

**ENSIGN GLOBAL COLLEGE**

**KPONG, EASTERN REGION, GHANA**

**KNOWLEDGE, ATTITUDE AND PERCEPTION OF SENIOR HIGH SCHOOL  
STUDENTS TOWARDS HIV/AIDS INFECTION AT PRAMPARAM IN THE NINGO-  
PRAMPARAM DISTRICT OF THE GREATER ACCRA REGION OF GHANA**

**BY**


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**DECLARATION**

I, Modrina Boakyewaa Botwey hereby declare that this submission is my own work towards the MPH and that to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the College, except where due acknowledgement been made in text.

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## **DEDICATION**

First of all, I thank God Almighty for His grace, knowledge and protection granted to me during my school journey and completing this thesis successfully. I dedicate this thesis to my mother and uncle, who supported me throughout this journey and served as my source of inspiration and motivation. I dedicate this work to my friends, and classmates who gave me words of wisdom and motivation to complete this research as well.

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## LIST OF ACRONYMS

HIV	Human immunodeficiency virus
AIDS	Acquired Immune Deficiency Syndrome
KAP	Knowledge, Attitude and Perception
PLHIV	People Living with HIV
ART	Antiretroviral Therapy
CDC	Centre for Disease Control and Prevention
SHS	Senior High School
WHO	World Health Organization
AOR	Adjusted Odds Ratio
COR	Crude Odds Ratio
CI	Confidence Interval
KP's	Key Populations
ARV	Antiretroviral
NAC	National Aids Commission
DPCU	District Planning and Coordinating Unit
NiPDA	Ningo Prampram District Assembly
GSS	Ghana Statistical Service
UNICEF	United Nations Children's Emergency Fund
NGO	Non-Governmental Organization
PPS	Population Proportionate to Size
GES	Ghana Education Service

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## ABSTRACT

**Background:** The youth in Ghana between the ages of 15 and 24 are the group most at risk for contracting Human Immunodeficiency Virus. Effective Human Immunodeficiency Virus prevention strategies are significantly hampered by adolescents' inaccurate knowledge, negative attitudes, and misconceptions about Human Immunodeficiency Virus transmission and prevention. This study aimed to assess the knowledge, attitudes, and perceptions of SHS students aged 15-24 towards Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) infection, transmission, and prevention in Prampram, Ghana.

**Method:** A descriptive, cross-sectional design was adopted, using a validated self-administered questionnaire, to collect data from a stratified sample of 223 SHS students selected from the Prampram Senior High school in March 2024. The data collected was analysed using Stata version 17. Descriptive and logistic regression were conducted. Statistical significance was set at  $p < 0.05$ .

**Results:** The study found that 48.9% of students had good knowledge regarding Human Immunodeficiency Virus/Acquired Immunodeficiency. Approximately, 43.9% had a positive attitude towards Human Immunodeficiency Virus/Acquired Immunodeficiency transmission and prevention whilst 56.1% exhibited negative attitude. A total of 66.4% had favorable perceptions regarding Human Immunodeficiency Virus/Acquired Immunodeficiency. There were no statistically significant associations found between sociodemographic variables and knowledge levels. Nevertheless, students who identified as Christians were twice as likely to have a positive attitude towards Human Immunodeficiency Virus/Acquired Immunodeficiency transmission and prevention (aOR: 2.49, 95% CI: 1.34 – 4.66,  $p=0.004$ ). Similarly, SHS 3 students were 76% more likely to have favorable perceptions towards Human Immunodeficiency Virus/Acquired Immunodeficiency transmission and prevention compared to SHS 1 students (cOR: 1.76, 95% CI: 1.00 – 3.09,  $p=0.048$ ).

**Conclusion:** The findings revealed that while there was a considerable proportion of students exhibiting good level of knowledge regarding Human Immunodeficiency Virus/Acquired Immunodeficiency, there is still room for improvement. Students had a good attitude towards Human Immunodeficiency Virus/Acquired Immunodeficiency transmission and prevention, indicating the presence of misconceptions or gaps in understanding.

**Keywords:** Knowledge, Attitudes, Perception, Human Immunodeficiency Virus/Acquired Immunodeficiency , Senior high school students.

# CHAPTER ONE

## 1.0 INTRODUCTION

### 1.1 Background

Human immunodeficiency virus (HIV) and Acquired Immunodeficiency Syndrome (HIV/AIDS) continue to represent a significant global public health challenge (World Health Organization [WHO], 2023). In sub-Saharan Africa, the impact of this disease is especially pronounced, with a substantial number of lives lost and ongoing transmission. The presence of HIV/AIDS remains prevalent worldwide, with certain regions observing an increase in new infections despite previous declines (Cheepsattayakorn, 2014). By the end of 2022, an estimated 39.0 million individuals were living with HIV, with the majority located in the WHO African Region (WHO, 2023). While there is no cure for HIV, access to effective prevention and treatment measures has transformed HIV into a manageable chronic health condition, allowing individuals with HIV to lead long and healthy lives (WHO, 2023).

Centers for Disease Control and Prevention (CDC) (2024) state that HIV is a virus that attacks the immune system of the body and that, if treatment is not received, it can progress to AIDS. The spread of AIDS/HIV occurs through the bodily secretions from an infected person, such as vaginal fluids, blood, breast milk, and semen. It does not spread through casual contact such as kissing, hugging, or sharing food. Additionally, vertical transmission from mother to child is possible. Antiretroviral therapy (ART) is utilized in the treatment and prevention of HIV, as untreated HIV can develop into AIDS after a prolonged period.

Diallo *et al.* (2022) reported that by the end of June 2015, about 36.9 million individuals were living with HIV, resulting in an estimated 1.2 million deaths from HIV/AIDS-related illnesses during the same period. A significant portion of these affected individuals was based

in Sub-Saharan Africa, with women constituting more than half of the affected population. In 2022, 1.3 million new HIV infections were recorded globally (UNAIDS, 2023).

Youth within the 15-24 age range, particularly adolescents, are identified as the most vulnerable group to HIV infection, contributing significantly to the global HIV-positive youth population (Rukundo *et al.*, 2016). In sub-Saharan Africa, an estimated 3.8 million youths are living with HIV/AIDS, representing 76% of the world's HIV-positive youth (Rukundo *et al.*, 2016). It's worth noting that young individuals contribute to approximately 41% of all new HIV infections, with an estimated 2500 youths becoming infected daily. Notably, HIV prevalence in Ghana stands at 1.6% with regional disparities, and key populations (KPs) are disproportionately affected by HIV in the country (Ali *et al.*, 2019).

Moreover, the Ghana HIV Fact Sheet of 2020 from the Ghana AIDS Commission indicates varying HIV prevalence rates within the country, with the Tema Region recording rates ranging between 1.7% and 2.9%. The Tema Metropolis exhibits a prevalence rate of 2.9%, whereas Ningo-Prampram records a rate of 2.5%

Young individuals, particularly those aged 15-24, are especially susceptible to HIV infection, attributed to participation in risky behaviors due to inadequate knowledge. For instance, Ghanaians often engage in sexual activities during high school or at the high school age (Dzah *et al.*, 2019). A survey conducted in Ghana's Ashanti area revealed that a majority of youths participate in pre-marital sex (Doku, 2012).

Furthermore, lack of appropriate health knowledge, limited access to reproductive healthcare, economic exploitation, lifestyle changes, transactional sex, and substance abuse are cited as significant hurdles predisposing youth to HIV infection (Dzah *et al.*, 2019).

## 1.2 Problem Statement

With a frequency of more than 1% in the general population, the HIV epidemic in Ghana is still widespread (Dapaah & Addo, 2023). However, the epidemic is typified by pockets of high incidence in particular areas and groups. With a nationwide adult prevalence rate of 1.68% as of 2020, the country has achieved some progress in containing the HIV and AIDS epidemic, although slowly and persistently (Ghana AIDS Commission, 2020). Regional and district discrepancies continue despite national initiatives. Of particular concern is the high prevalence (0.70%) among young persons aged 15-24, who are a proxy for new HIV infections. In 2020, 73.91% of this group was made up of young women (Ghana AIDS Commission, 2020). HIV prevalence among adults is notably high in the Ningo-Prampram District of the Greater Accra Region, at 2.63% (Ghana AIDS Commission, 2019). HIV has been found to be a behavior-related illness, indicating that knowledge and awareness of the virus may be able to affect how it spreads (Gudi, 2018). Adolescents' awareness and comprehension of HIV/AIDS is a significant issue in developing countries such as Ghana. According to Ghana Statistical Service (GSS) and ICF., (2023) 36% of young women and 37% of young men aged 15–24 are knowledgeable about HIV prevention. Given the decreased prevalence, it is necessary to look into people's knowledge, attitudes, and views about HIV/AIDS. Effective HIV prevention measures are significantly hampered by teenagers' negative attitudes, incomplete information, and misconceptions about HIV transmission and prevention. This makes it more difficult to encourage healthy behaviors and lower the rate of new HIV infections in this susceptible population. For adolescents and young people to make responsible choices about their sexual behavior and relationships, they need to be well informed. Teenagers are more vulnerable to AIDS when they don't have access to knowledge about the illness, safe sexual practices, and prevention strategies. It's important to inform and alert those who may be in danger.



Adolescents who do not have access to information on AIDS, its prevention, and harmful sexual practices are more vulnerable to the disease. It was evidently shown in the results from a study in Ghana by Dzah *et al.*, (2019) that Senior high school students In general, students had negative views toward people living with HIV, lacked understanding about HIV/AIDS, and participated in risky behaviors that could have exposed them to HIV transmission. Teens are more likely to be exposed to exciting pornographic images due to increasing internet access, media impact, sexuality misunderstandings, and peer pressure. This can result in risky sexual behaviors and HIV transmission. The exposure is increased, widespread in metropolitan areas and schools than in rural regions, where the prevalence of HIV/AIDS is known to be significant, especially among teenagers (Rukundo *et al.*, 2016). It's vital to note that many adolescents have misconceptions and lack awareness about this disease, indicating the crucial need for comprehensive education to combat this epidemic and save lives (Mahfoozi *et al.*, 2020). HIV care and preventive planning, as well as assessing the efficacy of preventative interventions, depend critically on an assessment of KAPs in any group, but particularly in youth (Nubed & Akoachere, 2016). Somewhat surprisingly, early research revealed a lack of data on HIV/AIDS awareness levels among young people, especially high school students in Sub-Saharan Africa. Similarly, there is a shortage of empirical studies on HIV/AIDS among Senior High School (SHS) students in Ghana, particularly in the Ningo-Prampram area, given the HIV prevalence rate of adults (15+) living with HIV reported in the Ningo-Prampram District, the exposure of unsafe sexual activities, and the urban nature of the district. This phenomenon thus highlights the importance of recognizing the knowledge, beliefs, and even common misconceptions among young people in the Prampram district. It is in this light that this research was conducted to examine knowledge, attitudes, and perceptions of Senior High School (SHS) students at Prampram towards HIV/AIDS transmission and prevention.

### **1.3 Rationale of the Study**

Ghana, while making considerable progress in reducing HIV prevalence, still faces substantial hurdles in achieving full control over the epidemic. Senior high school students represent a crucial demographic for intervention due to their transitional phase from adolescence to adulthood, making them highly vulnerable to new HIV infections. Understanding their knowledge, attitudes, and perceptions towards HIV/AIDS is essential for designing effective educational programs and policies. The proposed study is directly aligned with the United Nations Sustainable Development Goal 3 (SDG 3), which aims to ensure healthy lives and promote well-being for all at all ages. Specifically, SDG Target 3.3 seeks to end the AIDS epidemic by 2030 (WHO, 2023). By assessing the knowledge, attitudes, and perceptions of senior high school students towards HIV/AIDS, this study contributes to the broader objective of reducing new HIV infections through education and awareness, thus advancing progress towards achieving SDG 3. Also, understanding the current level of knowledge among students about HIV/AIDS can help identify gaps and misconceptions that need to be addressed. Furthermore, assessing attitudes and perceptions towards HIV/AIDS provides insights into the behavioral aspects that influence students' decisions regarding their sexual health. Additionally, the findings of this study can inform policymakers at the local and national levels. Data-driven insights into the specific needs and challenges faced by students in the Ningo-Prampram District will support the formulation of targeted policies and programs that address these issues comprehensively. Ultimately, this will help in reducing new HIV infections and improving the overall health and well-being of the youth in Prampram.

### **1.4 Conceptual Framework**

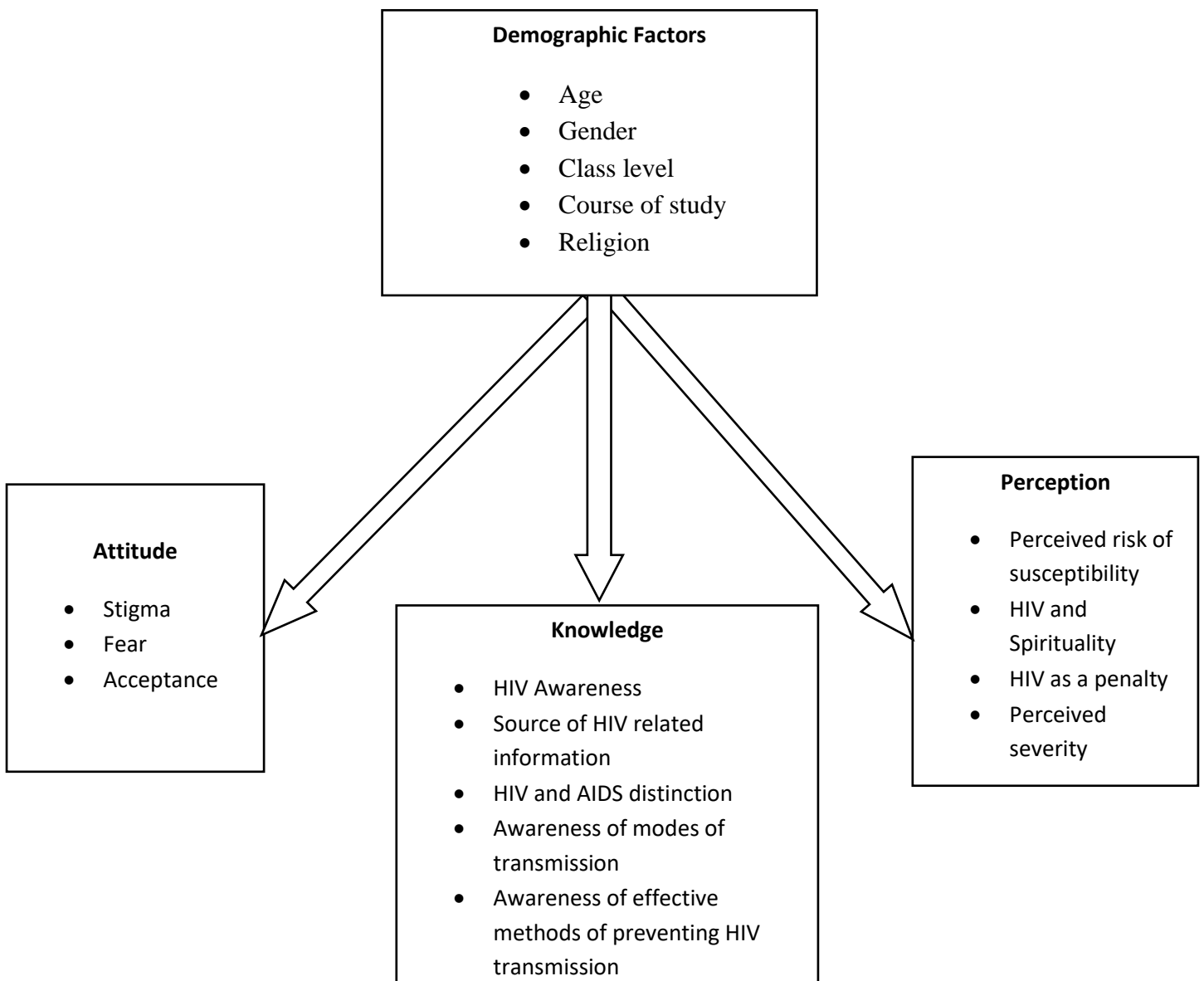
The KAP theory which was first introduced by Ajzen in the 1980s, also known as the Knowledge-Attitude-Perception theory was used as the conceptual basis for this study. It

suggests that an individual's knowledge, attitude, and perception are affected by the demographic factors. In the context of this study, the KAP theory helps explain how SHS students' knowledge, attitudes, and perception about HIV/AIDS are affected by Demographic factors.

In developing the conceptual framework for this study, the main key constructs of the KAP theory were identified and used to explore and understand the knowledge, attitude, and perception of senior high school students towards HIV/AIDS infection. These constructs include;

1. Demographic Factors: Age, gender, socioeconomic status, education level, and cultural background can influence an adolescent's knowledge, attitude, and perception towards HIV transmission and prevention.
2. Knowledge: This component focuses on assessing the level of accurate information adolescents have about HIV transmission, prevention methods, and misconceptions. It includes factors such as awareness of mechanism of transfer, knowledge of condom use, understanding HIV testing and therapy, and awareness of the importance of regular testing.
3. Attitude: This component explores the attitudes and beliefs that adolescents hold towards HIV, people living with HIV, and HIV prevention methods. It includes factors such as stigma, fear, acceptance, support, and perceived efficacy of prevention methods.
4. Perception: This component examines how adolescents perceive their susceptibility to HIV infection and the severity of the disease. It includes factors such as perceived risk, perceived benefits of prevention methods, self-efficacy in adopting preventive behaviors, and perceived social norms.

Overall, the components of knowledge, attitude, and perception are intertwined and mutually reinforcing in shaping students' understanding and responses to HIV/AIDS infection. Improving knowledge, fostering positive attitudes, and promoting accurate perceptions are essential for effective HIV/AIDS prevention and control efforts among senior high school students. The diagram below (Figure 1.1) is a framework that explains how the elements listed above interact to shaping students' understanding and responses to HIV/AIDS infection.



**Figure 1.1:** A modified Conceptual Framework of Study based on KAP model.

Source: (Wan, 2014; Rav-Marathe *et al.*, 2016).

## **1.5 Research Questions**

1. What is the level of knowledge on HIV/AIDS transmission and prevention among SHS students regarding in Prampram?
2. What are the attitudes of SHS students in Prampram towards HIV/AIDS transmission and prevention?
3. What are the perceptions of SHS students towards HIV/AIDS transmission and prevention in Prampram?

## **1.6 Study Objectives**

### **1.6.1 General Objective**

This study aimed at assessing the knowledge, attitude and perception of Senior High School (SHS) students at Prampram towards HIV/AIDS transmission and prevention.

### **1.6.2 Specific Objectives**

This study specifically sought;

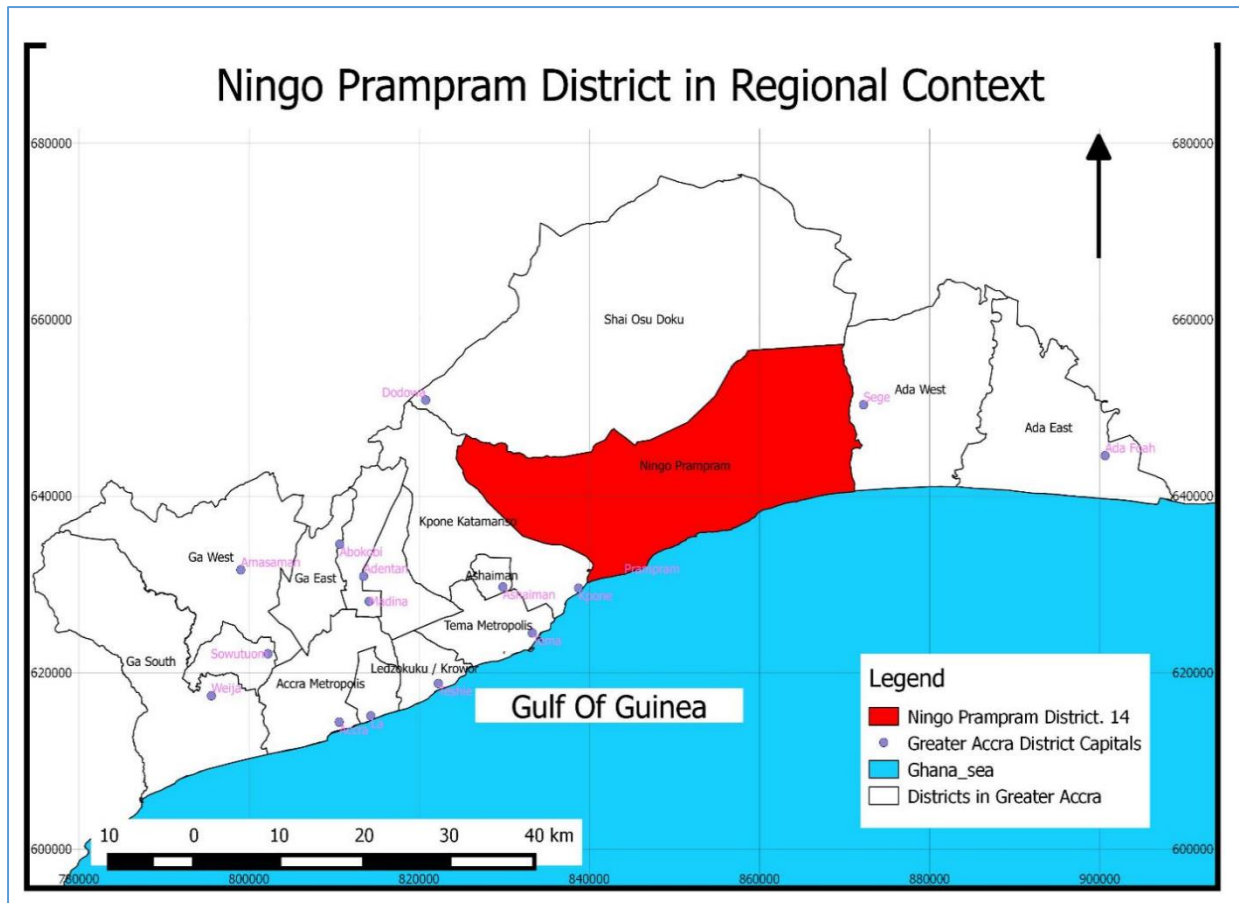
1. To assess the level of knowledge among SHS students in Prampram regarding HIV/AIDS transmission and prevention.
2. To explore the attitudes of SHS students towards HIV/AIDS transmission and prevention.
3. To examine the perceptions of SHS students towards HIV/AIDS transmission and prevention.
4. To assess the factors influencing knowledge, attitude, and perceptions.

## **1.7 Profile of study area**

The study was conducted in Prampram Senior High School which is in Miostso within Prampram in the Ningo Prampram District. Prampram Senior High School is a day/boarding

government assisted co-educational school founded in 2005. As of January 2024, the school had a total number of 1227 students and a total staff of 70 consisting of both teaching and non-teaching staff. There are five courses offered in the school currently, General Arts, General Science, Visual Arts, Home Economics and Business.

Prampram (Gbugbla), the capital of Ningo-Prampram District, which is a seaside town in Ghana's Greater Accra Region. The settlement is situated in the district of Ningo Prampram. As to the 2010 Population and Housing Census, Ningo-Prampram District has a population of 70,923, which accounts for 1.8 percent of the total population in the region. 52.7 percent of the population is female, and 47.3 percent is male. The percentage of people who reside in rural areas is about 558.3%. The district's ratio of men to women is 89.6. The district's population is young (under 15 years old) (38.2%), illustrating a wide base population pyramid that tapers down with a tiny number of elderly people (six percent) who are 60 years of age and beyond. The district's overall age dependency ratio is 75.3, whereas the rural communities have a higher dependency ratio (75.7) than the metropolitan areas' dependency ratio (74.7). 28.8% of people aged 11 and over are illiterate, whereas 71.2% of people are literate. Male literacy rates are higher (78.7%) than female literacy rates (64.7%). Four out of ten respondents (47.5%) said they could write and speak both Ghanaian and English. Of the 64,527 people in the district who are three years of age or older, 27.8% have never attended school, 36.9% are presently enrolled, and 35.3% have done so in the past (Ghana Population Census, 2010).



*Figure 1.2: A map of Ningo Prampram District.*

**Source:** DPCU, NiPDA 2020.

### **1.8 Scope of study**

Only students of the Prampram senior high school participated in the study, this is because Prampram Senior High School is the only SHS in Prampram. The study investigated the knowledge, attitude and perception of SHS students towards HIV, and the factors that influenced their knowledge, attitude and perception levels towards HIV/AIDS transmission and prevention in Prampram, Ghana. The study also examined the sources of HIV information for the SHS students.

## **1.9 Organization of Report**

This thesis is made up of six chapters. Chapter one involves the context of the study, the problem statement, the aims and the scope of the study. Chapter two explored relevant research on the knowledge, attitude, and perception of SHS students on HIV/AIDS. The methods, materials, instrument for data collection, data handling and ethical consideration is found in the third chapter. Chapter four contains the analyzed data from the data collected. Chapter five and six includes; discussion and conclusion respectively. The discussion expands on the analyzed data in chapter four of the study. The sixth chapter concludes the study and gives recommendations.



## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviewed literature related to the topic under study as documented by authorities, educationists, and researchers. This section covers research already carried out on HIV/AIDS and its prevalence. Assessed knowledge, attitude and perception of adolescents and research on factors that influence these knowledge, attitude and perception of HIV/AIDS.

#### **2.2 Overview of Human Immunodeficiency Virus/Acquired immunodeficiency Disease**

According to WHO (2023), HIV is a virus that targets the immune system of the body. The Centre for Disease Control and Prevention (CDC) states that HIV can result in acquired immunodeficiency syndrome (AIDS), a condition in which the immune system gradually fails and becomes more vulnerable to infections and malignancies. The virus primarily targets CD4+ T cells, which are crucial for the proper functioning of the immune system. Once inside the body, HIV replicates and spreads, leading to a gradual decline in the number of these cells, ultimately weakening the immune system.

Exchange of bodily fluids, including as blood, breast milk, semen, and vaginal secretions, with HIV-positive individuals can result in the transmission of the virus. HIV can also transfer from mother to unborn child during pregnancy and childbirth. HIV can be diagnosed with fast diagnostic tests that provide results the same day. HIV infection is incurable. It is treated with antiretroviral drugs, which stop the virus from growing within the body. The HIV virus is avoidable. Testing for HIV and other STDs, as well as using a male or female condom during intercourse, can all lower the chance of contracting HIV (WHO, 2023).

### **2.2.1 Overview of HIV**

A major public health concern in the world today is HIV/AIDS, the virus that causes AIDS. That being said the world is committed to stopping new HIV infections and ensuring that everyone who has HIV has access to treatment (HIV.gov, 2023). The proportion of HIV-positive individuals in the globe who are adolescents and young people is rising. 480,000 young persons between the ages of 10 and 24 acquired a new HIV infection in 2022 alone; of these, 140,000 were teenagers (UNICEF, 2024). Globally, around one thousand (1,100) young people (ages 15 to 24) have HIV infections every day. Nearly 60% (59%) of new HIV infections in 2021 occurred in Sub-Saharan Africa, which continues to be the HIV epidemic's hub (CDC, 2023). In Ghana, the youth (15 – 24 years) living with HIV as at 2019 was 5,613 (28%) of the total number of People Living with HIV-Ghana (National Aids Commission, 2019).

### **2.3 Knowledge on HIV**

Only one in three young people demonstrate accurate Knowledge of HIV prevention worldwide (UNAIDS, 2021). According to a review of population-based surveys carried out since 2000, there has been a consistent increase in young people's awareness of HIV throughout western and central Africa as well as in eastern and southern Africa (UNAIDS,2020). But young women in eastern and southern Africa have become more knowledgeable about HIV overall, albeit more slowly. According to recent polls, a lot of work still needs to be done. Studies conducted between 2011 and 2018 found that very few young women (aged 15 to 24) in eastern and southern Africa and 28% in western and central Africa had a comprehensive understanding of HIV, compared to 46% and 31% of young men in the same age group, respectively (UNAIDS,2020). As part of the 2001 Declaration of Commitment on HIV/AIDS, nations pledged to guarantee that, by 2005, 90%, and by 2010, 95% of youth between the ages

of 15 and 24 have access to resources, education, and life skills that will help them lower their risk of contracting HIV (UNAIDS, 2020).

A study conducted in Nigeria, Akwa Ibom state shows that out of a total of 1818 young adolescents who were interviewed, 9.4% highlighted very low comprehensive HIV knowledge (Badru *et al.*, 2020). Another research in Gabon, which examined HIV-related KAPs of high school and college students, found that pupils lack knowledge regarding HIV/AIDS transmission and prevention. Although only 15% of the respondents were aware of the dangerous HIV transmission behaviors, half of them used condoms. The respondents knew that HIV can spread through sexual activity (55.7%), mother-to-child transmission (48.3%), and sharing needles or syringes (51.8%) (Christane *et al.*, 2014).

A survey conducted in Ethiopia on HIV knowledge and associated factors among young Ethiopians showed that 20.92 percent of Ethiopian adolescents have little knowledge on HIV, whereas 48.76 percent and 30.31 percent of them had moderate and comprehensive knowledge on HIV, respectively (Dadi *et al.*, 2020).

A study was conducted in Rwanda to assess the Knowledge of young people on HIV/AIDS, and it shows that majority individually answered correctly all six knowledge questions (range 77.8–94.9%). However, the prevalence of comprehensive knowledge was 53.6% with a 95% confidence interval of 52.2-55.6% (Kawuki *et al.*, 2023).

According to a similar in a study conducted in the Fako Division, South West Region, Cameroon, participants reported having heard about HIV/AIDS, but the sources of information varied. Of those surveyed, 308 (66.4%) learned about the disease through sex education at school, 76 (16.4%) from the radio, 40 (8.6%) from friends, and 28 (6.0%) from family members. Less frequently used sources of information included the internet,

newspapers, and television (Nubed *et al.*, 2016). Findings from a research conducted in Ghana to analyze the level of awareness about HIV and AIDS among Ghanaian adults from 1998 to 2014 revealed that there was a lower level of awareness among women compared to men (29.24% vs. 37.7%), based on the combined data. The Greater Accra region had the highest percentage of HIV and AIDS comprehensive knowledge (44.18%), while the Northern region had the lowest (17.87%) among the ten administrative regions in Ghana. The study also found that living in rural areas was associated with a reduced likelihood of comprehensive knowledge of HIV and AIDS, with an odds ratio of 0.72 (95% CI; 0.65, 0.79,  $p < 0.001$ ), even after adjusting for other variables. Additionally, there was a decline in comprehensive knowledge of HIV and AIDS from 37.35% in 2008 to 32.5% in 2014. The lowest level of comprehensive knowledge (10.75%) during the four survey years was observed in 1998 (Guure *et al.*, 2020).

#### **2.4 Attitude on HIV**

A person's feelings, convictions, and actions regarding a specific subject, person, object, or event are referred to as their attitudes. An alternative definition of attitude is the manner in which we assess someone or something (Kendra Cherry, 2024). These days, there are many people who have negative attitudes toward HIV-positive people and AIDS patients, which has made it extremely difficult to control the pandemic as a whole. Some key findings in a study conducted in Tanzania to investigate their attitudes towards HIV are;

In general, women are marginally less likely than males to express acceptance toward those living with HIV/AIDS. The ability of a woman to demand safer sex from her husband, either by refusing to have sex or by asking to use condoms if she knows he has an STD, is widely acknowledged. (3) There is a general consensus that teaching kids about using condoms to prevent HIV/AIDS is a good idea. The overall stigmatizing attitude among survey

respondents was shown by an analysis of data from a study that looked at medical students' knowledge of HIV and their attitudes toward people living with HIV/AIDS in Jordan. It also showed that almost two-thirds of the study participants had positive attitudes toward people living with HIV. (Sallam *et al.*, 2022).

Another study in South Africa found out through a survey to investigate the knowledge attitudes, and behaviors toward individuals living with HIV and AIDS among private higher education students in Johannesburg revealed that while the majority of participants had positive attitudes toward HIV-positive people, 38 participants (7%) were unwilling to share housing or be associated with individuals living with HIV.

The most significant attitudes toward people living with HIV, ranked in order of relative importance based on the relative importance index score, were as follows: (1) approximately 83.4% of students said that their relationship with a family member would remain positive even if they had HIV; (2) 20% of students said that living with HIV-positive people would be extremely difficult for them; and (3) 7.6% of students felt that people who get HIV are promiscuous. Six percent of students said that HIV-negative people shouldn't be permitted to socialize with HIV-positive people, while forty-one students (7.6%) stated they did not want to be linked with those who are HIV positive. Regarding HIV and AIDS treatment, students expressed good sentiments. Approximately 63.1% or two thirds of the pupils

Approximately Of the students, 83.4% said that they would still have a positive relationship with a family member who was HIV positive. 20% of students said that living with HIV-positive people would be very difficult for them. And 7.6% of students felt that people who get HIV are promiscuous. These attitudes toward people living with HIV were ranked in order of relative importance based on the relative importance index score. Additionally, forty-one students (7.6%) expressed that they did not want to be linked with persons who are HIV

positive, and 6.4% of students believed that people who are HIV negative should not be permitted to socialize with those who are HIV positive. Students' opinions of HIV and AIDS treatment were mostly positive. About sixty-one percent (63.1%) of the pupils (Khamisa *et al.*, 2020).

A study done in Sekondi Takoradi Metropolis-Ghana revealed that the majority of respondents (233; 79.2 percent) stated a desire to care for HIV-positive relatives. However, 169 (57.5 percent) declined to dine in the same dish as the PLHIV. However, the majority of respondents (219; 74.5 percent) were eager to keep in touch with their HIV-positive acquaintances. On the contrary, the majority of them (201; 68.4 percent) answered that they would not do business with merchants who had HIV/AIDS. The vast majority of respondents (228; 77.6 percent) and teachers (224; 76.2%) agreed that HIV-positive students and instructors should be allowed to continue their studies and teaching. The majority (223; 75.9 percent) responded that they have never refused to care for HIV/AIDS patients (Dzah *et al.*, 2019).

A research conducted in the Sekondi-Takoradi Metropolis of Ghana uncovered that a significant proportion of participants (233; 79.2 percent) expressed a willingness to provide care for HIV-positive family members. Nevertheless, 169 individuals (57.5 percent) indicated reluctance to share a meal with a person living with HIV. Conversely, the majority of respondents (219; 74.5 percent) expressed an interest in maintaining relationships with acquaintances who are HIV-positive. Interestingly, a significant percentage (201; 68.4 percent) stated that they would not engage in commercial transactions with individuals affected by HIV/AIDS. Moreover, a substantial proportion of respondents (228; 77.6 percent) and educators (224; 76.2 percent) advocated for the continued participation of HIV-positive students and teachers in academic activities. Furthermore, the majority (223; 75.9 percent)

declared that they had never refused to provide care for patients with HIV/AIDS (Dzah *et al.*, 2019).

## **2.5 Perception on HIV**

Most KAP studies involving young people in many African countries (Nigeria, Botswana, Gabon, and others) and other regions revealed misconceptions. In research carried out in India, participants had false beliefs, such as the belief that HIV can be spread through mosquito bites and toilet seats (Kumar *et al.*, 2012). The acquisition of knowledge regarding HIV does not always result in ethical conduct and/or safe practices.

According to a Botswana study, half of the students may believe they are at risk for HIV, and the same participants said that every student who engages in sexual activity should know his status by routine testing (Stephens *et al.*, 2012). It was seen in a study conducted in South Africa that because they were young, did not exhibit outward symptoms of HIV, were not sexually active, and did not have HIV-positive parents, the majority of young people believed that their chance of contracting the virus was minimal. Nonetheless, young people recognized high-risk behaviors as those that made them more susceptible to HIV, including unprotected intercourse, having several sexual partners, binge drinking excessively, experiencing sexual abuse, being in car accidents, and acting violently (Muravha *et al.*, 2021).

A study conducted to investigate the Perceived risk of HIV Infection and Related Factors among Secondary School Students in Wakiso District, Uganda, describes how nearly 50% of the students surveyed believed they were at risk of becoming HIV positive. The results are marginally lower than those of previous research by Kibombo and colleagues, who found that among teenagers between the ages of 15 and 19, 72% of females and 55% of boys believed they were at risk of acquiring HIV (Osingada *et al.*, 2016).

A study conducted in Nigeria on HIV perception concluded that the results of the study indicate that the beliefs of HIV/AIDS among Nigerian adolescent students and their engagement in sexual activities are negatively correlated. The participants' sexual behavior is mostly unaffected by HIV/AIDS since they do not believe it to be a fatal illness. The study also demonstrates that gender will have a major impact on how Nigerian teenage students perceive HIV/AIDS. The study also showed that the age, religion, and sources of HIV/AIDS information of Nigerian adolescent pupils did not substantially affect their understanding of the illness. Additionally, a weak but favorable correlation was discovered between the attitudes of Nigerian teenage students toward preventative strategies and their perceptions of HIV/AIDS (Morayo, 2012).

In a different Ghanaian study on the relationship between risky sexual behavior and HIV risk perception among teenagers enrolled in school in a municipality, it was found that 27.7% of the participants were involved in sexual activity. Of those who were sexually active, 51.8% had their last sex before the age of 14, 65.4% had not used a condom, and 37.2% had had more than one partner. Merely 20.5% of the teenagers thought they were susceptible to contracting HIV. There was an independent relationship between sexual activity and perception of HIV risk (OR 1.54; 95% CI: 1.03–2.27). Teenagers who had several sexual partners were more likely to believe they were at risk of HIV infection than their peers who only had one relationship (AOR 2.39; 95% CI: 1.10 – 5.20). Not using a condom for sexual intercourse and early sexual debut were not associated with HIV risk perception. This clearly demonstrates that despite engaging in risky sexual conduct, the adolescents did not generally regard themselves to be at risk of HIV infection, with the exception of those who had several sexual partners (Afriyie and Essilfie, 2019).



## **2.6 Factors influencing Knowledge, Attitude and Perception towards HIV/AIDS Infection**

### **2.6.1 Knowledge**

A research investigation by Darteh (2020), using the females' file from the 2014 Ghana Demographic and Health Survey dataset, researchers looked at the contextual and individual factors that influence young women in Ghana's complete knowledge of HIV and AIDS. They discovered that young women with secondary and higher education levels (AOR = 2.85,  $p < 0.01$ ) held greater chances of having thorough knowledge of HIV and AIDS.

The evaluation findings from a study by Virtucio, (2020) a substantial difference was found when students of senior high school were grouped based on their sex in order to assess the impact of age, sex, and strand on their awareness of HIV/AIDS ( $p$ -value=0.048) It revealed that whereas female students were not informed (mean=21.08), male students were (mean=22.56). Similarly, grouping by strand results in a significant difference ( $p$ -value=.000). The results indicated that while students in the ABM strand (mean=19.81) were not informed, those in the STEM (mean=23.11) and HUMSS (mean=22.62) strands were. When categorized based on age, there isn't a significant difference ( $p$ -value=.847).

Another study by Khargekar *et al.*, (2024) In order to evaluate the perception, knowledge, and attitudes of college students in the Mumbai region regarding HIV/AIDS, as well as their relationship to sociodemographic factors, it was found that neither knowledge nor attitude were significantly impacted by age, gender, religion, or level of education.

Another study by Thar *et al.*, (2024) found significant differences in knowledge and attitudes based on age, region, residence type, education, wealth index, and media exposure. The study used the 2015–2016 Myanmar Demographic Health Survey to assess the impact of socioeconomic factors on women's knowledge and attitudes toward HIV/AIDS. Notably, the two factors that most strongly influenced knowledge and attitudes were money and

education. Similarly, Fenny *et al.*, (2017) who used information from three rounds of the Ghana Demographic & Health Surveys in 2003, 2008, and 2014 to look at patterns in the distribution of comprehensive knowledge about HIV and AIDS and identify the variables linked to comprehensive awareness of the disease in adult men and women discovered that education was the best indicator of comprehensive knowledge, followed by gender, marital status, locality, occupation, and wealth status.

Futhuremore, Ruan *et al.* (2021) conducted a nationwide cross-sectional survey to evaluate the knowledge of HIV, attitudes towards homosexuality, and sexual behavior among Chinese individuals aged 15-24. The results indicated that there were several major factors linked to higher scores in HIV knowledge among students, including: having received HIV instruction in schools and being older

### **2.6.2 Attitude**

Meilani *et al.* (2020) conducted a descriptive cross-sectional study with 370 high school students in Yogyakarta, Indonesia. The study found that adolescents' attitudes towards HIV/AIDS prevention were significantly influenced by their degree of knowledge ( $p = 0.028$ ) and self-efficacy ( $p = 0.034$ ). According to a multivariate analysis of the same survey, respondents who felt positively about their ability to avoid HIV/AIDS were 1.6 times more likely to feel positively about it than those who felt negatively about it.

### **2.6.3 Perception**

A crucial component of the majority of health behavior models used to create health promotion efforts, especially those that focus on risky behaviors associated to HIV, is perception of health risk (Adeniji & Ogubuike, 2024). Youths' perceptions of HIV risk varied across rural and urban

local governments in Rivers State, according to a comparative descriptive cross-sectional study that compared the sexual risk factors for HIV. Compared to their urban counterparts, youths in rural areas were more prone to underestimate their own risk of HIV infection (Adeniji & Ogubuike, 2024).

## **CHAPTER THREE**

### **3.0 METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the methods, research techniques and procedures employed for the study. All research methods and designs used by this study are explained and demonstrated in the light of the principal and specific objectives.

#### **3.2 Research Methods and Design**

The study design was cross-sectional and descriptive, utilizing quantitative data collection techniques. The purpose of this study's design was to gather data that would represent a population's snapshot at a specific point in time, enabling generalizations about phenomena to be made about a large population.

#### **3.3 Study Setting**

This study was carried out in Prampram, the capital of Ningo-Prampram District in the Greater Accra region. The district has 107 public schools, made up of 32 JHS, 42 primary, 2 SHS and 31 preschools. Prampram Senior High School and Ningo Senior High School are the only public second cycle institutions in the district (Ghana Statistical Service, 2014). The Prampram Senior High School was selected as the primary study site for this investigation, this is because it is the only SHS located in Prampram (the capital of the district). The school is located at Miotso within the Prampram Traditional Area. The school was established in the year 2005. It has a day and boarding housing status and accommodates both male and female genders. The school offers all of the required academic courses for senior high school students in Ghana, including business, general science, home economics, agriculture science, general arts, and visual arts. (*Prampram Senior High / SchoolsInGh.Com*, n.d.).

### **3.4 Study population**

Male and female students from Prampram Senior High School in Prampram, Ghana, made up the study population. Since most of the participants (students) are between the ages of 15 and 24, which is also the age group most vulnerable to HIV/AIDS infection, this demographic was selected.

### **3.5 Inclusion and Exclusion Criteria**

#### **3.5.1 Inclusion criteria**

This study included students aged between 15 and 24 years old, students who assent to and showed willingness to participate in the study, and students who were present during the data collection period.

#### **3.5.2 Exclusion Criteria**

Students who were not between the ages of 15 and 24 were not included in this study, nor were those who did not give their consent or demonstrate their readiness to participate. Additionally, absences from school occurred throughout the time when the data was being collected.

### **3.6 Sampling and Sample size determination**

This section includes the methods used to determine the sample size, the sampling strategy, data collection methods, and study-related resources. 75.4% of Ghanaian teenagers (15–24 years old) are estimated to be aware about HIV (UNICEF, 2013). Using the Cochran sample

size formula for cross-sectional research:  $n = \frac{Z^2 Pq}{d^2}$ . Where,

**n** is the minimum sample size required for the number of students,

**p** is the estimated share of HIV knowledge among Ghanaian adolescents (15–24 years) as 75.4% (UNICEF, 2013),

$Z = 1.96$  is the standard normal variate, since

$q = 1 - p$ ,

$d = 5\%$  is the acceptable margin of error.

$$\text{Therefore, } n = \frac{(1.96)^2 \times (0.754) \times (1 - 0.754)}{(0.05)^2} = 285.02$$

Adding a 10 % non-response rate ( $285 \times 0.1 = 28.5 \approx 29$ ) gives  $285 + 29 = 314$ . Therefore, a total of 314 students were recruited to this study.

The study used a simple random sampling, with a certain percentage of pupils selected from each form (one, two, and three). Considering the courses that are being given. Using the population proportional to size (314) to get the sample size for each grade (Table 3.1). There are 452, 375, and 462 pupils overall in each of the three grades—SHS 1, SHS 2, and SHS 3. Using the population sample size (314), determine the sample size for each grade.

Sample size per grade=

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

**Table 0.1: Sample size based on student's grade population proportionate to size (PPS).**

<b>Grades of Students</b>	<b>Estimated population = 1,287</b>	<b>Sample size (n) = 314</b>
SHS 1	450	110
SHS 2	375	91
SHS 3	462	113

There are five courses offered: Science, Business, General Arts, Home Economics and Visual Arts. The fraction of the population in the school register was used to calculate the number of respondents in each grade according to the courses offered (sampling frame). That is, the number of pupils in each grade level based on the courses offered multiplied by the research sample size divided by the overall number of students in the school. The quantity of responses for each grade level on the form and course will then be decided using simple random sampling, which was done by numbering 1 and 3 on folded pieces of paper and asking participants to choose, with students who received number 3 being chosen. This was calculated to get the overall sample size of (Tables 3.2 and 3.3 below)

**Table 0.2: Total number of students in each grade level with respect to the courses offered.**

<b>COURSES OFFERED</b>	<b>SHS 1</b>	<b>SHS2</b>	<b>SHS 3</b>	<b>TOTAL</b>
Science	47	35	70	<b>152</b>
Business	95	15	56	<b>166</b>
General Arts	198	190	206	<b>594</b>
Home Economics	95	110	118	<b>323</b>
Visual Arts	15	25	12	<b>52</b>
<b>TOTAL</b>	<b>450</b>	<b>375</b>	<b>462</b>	<b>1,287</b>

**Table 0.3: Estimated sampling according to the courses offered with respect to the grades.**

<b>COURSES OFFERED</b>	<b>SHS 1</b>	<b>SHS 2</b>	<b>SHS 3</b>
Science	12	8	17
Business	23	4	14
General Arts	48	46	50
Home Economics	23	27	29
Visual. Arts	4	6	3
<b>SAMPLE SIZE</b>	<b>110</b>	<b>91</b>	<b>113</b>

### **3.7 Study variables**

#### **3.7.1 Dependent Variables**

The dependent variables for this study was the knowledge, attitude, and perception of senior high school students towards HIV/AIDS infection.

#### **3.7.2 Independent variables**

The independent variables that were used in this study were socio-demographic characteristic of the students such as; age, gender, educational level and religion.

### **3.8 Data collection techniques and tools**

Students' responses on a standardized, closed-ended, pre-tested questionnaire were gathered for this study. The data was collected over the span of a month (February and March 2024) by the principal investigator during regular school hours. Before giving the questionnaire, the students were informed about the nature of the study. They were told that their replies would



be anonymous and confidential. Each questionnaire took around 15-20 minutes to interview each student. There were four sections to the English-language questionnaire. The participants' demographic information was covered in the first section of the questionnaire. The second part of the questionnaire relates to HIV and AIDS knowledge assessment. The third part relates to attitudes. The fourth and last section of the questionnaire relates to the perception of the participants on HIV.

### **3.9 Data Handling**

Data collected from the field were organized, stored, preserved, and only shared and used for the research project. Data was kept confidential and private. Soft copies were also safely preserved on a USB flash drive that was password-protected, while hard copies were kept in a locked filing cabinet. Only the principal investigator had access to the collected data. All information given during the study was treated confidentially unless authorized by law and regulation. No participant information was recognizable in presentations or publications, and results were given in a manner that respects their right to confidentiality. Confidentiality of data was assured at all times.

### **3.10 Pre-testing**

Pretests of the study's questionnaires were conducted at Ningo Senior High School, which is situated in the Greater Accra region's Ningo Prampram District. This population was considered because they share same characteristics with the school going adolescent in prampram. The pre-test made it possible to test the participants' level of understanding and help to further refine questionnaires. A few questions were clarified and changed in light of the replies obtained in order to guarantee the accuracy of the answers. It helped to test participants' level of understanding of the questionnaire. Results from the pretesting were not included in the main study.

### **3.11 Data Analysis**

The questionnaire was collected and crosschecked for completeness and consistency then coded and entered into Kobo collect Software. Data was extracted into an excel sheet then transferred to STATA Windows 17.0 for additional analysis and cleaning. The data was presented using descriptive statistics including frequencies, percentages, tables, and charts. The calculation of the mean age and its standard deviation to determine how close the individual data values are from the mean value. The next analyses involved the derivation of the composite score for each dependent variables. This was measured by adding all responses and determining the mean score between responses given per the knowledge assessment, attitude assessment and perception assessment. All composite score for each dependent variable was further categorised into 2 (Poor level which was scored as “< [mean score]”; and Good Levels which was scored as “≥ [mean score]”). Relationships between sociodemographic characteristics and respondents' Knowledge, Attitudes, and Perceptions (KAPs) of HIV/AIDS 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, socio-demographic factors with p-values  $\leq 0.05$  in the chi-square analysis were fitted. This allowed us to examine the Adjusted Odds Ratio (AOR) with a 95% confidence interval (CI) and determine the degree of relationship.

### **3.12 Ethical Consideration**

Ethics is the principles and guidelines that guides research, ensuring that the research is conducted responsibly and in a way that protects the rights and welfare of participants, ensuring the integrity of research data, and maintaining public trust in research. Before the study begins, ethical clearance was obtained from the Ethical Review Committee of Ensign Global College.

Additionally, official authorization was requested from the Ghana Education Service, Prampram. Furthermore, local authorization and consent for the study was sought from the headmasters of the several schools where the study was performed. Throughout the research process, ethical principles were observed to ensure that the outcomes of the study meets set standards. An informed consent form outlining the process in detail was read to the participant before each interview. Prior to the questionnaires being distributed, each respondent was given the choice to choose not to answer any of the questions. In addition, the participants were informed that they might discontinue the study at any moment.

### **3.13 Limitation of Study**

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

1. All participants were form (grade level) 1 and 3 students excluding form 2 students due to their unavailability during 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 on this particular cohort.

## **CHAPTER FOUR**

### **4.0 RESULTS**

#### **4.1 Introduction**

The quantitative analysis of the survey data is presented in this chapter. It focuses on the most important discoveries of Senior High School (SHS) students' knowledge, attitudes, and perceptions regarding HIV/AIDS prevention and transmission. The findings of the study are presented in tables and figures. These are categorized into the socio-demographic characteristics data, the knowledge regarding HIV/AIDSs transmission and prevention, the attitudes towards HIV/AIDSs transmission and prevention, the perceptions of SHS students towards HIV/AIDSs transmission and prevention and the factors influencing Knowledge, Attitude and Perceptions of SHS students regarding HIV/AIDS. A total of 314 questionnaires were administered to SHS students. However, 223 of them were retrieved as cleaned data and was used in the final analysis, thereby yielding a 71% response rate.

#### **4.2 Socio-demographic Information of respondents (SHS 1 and 3 students).**

A univariate analysis of the sociodemographic characteristics in terms of the age groups of respondents, gender, grade levels, course of study etc. was conducted to understand their distributions. Majority of the respondents were females, and the minority were males which constitutes 59.2% and 40.8% respectively, with an average age of the respondents being  $(17.77 \pm 1.433)$  years. Majority of the respondents were aged between 20 and 24 years (212; 95.1%). The result also showed the grade level with the highest frequency was SHS 3 students which constituted 50.3%. However, the least recorded grade level was SHS 1 students which comprises of 49.3%. Regarding the distribution of respondents' course of study, the largest category consists of 98 students who studied General Arts, accounting for 43.9% of the total.

Also, 52 students studied Home Economics, representing 23.3% of the total. Similarly, 36 students studied Business, 29 students studied General Science, accounting for 16.2% and 13.0% correspondently. And the minority were 8 students in the sample who studied Visual Arts, making up 3.6% of the total. Respondents were mostly Christians (154; 69.1%), with 68 belonging to the Islamic religion (68, 30.5%) and a single respondent being an African Traditionalist (1, 0.4%) (see Table 4.1 below).

**Table 0.1: Sociodemographic information of respondents.**

<b>Variables</b>	<b>Frequency (N=223)</b>	<b>Percentages (%)</b>
<b>Mean age of respondents 17.77 ± 1.43</b>		
<b>Age groups (years)</b>		
15 – 19	11	4.9
20 – 24	212	95.1
<b>Gender</b>		
Male	91	40.8
Female	132	59.2
<b>Grade level</b>		
SHS 1	110	49.3
SHS 3	113	50.7
<b>Course of Study</b>		
Visual Arts	8	3.6

General Science	29	13.0
Business	36	16.2
Home Economics	52	23.3
General Arts	98	43.9
<b>Religion</b>		
Christianity	154	69.1
Islamic	68	30.5
African Tradition	1	0.4

**Source:** *Field Data, 2024*

#### **4.3 The knowledge of respondents regarding HIV/AIDS transmission and prevention.**

Table 4.2 and 4.3 shows an overview of Prampram High School students' understanding about HIV/AIDS prevention and transmission, 99.1% had heard of HIV/AIDS. A higher proportion, 94.6% affirmed HIV targets the immune system in people. Also, 91.0% affirmed AIDS is an advanced form of HIV. More than half (60.1%) reported that HIV/AIDS cannot be cured. Approximately, 51.1% of respondents reported yes, a person living with HIV/AIDS can appear healthy. Regarding where respondents get information about HIV/AIDS from, the majority (57.8%, 70.4%, and 50.7% respectively) of them get information from school, the media and Friends. Furthermore, according to 96.4%, 66.4%, and 31.8% of the respondents, unprotected sexual contact, sharing syringes or needles, and mother-to-child transmission during pregnancy, childbirth, or breastfeeding can all spread HIV/AIDS correspondently. Furthermore, a higher proportion of respondents reported using condoms consistently and

correctly (84.8%) and Practicing abstinence from sexual activity (79.4%) were one of the effective methods of preventing HIV transmission by someone living with the virus.

**Table 0.2: Responses to questions on knowledge regarding HIV/AIDs transmission and prevention.**

<b>Questions</b>	<b>Frequency (N)</b>	<b>Percentages (%)</b>
<b>Heard of HIV/AIDs?</b>		
Yes	221	99.1
No	2	0.9
<b>HIV is a virus that attacks the human immune system.</b>		
True	211	94.6
False	10	4.5
No idea	2	0.9
<b>AIDs is an advanced form of HIV</b>		
True	203	91.0
False	9	4.1
No idea	11	4.9
<b>Can HIV/ AIDs be cured?</b>		
Yes	53	23.8
No	134	60.1

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Not sure	36	16.1
<b>Can a person living with HIV/AIDS appear healthy?</b>		
Yes	114	51.1
No	56	25.1
Not Sure	53	23.8

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**Source:** *Field Data, 2024*



*Table 0.3: Responses to questions on knowledge regarding HIV/AIDs transmission and prevention (cont'd).*

Questions	Yes		No		Total
	N	(%)	N	(%)	N(%)
<b>Where do you get information about HIV/AIDS from?</b>					
School	129	(57.8)	94	(42.2)	223 (100)
Media	157	(70.4)	66	(29.6)	223 (100)
Friends	113	(50.7)	110	(49.3)	223 (100)
Parents/ guardian	44	19.7	179	80.3	223 (100)
Religious groups/ events	43	19.3	180	80.7	223 (100)
<b>How is HIV/AIDS transmitted?</b>					
Unprotected sexual intercourse	215	96.4	8	3.6	223 (100)
Sharing needles or syringes	148	66.4	75	33.6	223 (100)
Mother-to-child transmission during pregnancy, childbirth or breastfeeding	71	31.8	152	68.2	223 (100)

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Mosquito bites	5	2.2	218	97.8	223 (100)
Physical contact with people with HIV	19	8.5	204	91.5	223 (100)
Talking with people diagnosed with HIV.	5	2.2	218	97.8	223 (100)

**Which of the following are effective methods of preventing HIV transmission by someone living with the virus?**

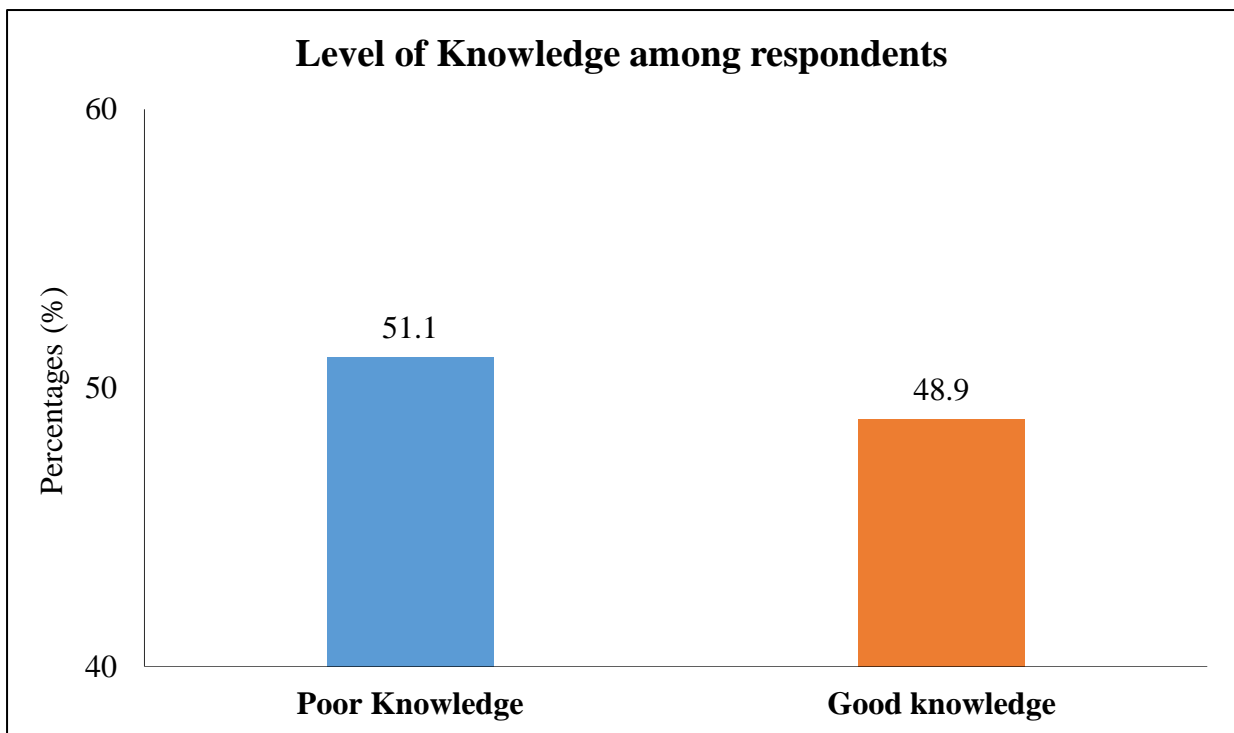
Using condoms consistently and correctly	189	84.8	34	15.2	223 (100)
Regularly checking viral loads	54	24.2	169	75.8	223 (100)
Taking antiretroviral medication as prescribed	54	24.2	169	75.8	223 (100)
Practicing abstinence from sexual activity	177	79.4	46	20.6	223 (100)

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**Source:** *Field Data, 2024*

### 4.3.1 Overall level of Knowledge regarding HIV/AIDs transmission and prevention

With respect to the overall level of knowledge of respondents, this survey found that one hundred and nine (48.9 percent) of respondents had strong awareness of HIV/AIDS. and 114 (51.1%) had poor knowledge regarding HIV/AIDS. This was measured by adding all responses and determining the mean score between responses given per the knowledge assessment (Good knowledge is scored as  $\geq 7.139$ , Poor knowledge is a score of  $< 7.139$ ). Figure 4.1 below represents the levels of knowledge among respondents regarding HIV/AIDs transmission and prevention.



*Figure 0.1: The levels of knowledge among respondents regarding HIV/AIDs transmission and prevention.*

#### **4.4 Attitudes of respondents towards HIV/AIDS transmission and prevention.**

This data suggests that the majority (102, 45.7%) of the respondents were comfortable with discussing HIV and sexual health with their peer or adults. In terms of respondents' willingness to take care of their relative with HIV/AIDS, the data reveals that a higher proportion (101, 45.3%) responded yes, while about 22.4% and 32.3% responded no and maybe. Additionally, 43.9% of respondents reported they would not buy fresh vegetables from a shopkeeper with HIV/AIDS (see Table 4.4 below).

***Table 0.4: Responses to questions on attitude towards HIV/AIDS transmission and prevention.***

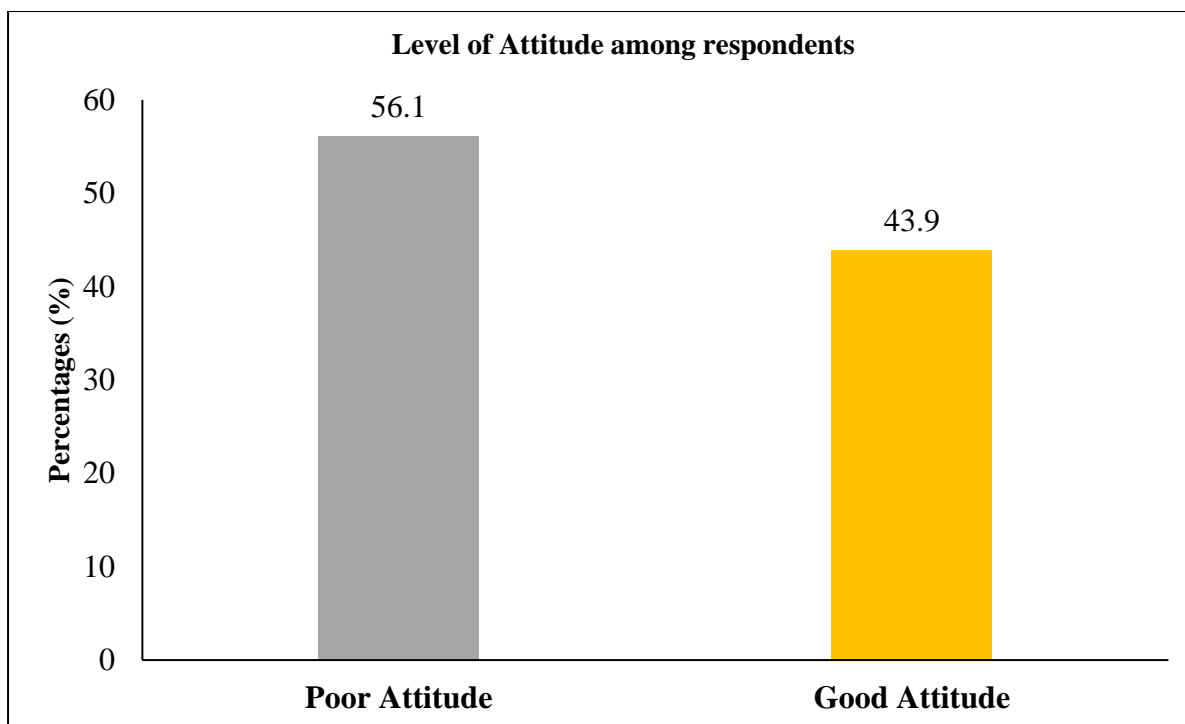
<b>Questions</b>	<b>Frequency (N=223)</b>	<b>Percentages (%)</b>
<b>How comfortable are you discussing HIV and sexual health with your peer or adults?</b>		
Not comfortable at all	19	8.5
I try to	26	11.7
I am not able to express myself fully	34	15.3
Comfortable	102	45.7
Very comfortable	42	18.8
<b>Would you be willing to take care for your relative with HIV/AIDS?</b>		
Yes	101	45.3

No	50	22.4
Maybe	72	32.3
<b>Would you buy fresh vegetables from a shopkeeper with HIV/AIDS?</b>		
Yes	68	30.5
No	98	43.9
Maybe	57	25.6
<b>Would you feel comfortable being friend with someone who has HIV/AIDS?</b>		
Yes	65	29.2
No	67	30.0
Maybe	91	40.8

**Source:** *Field data, 2024.*

#### **4.4.1 Overall level of attitude towards HIV/AIDS transmission and prevention**

With regards to the overall level of attitude among respondents, ninety-eight (43.9%) had good attitude towards HIV/AIDS transmission while 125 (56.1%) had poor attitude towards HIV/AIDS transmission. This was measured by adding all responses and determining the mean score between responses given per the attitude assessment (Good Attitude is scored as  $\geq 8.609$ , Poor Attitude is a score of  $< 8.609$ ). Figure 4.2 below represents the levels of attitude among respondents regarding HIV/AIDS transmission.



*Figure 0.2: The levels of attitude among respondents regarding HIV/AIDs transmission and prevention.*

#### **4.5 Perceptions of respondents towards HIV/AIDs transmission and prevention.**

The examination of respondents' perceptions regarding HIV/AIDS transmission and prevention finds that majority (206, 92.4%) of the respondents responded yes they believed anyone can be at risk of contracting HIV, regardless of their age, gender or sexual orientation. A greater proportion (200, 89.7%) do not think HIV is transmitted spiritually. Also, 46.2% of respondents reported that the statement HIV/AIDS patients are normally escorts was false, while 75 (33.6%) had no idea about the statement. The survey revealed that, 137 (61.4%) of respondents do not think living with HIV/AIDS is a punishment. In the study, 102 (45.7%) of respondents think of HIV/AIDS as an extremely serious health issue (Table 4.5).

*Table 0.5: Responses to questions on perceptions towards HIV/AIDs transmission and prevention.*

<b>Questions</b>	<b>Frequency (N=223)</b>	<b>Percentages (%)</b>
<b>Do you believe that anyone can be at risk of contracting HIV, regardless of their age, gender or sexual orientation?</b>		
Yes	206	92.4
No	17	7.6
<b>Do you think HIV is transmitted spiritually?</b>		
Yes	23	10.3
No	200	89.7
<b>HIV/AIDS patients are normally escorts?</b>		
True	45	20.2
False	103	46.2
No Idea	75	33.6
<b>Do you think living with HIV/AIDS is a punishment?</b>		
Yes	20	29.6
No	137	61.4

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Maybe	66	29.6
<b>How serious do you think HIV/AIDS is a health issue?</b>		
Not serious at all	1	0.5
Slightly serious	10	4.5
Moderately serious	26	11.7
Very serious	84	37.6
Extremely serious	102	45.7

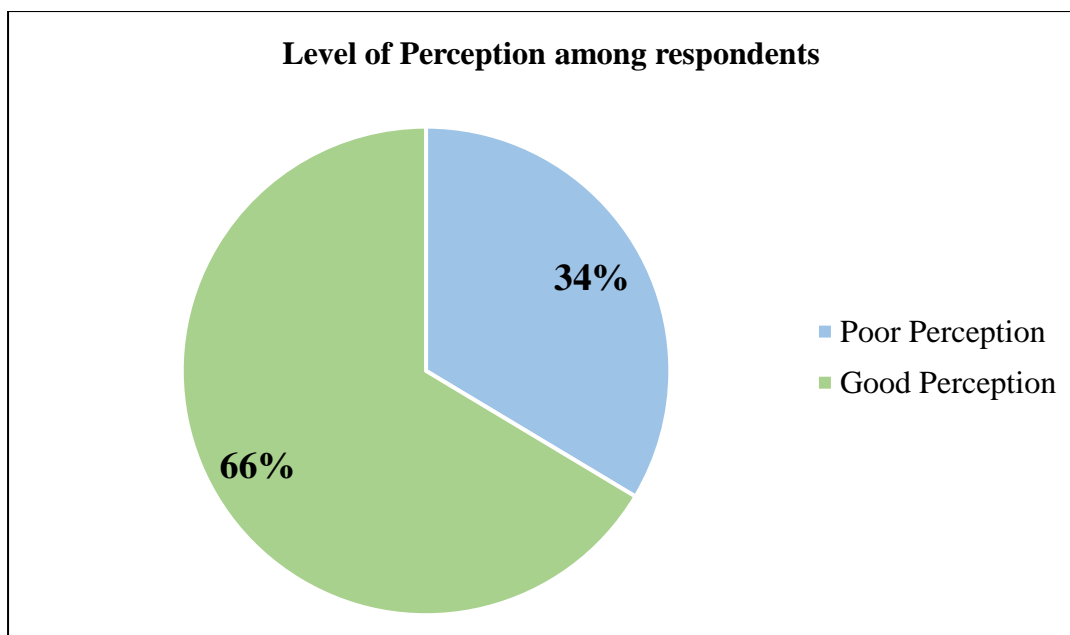
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**Source:** *Field Data, 2024*

**4.5.1 Overall level of perception towards HIV/AIDs transmission and prevention.**

In terms of overall perception, this study found that 75 (33.6%) of respondents had a negative perception of HIV/AIDS, while 148 (66.4%) had a positive perception. This was measured by adding all responses and determining the mean score between responses given per the perception assessment (Good Perception is scored as  $\geq 5.923$ , Poor Perception is a score of  $< 5.923$ ). Figure 4.3 below represents the levels of perceptions among respondents regarding HIV/AIDs transmission and prevention.





*Figure 0.3: The levels of perceptions among respondents regarding HIV/AIDs transmission and prevention.*

#### **4.6 Bivariate analysis of knowledge of HIV/AIDS among students on attitude, perception and covariates (sociodemographic characteristics).**

A Pearson's Chi-Square Test was conducted on selected variables with the levels of knowledge of HIV/AIDS among students to ascertain the level of statistical associations. At a p-value threshold of 0.05, it was observed from the results that few of the chosen indicators affirm strong significance. For example, the course of study among respondents had a statistically significant association with the knowledge regarding HIV/AIDS transmission and prevention at a p-value of **0.004**.

However, it was observed that all other covariates had no statistically significant association with levels of knowledge of HIV/AIDS among students as the results showed p-values  $> 0.05$ . (Table 4.6)

**Table 0.6: Bivariate analysis of knowledge of HIV/AIDS among students on attitude, perception and covariates (sociodemographic).**

Variables	Knowledge Levels (N=223)				$\chi^2$ (p-Value)
	Poor		Good		
	N	(%)	N	(%)	
<b>Age groups (In years)</b>					2.63 (0.105)
15 – 19	111	52.4	101	47.6	
20 – 24	3	27.3	8	72.7	
<b>Gender</b>					0.46 (0.499)
Male	49	53.8	42	46.2	
Female	65	49.2	67	50.8	
<b>Grade level</b>					0.55 (0.458)
SHS 1	59	53.6	51	46.4	
SHS 3	55	48.7	58	51.3	
<b>Course of Study</b>					<b>15.48 (0.004)</b>
Visual Arts	2	25.0	6	75.0	
General Science	15	51.7	14	48.3	
Business	22	61.1	14	38.9	
Home Economics	16	30.8	36	69.2	

General Arts	59	60.2	39	39.8
<b>Religion</b>				3.24 (0.198)
Christianity	74	48.1	80	51.9
Islamic	40	58.8	28	41.2
African Tradition	0	0.0	1	100.0

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**Source:** *Field Data, 2024*

#### **4.7 Bivariate analysis of levels of Attitude of HIV/AIDS among students on knowledge, perception and covariates (sociodemographic characteristics).**

A Pearson’s Chi-Square Test was conducted on selected variable with the levels of knowledge of HIV/AIDS among students to ascertain the level of statistical associations. At p-value threshold of 0.05, it was observed from the result that few of the chosen indicator affirm strong significance. For example, the religion of respondents had statistically significant association with the attitude regarding HIV/AIDS transmission and prevention at p-value of **0.009**.

However, it was observed that all other correlates had no statistically significant association with levels of attitude of HIV/AIDS among students as the result showed a p-values > 0.05 (Table 4.7).

***Table 0.7: Bivariate analysis of levels of Attitude of HIV/AIDS among students on knowledge, perception and covariates (sociodemographic).***

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<b>Variables</b>	<b>Attitude Levels (N=223)</b>	<b><math>\chi^2</math> (p-Value)</b>
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	<b>Poor</b>		<b>Good</b>		
	<b>N</b>	<b>(%)</b>	<b>N</b>	<b>(%)</b>	
<b>Age groups (In years)</b>					<b>0.27 (0.603)</b>
15 – 19	118	55.7	94	44.3	
20 – 24	7	63.6	4	36.4	
<b>Gender</b>					<b>0.67 (0.412)</b>
Male	54	59.3	37	40.7	
Female	71	53.8	61	46.2	
<b>Grade level</b>					<b>2.92 (0.087)</b>
SHS 1	68	61.8	42	38.2	
SHS 3	57	50.4	56	49.6	
<b>Course of Study</b>					<b>1.56 (0.816)</b>
Visual Arts	4	50.0	4	50.0	
General Science	15	51.7	14	48.3	
Business	18	50.0	18	50.0	
Home Economics	29	55.8	23	44.2	
General Arts	59	60.2	39	39.8	
<b>Religion</b>					<b>9.42 (0.009)</b>
Christianity	76	49.4	78	50.6	

Islamic	48	70.6	20	29.4
African Tradition	1	100.0	0	0.0

Source: *Field Data, 2024*

#### 4.8 Bivariate analysis of levels of perception of HIV/AIDS among students on knowledge, attitude and covariates (sociodemographic characteristics).

A Pearson's Chi-Square Test was conducted on selected variables with the levels of perception of HIV/AIDS among students to ascertain the level of statistical associations. At a p-value threshold of 0.05, it was observed from the results that few of the chosen indicators affirm strong significance. For example, the grade level ( $p=0.047$ ) and course of study ( $p=0.006$ ) had statistically significant associations with the perception regarding HIV/AIDS transmission and prevention.

However, it was observed that all other correlates had no statistically significant association with levels of perception of HIV/AIDS among students as the results showed p-values  $> 0.05$  (Table 4.8).

*Table 0.8: Bivariate analysis of levels of perception of HIV/AIDS among students on knowledge, attitude and covariates (sociodemographic).*

Variables	Perception Levels (N=223)				$\chi^2$ (p-Value)
	Poor		Good		
	N	(%)	N	(%)	
Age groups (years)					0.72 (0.395)
15 – 19	70	33.1	142	66.9	

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20 – 24	5	45.4	6	54.6	
<b>Gender</b>					<b>0.96 (0.328)</b>
Male	34	37.4	57	62.6	
Female	41	31.1	91	68.9	
<b>Grade level</b>					<b>3.94 (0.047)</b>
SHS 1	44	40.0	66	60.0	
SHS 3	31	27.4	82	72.6	
<b>Course of Study</b>					<b>14.44 (0.006)</b>
Visual Arts	1	12.5	7	87.5	
General Science	5	17.2	24	82.8	
Business	6	16.7	30	83.3	
Home Economics	22	42.3	30	57.7	
General Arts	41	41.8	57	58.2	
<b>Religion</b>					<b>1.38 (0.502)</b>
Christianity	49	31.8	105	68.2	
Islamic	26	38.2	42	61.8	
African Tradition	0	0.0	1	100.0	

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**Source:** *Field Data, 2024*

#### **4.9 Factors associated with knowledge, attitudes and perception regarding HIV/AIDS.**

The results in Tables 4.9, 4.10, and 4.11 below shows the predictive measures of the effects of selected variables on the knowledge, attitudes and perception regarding HIV/AIDS in both Crude and Adjusted logistic regression models.

In Table 4.9, the measure of predictive effects for all selected variables had no statistical significance on the knowledge of HIV/AIDS transmission and prevention in both unadjusted and adjusted models

Also, in Table 4.10, it was noted that Christians had 2 times higher odds of having good attitude towards HIV/AIDS transmission (AOR: 2.49, C.I (1.34 – 4.66)) after adjusting for all other variables in the model.

Furthermore, in table 4.11, SHS 3 students were 76% more likely to have good perception towards HIV/AIDS transmission and prevention compared to SHS 1 students (COR 1.76, C.I (1.00 – 3.09)).

**Table 0.9: Comparison of levels of knowledge of HIV/AIDS among students aged 15–24 years by attitude levels, perception levels and socio-demographic characteristics.**

<b>Variables</b>	<b>COR</b>	<b>(95% CI)</b>	<b>p-value</b>	<b>AOR</b>	<b>(95% CI)</b>	<b>p-value</b>
<b>Age groups (In years)</b>						
15 – 19	0.34	0.09 – 1.32	0.120	0.64	0.14 – 2.96	0.565
20 – 24	Ref	-	-	Ref	-	-
<b>Gender</b>						
Male	Ref	-	-	Ref	-	-
Female	1.20	0.70 – 2.05	0.499	1.07	0.58 – 1.97	0.826
<b>Grade level</b>						
SHS 1	Ref	-	-	Ref	-	-
SHS 3	1.21	0.72 – 2.06	0.459	1.07	0.60 – 1.90	0.814
<b>Course of Study</b>						
Visual Arts	Ref	-	-	Ref	-	-
General Science	0.31	0.05 – 1.81	0.193	0.34	0.06 – 2.07	0.234
Business	0.21	0.04 – 1.20	0.080	0.22	0.04 – 1.32	0.097
Home Economics	0.75	0.14 – 4.12	0.741	0.80	0.14 – 4.72	0.806
General Arts	0.22	0.04 – 1.15	0.072	0.26	0.04 – 1.47	0.127
<b>Religion</b>						



Christianity	1.54	0.88 – 2.75	0.140	1.32	0.71 – 2.45	0.380
Islamic	1	-	-	1	-	-
African Tradition	Ref	-	-	Ref	-	-

Ref., reference class; COR, crude odds ratio; AOR, adjusted odds ratio; CI, confidence interval.

*Table 0.10: Comparison of levels of attitude of HIV/AIDS among students aged 15–24 years by knowledge levels, perception levels and socio-demographic characteristics.*

<b>Variables</b>	<b>COR</b>	<b>(95% CI)</b>	<b>p-value</b>	<b>AOR</b>	<b>(95% CI)</b>	<b>p-value</b>
<b>Age groups (years)</b>						
15 – 19	1.39	0.39 – 4.90	0.605	1.13	0.27 – 4.68	0.869
20 – 24	Ref	-	-	Ref	-	-
<b>Gender</b>						
Male	Ref	-	-	Ref	-	-
Female	1.25	0.73 – 2.15	0.412	1.31	0.71 – 2.43	0.383
<b>Grade level</b>						
SHS 1	Ref	-	-	Ref	-	-
SHS 3	1.59	0.93 – 2.71	0.088	1.51	0.85 – 2.67	0.162
<b>Course of Study</b>						
Visual Arts	Ref	-	-	Ref	-	-
General Science	0.93	0.19 – 4.47	0.931	1.09	0.21 – 5.76	0.910
Business	1.00	0.22 – 4.63	1.000	1.22	0.24 – 6.19	0.810
Home Economics	0.79	0.18 – 3.52	0.760	0.69	0.14 – 3.41	0.649
General Arts	0.66	0.16 – 2.80	0.574	0.77	0.16 – 3.68	0.742
<b>Religion</b>						

Christianity	2.46	1.34 – 4.53	<b>0.004</b>	2.39	1.27 – 4.51	<b>0.007</b>
Islamic	Ref	-	-	Ref	-	-
African Tradition	-	-	-	-	-	-

Ref., reference class; COR, crude odds ratio; AOR, adjusted odds ratio; CI, confidence interval.

*Table 0.11: Comparison of levels of perception of HIV/AIDS among students aged 15–24 years by knowledge levels, attitude levels and socio-demographic characteristics.*

<b>Variables</b>	<b>COR</b>	<b>(95% CI)</b>	<b>p-value</b>	<b>AOR</b>	<b>(95% CI)</b>	<b>p-value</b>
<b>Age groups (years)</b>						
15 – 19	1.69	0.49 – 5.73	0.399	1.93	0.43 – 8.58	0.386
20 – 24	Ref	-	-	Ref	-	-
<b>Gender</b>						
Male	Ref	-	-	Ref	-	-
Female	1.32	0.75 – 2.32	0.328	1.85	0.96 – 3.57	0.068
<b>Grade level</b>						
SHS 1	Ref	-	-	Ref	-	-
SHS 3	1.76	1.00 – 3.09	<b>0.048</b>	1.73	0.94 – 3.18	0.078
<b>Course of Study</b>						
Visual Arts	Ref	-	-	Ref	-	-
General Science	0.69	0.07 – 6.88	0.748	0.48	0.04 – 5.42	0.537
Business	0.71	0.07 – 6.92	0.772	0.58	0.05 – 6.33	0.628
Home Economics	0.19	0.02 – 1.69	0.139	0.11	0.01 – 1.06	0.054
General Arts	0.19	0.02 – 1.68	0.138	0.13	0.01 – 1.24	0.068
<b>Religion</b>						

Christianity	1.33	0.73 – 2.41	0.352	1.37	0.71 – 2.64	0.347
Islamic	1	-	-	-	-	-
African Tradition	Ref	-	-	Ref	-	-

Ref., reference class; COR, crude odds ratio; AOR, adjusted odds ratio; CI, confidence interval.

## CHAPTER FIVE

### 5.0 DISCUSSION

#### 5.1 Introduction

Adolescents classified as those who are at a greater risk of contracting HIV/AIDS might not know enough about the illness. Large populations of young adults in places where there is a lot of close social interaction could become the epicenter of an epidemic (Othman, 2015). Students are one demographic more likely to contract HIV/AIDS, and some may not be properly informed about the illness. Since educational institutions house huge numbers of young adults who have high levels of close social contact, they may consequently become the focal point of epidemics (Al-Rabeei *et al.*, 2012). Before beginning any intervention, knowledge, attitudes, and perception (KAP) surveys are a highly helpful tool for determining how prepared people or communities are to adopt risk-free behaviors (Nubed & Akoachere, 2016).

#### 5.2 The knowledge of respondents regarding HIV/AIDSs transmission and prevention.

In this study, the researcher aimed to evaluate senior high school pupils in Prampram, Ghana's knowledge of HIV/AIDS. The majority of pupils (99.1%) have heard of HIV/AIDS, according to the research. According to a cross-sectional survey done in three high schools in Erbil, Iraq, by Othman (2015), all of the students (100%) had heard about HIV/AIDS, which is higher than the prevalence that the students in this study reported. This suggests that members of this cohort are well aware. This high level of awareness indicates that most SHS students probably know something about the disease, how it spreads, and how to prevent it, which is important information for the prevention and control of HIV/AIDS.

An excellent degree of knowledge and comprehension among the study group is demonstrated by the conclusion that 94.6 percent of prampram SHS students acknowledged that HIV is a virus that targets the human immune system. As a result, more potent HIV/AIDS preventive and control techniques will be able to be implemented. This emphasizes the significance of continual education and awareness campaigns to preserve and expand this body of knowledge. A comparable investigation by Bahrin *et al.*, (2018) to assess the level of knowledge of secondary school students in Penang about HIV/AIDS: A Pre and Post Intervention, supports this where 76% of the study group, during a pre-test, responded correctly to statement about HIV/AIDS being a type of disease that attacks the human immune system, and increased to 98.7% reported by a post-test intervention.

The high percentage of students (91.0%) recognizing AIDS as an advanced stage of HIV indicates a solid understanding of the progression of the disease. Students with knowledge of the disease's course are more probable to seek testing and medical care if they suspect they have been exposed to HIV, potentially leading to earlier diagnosis and improved health outcomes. This can positively influence prevention efforts.

A large proportion of students (60.1%) correctly responded the HIV/AIDS cannot be cured. This indicates a relatively high level of awareness regarding one of the most critical aspects of HIV/AIDS. The statistic suggests that public health education efforts in the region might be effective in communicating key facts about HIV/AIDS. This is an essential step in the ongoing fight against the epidemic, as accurate knowledge can lead to better prevention and treatment adherence.

A little over 51.1% of students said that it is possible for someone with HIV/AIDS to seem healthy. This finding implies that a sizable percentage of SHS students are aware that people living with HIV/AIDS could not show any outward signs of the illness. Knowing that a

someone might seem well even if they have HIV indicates a fundamental awareness of the asymptomatic phase of HIV infection, in which the virus may not show any overt symptoms. Understanding that HIV/AIDS symptoms are not always obvious might aid in lessening the stigma and discrimination related to the illness.

Regarding where respondents get information about HIV/AIDS from, the majority (70.4%) of them get information from the media. This finding agrees with the submissions of Othman, (2015). The media may be the main channel to use for any HIV/AIDS intervention targeting teenagers in our study area, based on the percentages of media outlets as sources of information directly targeted towards young people. The findings of this study suggested that AIDS-related content in the media should receive a lot of attention, and that all parents, educators, family members, and students should participate in AIDS education programs (Othman, 2015).

According to the current findings, the majority of respondents (96.4%) knew that HIV may spread through unprotected sexual contact, (66.4%) knew that sharing needles or syringes can transfer the virus, and (31.8%) knew that HIV can spread from mother to child during pregnancy. These findings align with the findings of three Ghanaian studies (Appiah-Agyekum & Suapim, 2013; Agyemang, 2012; Dzah *et al.*, 2019; Kenu *et al.*, 2014).

Furthermore, a higher proportion of respondents reported using condoms consistently and correctly (84.8%) and practicing abstinence from sexual activity (79.4%) were one of the effective methods of preventing HIV transmission by someone living with the virus. These findings suggest that efforts to promote HIV prevention strategies among SHS students have been relatively successful, as evidenced by their awareness of condom use and abstinence.

Overall, the knowledge level revealed that 48.9% of the students had good knowledge of HIV/AIDS, while 51.1% had poor knowledge. This result is mostly in line with the findings



published by Othman, (2015) and Huda & Amanullah, (2013). However, contradicts with a similar study carried out in Rasht City, Iran where Mahfoozi *et al.*, (2020) recorded a higher proportion (69.4%) of students having sufficient knowledge, and Dzah *et al.*, (2019), who conducted a cross-sectional study in Sekondi-Takoradi metropolitan, Ghana, and revealed that 61.6% of the pupils had adequate awareness on HIV/AIDS. While the finding of a good level of knowledge among nearly half of the participants is promising, the presence of a significant proportion with poor knowledge underscores the ongoing need for comprehensive and targeted HIV/AIDS education and awareness programs. These programs should be evidence-based, culturally sensitive, and accessible to all segments of the population to achieve meaningful and sustainable impacts in the fight against HIV/AIDS.

### **5.3 Attitudes of respondents towards HIV/AIDS transmission and prevention.**

This data suggests that the majority (45.7%) of the students were comfortable with regards to how comfortable they are discussing HIV and sexual health with their peer or adults. This is a reflection of a favorable attitude toward open discussion about these delicate matters that a sizable majority of students feel comfortable addressing themes related to HIV and sexual health. This degree of comfort implies that adults and peer groups may share some degree of trust and acceptance, which fosters an atmosphere that is favorable to meaningful conversations regarding sexual health.

According to this study, 45.3% of respondents, or fewer, said they would be willing to care for family members who were HIV/AIDS positive. This was, however, less than that of a similar study by Fana, (2021), who found that a higher proportion (70%) of South African high school learners participated in the study.

The study result where 43.9% of students reported they would not buy fresh vegetables from a shopkeeper with HIV/AIDS agrees with the reports of Dzah *et al.*, (2019) and Christane, (2014). The reluctance to purchase vegetables from a shopkeeper with HIV/AIDS could be attributed to pervasive stigma and misconceptions about the transmission of HIV. On the contrary, this study is at variance with the submission of Fana, (2021) where Of those surveyed, half (52%) said they would be willing to keep purchasing food from an HIV-positive person.

Overall, the study's findings show that the majority of SHS students—56.1% of them—had a negative attitude toward HIV/AIDS transmission and prevention. A much more lower prevalence was recorded by Gudi, (2018) This is inconsistent with a similar studies by Nubed & Akoachere, (2016), Al-Rabeei *et al.*, (2012), Adeboye *et al.*, (2016) and Akello *et al.*, (2023). This is concerning as having a positive attitude towards HIV/AIDS transmission and prevention is crucial in effectively addressing the disease and preventing its spread.

#### **5.4 Perceptions of respondents towards HIV/AIDs transmission and prevention.**

HIV/AIDS remains a significant worldwide health concern, and it is imperative to comprehend the attitudes, knowledge, and views of youth, particularly secondary school students, regarding HIV/AIDS. The analysis of students' perception towards HIV/AIDS transmission and prevention reveals that majority (92.4%) of the respondents responded yes they believed anyone can be at risk of contracting HIV, regardless of their age, gender or sexual orientation. The overwhelming majority of students who concurred that everyone might be at risk of HIV transmission suggests that there is a widespread awareness of the virus's capacity to infect individuals from all backgrounds. The findings from this study was

however in contrast with lower prevalence reported from a study by (Onoja *et al.*, 2021) who noted that although 80.7% believed they were not at risk of contracting HIV at the baseline survey, only 45.9% said they were not at risk in the survey after the interventions.

A greater proportion (89.7%) do not think HIV is transmitted spiritually. Students who rejected the notion that HIV spreads spiritually acknowledged the scientific consensus on the transmission of HIV/AIDS. This shows that students were aware that HIV is more commonly spread by certain body fluids than by spiritual or other worldly ways. These fluids include blood, semen, vaginal secretions, and breast milk.

Also, 46.2% of respondents reported that the statement HIV/AIDS patients are normally escorts was false, while 75 (33.6%) had no idea about the statement. The fact that nearly half of the students acknowledged the assertion to be untrue points to a constructive development in the fight against stigmatizing preconceptions around HIV/AIDS. Because escorts are frequently ostracized and marginalized in society, linking them to HIV/AIDS might exacerbate prejudice and discrimination against those who are infected.

The survey revealed that 61.4% of students do not think living with HIV/AIDS is a punishment. The results of this study indicate that most students view HIV/AIDS as a medical illness rather than a moral failing. It represents an improved knowledge of the disease's mode of transmission and the variables influencing its dissemination.

In the study, 45.7% of respondents think that HIV/AIDS is an extremely serious a health issue. Although nearly half of the students recognize the seriousness of HIV/AIDS, this also implies that a considerable proportion could not consider it to be such. It is essential for public health initiatives and educational efforts to comprehend people's perceptions about the gravity of

HIV/AIDS. This research suggests that focused campaigns to increase public knowledge of the effects of HIV/AIDS on people and communities may be necessary.

The finding that 66.4% of students have a good perception regarding HIV/AIDS is a positive sign, reflecting effective educational efforts and a supportive community environment. In a similar study conducted by Gudi, (2018) reported that 80% of study participants showed good level of perceptions towards HIV/AIDS which is in accordance with our study findings. However, continuous efforts are needed to improve this figure and ensure that all students hold accurate and empathetic views towards HIV/AIDS. This is consistent with a study

### **5.5 Factors associated with knowledge, attitudes and practices regarding HIV/AIDS**

According to the results of the current study, the measure of predictive effects for all associations did not show any statistically significant relationship with knowledge of HIV/AIDS. This is in line with a study done in Ghana's Ejura Sekyedumase region, which found no link between demographic factors and HIV/AIDS awareness(Agyemang, 2012).

Even after accounting for every other variable in the model, it was shown that students who identified as Christians were twice as likely to have a positive attitude about HIV/AIDS prevention and transmission. Church leaders and institutions may be able to be leveraged in HIV/AIDS education and prevention initiatives, given the impact of Christianity on attitudes regarding HIV/AIDS. In order to spread correct information and encourage favorable attitudes toward preventative measures, religious communities frequently have developed networks and communication channels.

Compared to SHS 1 students, SHS 3 students were 76% more likely to believe that HIV/AIDS transmission and prevention are serious issues. Nearing the end of their high school careers,

SHS 3 students may be more mature and conscious of health-related issues like HIV/AIDS. They might have learned more about HIV/AIDS during their academic careers through school curricula, awareness campaigns, and other educational materials.

## **CHAPTER SIX**

### **6.0 CONCLUSION AND RECOMMENDATION**

#### **6.1 Conclusion**

To Conclude with, this study sheds light on the knowledge, attitude, and perception of senior high school students towards HIV/AIDS infection in the Prampram area of the Ningo-Prampram District, Greater Accra Region, Ghana. The findings reveal that while there is a considerable proportion of students exhibiting good level of knowledge regarding HIV/AIDS, there is still room for improvement, as only 48.9% of respondents demonstrated good knowledge. Additionally, the study highlights that 43.9% of students had a good attitude towards HIV/AIDS transmission and prevention, indicating the presence of misconceptions or gaps in understanding. Moreover, it is encouraging to note that a majority of students (66.4%) exhibited a good perception regarding HIV/AIDS, suggesting a relatively favorable outlook on the disease and its prevention. Furthermore, the study identified some significant associations between certain demographic factors and students' attitudes and perceptions towards HIV/AIDS. Specifically, being Christian was found to be positively associated with having a good attitude towards HIV/AIDS transmission and prevention. Similarly, students in SHS 3 showed a higher likelihood of having a positive perception towards HIV/AIDS compared to their SHS 1 counterparts.

#### **6.2 Recommendations**

The following recommendations will be beneficial if adopted.

1. School authorities/administrators from Prampram Senior High School should improve HIV/AIDS education among high school students at Prampram Senior High School, it is crucial to tailor the education to the specific needs and behaviors of this age group.

It could involve creating targeted and engaging workshops, establishing peer education programs, and ensuring access to accurate and relevant information resources. The curriculum should be designed to be age-appropriate and interactive, with a focus on addressing misconceptions and providing practical knowledge that is relevant to the students' lives.

2. **Promoting Positive Attitudes:** The Ministry of Health working together with the Ministry of Education and Ghana Health Service should organize awareness campaigns, workshops, and community events that challenge stereotypes, dispel myths, and emphasize empathy and support for affected individuals. Implement initiatives to promote positive attitudes and reduce stigma towards individuals living with HIV/AIDS.
3. **Stigma Reduction programs:** To counteract negative attitudes and false beliefs about HIV, the Ministry of Health and the Ghana Aids Commission should support stigma reduction programs at Prampram Senior High School. Promoting empathy, comprehension, and acceptance of those living with HIV should be the main goals of these initiatives.
4. **Facilitating Interfaith Dialogue:** Prampram Senior High School administrators and school officials ought to plan interfaith discussions or gatherings where students from various religious backgrounds gather to exchange ideas, experiences, and knowledge regarding HIV/AIDS. This can enhance attitudes and views and foster understanding between parties. Despite their differences in religion, these exchanges can help Prampram SHS students feel more united, less prejudiced, and break down preconceptions.

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## APPENDICES

### Appendix I: Informed Consent Form

#### **KNOWLEDGE ATTITUDE AND PERCEPTION OF SCHOOL GOING ADOLESCENTS TOWARDS HIV IN PRAMPAM-GHANA**

I....., agree to participate in the research project titled Knowledge, Attitude and Perception of SHS and JHS students towards HIV, conducted by Modrina Boakyewaa Botwey who has discussed the research project with me.

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 benefit 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 minimise 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:

Phone number(s):

**Participant**

**Name:**

Signature:

Date:

## **Appendix II: Study Questionnaire**

### **ENSIGN GLOBAL COLLEGE**

#### **STUDY QUESTIONNAIRE**

This questionnaire is to seek for information to investigate the knowledge, attitude and perception of SHS Students towards HIV/AIDS in Prampram-Ghana. All responses will be used for academic purposes only, and respondents' information will be kept as private as possible. Also guaranteed is your confidentiality. Thank you.

#### ***TICK WHAT APPLIES TO YOU***

##### **A. Demographic Data:**

- a. What is your current age? .....
- b. Gender: Male [ ]    Female [ ]
- c. Class level: SHS1 [ ] SHS2 [ ] SHS3 [ ]
- d. What is your course of study?
  - i. General Science [ ]
  - ii. Business [ ]
  - iii. General Arts [ ]
  - iv. Home Economics [ ]
  - v. Visual Arts [ ]
- e. Religion: Christianity [ ] Islamic [ ] African Tradition Religion [ ]  
Other, specify .....

**B. Knowledge Assessment:**

6. Have you heard of HIV/AIDS?

- i. Yes [ ]
- ii. No [ ]

7. Where do you get information about HIV/AIDS from? (Select all that apply)

- i. School [ ]
- ii. Media [ ]
- iii. Friends [ ]
- iv. Parent/Guardian [ ]
- v. Religious groups/events [ ]
- vi. Other (Specify).....

8. HIV is a virus that attacks the human immune system.

- i. True [ ]
- ii. False [ ]
- iii. No idea [ ]

9. AIDS is an advanced form of HIV.

- i. True [ ]
- ii. False [ ]
- iii. No idea [ ]

10. How is HIV/AIDS primarily transmitted? (Select all that apply)

- i. Unprotected sexual intercourse [ ]
- ii. Sharing needles or syringes [ ]
- iii. Mother-to-child transmission during pregnancy, childbirth, or breastfeeding [ ]
- iv. Mosquito bites [ ]
- v. Physical contact with People with HIV [ ]
- vi. Talking with People diagnosed with HIV [ ]

11. Can HIV/AIDS be cured?

- i. Yes [ ]
- ii. No [ ]
- iii. No idea [ ]

12. Can a person living with HIV/AIDS appear healthy?

- i. Yes [ ]
- ii. No [ ]
- iii. Not sure [ ]

13. Which of the following are effective methods of preventing HIV transmission by someone living with the virus? (Select all that apply)

- i. Using condoms consistently and correctly [ ]
- ii. Regularly checking the viral load [ ]

iii. Taking antiretroviral medication as prescribed [ ]

iv. Practicing abstinence from sexual activity [ ]

**C. Attitude:**

14. On a scale of 1 to 5, how comfortable are you discussing HIV and sexual health with your peers or adults?

1 = Not comfortable at all [ ]

2= I try to [ ]

3= I'm not able to express myself fully [ ]

4= Comfortable [ ]

5 = Very comfortable [ ]

15. Would you be willing to care for your relative with HIV/AIDS?

i. Yes [ ]

ii. No [ ]

iii. Maybe [ ]

16. Would you buy fresh vegetables from a shopkeeper with HIV/AIDS virus?

i. Yes [ ]

ii. No [ ]

iii. Maybe [ ]

17. Would you feel comfortable being friends with someone who has HIV/AIDS?

- i. Yes [ ]
- ii. No [ ]
- iii. Maybe [ ]

**D. Perception:**

18. Do you believe that anyone can be at risk of contracting HIV, regardless of their age, gender, or sexual orientation?

- i. Yes [ ]
- ii. No [ ]

19. Do you think HIV is transmitted spiritually?

- i. Yes [ ]
- ii. No [ ]

20. HIV/AIDS patients are normally escorts?

- i. True [ ]
- ii. False [ ]
- iii. No idea [ ]

21. Do you think living with HIV is a punishment ?

- i. Yes [ ]
- ii. No [ ]
- iii. Maybe [ ]

22. How serious do you think HIV/AIDS is as a health issue?

- i. Not serious at all [ ]
- ii. Slightly serious [ ]
- iii. Moderately serious [ ]
- iv. Very serious [ ]
- v. Extremely serious [ ]



### **Appendix III: Assent Form for Participation in Research Study**

#### **ASSENT FORM FOR PARTICIPATION IN RESEARCH STUDY**

**Title of the Study:** Knowledge, attitude and perception of senior and junior high school students towards HIV/AIDS infection at Prampram in the Ningo-Prampram district of the greater Accra region of Ghana

This Study is being done by Modrina Boakyewaa Botwey from Ensign Global College and be contacted on 0553575059.

#### **Purpose of the Study:**

This research is being conducted to understand the knowledge, attitude, and perception of senior and junior high school students regarding HIV/AIDS in Prampram. The findings from this study may help in developing educational programs and interventions aimed at improving awareness and reducing the stigma associated with HIV/AIDS.

#### **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 HIV/AIDS, your attitudes towards people living with HIV/AIDS, and your perceptions of the risks associated with HIV/AIDS. The questionnaire will take approximately 20-30 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 Prampram perceive HIV/AIDS, which could contribute to more effective educational strategies.

**Questions:**

If you have any questions about the research study, please contact Modrina Boakyewaa Botwey on 0553575059.

**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.