-	-
Good	1.20	0.70 – 2.07	0.508	1.10	0.61 – 1.98	0.748

Note: Ref: Reference category, COR: Crude Odds Ratio, AOR: Adjusted Odds Ratio, CI: Confidence Interval.

Multivariate Logistic Regression Analysis of Variables on Practices towards Vaginal Candidiasis Prevention

Respondents aged 18–22 years were 10% more likely to engage in good practices regarding Vaginal Candidiasis compared to those aged 14–17 years (AOR = 1.05, 95% CI: 0.64–1.81). However, this association was not statistically significant ($p = 0.822$). Similarly, students in SHS 3 were more likely to demonstrate good practices compared to those in SHS 2 (AOR = 1.12, 95% CI: 0.82–1.99), though the observed difference was also not significant ($p = 0.509$).

When examining the role of religion, Islamic respondents exhibited a higher likelihood of good practices compared to Christians (AOR = 4.31, 95% CI: 0.90–20.54), although this association did not achieve statistical significance ($p = 0.067$). Course of study emerged as a stronger determinant of practice levels. Respondents pursuing a General Science course were significantly more likely to engage in good practices compared to those in General Arts (AOR = 3.70, 95% CI: 1.25–10.93, $p = 0.018$). Similarly, students in Business courses also demonstrated a higher likelihood of better practices (AOR = 2.77, 95% CI: 0.96–8.00), although this association was not statistically significant ($p = 0.060$).

Housing type did not significantly influence practice levels among respondents. Those who lived as day students were slightly less likely to demonstrate good practices compared to boarding students (AOR = 0.97, 95% CI: 0.41–2.30, $p = 0.951$). This lack of association suggests that

proximity to school resources and supervision may not be a critical factor in determining practice levels.

Knowledge levels, however, were a significant predictor of practice. Respondents with good knowledge were over twice as likely to engage in good practices compared to those with poor knowledge (AOR = 2.58, 95% CI: 1.68–3.96, $p < 0.001$). Additionally, attitude levels, while somewhat associated with practice, did not yield significant results. Respondents with good attitudes were slightly more likely to engage in positive practices compared to those with poor attitudes (AOR = 1.20, 95% CI: 0.70–2.07), but this association was not statistically significant ($p = 0.507$).

Table 4.10: Multivariate Logistic Regression Analysis of Variables on Practices towards Vaginal Candidiasis Prevention

Variables	COR	(95% CI)	p-value	AOR	(95% CI)	p-value
Age groups (years)						
14–17	Ref	-	-	Ref	-	-
18–22	1.10	0.64 – 1.90	0.725	1.05	0.64 – 1.81	0.822
Class level						
SHS 2	Ref	-	-	Ref	-	-
SHS 3	1.19	0.76 – 1.86	0.445	1.12	0.82 – 1.99	0.509
Religion						
Christianity	Ref	-	-	Ref	-	-
Islamic	4.15	0.82 – 20.95	0.085	4.31	0.90 – 20.54	0.067
African Tradition	1.00	-	-	1.00	-	-

Course of Study						
General Arts	Ref	-	-	Ref	-	-
Business	2.56	0.68 – 9.55	0.163	2.77	0.96 – 8.00	0.060
General Science	2.27	0.73 – 7.00	0.156	3.70	1.25 – 10.93	0.018
Housing						
Boarding	Ref	-	-	Ref	-	-
Day	1.23	0.47 – 3.21	0.676	0.97	0.41 – 2.30	0.951
Knowledge Level						
Good	2.68	1.78 – 4.03	0.000	2.58	1.68 – 3.96	< 0.001 *
Poor	Ref	-	-	Ref	-	-
Attitudes						
Good	1.20	0.62 – 1.96	0.739	1.20	0.70 – 2.07	0.507
Poor	Ref	-	-	Ref	-	-

Note: Ref: Reference category, COR: Crude Odds Ratio, AOR: Adjusted Odds Ratio, CI: Confidence Interval.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter presents the findings of the study on knowledge, attitude and practices towards vaginal candidiasis prevention and treatment among senior high school girls in the Ho municipality of the Volta Region, Ghana. The findings are interpreted and discussed around the study's specific objectives and incorporates comparisons with findings from previous related studies.

5.2 Sociodemographic Characteristics of the Girls

Respondents of this study were all females between the ages of 14 and 22 years. From the survey, it revealed that, the mean age was 16.84 years with a standard deviation of ± 1.23 years and majority (77.35%) were aged 14-17 years. This study is similar to a cross-sectional study carried out in Ho, Ghana on the use of emergency contraception among female senior high students, reported that its participants were between the ages of 14 and 25 years (Konlan *et al.*, 2020).

The religious composition of the respondents was predominantly Christians with 96.6% identifying as such with a smaller proportion identified as Muslims (2.54%). This is similar to a cross-sectional study conducted by Konlan *et al.*, (2020).

5.3 The knowledge of respondents regarding vaginal candidiasis

This study found that 97.71% of respondents had heard of VC, indicating a high level of awareness. However, a deeper analysis of their knowledge showed significant gaps. While 20.1% of the respondents correctly identified fungi as the cause, a majority (53.44%) incorrectly attributed it to bacteria, 4.07% said it was caused by virus and 22.39% admitted that they do not know the cause.

Similarly, fewer than half of the participants (38.17%) accurately named *Candida albicans* as the specific organism responsible for VC. These findings indicate that although awareness of VC is widespread, comprehensive knowledge of its aetiology remains insufficient.

These results are consistent with the findings from a similar study conducted among adolescent girls in the SHS in the Cape Coast Metropolis where only 23% correctly stated vaginal candidiasis is caused by fungi while 3% also indicated the condition is caused by virus and 72% were of the view that it is caused by bacteria (Ayebi-Arthur, 2021).

A cross-sectional study done in the Adenta municipality, Ghana by Akweley *et al.* (2024), also reported that most of the respondents did not know the causative organism that causes VC with 22.8% proposing that it was caused by bacteria while only 7.4% correctly attributed it to fungi. Such knowledge gaps may stem from inadequate emphasis on fungal infections during sexual and reproductive health (SRH) education in schools.

Participants demonstrated moderate understanding of VC diagnostic methods, with 54.20% correctly identifying testing of vaginal discharge as the appropriate method. However, misconceptions persisted, as 25.45% believed VC could be diagnosed through urine testing, and 20.36% admitted they did not know how it is diagnosed. These gaps may reflect limited access to detailed health education on vaginal infections.

The study also revealed substantial knowledge deficits regarding risk factors and preventive measures for VC. While most respondents identified poor hygiene (85%) and high sugar intake (73.3%) as risk factors, less than half recognized unnecessary antibiotic use (43%), weakened immunity (20.9%), or diabetes (18.6%) as contributors. Similarly, only 38.7% of respondents identified avoiding scented hygiene products as a preventive measure. A case-control study done

in China by Wen, (2019) on previous antibiotic treatment as a risk factor for recurrent vulvovaginal candidiasis (RVVC) revealed that recent antibiotic treatment was the most important host factor related to the pathogenesis of RVVC (Wen, 2019). A previous study done on the effect of antibiotics on VVC also indicated that the use of short courses of oral antibiotics could increase the prevalence of asymptomatic vaginal *Candida* colonization, and consequently, the incidence of symptomatic VVC (Xu *et al.*, 2008).

In terms of treatment, 56.49% of the respondents correctly identified antifungal medications as the appropriate therapy for VC. However, significant misconceptions were observed, as 15.78% of participants believed that antibiotics are effective, and 10.18% favoured herbal remedies. Alarming, 2.29% of participants believed that VC resolves on its own, a misconception that could lead to delayed treatment. This is consistent with a study done by Dejene, Birhanu and Tarekegn, (2022) on the knowledge, attitude and practices of residents toward antimicrobial usage and resistance in Gondar, Northwest Ethiopia which showed that participants had some misconceptions about antimicrobial use and resistance. These findings highlight the need for targeted health education campaigns to address misinformation about the use antibiotics for VC treatment and ensure that students are empowered with accurate knowledge.

Overall, the knowledge level revealed that 50.38% students had good knowledge of vaginal candidiasis, while 49.62 had poor knowledge. This result is consistent with the findings published by Akweley *et al.*, (2024) where 54.7% had good knowledge. However, contradicts with a similar study carried out in Pune City, India where Narayankhedkar, Hodiwala and Mane, (2015) recorded a lower proportion (37%) of adolescent girls having good knowledge.

5.4 Attitudes of respondents towards vaginal candidiasis prevention and treatment

Attitudes towards vaginal candidiasis significantly influence the health-seeking behaviors and preventive practices of girls. This study assessed various dimensions of attitudes, including perceived severity, personal susceptibility, stigma and awareness of complications. The finding revealed a generally positive attitude towards VC. An overwhelming 98.73% of the students agreed that VC is a serious health issue requiring medical attention. This high level of awareness of the condition's severity mirrors findings by Kyilleh, Tabong and Konlaan, (2018), that young women were more likely to view reproductive infections as conditions requiring professional care. However, this contradicts what Akweley *et al.*, (2024) reported that, more than half of their respondents (50.7%) agreed that vaginal candidiasis is not dangerous because it is curable. Additionally, 97.96% of the respondents acknowledged that poor personal hygiene increases the risk of contracting VC. However, such high levels of agreement may also indicate an overemphasis on hygiene as the sole cause of VC, potentially overlooking other contributing factors such as antibiotic use, hormonal changes or immune suppression (*Overview: Vaginal yeast infection (thrush) - InformedHealth.org - NCBI Bookshelf*, no date)

Interestingly, 70.99% of the respondents agreed with the statement that girls who get recurrent infections are careless with hygiene. While this belief reinforces the importance of cleanliness, it also suggests stigmatizing attitudes. Such perceptions may lead to shame and blame, discouraging affected individuals from seeking timely medical advice. Similar social stigma around female sexuality remains in Western culture and as a result, women often avoid and/or are embarrassed to discuss their sexual health with their health care professionals (HCPs) (Kingsberg *et al.*, 2019)

Furthermore, a strong majority (93.89%) of the respondents agreed that untreated VC can lead to complications. This finding reflects good awareness of the potential health risks of neglecting

treatment and supports the arguments that educational efforts especially in schools are providing students' understanding of reproductive health risks.

However, the study also uncovered barriers related to stigma and communication. Nearly 45.29% of the respondents reported feeling embarrassed to talk to healthcare providers about VC. This is significant, as embarrassment and lack of comfort can delay care-seeking behaviors (Tsadik, Lam and Hadush, 2019) and only 50.64% disagreed with this statement. This nearly even split suggests that despite acknowledging the seriousness of the condition, a substantial number of girls might suppress symptoms or self-medicate instead of seeking professional support. This aligns with (Hall *et al.*, 2018; McGranahan *et al.*, 2021; Janighorban *et al.*, 2022) who found that stigma and discomfort in discussing reproductive issues remain persistent barriers among girls.

5.5 Practices of respondents towards vaginal candidiasis prevention and treatment

The practice component of this study assessed how senior high school girls in the Ho municipality assessed personal hygiene, treatment seeking behavior, use of antifungal medications, and dietary habits which are essential for reducing risks and managing infections effectively. In this study 52.61% of participants reported that they “always” seek medical advice when symptoms of vaginal candidiasis occur, while 22.65% sometimes sought care, and a concerning 25.19% did not seek care at all. This suggests that although some students engage in proper care-seeking behaviors, a substantial proportion rely on alternatives such as self-medication. This is reinforced by the finding that 43% of respondents reported having self-medicated for vaginal infections. These findings are consistent with studies conducted in Ghana and sub-Saharan African countries. Studies reported that, adolescent girls often opt for self-treatment due to embarrassment, fear of judgment or lack of access to healthcare services. (Lawrence *et al.*, 2024; Okyere *et al.*, 2024; Puja *et al.*, 2024).

The majority of the respondents (82.19%) recognized the role of dietary practices in preventing infections, and 60.3% adhered to prescribed treatments during previous episodes. This is a positive finding, as diet and compliance with prescribed medications have shown to significantly reduce the occurrence of candidiasis. The candida diet is a strict diet meant to alleviate the symptoms of candida infections. However, its effectiveness is unsupported by scientific evidence (*The Candida Diet: Beginner's Guide and Meal Plan*, no date). This assertion relating to the candida diet in literature, however, is not suggestive that the senior high school girls are aware of it. Also, Ringdahl, (2000) reported that dietary habits have been suggested as causes of recurrent vulvovaginal candidiasis, however, most studies do not support a role for dietary factors in the etiology of recurrences, and adherence to strict diets has not been beneficial.

5.6 Factors associated with Knowledge, Attitudes and Practices regarding Vaginal Candidiasis

The study found course of study to be a significant predictor of knowledge about vaginal candidiasis. Students in General Science (AOR= 14.63, p= 0.001), Home Economics (AOR= 9.82, p= 0.003), and Business (AOR= 9.69, P=0.007) were more likely to have good knowledge compared to those in General Arts. In contrast, other variables like age, class level and religion did not significantly predict knowledge in this study. Additionally, both attitude and practices were significantly associated with knowledge. Respondents with good attitude (AOR= 1.75, p= 0.047) and good practices (AOR= 2.68, p< 0.001) had significantly higher odds of processing good knowledge. This warrants further investigative research to understand the reason for course of study being statistically significant. More particularly, the reason for which General Arts students seem to have a lower knowledge than students from other courses.

The findings also revealed that class level was significantly associated with attitude. Students in SHS 3 were less likely to have a good attitude compared to those in SHS 2 (AOR= 0.43, p= 0.007). This is somewhat unexpected, as one might anticipate more advanced students to be better informed and more positive in attitude. Contrary to expectations, knowledge level was not a significant predictor of attitude in this study (AOR= 1.61, p= 0.119), although a positive trend was observed. Other variable; religion, course of study, housing, and practices were not significantly associated with attitudes in this study.

Knowledge emerged as the strongest predictor of practices, with respondents who had good knowledge being over twice as likely to demonstrate good practices (AOR= 2.58, p< 0.001). Course of study was also associated with practice, particularly among General Science students (AOR= 3.70,p= 0.018), reinforcing the earlier assertion that educational background influences both knowledge and health behavior. However, attitude levels were not significantly associated with practice (AOR=1.20, p=0.507), despite good attitude often being presumed to translate into better health behavior. Religion showed a marginal association with practice (AOR= 4.31 for Islamic respondents, p=0.067), but the wide confidence interval suggests caution in interpretation due to small sample size.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

The study assessed the knowledge, attitudes and practices towards vaginal candidiasis prevention and treatment among senior high school girls in the Ho Municipality of the Volta Region. The study provided valuable insight into how SHS girls perceive, understand and respond to vaginal candidiasis, a common but often misunderstood health issue. According to the findings, awareness of vaginal candidiasis was high but detailed knowledge about its aetiology, risk factors, symptoms and treatment was limited. Misconceptions, such as attributing VC to bacteria or relying on antibiotics and herbal remedies for treatment, were prevalent. Additionally, while most respondents recognized the importance of hygiene and its role in preventing VC, gaps in understanding other preventive measures, such as avoiding unnecessary antibiotics, were evident.

Attitudes towards VC were generally positive, with most respondents acknowledging its seriousness and the importance of medical attention. However, stigmatizing beliefs, such as associating recurrent infections with poor hygiene, and embarrassment in discussing VC with healthcare providers were identified as barriers to effective care.

In terms of practices, just over half of the respondents demonstrated “Good Practice,” with 94.4% practicing good hygiene and 82.19% acknowledging the role of diet. However, self-medication and failure to seek medical advice were common, potentially leading to inappropriate treatment and delayed care.

The study also found that knowledge levels were significantly associated with attitudes and practices, as well as the course of study. Students in science-related academic programs were more

likely to exhibit better knowledge and practices, emphasizing the importance of tailored health education. Conversely, SHS 3 students showed unexpected poorer attitudes, which may reflect educational fatigue or other contextual factors.

In conclusion, while knowledge of vaginal candidiasis is high, there is a need for comprehensive sexual and reproductive health education to correct misconceptions and foster supportive attitudes and practices regarding vaginal candidiasis among SHS girls.

6.2 RECOMMENDATIONS

Based on the findings of this study, the following recommendations are proposed:

1. **Strengthen vaginal health education:** School authorities at OLA Senior High and EPC Mawuko Girls Senior High School are encouraged to collaborate with health professionals to design and implement age-appropriate modules on vaginal health. These modules should ensure that students across all academic programs receive equal exposure to reproductive health education, specifically addressing vaginal candidiasis. Additionally, schools should distribute brochures, posters, and infographics highlighting signs and symptoms, risk factors, prevention strategies, and what to expect during clinical check-ups.
2. **Establish Peer Health Education Programs:** School health officers should train selected students to serve as peer health educators. These educators can lead informal, stigma-free discussions on personal hygiene, common infections, and appropriate care-seeking behaviors, thereby normalizing conversations and creating safe spaces for open dialogue.
3. **Investigate Knowledge Disparities:** Further research should be conducted to explore why students in the General Arts program demonstrated significantly lower knowledge of vaginal candidiasis compared to those in the other programs i.e. Business, General Arts

and Home Economics programs. Understanding these differences can guide targeted educational interventions.

4. **Conduct National-Level Research with Representative Sampling:** Future studies should be conducted at the national level, using representative samples of senior high school girls and adolescents across Ghana, to better understand their knowledge, attitudes, and practices regarding vaginal candidiasis and its prevention. This would help guide targeted interventions, inform national policies, and strengthen efforts to improve adolescent reproductive health education and outcomes.

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APPENDICES

APPENDIX I: Informed Consent Form

KNOWLEDGE, ATTITUDES AND PRACTICES TOWARDS VAGINAL CANDIDIASIS AND ITS PREVENTION AMONG GIRLS AT SELECTED SENIOR HIGH SCHOOLS IN THE HO MUNICIPALITY OF THE VOLTA REGION OF GHANA.

I, agree to participate in the research project titled Knowledge, Attitudes and Practices towards Vaginal Candidiasis and its Prevention among girls at selected SHS in the Ho Municipality of the Volta Region of Ghana.

I have received, read and kept a copy of the information letter/ plain language statement. I have had the opportunity to ask questions about this research and I have received satisfactory answers.

I understand the general purposes, risks and methods of this research.

I consent to participate in the research project and the following has been explained to me:

- The research may not be of direct benefits to me
- My participation is completely voluntary
- My right to withdraw from the study at any time without any implications to me
- The risks including any possible inconvenience, discomfort or harm as a consequence of my participation in the research project
- The steps that have been taken to minimize any possible risks
- What I am expected and required to do
- Whom I should contact for any complaints with the research or the conduct of the research
- I am able to request a copy of the research findings and reports

- Security and confidentiality of my personal information

In addition, I consent to:

Audio-visual recording of any part of or all research activities (if applicable)

Publication of results from this study on the condition that my identity will not be revealed.

Emergency contact details

Name:

Relationship to participant:

Phone number(s):

Participant

Name:

Signature:

Date:

APPENDIX II: Survey Questionnaire

KNOWLEDGE, ATTITUDES AND PRACTICES TOWARDS VAGINAL CANDIDIASIS PREVENTION AND TREATMENT AMONG GIRLS AT SELECTED SENIOR HIGH SCHOOLS IN THE HO MUNICIPALITY OF THE VOLTA REGION OF GHANA.

Dear Participant,

This survey aims to assess your knowledge, attitudes, and practices regarding vaginal candidiasis.

Your responses will be kept confidential and used for research purposes only. **Please answer all.**

Section A: Sociodemographic Characteristics

A1. Age: _____ years

A2. Class:

SHS 1 SHS 2 SHS 3

A3. Religion:

Christianity Islam African Traditional Religion

A4. Ethnic group: a. Ewe b. Akan c. Ga-Dangme d. Mole-Dagbani e. Guan

A5. Course: a. General Science b. Business c. General Arts d. Home Economics e. Agriculture f. Visual Arts

A6. Housing:

Day Boarding

A7. Are sexual and reproductive health education provided in your school? Yes No

A8. Have you ever attended a health education session on vaginal candidiasis? Yes No

Section B: Knowledge on Vaginal Candidiasis

B1. Have you ever heard of vaginal candidiasis (yeast infection)?

Yes No

B2. What causes vaginal candidiasis? (Select all that apply)

- Bacteria
- Viruses
- Don't know
- Fungi
- Parasites

B3. Which specific organism is responsible for vaginal candidiasis?

- Candida albicans
- Trichomonas vaginalis
- Don't know
- Escherichia coli
- Chlamydia trachomatis

B4. Which of the following factors can increase the risk of vaginal candidiasis? (Check all that apply)

- Unnecessary Antibiotics use
- Poor hygiene
- Use of contraceptives
- Menstruation
- Don't know
- Pregnancy
- High sugar diet
- Weakened immune system
- Diabetes

B5. Which of the following are symptoms of vaginal candidiasis? (Check all that apply)

- Itching in the vaginal area
- Burning sensation during urination
- Thick, white, odorless discharge
- Redness and swelling of the vulva
- Genital ulcers or open sores
- Swelling in genital area
- Blood in urine
- Don't know

B6. How is vaginal diagnosed?

- Testing of vaginal discharge
- Testing of urine
- Don't know

B7. How can vaginal candidiasis be prevented? (Check all that apply)

- Maintaining hygiene
- Avoiding unnecessary antibiotics
- Avoiding scented hygiene products
- Maintaining a balanced diet
- Don't know

B8. How is vaginal candidiasis typically treated?

- Antifungal medications
- Antibiotics
- Herbal remedies
- It goes away on its own
- I don't know

B9. Which of the following antifungal medications can be used to treat vaginal candidiasis?

(Check all that apply)

- Fluconazole Miconazole
- Clotrimazole I don't know

B10. Can vaginal candidiasis recur after treatment?

- Yes No Don't know

B11. What are possible complications of vaginal candidiasis if untreated? (Check all that apply)

- Infertility Premature birth
- Ectopic pregnancy Cervix cancer Don't know

B12. From where have you received information on vaginal candidiasis? (Check all that apply)

- Friends Family Youth club
- School Television Radio
- Magazine Internet Hospital/Clinic

Section C: Attitudes towards Vaginal Candidiasis

Please indicate your best option for the following statements:

C1. Vaginal candidiasis is a serious health concern.

Agree Disagree Don't know

C2. I believe I am at risk of getting vaginal candidiasis if I do not practice good hygiene.

Agree Disagree Don't know

C3. Girls who get recurrent vaginal infections are careless about their hygiene.

Agree Disagree Don't know

C4. I believe that untreated vaginal candidiasis can lead to complications.

Agree Disagree Don't know

C5. I feel embarrassed to talk about vaginal candidiasis to my healthcare provider.

Agree Disagree Don't know

Section D: Practices towards Vaginal Candidiasis Prevention

D1. What hygiene practices do you follow to prevent vaginal infections?

Practicing good hygiene

wearing breathable underwear

Douching

Avoiding antibiotics

D2. Do you consider your dietary practices as part of preventing infections?

Yes No

D3. Have you ever self-medicated for vaginal infection?

Yes No

D4. Do you seek medical advice when symptoms of vaginal candidiasis occur?

Always Sometimes Not at all

D5. What steps do you take to prevent recurrent vaginal infections?

Regular gynecological check-up

Avoiding risk factors (e.g. tight clothing etc.)

Adhering to prescribed medications

Thank you for your participation in this survey. Your responses will contribute to improving vaginal health education and care for adolescent girls in the Ho Municipality.

APPENDIX III: Assent Form for Participation in Research Study

ASSENT FORM FOR PARTICIPATION IN RESEARCH STUDY

Title of the Study: Knowledge, attitude and practices towards vaginal candidiasis prevention and treatment among girls at selected senior high schools in the Ho municipality of the Volta region of Ghana.

This Study is being done by Princella Makafui Nutsugah from Ensign Global University and be contacted on 0501626484

Purpose of the Study:

This research is being conducted to understand the knowledge, attitude, and practices of senior high school girls regarding Vaginal candidiasis in Ho. The findings from this study may help in developing educational programs and interventions aimed at improving awareness and prevention of vaginal candidiasis.

What You Will Do:

If you agree to participate in this study, you will be asked to complete a questionnaire that includes questions about your knowledge of vaginal candidiasis, your attitudes towards its prevention and treatment, and your preventive practices towards vaginal candidiasis. The questionnaire will take approximately 10-15 minutes to complete.

Voluntary Participation:

Your participation in this study is completely voluntary. You have the right to refuse to participate or to withdraw at any point during the study without any penalty or loss of benefits to which you are otherwise entitled.

Confidentiality:

Your responses will be kept confidential. Data will be reported only as a collective combined total. No one will be able to identify you or your answers, and no personal information will be disclosed.

Risks:

There are no anticipated risks associated with participating in this study beyond those encountered in day-to-day life.

Benefits:

While there are no direct benefits to you for participating in this study, your responses may help us better understand how students in Ho perceive vaginal candidiasis, which could contribute to more effective educational strategies.

Questions: If you have any questions about the research study, please contact Princella Makafui Nutsugah on 0501626484.

Statement of Assent:

I understand that my participation in this study is voluntary. I have read (or have had read to me) this assent form. I have had the opportunity to ask questions and have received satisfactory answers. By signing below, I agree to participate in the research study described above.

Participant’s Name (Printed)

.....

Participant’s Signature

.....

Date

.....

If under 18: As parent/guardian of the participant named above, I give permission for him/her/them to take part in this research study.

Parent/Guardian's Name (Printed)

.....

Parent/Guardian's Signature

.....

Date

.....

Thank you for considering participation in our study. Your input is valuable and greatly appreciated.

APPENDIX IV: Ethical Clearance Form Ensign Global University, Kpong



OUR REF: ENSIGN/IRB/EL/SN-271/01
YOUR REF:

January 8, 2025

INSTITUTIONAL REVIEW BOARD SECRETARIAT

Princella Makafui Nutsugah
Ensign Global College
Kpong.

Dear Princella,

ETHICAL CLEARANCE TO UNDERTAKE POSTGRADUATE RESEARCH

At the General Research Proposals Review Meeting of the *INSTITUTIONAL REVIEW BOARD (IRB)* of Ensign Global College held on Wednesday, January 8, 2025, your research proposal entitled "**Knowledge, Attitudes and Practices towards Vaginal Candidiasis and Its Prevention among Girls at Selected Senior High Schools in the Ho Municipality of the Volta Region of Ghana**" was considered.

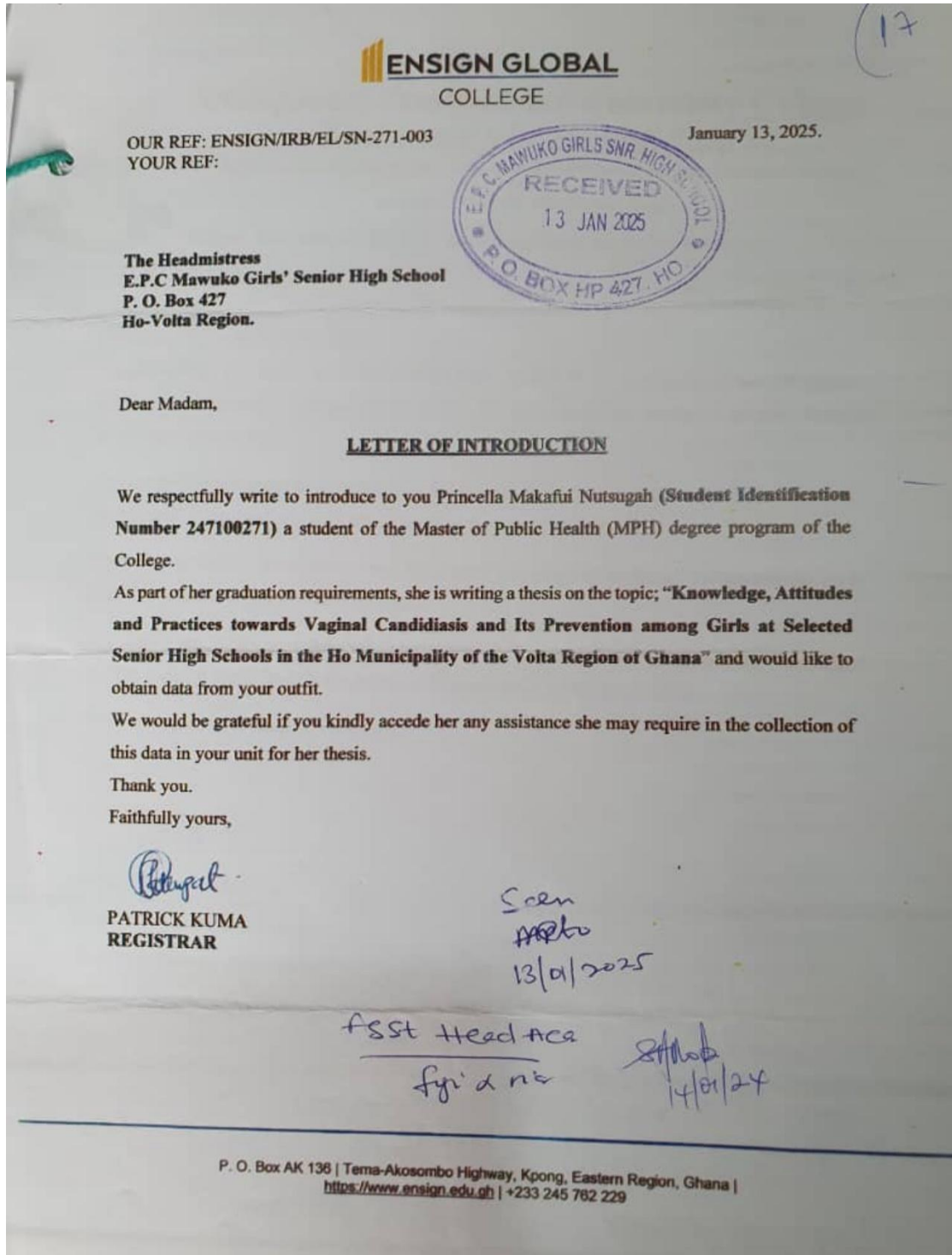
You have been granted Ethical Clearance to collect data for the said research under academic supervision within the IRB's frameworks and guidelines.

We wish you all the best.

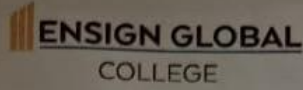
Sincerely,

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

APPENDIX V: Approval Letter from EPC Mawuko Girls SHS



APPENDIX VI: Approval Letter from OLA SHS



OUR REF: ENSIGN/IRB/EL/SN-271-002
YOUR REF:

January 13, 2025.

The Headmistress
OLA Senior High School
Ho.



Dear Madam,

LETTER OF INTRODUCTION

We respectfully write to introduce to you Princesa Makafui Nutsugah (**Student Identification Number 247100271**) a student of the Master of Public Health (MPH) degree program of the College.

As part of her graduation requirements, she is writing a thesis on the topic; **“Knowledge, Attitudes and Practices towards Vaginal Candidiasis and Its Prevention among Girls at Selected Senior High Schools in the Ho Municipality of the Volta Region of Ghana”** and would like to obtain data from your outfit.

We would be grateful if you kindly accede her any assistance she may require in the collection of this data in your unit for her thesis.

Thank you.

Faithfully yours,

PATRICK KUMA
REGISTRAR

Lead:

Asst Acat P. O. Box AK 138 | Tema-Akosombo Highway, Kpong, Eastern Region, Ghana |
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