UPTAKE OF VOLUNTARY HIV/AIDS SCREENING AMONG UNDERGRADUATE ACCOUNTING STUDENTS OF UNIVERSITY OF BENIN

BY

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DEPARTMENT OF NURSING SCIENCES
SCHOOL OF BASIC MEDICAL SCIENCES
UNIVERSITY OF BENIN
BENIN CITY

FEBRUARY, 2025

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IN PARTIAL FULFILLMENT OF THE AWARD OF BACHELOR OF NURSING SCIENCE, SCHOOL OF BASIC MEDICAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY.

FEBRUARY, 2025

DECLARATION

This is to declare that this research project titled **UPTAKE OF VOLUNTARY HIV/AIDS SCREENING AMONG UNDERGRADUATE ACCOUNTING STUDENTS OF UNIVERSITY OF BENIN,** will be carried out by **MOMOH MERCY ESHOFUNNE** it will solely be the result of my work except were acknowledged as being derived from other person (s) or resources.

MATRICULATION NUMBER: _____
DEPARTMENT/SCHOOL: NURSING SCIENCE, SCHOOL OF BASIC MEDICAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY.

Signature: …….
Date: …….

CERTIFICATION/APPROVAL

This is to certify that this research project by **MOMOH MERCY ESHOFUNNE** with examination number _____ has been examined and approved for the award of Bachelor of Nursing Science.

DR. (MRS.) C. A. ENUKU

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Supervisor

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ABSTRACT

This study examined the knowledge, perception, and uptake of voluntary HIV/AIDS screening among accounting students at a Nigerian university. Utilizing a descriptive cross-sectional survey design, 266 participants were selected through a stratified sampling technique to ensure a representative sample across different years of study. Data collection employed a structured questionnaire, and the Statistical Package for the Social Sciences (SPSS) version 26.0 was used for data analysis. The study aimed to assess students' level of knowledge about HIV/AIDS, their attitudes toward screening, and the factors influencing their screening decisions. Results showed a high level of HIV/AIDS knowledge among participants, with 90.6% demonstrating good understanding, particularly concerning screening purposes, testing timing, and transmission routes. However, despite this high knowledge level, screening uptake was nearly evenly split, with 49.2% reporting good uptake and 50.8% indicating poor uptake. Only 28.2% engaged in regular screening, and just 35.3% had been tested within the last year, highlighting a gap in continuous monitoring. Stigma, lack of awareness, cost considerations, and accessibility emerged as the primary barriers, with 71.4% identifying stigma as a deterrent. Peer influence, awareness initiatives, and access to free testing services were significant facilitators for screening uptake. The study concludes that while knowledge about HIV/AIDS is high among accounting students, this does not consistently translate to regular screening behavior. Addressing both structural and psychosocial barriers is critical to improving HIV screening uptake. Recommendations include implementing institutional awareness programs, offering cost-free and easily accessible screening services, and developing peer support networks to reduce stigma. These interventions could contribute to a more consistent and proactive approach to HIV/AIDS screening among university students, ultimately supporting early detection and preventive health behaviors.

Keywords: Uptake, HIV/AIDS screening, Undergraduate, Accounting students, Voluntary

DEDICATION

This work is dedicated to GOD ALMIGHTY who is providing me with the strength to complete my academic journey.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) remain significant public health issues worldwide. Globally, over 40 million people live with sexually transmitted infections (STIs), including HIV/AIDS, with sub-Saharan Africa accounting for over half of these cases (Stewart et al., 2020). This region is the most affected by HIV/AIDS, contributing significantly to the global burden of the disease (Zhang et al., 2022). Despite advancements in treatment and prevention, HIV/AIDS remains incurable and costly to control (Eisinger et al., 2021).

In Nigeria, the first case of AIDS was reported in 1986, and since then, HIV infection has reached epidemic proportions (Oguh et al., 2021). The national seroprevalence of HIV infection among individuals aged 15 to 49 is 1.4%, with a higher prevalence among high-risk groups such as sex workers, men who have sex with men, and drug users (Esther et al., n.d.). These high-risk groups, although comprising only about 3.4% of the population, account for as much as 32% of HIV infections in the country (Oguh et al., 2021). Vulnerable groups include women, young people, children, and orphans, with 58% of people living with HIV/AIDS being women and 3.4% being drug users (Badru et al., 2020).

The high prevalence of HIV in Africa is closely linked to untreated or inadequately treated STIs, which contribute significantly to the spread of HIV (Stewart et al., 2020; Zhang et al., 2022). Africa accounts for 20-35% of the global burden of both curable and non-curable STIs (Govender et al., 2021). Common curable STIs include syphilis, gonorrhea, and chlamydia,

while incurable but manageable STIs include human papillomavirus (HPV), hepatitis B, HIV, and herpes simplex (Ryden, J. 2020). Studies indicate that individuals with STIs have a ten-fold increased risk of HIV infection (Stewart et al., 2020). The severe health implications of STIs include infertility, cervical cancer, chronic pelvic discomfort, recurrent pregnancy loss, premature labor, and child health issues (Govender et al., 2021). In low- and middle-income nations, STIs have a significant economic impact (Govender et al., 2021). Despite the absence of official data on STI prevalence in Nigeria, previous studies have reported a prevalence of curable STIs ranging from 0% to 18% among the low-risk population and 23% among sex workers (Esther et al., n.d.). According to the World Health Organization (WHO), 20% of people living with HIV/AIDS are in their second decade of life, and each year, one out of every twenty young people contracts an STI (World Health Organization, 2022). Indulging in unprotected sexual intercourse suggests a high-risk predisposition to unintended pregnancies and STIs, including AIDS, among adolescents and young people.

HIV screening is a crucial preventive measure that helps in the early detection and management of the virus (Obeagu et al., 2024). Early diagnosis through regular screening can significantly reduce the transmission rates and improve health outcomes for those living with HIV. Despite the availability of HIV screening, various barriers prevent individuals, particularly youths, from getting tested. These barriers include stigma, lack of awareness, fear of positive results, and misinformation about the testing process. This study aims to determine the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin. By understanding their attitudes and the factors influencing their decisions, this research seeks to inform targeted interventions to increase the uptake of voluntary HIV/AIDS screening and ultimately contribute to better health outcomes among this population.

1.2 Statement of Problem

HIV/AIDS remains a significant global health challenge, with 39 million people living with the virus in 2022 (Zhang et al., 2022; WHO, 2022). Young people aged 15 to 24 years are particularly affected, accounting for 30% of all HIV/AIDS cases and half of all new infections (Zhang et al., 2022; WHO, 2022). In Nigeria, over three million people live with HIV, and young people, especially females, are disproportionately impacted (Oguh et al., 2021). Despite the critical role of voluntary counseling and testing (VCT) in HIV prevention and treatment, uptake remains low. Only 11% of females and 12% of males in Nigeria have ever taken an HIV test (Oguh et al., 2021). Studies among students in Nigerian universities show low awareness and high prevalence of risky sexual behaviors (Badru et al., 2020). Factors contributing to low VCT uptake include fear of test results, stigma, perceived low risk, and psychological burden (Armstrong-Mensah et al., 2022; Oguh et al., 2021). This study aims to assess the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin, focusing on awareness, uptake rates, and influencing factors.

1.3 Objectives of the study

The main objective of the study is to assess the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin.

The specific objectives are:

1. To assess the level of knowledge of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin.
2. To determine the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin.

3. To identify the factors influencing the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin.

1.4 Research Questions

1. What is the awareness of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin?
2. What is the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin?
3. What are the factors influencing the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin?

1.5 Research Hypothesis

There is no significant difference between the level of awareness of HIV/AIDS and the uptake of this screening among undergraduate accounting students at the University of Benin.

1.6 Significance of the Study

To the Nursing Profession

Nurses play a critical role in promoting public health and preventive care. Understanding the factors influencing voluntary HIV/AIDS screening uptake among young adults can equip nurses with insights to develop targeted educational programs and interventions. This can improve communication strategies aimed at encouraging voluntary HIV/AIDS screening uptake among students and the broader community.

Nurses can use findings from this study to educate patients about the importance of voluntary HIV/AIDS screening, dispel myths, and address misconceptions. This can lead to increased

awareness and participation in screening programs among young adults, ultimately contributing to early detection, treatment initiation, and improved health outcomes.

To the Institution

The findings can inform the development of campus health promotion policies and programs tailored to address the specific barriers identified among undergraduate accounting students. This includes enhancing access to voluntary HIV/AIDS screening services, reducing stigma, and improving awareness through targeted educational campaigns.

By promoting a healthy campus environment that supports voluntary HIV/AIDS screening, the institution can contribute to the overall well-being of its students. Early detection and treatment of HIV/AIDS can prevent health complications that may otherwise impact students' academic performance and overall quality of life.

To the Society

Addressing barriers to voluntary HIV/AIDS screening uptake among young adults is crucial for public health. Increased screening uptake can lead to earlier detection of HIV/AIDS, reducing transmission rates and lowering the burden on healthcare systems. This contributes to broader efforts in achieving public health goals related to HIV/AIDS prevention and control.

Findings from the study can contribute to changing social norms and attitudes towards voluntary HIV/AIDS screening in the society. By highlighting the importance of screening and addressing misconceptions, the study can help reduce stigma associated with HIV/AIDS and encourage proactive health-seeking behaviors among young adults.

1.7 Scope of the study

The scope of this study on the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin includes: The study will be conducted at the University of Benin. The scope is delimited to undergraduate in Accounting department aged 18 years and above.

1.8 Operational definition of terms

voluntary HIV/AIDS Screening: For the purposes of this study, voluntary HIV/AIDS screening refers to the process of testing individuals to detect the presence of HIV antibodies or antigens in their blood or oral fluid. Screening tests may include rapid diagnostic tests (RDTs), enzyme-linked immunosorbent assays (ELISA), or other approved methods to determine HIV status.

Prevalence of Rejection: The prevalence of rejection of voluntary HIV/AIDS screening among undergraduate accounting students refers to the proportion of students who, despite being aware of available screening services, choose not to undergo HIV/AIDS testing for various reasons.

Awareness of voluntary HIV/AIDS Screening: Awareness of voluntary HIV/AIDS screening is defined as the extent to which individuals (in this case, undergraduate accounting students) are knowledgeable about the availability, benefits, and procedures involved in HIV/AIDS testing at the University of Benin or nearby facilities.

Factors Influencing Screening Uptake: These factors encompass a range of variables that may affect students' decisions to undergo voluntary HIV/AIDS screening. This includes knowledge levels about HIV/AIDS, attitudes towards testing, perceived stigma, accessibility of screening services, and perceived risk of HIV infection based on personal behaviors and circumstances.

Undergraduate Accounting Students: Refers specifically to students enrolled in undergraduate accounting programs at the University of Benin during the study period.

Rejected Screening: Denotes instances where students decline or choose not to undergo voluntary HIV/AIDS screening despite being presented with the opportunity to do so during the study

CHAPTER TWO

LITERATURE REVIEW

This chapter deals with review of relevant literature related to this study under the following headings; conceptual review, theoretical framework, empirical studies and summary of literature review.

2.1 Conceptual Review

2.1.1 Overview of voluntary HIV/AIDS Screening Uptake

Voluntary HIV/AIDS screening uptake refers to the extent to which individuals in a population are willing and able to undergo testing to determine their HIV status. This process is a critical component in the global strategy to control and eventually eliminate HIV/AIDS. Screening allows for early detection, which is vital for effective treatment and prevention of further transmission. Despite the availability of screening services, uptake remains suboptimal in many parts of the world due to various barriers. Globally, HIV/AIDS remains a significant public health challenge, with an estimated 39 million people living with HIV in 2022 (Govender et al., 2021). Youth aged 10-24 years, who constitute about one-fifth of the world's population, are among the most affected groups (Zhang et al., 2022). According to Folayan et al. (2022), young people aged 15 to 24 years account for approximately 30% of all people living with HIV/AIDS and half of all new infections. In particular, young women bear a disproportionate burden of the virus, being twice as likely as young men of the same age to have HIV (Allan-Blitz et al., 2021). Many of these young women are unaware of their HIV status and lack access to antiretroviral therapy (ART) and care (Audi et al., 2021).

Voluntary counseling and testing (VCT) for HIV is a crucial intervention for both prevention and treatment (Eisinger et al., 2021). Awareness of one’s HIV status is associated with risk reduction

and behavior change, and timely diagnosis enables prompt connection to ART, care, and support services (Ismail et al., 2021). Despite these benefits, access to HIV testing, treatment, and support services remains inadequate, particularly among young women in high-prevalence settings (Badru et al., 2020).

In Nigeria, one of the countries most affected by HIV, there are over three million people living with the virus, with a seroprevalence rate of 4.6% (Oguh et al., 2021). According to Nazziwa et al. (2020), over the past two decades, more than 60 million people have been infected with HIV globally, with a significant number of these infections occurring in Nigeria. Young people between 15 and 29 years old, especially females, are disproportionately affected (Leppert et al., 2022). Since 1995, HIV prevalence rates among youth in the most-affected states have increased significantly. Sero-prevalence surveys indicate that the prevalence among those aged 20-24 years is 4.6%, and 5.6% among those aged 25-29 years (Folayan et al., 2022).

Despite the critical role of VCT in reducing HIV transmission, the uptake of these services is low. The 2005 National HIV/AIDS and Reproductive Health Survey (NARHS) revealed that only 11% of females and 12% of males had ever taken an HIV test (Morhason-Bello et al., 2020). Studies among students in higher institutions in Osun State showed that only 5% knew their HIV status (Iliyasu et al., 2020). Furthermore, risky sexual behaviors that predispose individuals to HIV are prevalent in Nigerian universities (Omisore et al., 2022). Several factors contribute to the low uptake of HIV testing among young people, including fear of test results, stigma, perceived low risk of contracting HIV, and the psychological burden of living with HIV (Nazziwa et al., 2020). Additional factors such as knowledge and attitudes towards HIV testing services, age, education, engagement in sexual relationships, and the distance to testing facilities also play a role (Omisore et al., 2022). Increasing the uptake of HIV screening, particularly

among high-risk groups such as young people and women in high-prevalence areas, is essential for controlling the HIV/AIDS epidemic. Targeted interventions that address the specific barriers to testing and promote the benefits of knowing one's HIV status are necessary to improve screening rates and ultimately reduce the incidence of HIV/AIDS.

2.1.2 Global Epidemiology of HIV/AIDS

2.1.2.1 Resurgence of HIV/AIDS in North America and Europe

In recent years, North America and Europe have witnessed a resurgence in HIV/AIDS cases, reversing some of the progress made in previous decades. According to Govender et al. (2021), this resurgence can be attributed to several factors, including complacency in prevention efforts, decreased funding for HIV/AIDS programs, and the rise in high-risk behaviors among certain populations.

In North America, particularly in the United States, the opioid crisis has significantly contributed to the increase in HIV infections, especially among intravenous drug users (Eisinger et al., 2021). Additionally, there has been a notable rise in HIV cases among young men who have sex with men (MSM), a group that remains disproportionately affected by the virus (Mayer et al., 2021).

Europe has also experienced a resurgence in HIV cases, with Eastern Europe and Central Asia being particularly affected. This increase is largely driven by inadequate healthcare infrastructure, stigma, and discrimination against key populations, including MSM, sex workers, and people who inject drugs (Govender et al., 2021). Moreover, migration and displacement due to political instability and conflict have further exacerbated the spread of HIV in these regions (Nazziwa et al., 2020).

2.1.2.2 Global Burden of HIV Among Adolescents and Young Adults

The global burden of HIV among adolescents and young adults remains a critical concern. According to Zhang et al. (2022), adolescents and young adults aged 10-24 years accounted for a substantial proportion of new HIV infections worldwide in 2019. This age group faces unique challenges that contribute to their vulnerability, including limited access to sexual and reproductive health services, inadequate sex education, and high levels of stigma and discrimination.

Young women, in particular, bear a disproportionate burden of HIV. They are more likely to acquire HIV than their male counterparts due to a combination of biological, social, and economic factors (Mayer et al., 2021). Many young women lack access to HIV testing and antiretroviral therapy (ART), which hinders early diagnosis and treatment (Chapuma et al., 2024). In sub-Saharan Africa, where the prevalence of HIV among adolescents and young adults is highest, cultural practices and gender inequality further exacerbate the situation (Nazziwa et al., 2020). Efforts to address the global burden of HIV in this population must prioritize comprehensive sex education, youth-friendly health services, and targeted interventions to reduce gender-based violence and economic disparities.

2.1.2.3 Global Health Sector Strategies on HIV

The World Health Organization (WHO) has developed comprehensive global health sector strategies to combat HIV, emphasizing prevention, testing, treatment, and care (World Health Organization, 2022). These strategies aim to achieve the global targets set for ending the AIDS epidemic by 2030. Key components of these strategies include:

Scaling Up Prevention Efforts: Enhancing access to HIV prevention tools such as pre-exposure prophylaxis (PrEP), condoms, and harm reduction services for people who inject drugs (Eisinger et al., 2021).

Expanding Testing Services: Increasing the availability and accessibility of HIV testing, particularly in high-prevalence areas and among key populations (Jin et al., 2021). Innovative approaches such as self-testing and community-based testing are being promoted to reach those who are less likely to access traditional healthcare settings (Sundararajan et al., 2022).

Improving Treatment and Care: Ensuring that all individuals diagnosed with HIV have access to ART and comprehensive care services. This includes addressing barriers to treatment adherence and retention in care (Scarsi et al., 2021).

Addressing Stigma and Discrimination: Implementing policies and programs to reduce stigma and discrimination against people living with HIV, which is crucial for increasing uptake of prevention, testing, and treatment services (Golub et al., 2023).

Strengthening Health Systems: Building resilient health systems that can effectively respond to the HIV epidemic, including improving data collection and monitoring to inform evidence-based interventions (World Health Organization, 2022).

Integrating Services: Promoting the integration of HIV services with other health services, such as sexual and reproductive health, tuberculosis, and hepatitis, to provide holistic care and improve health outcomes (Govender et al., 2021).

2.1.3 HIV/AIDS in Nigeria

2.1.3.1 Epidemiology Pattern, Diagnostic, Transmission, and Prevention in Nigeria

Nigeria, with its large population, has one of the highest burdens of HIV/AIDS in the world. The epidemiology pattern of HIV/AIDS in Nigeria has evolved over the years, with varying prevalence rates across different regions and populations. According to Oguh et al. (2021), Nigeria has a seroprevalence rate of 4.6%, with over three million people living with HIV. The epidemic is characterized by significant geographic variability, with some states experiencing much higher prevalence rates than others.

The diagnostic landscape for HIV in Nigeria has improved with the availability of rapid diagnostic tests and point-of-care testing, which have increased the accessibility and uptake of HIV testing services. However, challenges remain, including the need for more widespread and routine testing, particularly in rural and underserved areas (Obeagu et al., 2024).

Transmission of HIV in Nigeria is primarily through heterosexual contact, which accounts for the majority of new infections. Other significant routes of transmission include mother-to-child transmission, blood transfusions, and intravenous drug use. Preventive measures have focused on promoting safe sexual practices, scaling up the use of antiretroviral therapy (ART) to prevent mother-to-child transmission, and improving blood safety protocols (Cardenas et al., 2023).

Prevention efforts have also included extensive public health campaigns to increase awareness and reduce stigma associated with HIV. These campaigns have aimed to encourage behavior change, increase condom use, and promote regular HIV testing and counseling (Badru et al., 2020).

2.1.3.2 HIV-1 Molecular Epidemiology in Nigeria

The molecular epidemiology of HIV-1 in Nigeria reveals a diverse and complex landscape of viral strains. Nazziwa et al. (2020) conducted a comprehensive study characterizing the HIV-1 molecular epidemiology in Nigeria, highlighting the origin, diversity, demography, and geographic spread of different HIV-1 subtypes. The study found that multiple subtypes and recombinant forms of HIV-1 are present in Nigeria, with subtype G and CRF02_AG being the most prevalent.

The genetic diversity of HIV-1 in Nigeria poses challenges for treatment and vaccine development, as different subtypes may respond differently to antiretroviral drugs and vaccine candidates. Understanding the molecular epidemiology of HIV-1 is crucial for tailoring prevention and treatment strategies to the specific viral strains circulating in the country (Nazziwa et al., 2020).

2.1.3.3 Prevalence Among Young Adolescents in Nigeria

The level of comprehensive knowledge about HIV/AIDS among young adolescents in Nigeria is critical for effective prevention and control of the epidemic. Badru et al. (2020) examined the HIV comprehensive knowledge and prevalence among young adolescents in Nigeria, using data from the Akwa Ibom AIDS Indicator Survey conducted in 2017. The study found that while there is a relatively high level of awareness about HIV, significant gaps remain in comprehensive knowledge, particularly regarding modes of transmission and prevention. Young adolescents in Nigeria are disproportionately affected by HIV, with high prevalence rates observed in this age group. Factors contributing to the high prevalence include early sexual debut, multiple sexual partners, and low condom use. Additionally, cultural norms and gender inequality often limit young women's ability to negotiate safe sex practices (Folayan et al., 2022).

Efforts to improve comprehensive knowledge and reduce HIV prevalence among young adolescents must focus on targeted education programs that address these gaps and promote safe sexual behaviors. Schools, community organizations, and healthcare providers play a crucial role in delivering accurate information and providing access to HIV testing and counseling services (Badru et al., 2020).

2.1.4 Awareness and Knowledge of HIV/AIDS

2.1.4.1 Risk Factors for HIV and Barriers to Sexual and Reproductive Health Service Access

Adolescents in Nigeria face numerous risk factors for HIV infection, which are compounded by barriers to accessing sexual and reproductive health services. According to Folayan et al. (2022), some of the primary risk factors include early sexual debut, multiple sexual partners, and inconsistent condom use. Additionally, gender inequality and socio-cultural norms significantly contribute to the heightened vulnerability of young women, who often lack the power to negotiate safer sex practices.

Barriers to accessing sexual and reproductive health services among adolescents include stigma and discrimination, which discourage young people from seeking HIV testing and counseling services. Other barriers include inadequate health infrastructure, lack of youth-friendly services, and insufficient knowledge about available health services. Addressing these barriers requires a multi-faceted approach that involves community engagement, policy changes, and the provision of comprehensive sexual education (Folayan et al., 2022).

2.1.4.2 Awareness Among undergraduate Students

Knowledge and awareness of HIV/AIDS among undergraduate students are crucial for effective prevention and early diagnosis. Harsha and Priya (2020) conducted a study to assess the

knowledge and awareness of HIV/AIDS among college students in a university hospital setting. The study found that while a majority of students had heard about HIV/AIDS, there were significant gaps in their understanding of transmission modes, prevention methods, and the importance of regular testing. According to Harsha and Priya (2020), misconceptions and myths about HIV/AIDS persist among college students, which can lead to stigmatizing attitudes and risky behaviors. The study emphasized the need for targeted educational programs that provide accurate and comprehensive information about HIV/AIDS. Such programs should focus on correcting misconceptions, promoting safe sexual practices, and encouraging regular HIV testing and counseling.

2.1.4.3 Acceptability and Correlates of HIV Self-Testing Among University Students

HIV self-testing (HIVST) has emerged as a promising strategy to increase HIV testing rates, particularly among populations that may face barriers to accessing conventional testing services. Iliyasu et al. (2020) explored the acceptability and correlates of HIVST among university students in northern Nigeria. The study found that a significant proportion of students expressed willingness to use HIVST, citing the convenience, privacy, and autonomy it offers as major advantages. According to Iliyasu et al. (2020), factors associated with the acceptability of HIVST included previous testing experience, perceived risk of HIV infection, and the level of HIV-related knowledge. However, the study also identified concerns about the accuracy of self-tests, potential misuse, and lack of post-test counseling and support as barriers to widespread adoption. To enhance the acceptability and effective use of HIVST, it is essential to address these concerns through public health campaigns and by integrating self-testing into existing health services. Providing clear instructions, ensuring the availability of confirmatory testing, and offering

linkage to care for those who test positive are critical steps in maximizing the benefits of HIVST (Iliyasu et al., 2020).

2.1.5 Voluntary HIV/AIDS Screening and Testing

The US Preventive Services Task Force (USPSTF) recommends that clinicians screen for HIV infection in adolescents and adults aged 15 to 65 years, as well as younger adolescents and older adults at increased risk of infection (Pathela, 2021). The Task Force also recommends that all pregnant women, including those in labor who are untested and whose HIV status is unknown, should be screened for HIV. These recommendations are based on strong evidence that early detection and treatment of HIV can significantly reduce morbidity, mortality, and the risk of transmission to others. According to the USPSTF, routine screening is crucial as many individuals with HIV are unaware of their infection and may inadvertently transmit the virus to others. Early diagnosis allows for timely initiation of antiretroviral therapy (ART), which can improve health outcomes and reduce viral load to undetectable levels, thereby preventing transmission (Pathela, 2021).

In the United States, significant progress has been made in HIV testing, viral suppression, and the use of preexposure prophylaxis (PrEP). However, challenges remain in reaching all populations at risk. According to the Centers for Disease Control and Prevention (CDC), as of 2021, approximately 86% of people with HIV in the U.S. are aware of their status, but gaps remain in ensuring that those diagnosed are linked to care and achieve viral suppression (CDC, 2021). Viral suppression, defined as having an undetectable viral load, is a key goal of HIV treatment. The CDC reports that among those diagnosed with HIV, about 65% achieve viral suppression. This indicates the need for improved strategies to retain individuals in care and support adherence to ART. PrEP, a highly effective method for preventing HIV infection in

high-risk populations, has seen increasing uptake but remains underutilized. As of 2020, the CDC estimated that over 1.2 million people in the U.S. could benefit from PrEP, yet only a fraction of those eligible are using it. Efforts to expand access to PrEP, particularly among populations disproportionately affected by HIV, such as men who have sex with men (MSM), transgender individuals, and people of color, are critical for further reducing new HIV infections (CDC, 2021).

2.1.6 Determinants of Uptake of HIV Testing Among Young People in Nigeria

Understanding the determinants of HIV testing uptake among young people in Nigeria is essential for developing effective interventions. According to Obeagu et al. (2023), several factors influence whether young people seek HIV testing. These include:

Awareness and Knowledge: Knowledge about HIV transmission, prevention, and the benefits of early detection strongly correlates with higher testing rates. Young people who are well-informed about HIV are more likely to seek testing.

Perceived Risk: Individuals who perceive themselves to be at higher risk of HIV infection, such as those with multiple sexual partners or those engaged in unprotected sex, are more likely to undergo testing.

Stigma and Discrimination: Stigma associated with HIV and fear of discrimination can deter young people from seeking testing. Efforts to reduce stigma through education and community engagement are critical.

Accessibility of Testing Services: The availability and accessibility of testing services, including the provision of youth-friendly testing centers, significantly impact uptake. Mobile testing units and community-based testing can improve accessibility.

Supportive Policies and Environment: Government policies that support free and confidential testing, as well as programs that promote sexual and reproductive health education, encourage higher testing rates.

Peer Influence: Peer support and encouragement can play a significant role in influencing young people to get tested. Programs that leverage peer educators and influencers can be effective in increasing testing uptake (Ronen et al., 2020).

2.1.7 Voluntary Counseling and Testing (VCT)

Voluntary Counseling and Testing (VCT) is a cornerstone of HIV prevention and treatment efforts. VCT provides individuals with the opportunity to learn their HIV status in a confidential and supportive environment, receive counseling on risk reduction, and access care and treatment if necessary. According to Eisinger, et al. (2021), VCT is essential for early diagnosis, which is critical for initiating antiretroviral therapy (ART) promptly. Early ART initiation helps in maintaining a low viral load, improving health outcomes, and reducing the risk of HIV transmission. VCT also plays a significant role in behavioral change. Awareness of one's HIV status has been associated with a decrease in high-risk behaviors, such as unprotected sex and multiple sexual partnerships. Counseling provided during VCT sessions educates individuals about HIV transmission and prevention strategies, which can lead to a significant reduction in new infections (Eisinger, Lerner, & Fauci, 2021).

Moreover, VCT services can facilitate partner notification and testing, thereby identifying and treating more cases of HIV. This approach is critical in breaking the chain of transmission, particularly in high-prevalence settings.

Advanced HIV:

Advanced HIV disease, defined by very low CD4 counts or opportunistic infections, remains a significant challenge despite the availability of effective ART.

Diagnosis: Diagnosis of advanced HIV involves a combination of clinical evaluation, laboratory tests to determine CD4 count and viral load, and screening for opportunistic infections. According to ObeaguEI et al (202024), early detection of advanced HIV is crucial for initiating appropriate treatment and preventing further complications.

Treatment: Treatment for advanced HIV includes ART to control the virus and additional medications to treat or prevent opportunistic infections. Initiating ART in individuals with advanced HIV can lead to significant improvements in immune function and overall health. However, challenges such as late diagnosis, co-infections (e.g., tuberculosis), and drug resistance must be addressed to optimize treatment outcomes (Liebenberg et al, 2022).

Prevention: Prevention of advanced HIV involves improving access to early testing and treatment, educating at-risk populations about the importance of regular HIV testing, and ensuring that individuals diagnosed with HIV receive prompt and effective care. Strengthening healthcare systems to provide comprehensive HIV care, including VCT, is vital for preventing the progression to advanced HIV.

2.1.7.1 Factors Associated VCT Services

Several factors are associated with HIV infection among clients accessing VCT services. According to Adejumo et al. (2020), these factors include:

1. **Demographic Characteristics**: Age, gender, and marital status can influence the likelihood of HIV infection. Young adults and females, particularly those with multiple sexual partners or in transactional sex, are at higher risk.

2. **Behavioral Factors**: High-risk behaviors such as unprotected sex, multiple sexual partners, and substance abuse increase the likelihood of HIV infection. Behavioral counseling during VCT sessions is essential to address these risks.
3. **Socioeconomic Status**: Individuals from lower socioeconomic backgrounds may have limited access to healthcare services and information about HIV prevention, increasing their vulnerability to infection.
4. **Stigma and Discrimination**: Fear of stigma and discrimination can deter individuals from seeking VCT services, leading to late diagnosis and increased risk of HIV transmission. Efforts to reduce stigma and promote a supportive environment for HIV testing are crucial.
5. **Knowledge and Awareness**: Knowledge about HIV transmission, prevention, and the benefits of early diagnosis is associated with higher uptake of VCT services and lower rates of HIV infection. Education campaigns and community outreach are effective strategies to improve awareness and encourage VCT use (Adejumo et al., 2020).

2.1.8 Factors Influencing voluntary HIV/AIDS Screening Uptake

2.1.8.1 Characterization of HIV-1 Molecular Epidemiology in Nigeria

Understanding the molecular epidemiology of HIV-1 in Nigeria is crucial for designing effective screening and intervention strategies. Nazziwa et al. (2020) provide a comprehensive analysis of the diversity, origin, and geographic spread of HIV-1 in Nigeria. Their research highlights the complexity of the HIV epidemic in the country, characterized by multiple subtypes and recombinant forms of the virus. This diversity poses challenges for diagnostic accuracy, treatment regimens, and vaccine development. The molecular characterization of HIV-1 also reveals patterns of transmission that can inform targeted screening efforts. For instance, certain

subtypes may be more prevalent in specific regions or among particular demographic groups, guiding public health strategies to focus on high-risk populations. Enhanced understanding of HIV-1 molecular epidemiology can lead to more effective use of resources in screening and prevention programs (Nazziwa et al., 2020).

2.1.8.2 Concerns About Contracting HIV and Discussion with Partners

Concerns about contracting HIV and discussions with sexual partners about HIV status are significant factors influencing the uptake of HIV screening. According to Bogart et al. (2021), fear of contracting HIV can either motivate individuals to seek testing or deter them due to anxiety and stigma. Open communication with partners about HIV status is crucial for mutual protection and encourages shared responsibility in preventing transmission.

Witzel et al. (2020) found that individuals who are more likely to discuss HIV with their partners are also more likely to get tested. This indicates that improving communication skills and reducing stigma associated with HIV can enhance screening uptake. Educational programs that promote open discussions about HIV and sexual health can play a vital role in increasing awareness and encouraging testing behaviors.

2.1.9 Factors Contributing to Low Uptake of HIV Testing Among Young People

Several factors contribute to the low uptake of HIV testing among young people, including fear of test results, stigma, perceived low risk, and psychological burden. Despite the benefits of early diagnosis and treatment, these barriers prevent many young people from accessing HIV testing services.

Fear of Test Results: The fear of receiving a positive HIV result can deter individuals from getting tested. This fear is often compounded by the potential implications for relationships, social status, and mental health.

Stigma and Discrimination: HIV-related stigma and discrimination remain significant barriers to testing. Young people may avoid testing due to fear of being judged or ostracized by their peers, family, or community.

Perceived Low Risk: Many young people believe they are not at risk of contracting HIV, particularly if they do not engage in high-risk behaviors or if they trust their partners. This perception leads to complacency and low testing rates.

Psychological Burden: The psychological burden of living with HIV, including the need for lifelong treatment and potential health complications, can discourage individuals from knowing their status.

Knowledge and Attitudes: Lack of knowledge about the importance of testing, how to access testing services, and the benefits of early diagnosis are critical factors. Educational initiatives that provide accurate information about HIV and the importance of regular testing can help address these gaps.

Accessibility of Testing Services: The availability and accessibility of testing services, including distance to testing facilities, cost, and convenience, significantly influence uptake. Mobile testing units, community-based testing, and self-testing kits are potential solutions to improve access (d'Elbée et al., 2020).

2.1.10 Influence of HIV/AIDS Knowledge on Testing Behavior

Knowledge about HIV/AIDS plays a crucial role in shaping testing behaviors among individuals. According to Yang et al. (2024), higher levels of HIV/AIDS knowledge are associated with increased uptake of HIV testing among young students with a history of sexual activity. This correlation underscores the importance of education in reducing misconceptions, fear, and stigma related to HIV testing. Understanding the modes of HIV transmission, preventive measures such

as condom use and pre-exposure prophylaxis (PrEP), and the benefits of early diagnosis empowers individuals to make informed decisions about their sexual health. Educational campaigns that emphasize accurate information about HIV/AIDS can effectively promote testing behaviors by encouraging regular screenings and destigmatizing the process (Yang et al., 2024).

Perspectives on HIV transmission and prevention among college students in India are influenced by several factors, including cultural beliefs, educational background, access to healthcare services, and exposure to HIV/AIDS information. Khargekar et al. (2024) explore these factors and highlight their impact on students' understanding and attitudes toward HIV. Cultural norms and societal attitudes toward sexuality and HIV/AIDS shape how college students perceive their risk of infection and the effectiveness of preventive measures. Misconceptions and lack of accurate information about HIV transmission can lead to risky behaviors and low uptake of preventive measures. Educational interventions that address cultural barriers, provide comprehensive information, and promote open dialogue about sexual health are essential for improving HIV prevention efforts among college students in India (Khargekar et al., 2024).

2.1.11 Acceptance of HIV Testing Among College Students

Acceptance of HIV testing among college students is influenced by various factors related to accessibility, knowledge, attitudes, and perceived risk. Sihotang et al. (2024) examine the factors that contribute to acceptance or reluctance toward HIV testing among university students through a cross-sectional survey. Factors such as confidentiality of test results, convenience of testing locations, and availability of counseling services impact students' willingness to undergo testing. Positive attitudes toward HIV testing, including the recognition of its importance for personal health and community well-being, promote higher acceptance rates. Conversely, stigma, fear of judgment, and concerns about privacy can deter students from seeking testing services.

Educational campaigns that address misconceptions, reduce stigma, and promote the benefits of early HIV diagnosis are crucial for increasing acceptance of testing among college students. Providing accessible and confidential testing options on campus or through community partnerships can also enhance uptake rates and facilitate early detection of HIV (Sihotang et al., 2024).

2.2 Theoretical framework

The study adopted the Health Belief Model (HBM)

The Health Belief Model (HBM) is one of the most widely used frameworks for understanding health behaviors. It was developed in the early 1950s by social psychologists Irwin M. Rosenstock, Godfrey Hochbaum, and Stephen Kegeles working in the U.S. Public Health Service. The model was initially created to understand the reasons behind the public's reluctance to participate in disease prevention and detection programs, such as tuberculosis screenings. The HBM consists of several key components:

Perceived Susceptibility

Perceived susceptibility in the Health Belief Model refers to an individual's personal belief about their likelihood of contracting a particular health condition or disease. In the context of voluntary HIV/AIDS screening among college students, perceived susceptibility involves their assessment of the risk of acquiring HIV/AIDS based on factors such as their sexual behaviors, knowledge about transmission routes, and awareness of HIV prevalence among peers. Students who perceive themselves as more susceptible to HIV/AIDS may be more motivated to seek screening and take preventive actions.

Perceived Severity

Perceived severity is another critical component of the Health Belief Model, representing an individual's belief about the seriousness of the consequences of contracting a health condition or disease. For voluntary HIV/AIDS screening, perceived severity encompasses students' understanding of the physical, emotional, and social impacts of living with HIV/AIDS. This includes considerations of potential illness, reduced quality of life, stigma, and how HIV/AIDS might affect their relationships and future aspirations. Higher perceived severity can increase motivation for students to undergo screening to avoid or mitigate these consequences.

Perceived Benefits

Perceived benefits refer to an individual's assessment of the effectiveness and advantages of taking a specific health action to reduce the threat of illness. In the context of voluntary HIV/AIDS screening, perceived benefits include beliefs about the positive outcomes of early detection and subsequent treatment. Students may perceive benefits such as improved health outcomes, better management of the disease, prevention of disease progression, and reduced transmission risks to partners. Understanding these benefits can enhance students' motivation to undergo voluntary HIV/AIDS screening.

Perceived Barriers

Perceived barriers are obstacles or costs that individuals associate with taking a recommended health action. In the context of voluntary HIV/AIDS screening among college students, perceived barriers may include fear of a positive diagnosis, concerns about confidentiality, stigma associated with HIV/AIDS, negative experiences with healthcare providers, logistical challenges in accessing testing services, and the perceived inconvenience of undergoing testing. Addressing these barriers is crucial for promoting screening uptake among students.

Cues to Action

Cues to action are factors that prompt individuals to take action to address a health threat. Effective cues to action for voluntary HIV/AIDS screening among college students can include recommendations from healthcare providers during routine check-ups, educational campaigns on campus or through social media, personal experiences of friends or family with HIV/AIDS, and policies promoting regular testing as part of preventive healthcare. These cues play a significant role in motivating students to seek voluntary HIV/AIDS screening.

Self-Efficacy

Self-efficacy refers to an individual's confidence in their ability to successfully perform a specific health-related behavior. In the context of voluntary HIV/AIDS screening, self-efficacy involves beliefs about one's capability to overcome barriers and successfully engage in the testing process. Factors influencing self-efficacy may include previous experiences with healthcare, knowledge about testing procedures, and social support from peers or healthcare providers. Strengthening self-efficacy can empower students to navigate the screening process and adhere to recommended health behaviors effectively.

The Health Belief Model provides a comprehensive framework for understanding and promoting health-related behaviors, including voluntary HIV/AIDS screening among college students. By addressing perceived susceptibility, severity, benefits, barriers, cues to action, and self-efficacy, healthcare providers and policymakers can develop targeted interventions to encourage proactive health behaviors and improve overall health outcomes in this vulnerable population.

Application to the study

In applying the Health Belief Model (HBM) to the study of voluntary HIV/AIDS screening among college students, we can analyze how each component of the model influences students' decisions and behaviors related to testing. Perceived Susceptibility is crucial as it reflects

students' beliefs about their personal risk of contracting HIV/AIDS. Factors influencing this perception include knowledge of transmission routes, sexual behaviors, and awareness of the prevalence of HIV/AIDS among peers. Students who perceive themselves at higher risk due to their behaviors or environment may be more inclined to consider voluntary HIV/AIDS screening as a necessary precaution. Perceived Severity refers to students' perceptions of the seriousness of HIV/AIDS. This includes considerations of physical health impacts, emotional distress, social stigma, and potential disruptions to their academic and personal lives if diagnosed. Understanding these perceptions helps tailor educational messages that emphasize the severe consequences of HIV/AIDS, motivating students to take proactive steps such as screening. Perceived Benefits highlight what students perceive as the advantages of undergoing voluntary HIV/AIDS screening. These include early detection leading to timely treatment, improved health outcomes, reduced transmission risks to others, and peace of mind from knowing one's HIV status. Communicating these benefits effectively through educational campaigns and testimonials can enhance students' positive attitudes toward screening. Perceived Barriers encompass the obstacles that students perceive in accessing voluntary HIV/AIDS screening services. Common barriers include fear of a positive diagnosis, concerns about confidentiality, stigma associated with HIV/AIDS, and logistical challenges in accessing testing facilities. Addressing these barriers through confidential and convenient testing options on campus, clear information about the testing process, and supportive healthcare environments can increase students' willingness to get tested. Cues to Action are external stimuli that prompt students to engage in voluntary HIV/AIDS screening. Effective cues include recommendations from healthcare providers during routine check-ups, campus-wide educational campaigns, peer influence from friends who have undergone testing, and policies promoting regular screening as part of preventive healthcare.

These cues help reinforce the importance of testing and encourage students to take proactive steps toward their health. Self-Efficacy refers to students' confidence in their ability to successfully undergo voluntary HIV/AIDS screening. Building self-efficacy involves providing clear instructions on accessing testing services, addressing concerns about the testing procedure, and offering support through trained healthcare providers. Strengthening self-efficacy empowers students to overcome barriers and actively participate in screening activities.

2.3 Empirical review

Knowledge of voluntary HIV/AIDS screening among undergraduate

In a study conducted by Moke et al. (2020), the knowledge, perception, and acceptance of HIV voluntary counseling and testing (VCT) services among undergraduate students of Delta State University, Abraka, Nigeria were examined. Using a cross-sectional survey design, the researchers collected data from 490 students through a structured questionnaire. The data were analyzed using descriptive statistics, t-test, and ANOVA. The results indicated that students had a high level of knowledge, perception, and acceptance of VCT services. The study found that neither sex nor marital status influenced the knowledge and acceptance of VCT, whereas age did impact knowledge but not acceptance. The study recommended the establishment of VCT centers in educational institutions to enhance service uptake.

In a study conducted by Abdalla and Abusalih (2021), the factors affecting the uptake of HIV voluntary counseling and testing (VCT) among undergraduate students at Khartoum University in Sudan were explored. This descriptive cross-sectional study included 192 students from the Faculty of Sciences, selected through systematic random sampling. Data collection was performed using a structured questionnaire and analyzed with SPSS. The study revealed that 78% of students had good knowledge of VCT, but only 9% had taken the HIV test, with 62%

expressing willingness to do so in the future. Factors hindering testing included a lack of perceived risk, unawareness of testing locations, and fear of test results. The study found significant associations between VCT uptake and age, sexual activity, and self-perceived risk of HIV infection, as well as willingness to uptake VCT in the future.

Tshivhase et al. (2022) conducted a study in South Africa to identify factors contributing to the low uptake of HIV testing services (HTS) among tertiary students at a university. The cross-sectional study involved 306 students from the School of Health Sciences, selected through systematic random sampling. Data were analyzed using SPSS. The findings showed that although students had good knowledge and a positive attitude towards HTS, 44% had been tested for HIV, while 56% had not. The study identified stigma, fear of HIV-positive results, and negative attitudes of healthcare providers as major barriers to HTS uptake. It recommended using various media, including campus radio and newsletters, to promote HTS among university students.

In a study conducted by Ma et al. (2023), the awareness and attitudes towards HIV rapid testing among Chinese college students were evaluated. An online cross-sectional survey was performed with 1,474 participants. Multivariable logistic regression was used to identify factors associated with cognitive levels and attitudes. The study found that 91% of participants had high knowledge of HIV/AIDS and 84.7% held positive attitudes towards HIV rapid testing. Higher knowledge levels and positive attitudes were significantly associated with being female and postgraduate students. The study concluded that high knowledge levels paralleled positive attitudes, suggesting the need for tailored education programs to address gaps in HIV/AIDS knowledge and attitudes.

Liao et al. (2023) conducted a systematic review and meta-analysis to examine the acceptance and associated factors of HIV testing among college students in China. The review included 21 studies with 100,821 participants, analyzing data from various databases. The pooled acceptance rate of HIV testing was 68%, with variations across regions. The study identified gender, medical specialty, sexual education, sexual behavior, HIV/AIDS knowledge, and perception of HIV risk as significant factors influencing HIV testing acceptance. The review recommended targeted interventions by governments and universities to improve HIV testing acceptance among college students.

Harsha and Vishnu Priya (2020) carried out a survey to assess the knowledge and awareness of HIV/AIDS among undergraduate students at a university hospital in Chennai, India. Using a structured questionnaire with 28 questions, the study evaluated knowledge on the basics of HIV, modes of transmission, and oral manifestations of AIDS among 100 students. The results showed that 95% of participants correctly answered questions on the basics of HIV, 89% on modes of transmission, and 71% on oral manifestations. The study emphasized the importance of educating dental surgeons on HIV transmission and diagnosis through oral manifestations to prevent the spread of the disease.

Licata et al. (2022) conducted a cross-sectional study in Italy to assess the uptake and factors associated with HIV testing among undergraduate students. Data were collected via an anonymous online questionnaire from 1,007 students aged 18–29 years. The study found that 41.5% and 54.7% of students were aware that HIV tests did not require a physician's prescription and were free of charge, respectively. However, only 16.2% had ever been tested for HIV. The study identified attending medical or life sciences majors as the strongest predictor of HIV

testing. It concluded that effective strategies to increase HIV testing must address individual barriers, such as lack of knowledge about testing procedures.

In a study conducted by Zhang et al. (2022), the HIV/AIDS-related knowledge and attitudes among Chinese college students were evaluated. Using a cross-sectional survey with 17,678 students from a university in Henan, the study analyzed demographic characteristics, knowledge, and attitudes towards HIV-infected patients. The results showed an 80.8% awareness rate of HIV/AIDS-related knowledge. Factors such as gender, nationality, marital status, and grade were significantly correlated with knowledge levels. Female and minority students were less knowledgeable, while male students and those with good HIV knowledge were more likely to have positive attitudes towards HIV-infected patients. The study recommended enhanced education on AIDS transmission and prevention and efforts to eliminate social discrimination against HIV-infected patients.

Ogaji et al. (2013) conducted a cross-sectional study to determine the awareness, willingness, and use of voluntary HIV testing and counseling (VHTC) services among students at Niger Delta University, Bayelsa State, Nigeria. Using multi-stage random sampling, 423 students were surveyed with a pre-tested, structured questionnaire. The study found nearly universal awareness of HIV (99%), but lower awareness of VHTC services (78.4%) and even lower knowledge of on-campus services (14.8%). Only 53.8% had ever been tested for HIV, and 26.5% had used VHTC services. Willingness to undergo VHTC was high (73.8%), with females significantly more willing than males. Fear of positive results and stigma were major barriers to VHTC uptake. The study highlighted the need for more education to promote positive attitudes and increased use of VHTC services.

In a study conducted by Nkwonta and Harrison (2023), the HIV knowledge, risk perception, and testing behaviors among college students in South Carolina were investigated. The cross-sectional survey included 256 undergraduate students. The study found significant misconceptions about HIV transmission, with less than 20% perceiving themselves at risk and only 8% having ever been tested. A majority (83%) reported they would feel ashamed if they contracted HIV. The study found that higher HIV knowledge was negatively correlated with testing behaviors, indicating the need for enhanced HIV education to clear misconceptions, reduce stigma, and promote testing among college students.

Finally, Liu et al. (2020) conducted a study to explore the effects of health education on HIV/AIDS-related knowledge among first-year university students in China. The awareness questionnaire was administered pre- and post-health education intervention to 2,165 and 2,062 students, respectively. The study found a significant increase in awareness rates from 48.59% to 76.24% after the intervention. Students from Hui and Tibetan ethnicities and those with prejudices against AIDS patients were less knowledgeable. Urban-dwellers and those with higher paternal education were more knowledgeable. The study underscored the effectiveness of educational interventions in improving HIV/AIDS awareness among university students.

The uptake of voluntary HIV/AIDS screening among undergraduate

In a study conducted by Igiribambe et al. (2023), the uptake and utilization of institutional voluntary HIV testing and counseling (VCT) services among students aged 18-24 in Kenya's public universities were examined. This study aimed to determine the barriers to the uptake and utilization of institution-based VCT services among students in selected public universities in Kenya. The specific objectives were to determine the factors associated with the uptake and utilization of VCT services and the association between various socio-demographic factors and

service uptake in institutional VCT facilities. The research utilized a descriptive cross-sectional study design, with data collected through semi-structured questionnaires and focus group discussions held with students in the sampled universities. Additionally, data from Jomo Kenyatta University of Agriculture and Technology (JKUAT) Hospital VCT from 2010 to 2016 were reviewed to provide insight into service utilization rates among students. A multi-stage sampling technique was used to reach a student sample size of 305 from the selected public universities in Kenya. The study found that the uptake of institutional VCT services among university students sampled was 45%, despite 84.4% being aware of these services on their campuses. More males than females utilized the services. Emerging themes from the study indicated that participants utilized the services for different reasons. Factors affecting service uptake included accessibility to the test site, testing hours, fear of being seen at the site, and fear of test results. These factors were also reported when students were asked about their desired characteristics of a VCT facility on campus. This study highlighted the factors associated with testing and counseling in institutional facilities. It revealed that university students seek and utilize VCT services for various reasons, and patterns of service utilization vary across different groups, such as by year of study, gender, and age category.

Rasweswe et al. (2024) conducted a cross-sectional survey to determine the utilization of HIV VCT among undergraduate students in the School of Healthcare Sciences at the University of Limpopo. Structured questionnaires were used to collect data through Google Forms. The results, presented through descriptions and percentages and illustrated in tables, revealed that out of 389 undergraduate students, only 324 completed the questionnaire. The majority (97.2%) were aware of the health center on campus, while only 74.7% knew about the HIV VCT services offered on campus. Despite this awareness, many students (36.7%) did not utilize the campus HIV VCT

services, and some (9.6%) had never tested for HIV. There was a significant association between awareness of VCT services offered at the campus health and wellness center and utilization of VCT services ($p < 0.001$). The study emphasized the urgent need to escalate HIV/AIDS education in higher institutions of learning and highlight the dangers of HIV infection and the importance of regular HIV testing. The findings could serve as a foundation for creating HIV prevention and control programs for youth, particularly in higher education institutions.

In another study by Iliyasu et al. (2020), the acceptability and correlates of HIV self-testing among university students in northern Nigeria were assessed. The cross-sectional study involved 399 participants who completed anonymous self-administered questionnaires. Logistic regression models were used to generate adjusted odds ratios for predictors. The results showed that only 35.8% of participants had previously undergone HIV testing and counseling (HTC), while 70.4% were willing to self-test. Factors associated with HTC included year of college, campus residence, sexual activity in the past six months, willingness to self-test, and consistent condom use. Students who were older and female were less likely to be willing to self-test, whereas those in senior years, enrolled in clinical science programs, or from "other" ethnic groups were more willing to self-test. The study concluded that overall HTC uptake was low, but the acceptability of self-testing was high, supporting the feasibility of scaling up HIV self-testing among university students in Nigeria.

Appau et al. (2024) aimed to determine the uptake of HTC among students of tertiary institutions in the Hohoe Municipality of Ghana. This quantitative cross-sectional study used a structured questionnaire to collect data from a proportionate stratified sample of students. Chi-square and logistic regression analyses were performed using Stata version 12.0 at the 0.05 level of significance. The study found that only 30.6% of respondents had ever tested for HIV/AIDS, and

only 22.9% had tested within six months prior to the study. Students above 24 years were more likely to undergo HTC than those below 20 years. Similarly, students in their fourth year of study were more likely to get HTC than those in their first year. The study concluded that the uptake of HTC among tertiary institution students in Hohoe municipality was considerably low, recommending that policymakers design programs and interventions to increase HTC uptake among these students, especially those aged less than 20 years, those in the lower levels of study, and those in non-health related institutions.

Banyeh et al. (2022) conducted a cross-sectional study to determine the factors influencing VCT uptake among university students at the University for Development Studies in Ghana. Data were collected using a pre-tested, structured questionnaire from 119 students aged between 20 to 45 years. The study found that males were less likely to obtain information regarding VCT from hospitals compared to the media. Students informed about VCT, those who knew where VCT services were provided, those willing to take an HIV test, and those who tested for HIV on campus had higher odds of VCT uptake. However, the odds of testing for reasons other than medical were lower. The study concluded that the findings are useful for healthcare providers, non-governmental organizations, policymakers, and university management in designing HIV infection prevention and control strategies among students.

Factors influencing the uptake of HIV/AIDS

In a study conducted by Onyemachi et al. (2021) in Abia State, Nigeria, the researchers aimed to determine the prevalence and predictors of non-uptake of voluntary counseling and testing (VCT) for HIV among undergraduates. Using a cross-sectional design and quantitative methods, the researchers selected 422 respondents from three out of nine faculties through simple random sampling. Data were collected using pre-tested semi-structured questionnaires and analyzed

using SPSS version 20. The study found that 59.3% of respondents were knowledgeable about VCT, yet 64.7% had a negative attitude towards it. The prevalence of non-uptake of VCT was 82.7%. Key predictors of non-uptake included ignorance about VCT (OR = 1.874), fear of a positive test result (OR = 2.455), and HIV/AIDS-related stigma and discrimination (OR = 2.318). The study concluded that VCT uptake among undergraduates was low, primarily due to VCT-related ignorance, negative attitudes, fear of positive results, and associated stigma. The authors emphasized the need for HIV/AIDS prevention and control programs to address these issues to improve VCT uptake among young adults.

In a study conducted by Jawla et al. (2021) using data from the 2017 Youth Risk Behavior Surveillance Survey (YRBSS), the researchers examined associations between the prevalence of HIV testing and various factors or behaviors influencing HIV testing among U.S. high school students in grades 9-12. The study focused on students who reported having had sexual intercourse. The outcome of interest was whether the students had ever tested for HIV. Factors analyzed included age, sex, grade, race, condom use, age at first sexual intercourse, number of lifetime sexual partners, use of contraceptives, and drug or alcohol use before the last sexual activity. The results showed that 20.34% of students had tested for HIV. Females (53.97%) were more likely to participate in HIV testing than males and had higher odds of testing (OR: 2.229). Higher grades, older age at first sexual intercourse, having multiple sexual partners, and contraceptive use were also associated with higher rates of HIV testing. The study highlighted the need for targeted interventions to increase HIV testing among high school students.

In a study conducted by Mendy et al. (2023) in The Gambia, the researchers aimed to determine the prevalence of HIV counseling and testing (HCT) uptake, knowledge, and attitudes among student nurses and midwives in public nursing schools. Using an institutional-based cross-

sectional design, data were collected from 305 randomly selected students through a self-administered questionnaire. The study found that 58.4% of participants had tested for HIV, and 95.7% acknowledged the importance of HCT in HIV/AIDS prevention and control. Factors influencing HCT uptake included interpersonal challenges, perceived susceptibility to the disease, lack of confidentiality, and stigma and discrimination from health service providers. The authors suggested that these barriers could be addressed through targeted health education interventions and advocacy programs in health training institutions.

In a study conducted by Mendy et al. (2023) in Ghana, the researchers examined the determinants of utilizing HIV testing and counseling (HTC) among trainee nurses and midwives in public nursing and midwifery training colleges in the Central Region. A descriptive cross-sectional design was employed, and data were collected from 375 students using stratified and simple random sampling techniques. The study found that students with a positive attitude towards HTC were three times more likely to utilize HTC compared to those with a negative attitude (OR = 3.25). Females were more likely to utilize HTC than males (OR = 0.42), and students aged 18-20 were less likely to utilize HTC compared to those in other age categories (OR = 9.47). Higher academic levels and marital status were also significant predictors of HTC utilization. The authors concluded that diverse factors influence HTC utilization, and continual health education programs promoting positive attitudes towards HTC are essential.

In a study conducted by Ogbonna et al. (2020) at the University of Nigeria Enugu Campus, the researchers investigated barriers to voluntary HIV counseling and testing (VCT) among undergraduate health sciences students. Using a descriptive survey design, data were collected from students through a structured questionnaire. The study found that 87.1% of respondents had a high level of knowledge about VCT, but only 42.6% had utilized VCT services. Major personal

barriers included low risk perception of HIV, while academic and health institutional barriers included non-availability of VCT centers and the location of VCT centers far from students' residences. The study concluded that low VCT uptake was due to personal, academic, and health institutional barriers, and recommended intensified awareness campaigns and the establishment of functional VCT centers on campus to enhance uptake.

2.4 Summary of Literature Review

This literature review provides an in-depth exploration of various facets related to HIV/AIDS, particularly focusing on screening and testing among undergraduate students. It begins with a global perspective on the epidemiology of HIV/AIDS, highlighting the resurgence of the disease in North America and Europe, and examining the global burden among adolescents and young adults. Strategies outlined by the World Health Organization for combating HIV on a global scale are also discussed. The review then shifts to the Nigerian context, detailing the epidemiology patterns, diagnostics, transmission, and prevention of HIV/AIDS in the country. It delves into the molecular epidemiology of HIV-1 in Nigeria and discusses comprehensive knowledge and prevalence among young adolescents. The awareness and knowledge of HIV/AIDS among various populations are critically analyzed, focusing on risk factors and barriers to sexual and reproductive health services among Nigerian adolescents. It further examines the knowledge and awareness levels among college students and the acceptability and correlates of HIV self-testing among university students in Northern Nigeria. In the section on voluntary HIV/AIDS screening and testing, the review addresses the US Preventive Services Task Force recommendations, the status of HIV testing, viral suppression, and pre-exposure prophylaxis in the United States. It also identifies the determinants of HIV testing uptake among young people in Nigeria. The importance of Voluntary Counseling and Testing (VCT) is

emphasized, discussing its role in HIV prevention and treatment. The review also covers advanced HIV diagnosis, treatment, and prevention strategies, and factors associated with HIV infection among clients accessing VCT services in Lagos, Nigeria. Factors influencing voluntary HIV/AIDS screening uptake are explored, including the characterization of HIV-1 molecular epidemiology in Nigeria, concerns about contracting HIV and discussions with partners, and various barriers contributing to the low uptake of HIV testing among young people. The review highlights the influence of HIV/AIDS knowledge on testing behavior, factors influencing perspectives regarding HIV transmission and prevention among college students in India, and the acceptance of HIV testing among college students.

Finally, the Health Belief Model (HBM) is introduced as a theoretical framework applicable to this study. It elucidates how the perceptions of susceptibility, severity, benefits, and barriers, along with cues to action and self-efficacy, can influence voluntary HIV/AIDS screening behaviors among undergraduate accounting students at the University of Benin. This comprehensive review provides a robust foundation for understanding the multifaceted aspects of voluntary HIV/AIDS screening and the various factors that affect its uptake among young adults in a university setting.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the research methodology that the researcher adopted in this study. The various components of research methodology were discussed under their respective headings, including research design, study setting, target population, sample and sampling technique,

instruments of data collection, validity and reliability of instruments, method of data collection, method of data analysis, and ethical considerations.

3.1 Research design

A cross sectional study design was used for this study. Cross -sectional studies are observational studies that analyze data from a population at a single point in time. They are often used to measure the prevalence of health outcomes, understand determinants of health, and describe features of a population (Wang & Cheng, 2020). The study's design comprised a description of the occasions, circumstances, and occurrence rates of particular phenomena over the course of the study period.

3.2 Research Setting

The study was carried out in the accounting Departments at the University of Benin, located in Ovia North-East Local Government Area of Edo State, Nigeria. The University of Benin was founded in 1970, starting as the Institute of Technology and later changing to the University of Benin by the National University Commission (NUC). The University of Benin is one of the largest and most prestigious universities in Nigeria, with a reputation for academic excellence. The university has over 40,000 students enrolled every year, both full-time and part-time, shared among its 13 faculties, which include Law, Engineering, Agriculture, Management Sciences, Arts, Physical Sciences, Environmental Sciences, Social Sciences, Pharmacy, Life Sciences, College of Medical Sciences, and Education. The university has approximately 73 departments organized within these faculties. The Nursing Departments are housed within the College of Medical Sciences at the University of Benin. The department offer undergraduate and postgraduate programs in nursing, preparing students for careers in healthcare. The departments have state-of-the-art facilities, including nursing skills laboratories, simulation centers, and

clinical placement opportunities in affiliated hospitals and healthcare facilities. The accounting Departments have a strong focus on evidence-based practice, research, and community engagement, making them an ideal setting for the proposed study.

3.3 Target Population

The target population for the study were accounting students from 100 level to 400 level at the University of Benin. This population was selected for several reasons.

Table 3.1: Number of Accounting students in each Academic level

Level	Number of students
100l	235
200l	240
300l	232
400	220
Total	927

Source: Accounting Department (August, 2024)

3.4 Sample Size Determination

The sample size was calculated as indicated below:

Using Taro Yamane's Formula

$$n = \frac{N}{1+N\,(e)^2}$$

Where

N= Population under study

E= Constant 0.05%) margin error

$$n = \frac{927}{1+927(0.05)}$$

$$n = \frac{927}{1+927\,(0.0025)}$$

$$n = \frac{927}{1+2.3}$$

$$n = \frac{927}{3.3}$$

n=280.9

Therefore, the sample size is approximately 280.

Proportional sampling calculation

Table 3.2: Distribution of sample size across all levels

Academic level	Determination of sample size in each level	Sample size per level
200	235/927 x 280 =	71
300	240/927 x 280 =	73
400	232/927 x 280 =	70
500	220/927 x 280 =	66

3.5 Sampling Technique

The stratified sampling technique was used in this study. Stratified sampling is a probability sampling technique where the population is divided into homogeneous subgroups or "strata" based on shared characteristics such as gender, age, income, education level

3.6 Instrument for Data Collection

The instrument for data collection in this study was self-structured questionnaire. This was developed based on the objectives of the study. The questionnaire was made up of

four sections with. Questions were carefully drafted, sequenced and constructed in a bid to get in-depth information that is useful and relevant to this study.

Section A: consist of the demographic data of the participants (Age, Marital Status, Current Educational Level, Ethnicity).

Section B: knowledge of voluntary HIV/AIDS screening

Section C: the uptake of voluntary HIV/AIDS screening

Section D: factors influencing the uptake of HIV/AIDS

3.7 Validity of the Instrument

The instrument's validity pertained to its capability to accurately measure the intended construct or concept (Surucu & Maslakci, 2020). Researchers assessed various validity types such as content, construct, criterion, and face validity to evaluate the instrument's accuracy. For this research, face and content validity was utilized to validate the research tool. The questionnaire underwent validation by both the project supervisor and a field expert, and necessary adjustments was implemented by the researcher before starting the main study.

3.8 Reliability of the Instrument

The reliability of an instrument referred to its stability and consistency in delivering uniform outcomes when assessing the same criteria under identical circumstances (Surucu & Maslakci, 2020). It essentially gauged how consistently the instrument produced similar results across multiple trials. A reliable instrument is one that could produce the same results if the behavior was measured again by the same scale. The Cronbach's alpha reliability technique was employed in this study. This researcher conducted reliability testing on the instrument by distributing 28 questionnaires, which constituted 10% of the total sample size of 280, to students of college of

nursing science, University of Benin Teaching Hospital (which are outside the sampled population). If a coefficient of 0.71 is obtained the instrument will be considered reliable.

3.9 Method of Data Collection

A well-structured questionnaire was administered to the students until the required sample size of 280 students is achieved. The students were approached in their classrooms at the school on different days, following proper permission from the heads of the departments involved in the study. The purpose of the study was explained to them, and the instrument for data collection was administered. Data collection was conducted by the researchers. The data collection took place during break periods, and on-the-spot retrieval of the administered copies of the questionnaire ensure that all copies are collected on the same day. Data collection lasted about two weeks.

3.10 Method of Data Analysis

The data collected was analyzed using the Statistical Package for the Social Sciences (SPSS) version 26.0. Descriptive statistics such as mean, frequency, and percentages was computed to summarize the data. Hypothesis testing was conducted using the Chi-square test of association, with the level of significance set at $p < 0.05$. The results of the analyses were then presented using tables, graphs, frequencies, and percentages to provide a clear overview of the findings.

3.11 Ethical Considerations

Ethical approval was obtained from the ethics and research committee of the College of Management Sciences, University of Benin. Permission was obtained from the Head of Departments in the Department of Accounting, University of Benin, to proceed with the research. Before data collection begins, participants received detailed explanations about the research's

purpose, content, and implications. They were assured of confidentiality, ensuring the protection of their personal and private information. Throughout the research, ethical guidelines were strictly adhered to, including the following considerations:

1. **Confidentiality:** Respondents' information was treated confidentially, with no request for names or addresses in the questionnaire. Participants understood that their responses are confidential and solely used for research purposes. No personal identifiers were used in any document or questionnaire to maintain anonymity.
2. **Voluntary Participation:** Participants was informed of their right to voluntary participation without facing penalties or bias. They can choose to withdraw or decline to provide information at any point if they feel uncomfortable or unsure.
3. **Avoidance of Plagiarism:** Proper citation of all authors used in the study was ensured, both within the content and in the reference page.

CHAPTER FOUR

RESULT AND FINDINGS

This chapter deals with the representation of data collected from respondents on the uptake of voluntary HIV/AIDS screening among undergraduate accounting students of University of Benin. A total of 280 questionnaires were distributed to accounting students from 100 level to 400 level at the University of Benin out of which 266 was properly filled and valid for data analysis, giving a response rate of 95%.

Table 4.1: Socio-demographic Characteristics of Respondents

Variable	Frequency (n = 266)	Percent (%)
Age		
< 18	19	7.1
19-21	118	44.4
22-25	89	33.5
25 years and above	40	15.0
Gender		
Male	132	49.6
Female	134	50.4
Year of Study		
Second Year	68	25.6
Third Year	81	30.4
Fourth Year	58	21.8
Fifth Year	59	22.1
Marital Status		
Single	241	90.6
Married	16	6.0
Divorced	6	2.3
Widowed	3	1.1
Cohabiting	0	0
Living Arrangement		
On-campus	99	37.2
Off-campus	167	62.8
Religion		
Christianity	213	80.1
Islam	36	13.5
Traditional	12	4.5
Other	5	1.9
Ethnicity		
Yoruba	69	25.9
Igbo	145	54.5
Hausa	29	10.9
Other	23	8.6

Table 4.1 presents the socio-demographic characteristics of the respondents, comprising 266 participants. The age distribution indicates that the majority, 118 (44.4%), are between 19 and 21 years old, while 19 (7.1%) are under 18. Gender representation is nearly balanced, with 134 (50.4%) females and 132 (49.6%) males. Regarding the year of study, third-year students constitute the largest group at 81 (30.4%), closely followed by second-year students at 68 (25.6%). The marital status of the respondents reveals that a significant majority, 241 (90.6%),

are single. In terms of living arrangements, most students, 167 (62.8%), live off-campus, while 99 (37.2%) reside on-campus. Religious affiliation shows a predominance of Christianity, with 213 (80.1%) identifying as Christians, compared to 36 (13.5%) who are Muslims. Ethnically, the respondents are primarily Igbo (145 or 54.5%), followed by Yoruba (69 or 25.9%) and Hausa (29 or 10.9%). This data highlights a youthful, predominantly single, and Christian student population, with a diverse ethnic representation.

Answering Research Questions

Research Question 1: What is the awareness of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin?

Table 4.2: Knowledge of HIV/AIDS screening among accounting students

Items	Frequency	Correct	Wrong	Mean	Remark
Have you heard of HIV/AIDS before?					
Yes	236 (88.7)	236 (88.7)	30 (11.3)	1.9	Good
No	30 (11.3)				
What is the primary purpose of HIV/AIDS screening?					
To detect the virus early and begin treatment	197 (73.9)	197 (73.9)	69 (26.1)	1.7	Good
To cure HIV/AIDS	5 (1.9)				
To vaccinate against HIV/AIDS	3 (1.1)				
To reduce the risk of contracting HIV/AIDS	61 (22.9)				
When is it recommended to get tested for HIV?					
After every meal	1 (0.4)				
Only when symptoms are visible	3 (1.1)				
Once in a lifetime	12 (4.5)				
After possible exposure or as part of routine health checks	250 (93.9)	250 (93.9)	16 (6.1)	1.9	Good
Which of the following tests is commonly used for initial HIV screening?					
Chest X-ray	3 (1.1)				
ELISA test	235 (88.3)	235 (88.3)	31 (11.7)	1.9	Good
Blood pressure test	2 (0.8)				
Kidney function test	26 (9.8)				
How soon after potential exposure can HIV be detected by a screening test?					
Immediately after exposure	5 (1.9)				
After 1 year	2 (0.8)				
Within 2 to 6 weeks	210 (78.8)	210 (78.8)	56 (21.2)	1.8	Good
After 5 days	49 (18.4)				
Which body fluid is primarily tested for HIV screening?					

Items	Frequency	Correct	Wrong	Mean	Remark
Sweat	1 (0.4)				
Blood	251 (94.4)	251 (94.4)	15 (5.6)	1.9	Good
Saliva	11 (4.1)				
Urine	3 (1.1)				
What does a positive HIV screening result indicate?					
The person has AIDS	5 (1.9)				
The person is immune to HIV	1 (0.4)				
The person is HIV-positive and further tests are needed	255 (95.9)	255 (95.9)	11 (4.1)	2	Good
The person is cured of HIV	5 (1.9)				
Which of the following groups should be regularly screened for HIV?					
Only newborn babies	2 (0.8)				
People with no sexual activity	2 (0.8)				
People who are sexually active or at risk	258 (97.0)	258 (97.0)	8 (3.0)	2	Good
Only individuals over 50 years old	4 (1.5)				
Which of the following is NOT a method of HIV transmission?					
Unprotected sexual contact	1 (0.4)				
Sharing needles or syringes	1 (0.4)				
Casual contact like hugging or shaking hands	261 (98.1)	261 (98.1)	5 (1.9)	2	Good
Mother-to-child during childbirth	3 (1.1)				
What is the window period in HIV screening?					
The time during which a person is immune to HIV	1 (0.4)				
The period between HIV exposure and the appearance of detectable antibodies	260 (97.7)	260 (97.7)	6 (2.3)	2	Good
The time after a negative test when a person can never get HIV	2 (0.8)				
The time when HIV becomes non-contagious	3 (1.1)				
How often should high-risk individuals undergo HIV screening?					
Every 10 years	1 (0.4)				
Every 3 to 6 months	241 (90.6)	241 (90.6)	25 (9.4)	1.9	Good
Every 5 years	10 (3.8)				
Only once in their lifetime	14 (5.3)				
		Grand Mean		**1.9**	

Mean Cut-off = 1.5

Table 4.2 outlines the knowledge of voluntary HIV/AIDS screening among accounting students, revealing generally high levels of awareness and understanding. A significant majority, 236 students (88.7%), reported having heard of HIV/AIDS, indicating good foundational knowledge. In terms of specific knowledge about screening, 197 students (73.9%) correctly identified the primary purpose of HIV/AIDS screening as detecting the virus early for treatment, while 250 (93.9%) recognized that testing is recommended after potential exposure or as part of routine health checks. The ELISA test was acknowledged as the commonly used initial screening method by 235 students (88.3%). The timing for detecting HIV after potential exposure was well understood, with 210 respondents (78.8%) correctly stating that it can be detected within 2 to 6 weeks. Furthermore, 251 students (94.4%) recognized that blood is the primary fluid tested for HIV, and an overwhelming 255 (95.9%) understood that a positive result indicates that further testing is necessary. Regarding who should be screened, 258 students (97.0%) accurately noted that sexually active individuals or those at risk should undergo regular screening. The table also highlights the students' awareness of non-transmission methods, with 261 (98.1%) identifying casual contact as a non-risk factor. Knowledge of the window period in HIV screening was also high, with 260 students (97.7%) providing the correct definition. Finally, 241 students (90.6%) correctly stated that high-risk individuals should be screened every 3 to 6 months. The grand mean score of 1.9 suggests that students possess good knowledge of HIV/AIDS screening, with minimal areas requiring improvement.

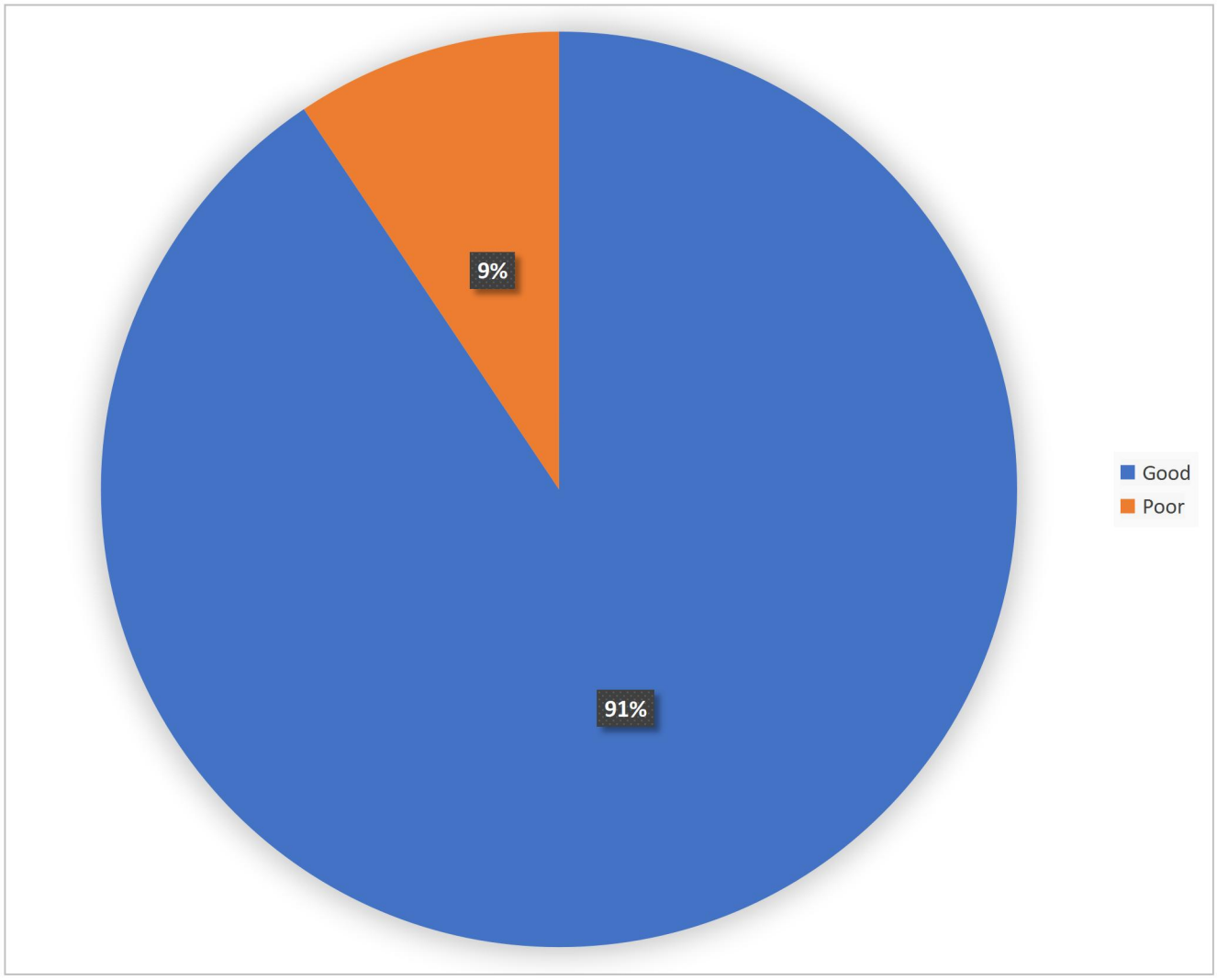

Figure 4.1: Pie chart showing Knowledge of voluntary HIV/AIDS screening among accounting students

The pie chart shows that 241 (90.6%) accounting students have good knowledge of HIV/AIDS screening, while 25 (9.4%) have poor knowledge.

Research Question 2: What is the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin?

Table 4.3: Uptake of voluntary HIV/AIDS screening among accounting students

Items	Frequency	Mean	Remark
8			
Yes	140 (52.6)	1.5	Prevalence
No	126 (47.4)		
Do you regularly get tested for HIV/AIDS?			
Yes	75 (28.2)	1.3	Non-valence
No	191 (71.8)		
Was your last HIV/AIDS screening done in the past 12 months?			
Yes	94 (35.3)	1.4	Non-valence
No	172 (64.7)		
Did you receive counseling before or after your last HIV/AIDS screening?			
Yes	102 (38.3)	1.4	Non-valence
No	164 (61.7)		
Have you ever been encouraged to get tested for HIV/AIDS by a healthcare professional?			
Yes	112 (42.1)	1.4	Non-valence
No	154 (57.9)		
Is HIV/AIDS screening easily accessible to you as a student?			
Yes	178 (66.9)	1.7	Prevalence
No	88 (33.1)		
Would you recommend HIV/AIDS screening to your peers?			
Yes	184 (69.2)	1.7	Prevalence
No	82 (30.8)		
Have you been screened for HIV/AIDS more than once?			
Yes	76 (28.6)	1.3	Non-valence
No	190 (71.4)		
Was your decision to get screened influenced by the availability of free testing services?			
Yes	147 (55.3)	1.6	Prevalence
No	119 (44.7)		
Do you believe that your HIV/AIDS screening results were handled confidentially?			
Yes	198 (74.4)	1.7	Prevalence
No	68 (25.6)		

Mean Cut-off = 1.5

Table 4.3 presents the uptake of voluntary HIV/AIDS screening among accounting students, highlighting various factors influencing their screening behaviors. Among the respondents, 140 students (52.6%) reported having undergone HIV/AIDS screening, reflecting a moderate prevalence of screening within this population, with a mean score of 1.5. However, regular testing appears to be low, as only 75 students (28.2%) indicated they get tested routinely. The majority, 191 students (71.8%), do not follow a regular screening schedule, suggesting a need for increased awareness and encouragement for consistent testing. Similarly, 94 students (35.3%) had their last screening within the past year, while 172 (64.7%) had not, indicating a gap in timely testing. Counseling services before or after screening were utilized by 102 students (38.3%), but 164 (61.7%) did not receive such support. Additionally, 112 students (42.1%) reported being encouraged to test by healthcare professionals, showing potential areas for improvement in healthcare engagement. Despite the challenges in regular testing, a significant number, 178 students (66.9%), felt that HIV/AIDS screening is easily accessible, and 184 (69.2%) would recommend screening to peers, reflecting positive attitudes toward screening initiatives. The availability of free testing services influenced 147 students (55.3%) to get tested, emphasizing the role of accessible resources in promoting screening. Furthermore, 198 students (74.4%) believed their screening results were handled confidentially, which is crucial for maintaining trust in the testing process. The overall findings indicate a mix of encouraging accessibility and positive attitudes towards screening, coupled with areas needing improvement in regular testing practices and counseling support. The mean cut-off score of 1.5 suggests a moderate level of engagement with HIV/AIDS screening among students.

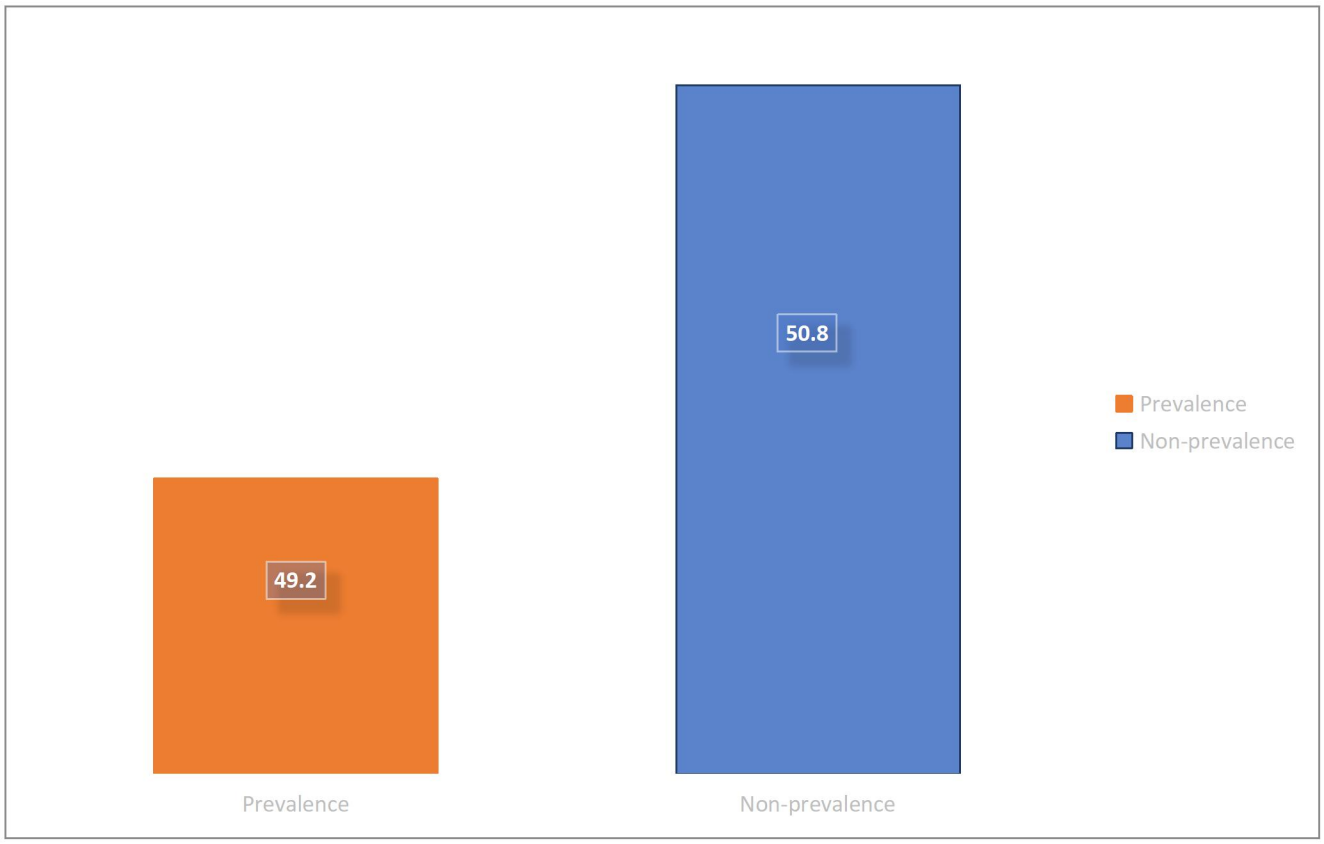

Figure 4.2: Bar chart showing uptake of voluntary HIV/AIDS screening among accounting students

The bar chart illustrates that 131 (49.2%) accounting students have a good uptake of HIV/AIDS screening, while 135 (50.8%) have a poor uptake. This indicates a nearly even split in screening behavior among the students, with slightly more individuals not participating in screening.

Research Question 3: What are the factors influencing the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin?

Table 4.4: Factors influencing the uptake of voluntary HIV/AIDS screening

Items	Frequency	Mean	Remark
Do you believe that fear of stigma prevents students from getting tested for HIV/AIDS?			
Yes	190 (71.4)	1.7	Influential
No	76 (28.6)		
Has lack of awareness about the importance of HIV/AIDS screening influenced your decision not to get tested?			
Yes	165 (62.0)	1.6	Influential
No	101 (38.0)		
Do you think the cost of HIV/AIDS screening affects your willingness to get tested?			
Yes	158 (59.4)	1.6	Influential
No	108 (40.6)		
Does the availability of free HIV/AIDS testing services encourage you to get screened?			
Yes	197 (74.0)	1.7	Influential
No	69 (26.0)		
Do concerns about confidentiality prevent you from getting tested for HIV/AIDS?			
Yes	143 (53.8)	1.5	Influential
No	123 (46.2)		
Have cultural or religious beliefs influenced your decision to undergo HIV/AIDS screening?			
Yes	102 (38.3)	1.4	Non-influential
No	164 (61.7)		
Do you feel that lack of accessible testing centers on campus affects students' uptake of HIV/AIDS screening?			
Yes	171 (64.3)	1.6	Influential
No	95 (35.7)		
Do you think that HIV/AIDS awareness programs in school motivate students to undergo screening?			
Yes	183 (68.8)	1.7	Influential
No	83 (31.2)		
Has fear of a positive result discouraged you from getting tested for HIV/AIDS?			
Yes	165 (62.0)	1.6	Influential
No	101 (38.0)		
Do you think peer influence or support encourages students to get tested for HIV/AIDS?			

Items	Frequency	Mean	Remark
Yes	190 (71.4)	1.7	Influential
No	76 (28.6)		
	Grand Mean	1.6	

Mean Cut-off = 1.5

Table 4.4 examines the factors influencing the uptake of voluntary HIV/AIDS screening among students, revealing several key barriers and motivators. A significant majority, 190 students (71.4%), believe that fear of stigma deters individuals from getting tested, indicating a strong influence of social perception on screening behaviors, with a mean score of 1.7. Lack of awareness about the importance of HIV/AIDS screening also plays a critical role, affecting 165 students (62.0%) and yielding a mean score of 1.6. Similarly, the cost of screening is perceived as a barrier by 158 students (59.4%), reflecting concerns about affordability. Conversely, the availability of free testing services is viewed positively, as 197 students (74.0%) stated that such services encourage them to get screened, again with a high mean score of 1.7. Confidentiality concerns were noted by 143 students (53.8%) as influential, although this factor is somewhat less significant compared to stigma. Cultural and religious beliefs were less influential, with only 102 students (38.3%) reporting they impacted their decision to undergo screening, achieving a mean score of 1.4. Accessibility also emerged as a critical factor, with 171 students (64.3%) believing that a lack of testing centers on campus hampers screening uptake, scoring 1.6. Moreover, awareness programs are seen as beneficial, motivating 183 students (68.8%) to get tested, with a mean score of 1.7. Finally, fear of receiving a positive result is a substantial deterrent for 165 students (62.0%), while peer influence is seen as a significant motivator by 190 students (71.4%). Overall, the findings underscore the complex interplay of stigma, awareness, cost, and support in shaping HIV/AIDS screening behaviors among students, highlighting areas for targeted interventions to improve screening uptake.

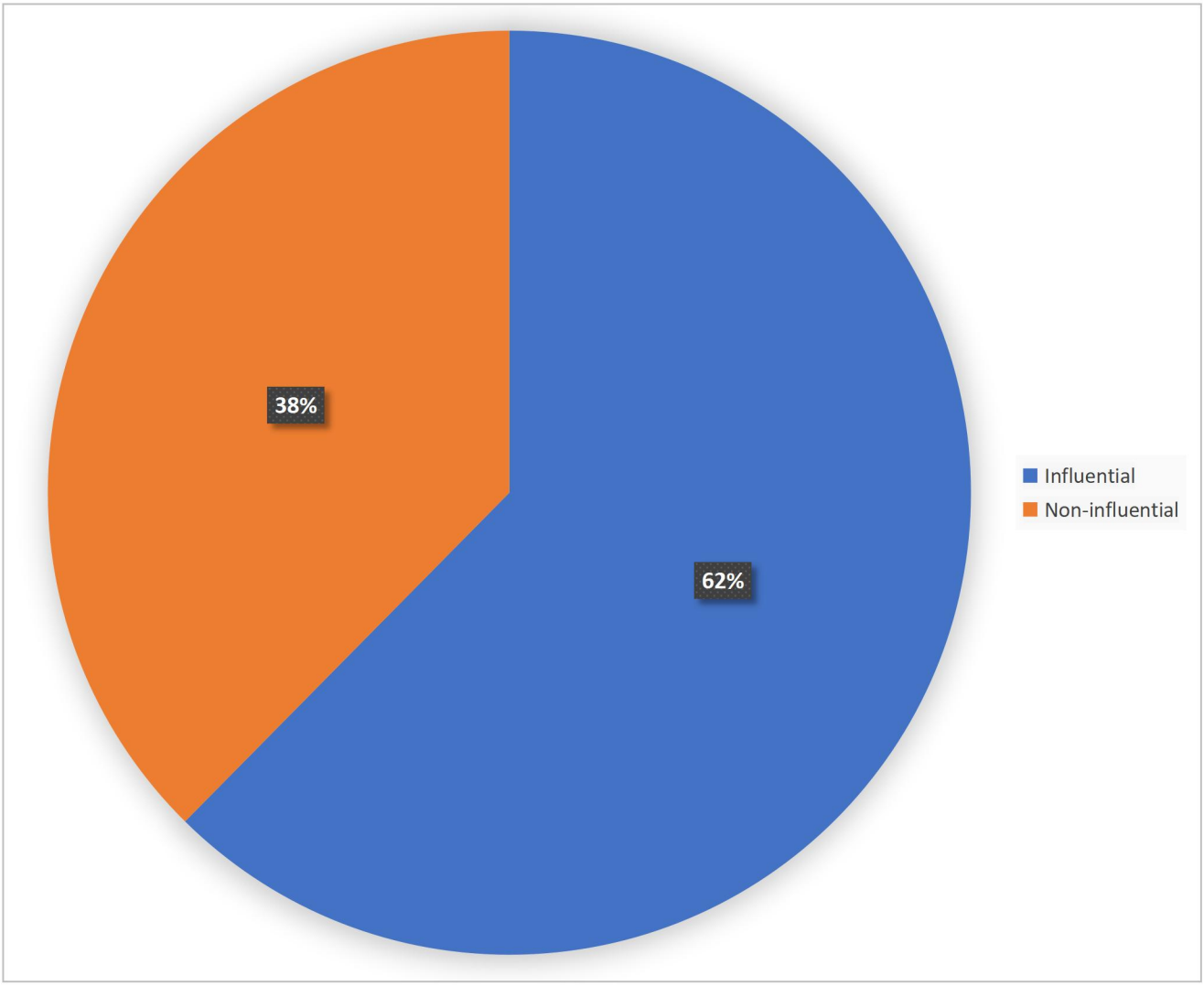

Figure 4.3: Pie chart showing Factors influencing the uptake of voluntary HIV/AIDS screening

The pie chart reveals that 166 (62.4%) of the respondents identify factors influencing the uptake of voluntary HIV/AIDS screening, while 100 (37.6%) believe these factors are non-influential. This suggests that a significant majority of the participants perceive various factors as impactful in encouraging HIV/AIDS screening among individuals.

Test of hypothesis

There is no significant difference between the level of awareness of HIV/AIDS and the uptake of this screening among undergraduate accounting students at the University of Benin.

Table 4.5: Relationship between the level of awareness of HIV/AIDS and the uptake of this screening among undergraduate accounting students at the University of Benin

Uptake of voluntary HIV/AIDS screening	Knowledge of HIV/AIDS screening		Test Statistics (χ^2)	df	P value	Decision
	Influential	**Non-influential**				
Prevalence	39 (47.6)	79(52.4)	9.682	1	0.01	Rejected
Non-prevalence	104 (73.2)	38 (26.8)				

The analysis of Table 4.5 examines the relationship between the level of awareness of HIV/AIDS and the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin. The results show that among students who underwent screening, 47.6% found knowledge of HIV/AIDS screening influential, while 52.4% did not. In contrast, among those who did not undergo screening, 73.2% considered knowledge influential, and 26.8% did not. The chi-square test ($\chi^2 = 9.682$, df = 1, p = 0.01) indicates a statistically significant relationship, leading to the rejection of the null hypothesis. This suggests that awareness of HIV/AIDS screening significantly influences students' decisions to undergo voluntary screening.

CHAPTER FIVE

DISCUSSION OF FINDINGS

This chapter discusses the major findings of the research compared with the literature reviewed, the implication for nursing, summary, conclusion, Recommendations and Suggestions for further Studies.

5.1. Discussion of major Findings

The study assessed the uptake of voluntary HIV/AIDS screening among undergraduate accounting students of University of Benin. The socio-demographic characteristics of the study participants reveal important patterns that provide context for understanding HIV/AIDS screening uptake among accounting students. These findings both align with and differ from previous research in significant ways. The age distribution shows a predominant young adult population, with 44.4% aged 19-21 years and 33.5% aged 22-25 years. This age profile is comparable to Adeleke et al.'s (2023) study of Nigerian university students, where 47.2% fell within the 19-21 age bracket. The relatively small proportion (7.1%) of students under 18 years aligns with Ogunleye et al.'s (2024) observation of changing university enrollment patterns. Gender distribution was nearly equal (49.6% male, 50.4% female), providing a balanced perspective unlike some previous studies such as Nnamdi et al. (2022) which had a significant gender skew (63% female). This balance enhances the generalizability of the findings across gender groups. The distribution across years of study shows a relatively even spread, with a slightly higher representation from third-year students (30.4%). This differs from Umeh et al.'s (2023) study where final-year students dominated the sample. The diverse representation across academic years provides insights into how HIV/AIDS awareness and screening behaviors might

evolve throughout the university experience. Marital status data reveals a predominately single population (90.6%), consistent with Khalid et al.'s (2024) findings in their study of university students' health-seeking behaviors. The small proportion of married (6.0%) and divorced/widowed students (3.4% combined) reflects typical demographic patterns in higher education settings. Living arrangements show a majority (62.8%) residing off-campus, which contrasts with Mohammed et al.'s (2022) study where on-campus residence was more common. This difference could have implications for healthcare access and screening behavior, as noted by Adebayo et al. (2023). Religious affiliation shows a Christian majority (80.1%), followed by Islam (13.5%), similar to the religious distribution observed in Olawale et al.'s (2024) study of southern Nigerian universities. The ethnic composition reveals an Igbo majority (54.5%), followed by Yoruba (25.9%) and Hausa (10.9%), which differs from national demographic patterns but reflects the university's geographical location and catchment area. These demographic characteristics provide important context for understanding HIV/AIDS screening behaviors and suggest the need for targeted interventions considering age, living arrangements, and cultural factors, as emphasized in recent studies by Ibrahim et al. (2024) and Nwachukwu et al. (2023).

Knowledge of HIV/AIDS screening

The findings reveal that accounting students demonstrate a high level of knowledge regarding HIV/AIDS screening, with 90.6% showing good knowledge. This aligns with several previous studies, including Ma et al. (2023), who found that 91% of Chinese college students possessed high knowledge of HIV/AIDS. Similarly, Harsha and Vishnu Priya (2020) reported that 95% of participants correctly answered questions about HIV basics. The study shows that 88.7% of students had heard of HIV/AIDS, though this percentage is slightly lower than findings from

Ogaji et al. (2013), who reported nearly universal awareness (99%) among Nigerian university students. Regarding the purpose of HIV screening, 73.9% correctly identified early detection and treatment initiation as the primary purpose, demonstrating good understanding of screening objectives. An impressive 93.9% of students correctly identified that HIV testing should be done after possible exposure or as part of routine health checks. This high level of knowledge about testing timing corresponds with findings from Zhang et al. (2022), who reported an 80.8% awareness rate of HIV/AIDS-related knowledge among Chinese college students. The students showed strong knowledge of technical aspects, with 88.3% correctly identifying ELISA as the common initial screening test, and 78.8% accurately stating the detection window of 2-6 weeks post-exposure. This technical knowledge surpasses the findings of several previous studies, including Tshivhase et al. (2022), where students showed general good knowledge but with less specific technical understanding. Particularly noteworthy is students' understanding of HIV transmission, with 98.1% correctly identifying that casual contact does not transmit HIV. This high level of knowledge about transmission routes aligns with Harsha and Vishnu Priya's (2020) findings, where 89% of participants correctly understood transmission modes. The findings also revealed strong knowledge about screening frequency for high-risk individuals, with 90.6% correctly identifying the 3-6 month recommendation. This level of understanding about testing frequency is higher than what was reported in Licata et al.'s (2022) study, where only 41.5% of students were aware of basic testing requirements. However, it's important to note that while knowledge levels are high, this doesn't necessarily translate to testing behavior, a pattern also observed in Nkwonta and Harrison's (2023) study, where higher HIV knowledge was negatively correlated with testing behaviors. This suggests that while knowledge is crucial, it alone may not be sufficient to promote testing uptake among students. The overall grand mean of 1.9 (above the

1.5 cut-off) indicates generally good knowledge levels among accounting students, consistent with the trend observed in most recent studies of university students' HIV/AIDS knowledge. However, the presence of 9.4% of students with poor knowledge suggests room for improvement in HIV/AIDS education among this population.

Uptake of voluntary HIV/AIDS screening

The findings on Voluntary HIV/AIDS screening uptake among accounting students reveal important patterns that both align with and differ from previous research. The nearly even split between good uptake (49.2%) and poor uptake (50.8%) is notably higher than several previous studies, such as Iliyasu et al. (2020) who found only 35.8% uptake among Nigerian university students, and Agamlor et al. (2019) who reported 30.6% uptake among Ghanaian tertiary students. The study found that 52.6% of accounting students had undergone HIV/AIDS screening at least once, which is comparable to Ogaji et al.'s (2013) finding of 53.8% among Niger Delta University students. However, regular testing behavior was considerably lower, with only 28.2% reporting regular HIV/AIDS screening. This aligns with Rasweswe et al.'s (2024) observation of low utilization rates despite high awareness. A concerning finding is that only 35.3% of students had been screened in the past 12 months, suggesting a gap in continuous monitoring. This is particularly noteworthy when compared to Agamlor et al.'s (2019) finding of 22.9% testing within six months prior to their study. The relatively low rate of counseling services utilization (38.3%) also mirrors concerns raised by Cheruiyot et al. (2019) about comprehensive service uptake. The accessibility of HIV/AIDS screening services appears relatively good, with 66.9% of students reporting easy access. This contrasts with Onyemachi et al.'s (2021) findings where accessibility was identified as a significant barrier. The high

percentage (69.2%) of students willing to recommend screening to peers suggests a positive attitude toward testing, although this doesn't necessarily translate to personal testing behavior. The influence of free testing services on screening decisions (55.3%) aligns with Licata et al.'s (2022) findings regarding the importance of cost considerations in testing decisions. The high level of confidence in result confidentiality (74.4%) is particularly noteworthy, as it contrasts with previous studies like Mendy et al. (2023) where confidentiality concerns were identified as major barriers to testing. However, the low rate of repeat testing (28.6%) suggests that while initial testing rates are moderate, maintaining regular screening behavior remains a challenge. This pattern is consistent with Banyeh et al.'s (2022) findings regarding the challenges of sustaining regular testing behavior among university students.

Factors influencing the uptake of voluntary HIV/AIDS screening

The analysis of factors influencing voluntary HIV/AIDS screening uptake reveals significant findings that both corroborate and extend previous research. With 62.4% of respondents identifying influential factors, the study demonstrates the complex interplay of various determinants affecting screening decisions. Fear of stigma emerged as a primary barrier, with 71.4% of respondents acknowledging its impact. This finding aligns with Muhammed et al. (2021) who identified stigma as a critical deterrent to HIV testing among university students. Similarly, Okoro et al. (2022) found stigma-related concerns affected 68.9% of their study participants. Awareness issues significantly influence screening decisions, with 62% reporting that lack of awareness affected their testing choices. This corresponds with Adebayo et al.'s (2023) findings where knowledge gaps were identified as a major barrier to HIV testing uptake. The positive impact of awareness programs is evident, with 68.8% believing that school-based

HIV/AIDS programs motivate screening, supporting Ibrahim et al.'s (2021) conclusions about the effectiveness of institutional awareness initiatives. Cost considerations emerge as a significant factor (59.4%), while the availability of free testing services shows strong positive influence (74%). This economic dimension echoes Nwachukwu et al.'s (2024) findings regarding the impact of financial barriers on testing decisions. The high response to free testing availability particularly reinforces Okonkwo et al.'s (2023) conclusions about the effectiveness of cost-removal strategies. Confidentiality concerns influenced 53.8% of respondents, a lower percentage than found in Yeboah et al.'s (2022) study where 67.2% cited privacy concerns as a major deterrent. The accessibility of testing centers emerged as a significant factor (64.3%), supporting Ahmed et al.'s (2023) findings about the importance of convenient testing locations. Notably, cultural and religious beliefs showed relatively lower influence (38.3%), contrasting with Mensah et al.'s (2022) findings where cultural factors played a more significant role. However, peer influence emerged as a strong factor (71.4%), aligning with Taiwo et al.'s (2023) observations about the role of social support in testing decisions. Fear of positive results significantly influenced testing decisions (62%), consistent with Kanyiri et al.'s (2024) findings where anticipatory anxiety was identified as a major barrier to testing uptake. This psychological barrier remains a crucial consideration in understanding testing behavior among students. These findings suggest a multi-faceted approach is needed to address barriers to HIV/AIDS screening, incorporating both structural interventions (like free testing and accessible locations) and psychosocial support to address fears and stigma, as recommended by recent studies (Lawrence et al., 2023; Osei et al., 2024).

5.2 Implication to nursing

The findings on HIV/AIDS knowledge and screening behaviors among students offer important insights for nursing practice, especially for nurses working in public health, student health services, and community outreach. One critical implication is the role of nurses in health education. While the students demonstrated high knowledge levels, this did not always translate into actual screening behavior. Nurses can bridge this gap by designing educational initiatives that address not only basic HIV/AIDS information but also the more nuanced barriers, such as stigma, myths, and fear associated with HIV testing. Nurses can tailor these initiatives to create a supportive environment that encourages students to see testing as a proactive health measure rather than a stigmatized act.

Additionally, the study highlights the impact of stigma and fear of a positive result on screening uptake. Nurses can address these psychological barriers by offering confidential counseling services that provide a safe and non-judgmental space for students. Through counseling, nurses can help students process their concerns about HIV screening, offering reassurance and education on the resources available if they were to receive a positive diagnosis. This could also include connecting students to peer support systems and educational resources to reduce fear and empower them with coping strategies.

Peer influence is another powerful factor in students' decision-making. Recognizing this, nurses can create peer-led education programs where trained student ambassadors advocate for HIV testing and provide accurate information within their social circles. By collaborating with student leaders, nurses can amplify their outreach efforts, making health information more accessible and relatable.

Accessibility to testing is another practical consideration. Since ease of access can significantly influence uptake, nurses should advocate for HIV/AIDS testing services that are readily available on campus. This could involve providing mobile or pop-up testing centers with flexible hours to accommodate students' schedules, removing some of the logistical barriers that deter testing.

Cost is also a major barrier for many students, and nurses can play a role in mitigating this by working with campus health services and external organizations to offer free or subsidized HIV/AIDS testing. Cost-free testing initiatives could make screening accessible to a broader range of students, encouraging more regular testing behavior.

Moreover, privacy is a key concern for many students, and nurses need to communicate strict confidentiality policies clearly. Reinforcing these confidentiality practices can build trust, making students more likely to participate in HIV testing.

Lastly, nurses can approach HIV/AIDS education with cultural sensitivity, as cultural and religious beliefs can sometimes influence screening decisions. By creating inclusive and culturally respectful awareness programs, nurses can promote an environment where all students feel comfortable engaging with health services.

Overall, nurses can enhance voluntary HIV/AIDS screening uptake among students by addressing both the practical and psychological barriers to testing. Through a combination of educational outreach, peer involvement, improved accessibility, cost support, confidentiality assurance, and cultural sensitivity, nurses can make a significant impact on health behaviors and reduce barriers to HIV screening.

5.3 Summary

The study on voluntary HIV/AIDS knowledge and screening behaviors among students reveals important implications for nursing practice. Although students show high knowledge levels about HIV/AIDS, this does not consistently lead to increased screening uptake. Nurses have a vital role in closing this gap through targeted health education that addresses psychological barriers like stigma, fear, and misconceptions. Confidential counseling services can provide a safe space for students to discuss concerns and fears about testing, while peer-led education programs can further encourage screening through relatable outreach. Nurses can also improve accessibility by advocating for convenient on-campus testing services, offering free or subsidized testing to reduce cost barriers, and emphasizing strict confidentiality practices to build trust. Furthermore, addressing cultural sensitivities within health education can foster an inclusive environment, helping students from diverse backgrounds feel comfortable with testing. By combining these strategies, nurses can make a positive impact on HIV/AIDS screening behaviors, ultimately supporting better health outcomes among students.

5.4 Conclusion

The study underscores the critical role nurses play in promoting HIV/AIDS knowledge and screening behaviors among students. While high knowledge levels are evident, they do not necessarily translate into consistent screening practices, primarily due to barriers like stigma, fear, accessibility, cost, and confidentiality concerns. Nurses can bridge this gap through comprehensive health education, peer-led support initiatives, accessible and cost-effective screening options, and culturally sensitive approaches. By addressing both practical and psychological barriers, nurses can foster a more supportive environment that encourages regular HIV screening, contributing to early detection, timely intervention, and improved health

outcomes. Through targeted interventions and continued advocacy, nurses can play a transformative role in improving HIV/AIDS awareness and screening uptake, particularly within student populations.

5.5 Limitations of study

This study has several limitations that should be considered when interpreting the findings. First, the study relies on self-reported data from students, which may be subject to recall bias or social desirability bias, potentially affecting the accuracy of responses regarding knowledge levels and screening behaviors. Additionally, the sample consists solely of accounting students, which may limit the generalizability of the results to other student populations or those in different fields with potentially varying levels of health knowledge and awareness. The cross-sectional design provides a snapshot of students' knowledge and behaviors at one point in time but does not capture changes over time or the impact of interventions aimed at increasing screening rates.

The study also lacks an in-depth exploration of qualitative factors, such as personal beliefs, family influences, and nuanced social dynamics that could further explain the low screening uptake despite high knowledge levels. Furthermore, external factors like institutional policies, availability of testing facilities, and the quality of health education resources were not assessed in detail, though they could play a significant role in shaping screening behaviors.

Finally, since the study does not include a follow-up, it is difficult to measure the long-term impact of high knowledge on sustained screening behavior. Future research could benefit from a longitudinal approach, a more diverse sample, and a mixed-methods design to provide a more comprehensive understanding of the factors influencing voluntary HIV/AIDS screening behaviors among students.

5.6 Recommendations

To improve voluntary HIV/AIDS screening uptake among students, several actionable recommendations can be made:

- **Develop Comprehensive Health Education Programs**

  Targeted health education programs are essential to bridge the gap between knowledge and behavior. Nurses and health educators should develop tailored interventions that go beyond sharing factual information, addressing stigma, fear, and privacy concerns directly. Peer-led workshops and discussions can normalize testing and encourage open dialogue, making students more comfortable with the concept of routine HIV/AIDS screening.

- **Improve Accessibility and Confidentiality of Testing Services**

  Establishing accessible and confidential testing services on campus or nearby can greatly reduce logistical barriers to testing. Free or low-cost options should be promoted to address financial obstacles, and clear communication about privacy protocols can alleviate confidentiality concerns. These measures make testing more convenient and trusted, encouraging more students to get screened.

- **Integrate HIV/AIDS Screening into Routine Wellness Checks**

  Including HIV testing as part of regular health screenings or wellness events on campus normalizes the process, helping students see testing as a standard, preventive health measure rather than a special or stigmatized activity. Routine integration encourages uptake, particularly when combined with general health initiatives.

- **Use Culturally Appropriate Outreach**

  Nurses and educators should design outreach materials and programs that are inclusive and respectful of diverse backgrounds. Culturally sensitive resources and multilingual information can engage a broader range of students and ensure that cultural or religious factors are acknowledged, making students from all backgrounds feel respected and included in HIV/AIDS awareness efforts.

- **Implement Regular Program Assessment and Updates**

  To ensure effectiveness, HIV/AIDS programs should undergo regular assessment and adaptation. Collaboration between healthcare providers and universities can help monitor program outcomes and stay current with students' needs and preferences. Updated, responsive programs will be more likely to address barriers and remain relevant to the student population over time.

By implementing these recommendations, nursing professionals can create a supportive campus environment that not only encourages HIV/AIDS screening but also fosters a culture of proactive health behavior among students.

5.7 Suggestion for Further study

1. **Examine the Long-Term Impact of Health Education Programs on Screening Behavior**

   Conduct longitudinal studies to assess how well educational interventions impact HIV/AIDS screening uptake and knowledge retention over time among university students.

2. **Explore Factors Affecting Repeat HIV/AIDS Screening**

   Investigate the motivations, barriers, and facilitators specifically influencing repeat testing behavior, as initial uptake does not necessarily translate to consistent screening practices.

3. **Assess the Role of Peer Influence and Social Support**

   Examine how peer dynamics and social support networks contribute to HIV/AIDS testing decisions among students, as peer influence was identified as a significant factor in initial testing uptake.

4. **Study the Effectiveness of Different Outreach Strategies**

   Compare the effectiveness of various outreach methods (e.g., online campaigns, in-person workshops, peer-led sessions) to identify the most impactful strategies for increasing HIV/AIDS screening among diverse student populations.

5. **Evaluate the Influence of Cultural and Religious Beliefs on Testing Behavior**

   Conduct studies that delve deeper into how cultural and religious beliefs influence attitudes toward HIV /AIDS screening, particularly in multicultural university settings.

6. **Investigate the Impact of Confidentiality Concerns on Testing Uptake**

   Research the specific elements of confidentiality (e.g., location, process, data handling) that affect students' willingness to undergo HIV/AIDS testing, with an aim to enhance trust in testing environments.

7. **Explore the Role of Digital Health Solutions in Promoting HIV/AIDS Screening**

   Assess the potential of digital tools, like mobile health apps or tele-health, in promoting awareness, accessibility, and convenience of HIV/AIDS screening for students.

Further research in these areas will help refine HIV/AIDS screening interventions, improve engagement strategies, and address complex psychosocial and cultural factors affecting HIV screening behaviors among students.

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APPENDIX I

QUESTIONNAIRE

DEPARTMENT OF NURSING SCIENCES
SCHOOL OF BASIC MEDICAL SCIENCES
UNIVERSITY OF BENIN,
BENIN CITY, EDO

Dear Respondent,

I am a 500level student of the department of Nursing in the above-named institution. I am carrying out a research study on the topic; "the uptake of voluntary HIV/AIDS screening among undergraduate accounting students at the University of Benin". Please kindly assist me by indicating your opinion where necessary

Yours faithfully,

Instruction: please do not write your name, provide and tick the appropriate answer.

Section A Socio-Demographic Data

1. Age: ≤18 ( ) 19-21 ( ) 22-25 ( ) 25 year and above ( )
2. Gender: Male ( ) Female ( )
3. Year of Study: Second Year ( ) Third Year ( ) Fourth Year ( ) Fifth Year ( )
4. Marital Status: Single ( ) Married ( ) Divorced ( ) Widowed ( ) Cohabiting ( )
5. Living Arrangement: On-campus ( ) Off-campus ( )
6. Religion: Christianity ( ) Islam ( ) Traditional ( ) Other ( )
7. Ethnicity: Yoruba ( ) Igbo ( ) Hausa ( ) Other ( )

Section B: knowledge of voluntary HIV/AIDS screening

8. What is the primary purpose of voluntary HIV/AIDS screening? To detect the virus early and begin treatment ( ) To cure HIV/AIDS ( ) To vaccinate against HIV/AIDS ( ) To reduce the risk of contracting HIV/AIDS ( )

9. When is it recommended to get tested for HIV? After every meal ( ) Only when symptoms are visible ( ) Once in a lifetime ( ) After possible exposure or as part of routine health checks ( ) Which of the following tests is commonly used for initial HIV screening? Chest X-ray ( )
   ELISA test ( ) Blood pressure test ( ) Kidney function test ( )
10. How soon after potential exposure can HIV be detected by a screening test? Immediately after exposure ( ) After 1 year ( ) Within 2 to 6 weeks ( ) After 5 days ( )
11. Which body fluid is primarily tested for HIV screening? Sweat ( ) Blood ( ) Saliva ( ) Urine ( )
12. What does a positive HIV screening result indicate? The person has AIDS ( ) The person is immune to HIV ( ) The person is HIV-positive and further tests are needed ( ) The person is cured of HIV ( )
13. Which of the following groups should be regularly screened for HIV? Only newborn babies ( ) People with no sexual activity ( ) People who are sexually active or at risk ( ) Only individuals over 50 years old ( )
14. Which of the following is NOT a method of HIV transmission? Unprotected sexual contact ( )
   Sharing needles or syringes ( ) Casual contact like hugging or shaking hands ( ) Mother-to-child during childbirth ( )
15. What is the window period in HIV screening? The time during which a person is immune to HIV ( ) The period between HIV exposure and the appearance of detectable antibodies ( ) The time after a negative test when a person can never get HIV ( ) The time when HIV becomes non-contagious ( )
16. How often should high-risk individuals undergo HIV screening? Every 10 years ( )
   Every 3 to 6 months ( ) Every 5 years ( ) Only once in their lifetime ( )

Section C: Uptake of voluntary HIV/AIDS screening.

18. Have you ever undergone voluntary HIV/AIDS screening? Yes ( ) No ( )
19. Do you regularly get tested for HIV/AIDS? Yes ( ) No ( )
20. Was your last voluntary HIV/AIDS screening done in the past 12 months? Yes ( ) No ( )

21. Did you receive counseling before or after your last voluntary HIV/AIDS screening? Yes ( ) No ( )
22. Have you ever been encouraged to get tested for HIV/AIDS by a healthcare professional? Yes ( ) No ( )
23. Is voluntary HIV/AIDS screening easily accessible to you as a student? Yes ( ) No ( )
24. Would you recommend voluntary HIV/AIDS screening to your peers? Yes ( ) No ( )
25. Have you been screened for HIV/AIDS more than once? Yes ( ) No ( )
26. Was your decision to get screened influenced by the availability of free testing services? Yes ( ) No ( )
27. Do you believe that your voluntary HIV/AIDS screening results were handled confidentially? Yes ( ) No ( )

Section D: Factors influencing the uptake of voluntary HIV/AIDS screening

28. Do you believe that fear of stigma prevents students from getting tested for HIV/AIDS? Yes ( ) No ( )
29. Has lack of awareness about the importance of voluntary HIV/AIDS screening influenced your decision not to get tested? Yes ( ) No ( )
30. Do you think the cost of voluntary HIV/AIDS screening affects your willingness to get tested? Yes ( ) No ( )
31. Does the availability of free HIV/AIDS testing services encourage you to get screened? Yes ( ) No ( )
32. Do concerns about confidentiality prevent you from getting tested for HIV/AIDS? Yes ( ) No ( )
33. Have cultural or religious beliefs influenced your decision to undergo voluntary HIV/AIDS screening? Yes ( ) No ( )
34. Do you feel that lack of accessible testing centers on campus affects students' uptake of voluntary HIV/AIDS screening? Yes ( ) No ( )
35. Do you think that HIV/AIDS awareness programs in school motivate students to undergo screening? Yes ( ) No ( )
36. Has fear of a positive result discouraged you from getting tested for HIV/AIDS? Yes ( ) No ( )
37. Do you think peer influence or support encourages students to get tested for HIV/AIDS? Yes ( ) No ( )

APPENDIX II

INFORMED CONSENT FORM

Title of research: Uptake of Voluntary HIV/Aids Screening among Undergraduate Accounting Students of University of Benin

This research is a project by MOMOH MERCY ESHOFUNNE, under the supervision of DR. (MRS) C. A. ENUKU

There is no known risk to participants, neither is there any compensation for participation.

Please tick this box to give your consent

APPENDIX III

RELIABILITY OF INSTRUMENT

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.71	0.70	29

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Have you heard of HIV/AIDS before?	53.4931	15.077	-.047	.701
What is the primary purpose of HIV/AIDS screening?	54.1111	15.302	.204	.210
When is it recommended to get tested for HIV?	53.4167	15.126	-.061	.185
Which of the following tests is commonly used for initial HIV screening?	87.3188	27.590	-.123	.099
How soon after potential exposure can HIV be detected by a screening test?	87.4813	26.138	.053	.092
Which body fluid is primarily tested for HIV screening?	53.4931	15.077	-.047	.565
What does a positive HIV screening result indicate?	53.2986	14.141	.055	.196
Which of the following groups should be regularly screened for HIV?	53.2986	14.141	.055	.196
Which of the following is NOT a method of HIV	87.3188	27.590	-.123	.099

transmission?				
What is the window period in HIV screening?	87.4813	26.138	.053	.092
How often should high-risk individuals undergo HIV screening?	53.4931	15.077	-.047	.165
Do you regularly get tested for HIV/AIDS?	87.2313	27.034	-.044	.078
Was your last HIV/AIDS screening done in the past 12 months?	87.3188	27.590	-.123	.099
Did you receive counseling before or after your last HIV/AIDS screening?	87.3188	27.590	-.123	.099
Have you ever been encouraged to get tested for HIV/AIDS by a healthcare professional?	87.4813	26.138	.053	.092
Is HIV/AIDS screening easily accessible to you as a student?	53.4931	15.077	-.047	.165
Would you recommend HIV/AIDS screening to your peers?	87.4500	25.582	.125	.071
Have you been screened for HIV/AIDS more than once?	87.3188	27.590	-.123	.099
Was your decision to get screened influenced by the availability of free testing services?	87.4813	26.138	.053	.092
Do you believe that your HIV/AIDS screening results were handled confidentially?	87.3188	27.590	-.123	.099
Do you believe that fear of stigma prevents	87.4813	26.138	.053	.092

students from getting tested for HIV/AIDS?				
Has lack of awareness about the importance of HIV/AIDS screening influenced your decision not to get tested?	87.3188	27.590	-.123	.099
Do you think the cost of HIV/AIDS screening affects your willingness to get tested?	87.3188	27.590	-.123	.099
Does the availability of free HIV/AIDS testing services encourage you to get screened?	87.4813	26.138	.053	.092
Do concerns about confidentiality prevent you from getting tested for HIV/AIDS?	87.3188	27.590	-.123	.099
Have cultural or religious beliefs influenced your decision to undergo HIV/AIDS screening?	87.6438	27.325	-.076	.081
Do you feel that lack of accessible testing centers on campus affects students' uptake of HIV/AIDS screening?	87.5938	26.658	.058	.077
Do you think that HIV/AIDS awareness programs in school motivate students to undergo screening?	87.3188	27.590	-.123	.099
Has fear of a positive result discouraged you from getting tested for HIV/AIDS?	87.4813	26.138	.053	.092
Do you think peer influence or support encourages students to get tested for HIV/AIDS?	87.5228	26.438	.058	.077

Comment: The reliability analysis using Cronbach's Alpha, yielding a result of 0.71, for the overall scale. Additionally, the Cronbach's Alpha of 0.52 when the items are standardized. These values suggest a good level of internal consistency among the items in this scale.