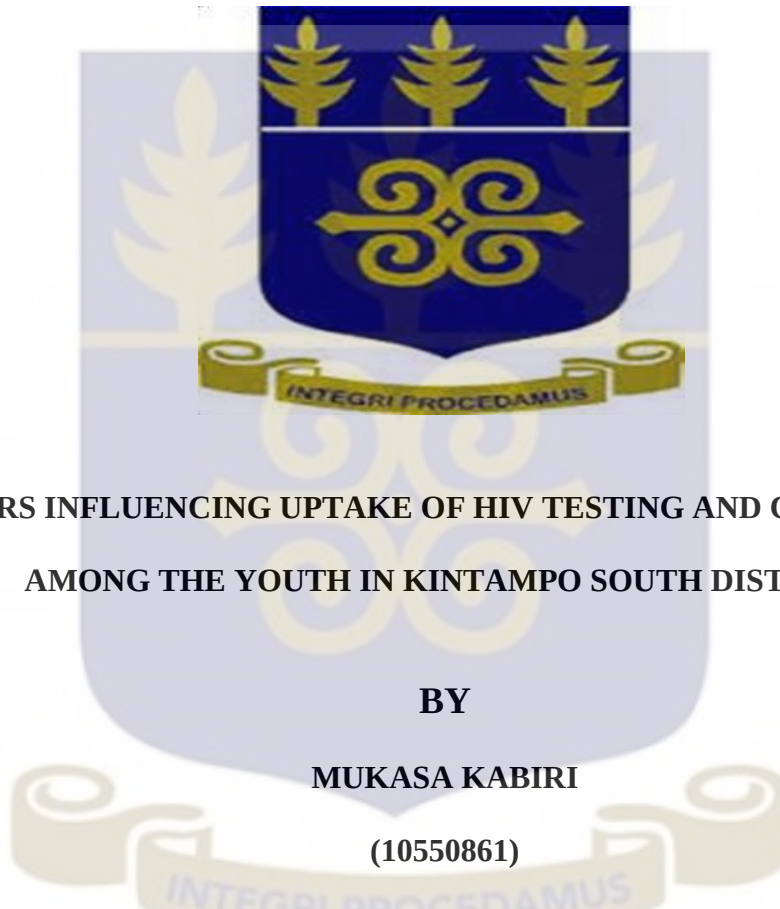


**SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA
LEGON**



**FACTORS INFLUENCING UPTAKE OF HIV TESTING AND COUNSELLING
AMONG THE YOUTH IN KINTAMPO SOUTH DISTRICT**

BY

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(10550861)

**THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA,
LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE
AWARD OF MASTER OF PUBLIC HEALTH DEGREE**

JULY, 2016

DECLARATION

Except for the specific references which have been duly acknowledged, I declare that this work is the result of my own effort, and it has not been submitted either in part or whole for any other degree in this University or elsewhere.

SIGNATURE..... DATE.....

MUKASA KABIRI
(STUDENT)

SIGNATURE..... DATE.....

DR. ANTHONY DANSO-APPIAH
(SUPERVISOR)



DEDICATION

To my lovely wife, Ms. Eunice Mimmir Botir and children Muzeyi Kamaangbakpi Kabiri and Maurine Maa-ere-faa Kabiri.



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I am first and foremost very grateful to the almighty God for his divine mercies that have seen me through this course. I also especially owe Dr. Anthony Danso-Appiah who in spite of his busy schedules took time to read through the manuscript and offered very useful recommendations for this final work.

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ABSTRACT

Background: HIV/AIDS is a threat to global development and human security, and Sub-Saharan Africa remains the region worst affected. It is estimated that 23.5 million people in this region are living with HIV, with youth accounting for 40% of new HIV infections. However, HIV Testing Counselling uptake among the youth is low.

Aim: The objective of this study was to assess the factors influencing uptake of HIV testing and counselling among the youth aged 15-24 years in Kintampo South District.

Methodology: A cross-sectional study was conducted among the youth aged 15 to 24 years using pre-tested questionnaire in the Kintampo South District. A simple random sampling technique was used to select the communities and households. Only participants who gave consent to participate in the study were interviewed. Data was collected on demographic characteristics, personal related and health system related factors that influence uptake of HIV testing and counselling among the youth 15-24 years.

Results: Nearly half of the youth (49.8%) had never tested for HIV with factors such as lack of confidentiality, lack of privacy, mistrust of the health system, inconvenient facility opening hours, fear of positive results and poor attitude of services providers being cited as barriers to uptake of HIV testing and counselling. Age, educational status, marital status and occupation were some demographic factors found to be significant determinants of HIV testing and counselling among the youth. The single most significant factor that was associated with HIV testing and counselling from the study was the high willingness to test for HIV among the youth of the Kintampo South District.

Conclusion: The findings of the study that nearly half of the youth had never tested for HIV and citing lack of confidentiality, lack of privacy, mistrust of the health system, inconvenient facility opening hours, fear of positive results and poor attitude of services providers as barriers to uptake of HIV testing and counselling has a serious public health implications.



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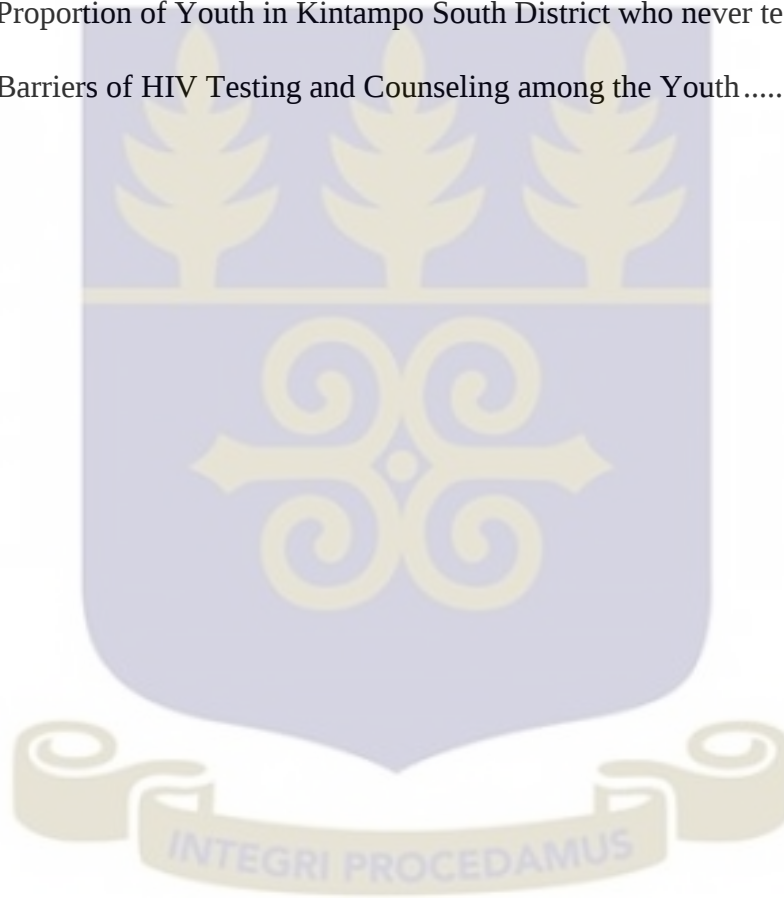
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LIST OF ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
AOR	Adjusted Odd Ratio
ART	Anti-Retroviral Therapy
CI	Confidence Interval
DHS	Demographic and Health Survey
EDHS	Ethiopia Demographic Health Survey
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
HAART	Highly Active Anti-Retroviral Therapy
HTC	HIV Testing and Counselling
HIV	Human Immunodeficiency Virus
MOH	Ministry of Health
NACP	National AIDS Control Programme
OR	Odd Ratio
COR	Crude Odd Ratio
PMTCT	Prevention of Mother-to-Child Transmission
SSA	Sub-Sahara Africa
VCT	Voluntary Counseling and Testing
VHCT	Voluntary HIV Counseling and Testing

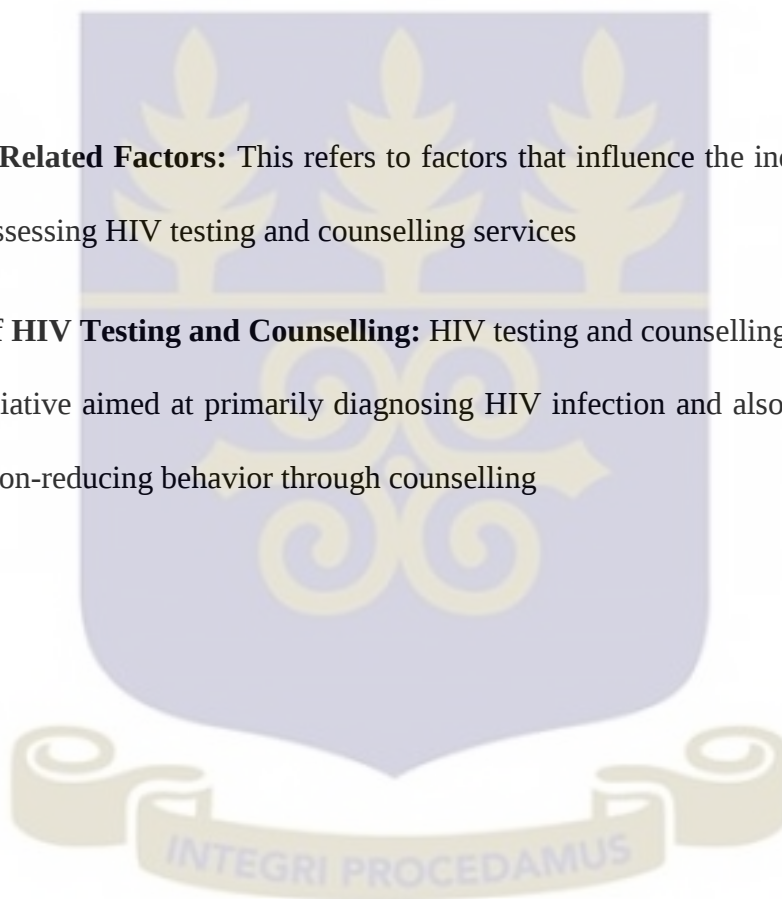
DEFINITION OF TERMS

Youth: The youth as used in this study refers to anyone (male or female) aged 15 to 24 years living in the Kintampo South District at the time of this study

Health System- Related Factors: They are factors within the structure of the Ghana Health Service that may affect the use of HIV testing and counselling services among the youth

Personal-Related Factors: This refers to factors that influence the individual behaviour towards assessing HIV testing and counselling services

Uptake of HIV Testing and Counselling: HIV testing and counselling (HTC) is a public health initiative aimed at primarily diagnosing HIV infection and also encouraging HIV transmission-reducing behavior through counselling



CHAPTER ONE

INTRODUCTION

1.0 Background

HIV and AIDS is a major source of concern all over the world and constitute a major cause of death and a threat to national development. The disease has negative impacts on economic, social and political development of any nation with high infection rate (Jimoh & Balogun, 2010). Sub-Saharan Africa is the worst affected in the world, with an estimated 23.5 million people living with HIV (Ogaji, Oyeyemi & Ibrahim, 2013).

Evidence has shown that about half of the total population in Africa today is younger than 18 years with those aged 15 to 24 years accounting for 40% of the overall new HIV infections. Young women are twice as likely to be infected as young men. The continuous growth of the young population in high HIV burden countries may lead to further spread of the epidemic unless evidence-based strategies are designed targeting the youth and made friendly for them to assess (Asante, 2013).

Although the annual number of AIDS-related deaths worldwide dropped by 35% from 2005 to 2013, deaths among adolescents (ages 10-19) living with HIV have increased by 50% from 2005 to 2012. In the era of antiretroviral therapy one would expect a sharp reduction in AIDS deaths. However, AIDS remained the second leading cause of death among adolescents worldwide (Asante, 2013).

Evidence showed that out of the estimated 35 million people currently living with HIV in the world, 19 million do not know their HIV status. Adolescent girls and young women are estimated to account for one in four new HIV infections in sub-Saharan Africa. The spread

of HIV/AIDS among young adults who are the productive age group of society have become a public health concern in Ghana and Sub-Saharan Africa. What is more serious in recent times is the growing infection rate especially among adolescent in Sub-Saharan Africa which represents only 10% of the world population. Research has indicated that the highest affected population with HIV in Sub-Saharan Africa is 15-24 years. Adolescents described here as the high-risk population contributes 60% of the overall incidence of HIV infection in many countries (Asante, 2013).

Asante (2013) reported that though most people are aware of HIV infection only 28.3% of females and 34.2% of males aged 15-24 years were able to accurately distinguish between factual information and common misconception.

According to Sanga, Kapanda, Msuya, & Mwangi, (2015) more than 50% of all HIV cases in the world are young persons aged 10-24 years. Though the youth are labeled in several studies as highly vulnerable to HIV infection, HTC uptake among the youth continue to lag behind. A Sub-Saharan African Survey (2005-2010) revealed that only 10% males and 15% females aged 15-24 years knew their HIV status. This means that most of the young people in the survey were not aware of their HIV positive status thus exposing them to the risk of acquiring or transmitting HIV to others.

In Tanzania, 65.8% males and 46.3% females between the ages of 15-25 years are not aware of their HIV status despite high awareness in the country. Likewise, in Arusha city of Tanzania, 69.8% and 30.3% of males and females respectively do not know their HIV status. This is unfortunate especially in a country like Tanzania where HIV is a serious

epidemic. Studies revealed that only 50% females and 39% males in secondary or high education in Tanzania knows their HIV status (Sanga et al., 2015).

HTC services are widely recognized because of their role in the fight against HIV/AIDS since they provide contact centres where information, guidance and referral to medical treatment can be sought. Information, counseling and testing also play a vital role in promoting and reaffirming safer sex practices for persons who test negative (Sherr, Lopman, Kakowa, & Dube, 2007). However, the effectiveness of these services depends on their accessibility by community members and young people (15–24 years) especially.

The lack of use of HTC services is especially prominent amongst young people, though new HIV infections are highest amongst the group aged 15–24 years. Though young people tend to be aware of HTC services, few have accessed these services and know their HIV status. Perceptions of both HIV/AIDS and HTC are still affected by stigma and mistrust, creating barriers to accessing HTC services at individual, interpersonal and community or cultural levels.

Macphail, Pettifor, Moyo, & Rees, (2015) also found that at organizational and community levels, perceptions of HTC are the most negative, presenting barriers to youth uptake of these services. Perceived negative and judgmental attitudes by service staff and poor training were other reasons not to go for HIV testing. Also, the issue of confidentiality and fear of gossiping among nursing staff were some barriers that prevent the youth from assessing HTC services. They belief that their parents and neighbours will find out and know that they engaged in sexual activity and worst of all get to know that they are HIV positive.

In developed countries with epidemics in core groups, high-quality HIV Testing and Counseling (HTC) have been shown to substantially reduce the incidence of Sexually Transmitted Diseases transmission and increase condom use. In resource poor settings, including many sub-Saharan countries with generalized epidemics, HTC is becoming increasingly available, but study results conflict with regards to the potential impact of HTC to promote reductions in risky behaviours. Quality of HTC and local context are also critical. The costs/benefits to an individual of knowing their status have oscillated over time and place, depending on a multitude of factors such as stigma and discrimination, availability of social support, availability of interventions including prevention of infant infection in pregnancy and access to antiretroviral treatment. However, beyond individual motivation, the mechanism by which HTC is provided may also be important. Providing HTC at home, in the workplace or in other convenient locations has been shown to facilitate acceptability and uptake (Sherr et al., 2007).

HIV Testing and Counseling has also been identified as the key entry point to prevention, care, treatment and support services. It is where people learn whether they are infected, and are helped to understand the implications of their HIV status and make informed choices for the future. HIV Testing and Counseling (HTC) is now acknowledged as an efficacious and pivotal strategy for both HIV and AIDS prevention and care. The rapid expansion of HIV treatment is an important response to the HIV/AIDS epidemic in sub-Saharan countries. However, enrollment of infected individuals in treatment programs continues to be hampered by the low uptake of HIV Testing and Counseling (HTC).

Furthermore, Demographic and Health Surveys (DHS) conducted in sub-Saharan African countries have identified a strong socioeconomic gradient in uptake of HTC. Poor accessibility of health facilities, fatalism, HIV-related stigma and confidentiality are continually mentioned as the main barriers to use of HTC services in African countries. While several strategies to increase the uptake of HTC among sub-Saharan populations have been suggested, their impact on the poorest may be limited. Routine testing in hospitals and other health care facilities, for example, significantly increases uptake and case-finding among the attendees of these facilities, but cost and convenience issues often limit the use of healthcare facilities among the lower socioeconomic strata in sub-Saharan countries.

HTC uptake is also increased through workplace-based initiatives, but such strategies similarly do not reach the poorest members of society who are often unemployed or employed in the informal sector. To overcome these limitations, the home-based provision of HTC services has recently been proposed as a strategy to attain “universal HIV testing and counseling” in Africa. Indeed, community-based approaches like mobile HTC units or home-based HTC provision have been shown to dramatically increase the uptake of testing services. However, previous studies have not documented whether the provision of home-based HTC may reduce the socioeconomic gradient in HTC uptake observed in sub-Saharan countries(Helleringer, Kohler, Frimpong and Mkandawire, 2011).

Studies have shown that HIV testing is still low in many African countries thereby necessitating action by governments of African countries to increase access to HIV counseling and testing. Similarly, it was observed in the United States that patients with

HIV infection were generally discovered at an advanced stage, usually in the course of medical care and often during care for complications of AIDS. The timeliness of HIV diagnosis and the initiation of HAART are major determinants of survival for HIV-infected people. Earlier diagnosis is likely to result in early access to appropriate care and increase the proportion of HIV-infected patients receiving care, thereby improving the quality of care for persons and populations. Other benefits of increasing access to HTC services include the opportunities it offers to intensify preventive behaviours, referral for treatment, care and support services for infected individuals (Owolabi et al., 2011).

There are many reasons for the low uptake of HTC services, and these operate at the individual level, as well as at the broader institutional and structural levels. Individual factors include anxiety about testing positive for HIV and the ramifications of a positive test, as well as fears about stigmatization, disease and death. Systemic factors that limit HTC uptake include concerns about a lack of confidentiality, actual breaches of confidentiality by healthcare workers, fear of being discriminated against by those workers, a general lack of trust in the healthcare system, and a fear of disclosing one's HIV positive status to sex partners. Fears of possible adverse consequences, particularly for women, pose an additional barrier to HTC implementation.

There is evidence that among many HIV positive women, fear of violence is a major barrier to testing and disclosure of HIV status to sexual partners. This study therefore seeks to assess the proportion of the youth 15-24 years who have ever tested for HIV and knows their status and the factors that influence uptake of HIV Testing and Counseling services in the Kintampo South District of the Brong Ahafo Region.

1.1 Problem Statement

Access to HTC is considered a cornerstone to the strategic framework adopted by Ghana for HIV control. The government of Ghana based on the framework has since introduced and implemented various intervention programmes to increase testing for HIV. Despite all these interventions, HTC still remains low in Ghana and the world as a whole (Asante, 2013).

Recent estimates based on surveys in 12 high-burden countries in sub-Saharan Africa indicates that a median of just 12% of men and 10% of women in the general population have been tested for HIV and received the results. Even in more developed countries, about 20% to 30% of sero-positive individuals are unaware that they are HIV positive (Signorelli, & Osborn, 2001).

Many countries with the highest HIV prevalence are experiencing a massive “youth bulge” in population, so even with decreasing HIV prevalence, the absolute number of young people living with HIV or at risk of acquiring HIV will grow in the next five years (Crocegalis, Hardee, & Gay, 2014). HIV Testing and Counselling remains low and unknown in many Ghanaian communities largely due to stigmatization and fear of positive results of the test. It is also not precise whether the factors that account for low HTC uptake in the general population could be the same in the youthful population.

Despite the high number of people already living with HIV/AIDS, it is estimated that less than 10% are aware they are infected, mainly because of the limited availability, access,

and use of HTC. Young people's service needs are frequently overlooked in HIV programming that is not specifically designed for adolescents (Croce-galis et al., 2014).

Recent studies on HIV among young adults in Ghana has predominantly focused on the whole country as reported in the Ghana Demographic and Health Surveys or conducted in other Regions of Ghana rather than the Brong Ahafo Region especially the Kintampo South District. One study that was conducted in the Kintampo area by Abokyi et al., (2014) combined both Kintampo North and South districts which did not focused on the youth and also never showed specifically HTC uptake for the Kintampo South District alone. This study therefore was specifically conducted in the Kintampo South District among the youth to establish factors that influence uptake of HIV Testing and Counseling among the youth since data available at the District Health Information Management System (DHIMS) of the Kintampo South District revealed consistently very low uptake of HTC services among the youth in the district as shown in the table below:

Table 1: Uptake of HIV Testing and Counselling in Kintampo South District 2012-2014

Year	No. tested	Total population	% tested
2012	63	84,769	0.07
2013	110	86,719	0.13
2014	42	88,714	0.05

Source: Kintampo South District Health Directorate dhims

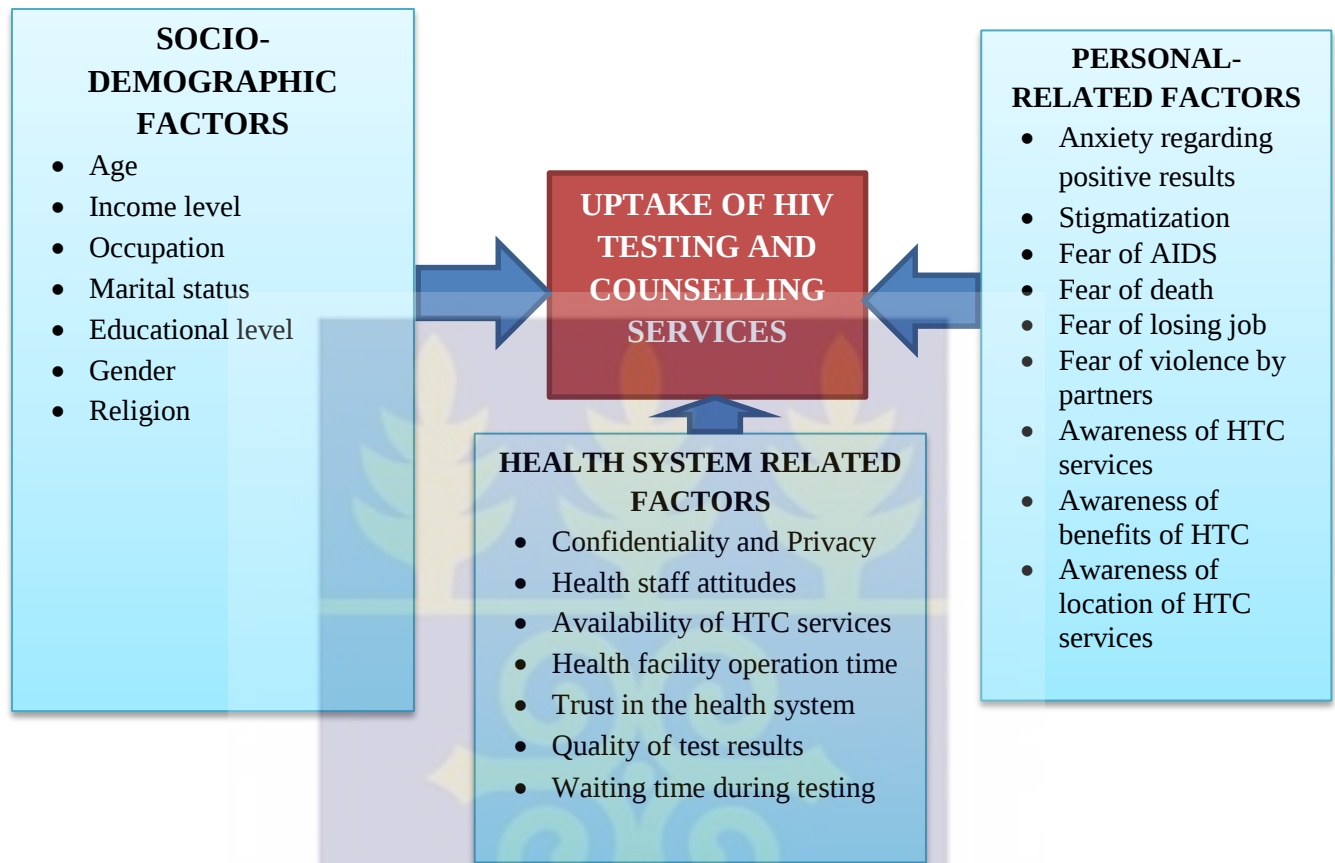


Figure 1: Conceptual Framework of Factors Influencing Uptake of HIV Testing and Counselling

Description of Conceptual Framework

The uptake of HIV testing and counselling services can be influenced by many factors which can be grouped into socio-demographic factors, health system-related factors and personal-related factors. Socio-demographic factors such as age, sex, marital status, occupation, educational level, income status and religion may play a role towards the uptake of HIV testing and counselling services. People with high education and good source of income are most likely to go for HIV testing and counselling because they can better understand the importance of testing for HIV and afford the cost of testing. This may be due to the fact that they are employed and can afford the cost of the test. Young adults

and older adults are able to make decisions to undertake HIV test than adolescence due to the fear of meeting their parents or other elderly people at the testing centre.

Also, because HIV infection is associated with social stigma in society, uptake may be improved when the services are provided in a confidential and anonymous manner. Most youth may also take HIV test if the test is cheap, accessible, available and convenient time schedule. Due to fear of positive results, stigmatization, discrimination, fear of losing one's job and fear of death from AIDS the decision to test for HIV becomes a difficult one for most people. The decision to go for an HIV test is also determined by the fact that people are aware of the importance of the test and where to go for the test. Most people may have the intention to test for HIV but have inadequate information about where to get tested or cannot afford the cost of the test. These and other factors interplay to influence a person's decision to voluntarily or otherwise make a decision to have an HIV test.

1.2 Justification

This study provided information regarding factors that influence the uptake of HTC services among the youth in the Kintampo South District. This information is expected to enable policy makers in the Ministry of Health, Ghana Health Service and their collaborating agencies to design youth friendly strategies that will help improve the uptake of HTC services among the youth. The results of this study also serves as a baseline for more vigorous research in the future regarding the gap between knowledge, attitudes and the uptake of HTC services. Also, the youth who are diagnosed early enough through HTC may receive early treatment and care that will improve their health to work to increase

productivity in their various communities, pursue academic goals as well as support others in their homes since the youth remains the workforce of society.

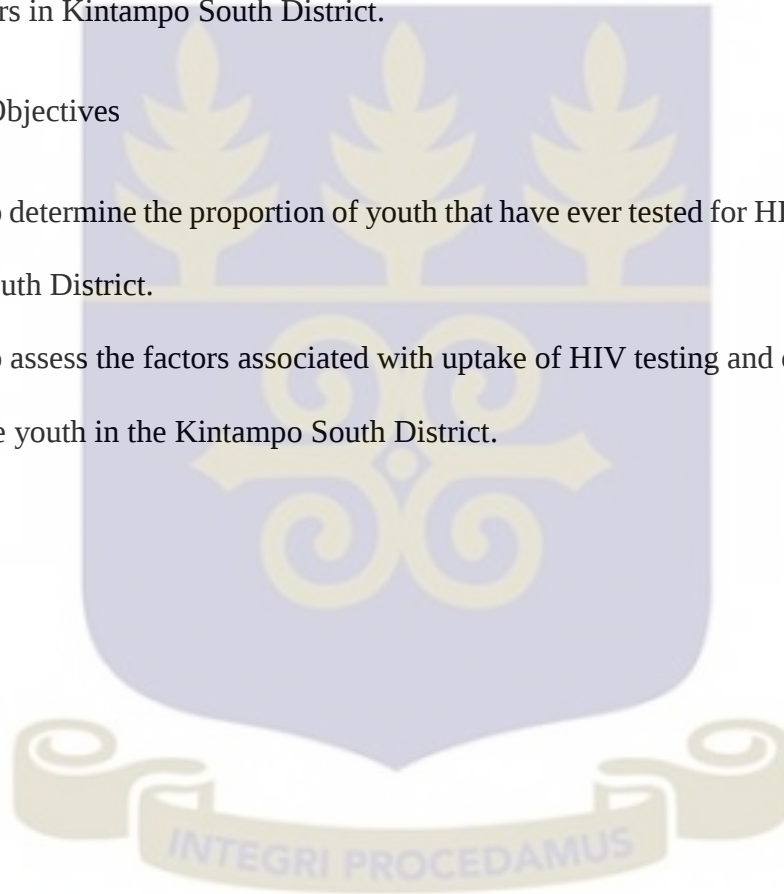
1.3 Objectives

Main Objective

To assess factors influencing uptake of HIV testing and counselling among the youth aged 15-24 years in Kintampo South District.

Specific Objectives

1. To determine the proportion of youth that have ever tested for HIV in the Kintampo South District.
2. To assess the factors associated with uptake of HIV testing and counselling among the youth in the Kintampo South District.



CHAPTER TWO

LITERATURE REVIEW

This chapter reviewed literature on previous studies conducted on factors that influence HIV testing and counselling. The proportion of HIV testing and counselling and factors about knowledge of HIV testing and counselling, personal, socio-demographic and health system that influence uptake of HIV testing were reviewed.

2.0 Proportion of HTC Services Utilization

The provision of HIV Testing and Counseling (HTC) is a very significant part of any national HIV prevention programme. It is well known that people living with HIV and are aware of their status are mostly less likely to transmit the infection to others. So many studies have reported that HTC plays a vital role in identifying persons infected as well as provide an opportunity for them to benefit from therapeutic interventions (Ababa & Ali, 2015).

HIV Testing and Counseling (HTC) remain fundamental in accessing HIV treatment and prevention services. Moreover, risk behaviours that are known to fuel HIV transmission are reported more during adolescence and HTC is one sure opportunity to engage and promote healthy sexual practices through counselling and linkage to other health services. Studies have shown that, young people who are labelled as sexually active tend to be exposed to early sex in sub-Saharan Africa (SSA) before the age of 15 years and the need to highlight the benefits of effective and acceptable HTC options among this group. The WHO realizing the vulnerability of the youth to HIV infection developed specific HTC guidelines for adolescents in the year 2013. The guidelines emphasized the importance to

establish comparative effective interventions to improve access to HTC (Govindasamy et al., 2015).

A study conducted by reviewing the National AIDS Control Programme (NACP) data in Ghana between 2007 and 2010 from all HIV tests conducted in the country reported a total proportion of 16% of the 2010 Ghanaian population have ever tested for HIV. Similarly, the 2008 Ghana Demographic and Health Survey (GDHS) report revealed that the proportion of females and males aged 15-49 years that have ever tested for HIV was 21% and 14% respectively.

According to Yawson, Dako-gyeke, Addo, & Dornoo, (2014) other studies conducted across Africa have reported varied HIV testing and counseling (HTC) uptake by sex. The study reported that females in Southern African countries were utilizing HTC than males compared to countries such as Ethiopia, Nigeria, Tanzania, and Zambia where male utilization of HTC was higher than females. They found the high female testing to be consistent with previous findings in Ghana, which shows high readiness for HIV testing among pregnant women in Ghana. The study also reported that the limited HIV testing among men is well known in Ghana.

Again, Yawson et al., (2014) reported in their study conducted over a decade ago on HIV patients in Ghana that more females were getting tested for HIV in hospitals than their male counterparts. Similarly, data from the annual reports of the NACP between 2007–2010, reported that females contributed to 58.2% of all persons who tested for HIV in health facilities across the country, giving a female to male ratio (F: M ratio) of 1.4. In a similar study conducted in a community setting in 2010, F: M ratio was also 1.4 for HIV testing.

This ratio reported in the NACP annual report excluded the figures for PMTCT. The overall female to male ratio of HIV testing including PMTCT data in Ghana was found to be 2.8. The study recommends the importance for males to utilize HTC in Ghana because in many societies they are heads of households and make decisions regarding resources that are vital for HIV prevention and care. It is important to increased involvement of men in HTC in combating the HIV epidemic in Ghana (Yawson et al., 2014).

Despite campaigns to encourage testing and the accompanied benefits of HTC, few young people in sub-Saharan Africa have been reported to have ever tested for HIV using the HTC services (Macphail et al., 2015), although there is reported high levels of willingness to test. The study further reported that much is not known about the predictors of HTC uptake among the youth in sub-Saharan Africa. The study cited predictors such as knowledge of HIV, knowing a source of HTC, perceived risk and having discussed condom use for HIV prevention among Nigerian youth.

According to Jimoh & Balogun, (2010) on factors hindering acceptance of HIV/AIDS voluntary counseling and testing among youth in Kwara state, Nigeria, young people are the most vulnerable population to HIV and other Sexually Transmitted Diseases. He reported that in many countries, 60% of all HIV incidences are among the age group 15-24 years. A recent study by Jimoh & Balogun, (2010) reported that the level of awareness of HIV/AIDS in Nigeria remains low and stressed the need to change the attitudes of most Nigerians regarding voluntary HIV/ AIDS counselling and testing.

According to a study by Ogaji, Oyeyemi & Ibrahim (2013) on awareness, willingness and use of HTC services by students of a university in south-south Nigeria, 72% of Nigerians

desired to have an HIV test; an increase from 43% observed in 2005 according to the HIV/AIDS and Reproductive Health Survey (NARHS) report. The study however reported low uptake of HTC services of 14.4% and 14.7% of females and males respectively.

The 2005 Ethiopia Demographic Health Survey (EDHS) also reported that only 4% of women (aged 15–49 years) and 6% of men (aged 15–49 years) had ever been tested for HIV. Meanwhile, the study found that 53% of the study subjects knew where HTC services were provided. Comparing uptake of HTC among urban and rural men, the study further revealed that 21.9% of urban men and 2.6% of rural men had ever tested for HIV.

2.1 Factors Associated with Uptake of HIV Testing and Counseling Services

The factors that influence uptake of HIV Testing and Counselling are varied and can be categorized under socio-demographic factors, personal-related factors, knowledge regarding testing and health system-related factors as shown below.

2.1.1 Socio-demographic Factors Influencing HTC

A study conducted by Kaai, Bullock, Burchell, & Major (2012) on factors that affect HIV testing and counseling services among heterosexuals in Canada and the United Kingdom found age to be the most frequently mentioned socio-demographic factor associated with HTC. The study further indicated that there was a difference in the direction of the association. The difference was found in comparing three studies where it was reported that HTC was more likely if respondents were younger than 40–45 years, while other three studies found that respondents who were younger than 25 years or 30 years were less likely to have been tested for HIV. The difference the study indicated was mainly due to the

samples that were studied. They identified the first group of studies sampled younger populations compared to the last three studies that focused on older populations.

In both situations however, the results was reported to suggest that the highest testing rates were among the middle-aged study participants and lower among the young and older populations. The study also found other demographic factors such as ethnicity, residing or living in a city of over one million people, having low income, being a female and being more educated to have influenced the heterosexuals in getting tested for HIV. They found three studies that cited marital status as a factor associated with HTC. According to the review study, two of the studies that found association between marital status and HTC reported that unmarried people were more likely to be tested for HIV compared to those who were married or those cohabitating. The findings of this review was however, found to be different from Johns et al findings on similar reviews. The study then gave a plausible explanation that the sample in Johns' and his colleagues study were older immigrants from East Africa (mean age of 35.7 years), who were more likely to be married compared to the other two Canadian studies which had participants who were mainly younger and single (Kaai et al., 2012).

Addis et al. (2013) examined knowledge, attitude and practice towards voluntary counseling and testing among university students in Northwest Ethiopia and found that association between higher educational status, being employed and having better income and uptake of HIV testing. The study also found an important association between religion and HTC utilization among men living in urban areas, citing Muslims as being less likely to be tested for HIV. The study attempted to explain that the religious association could be

as a result of higher adherence to religious beliefs, which may give protection against the sexual transmission of HIV. The study cited for example that in Islam, though polygamy is accepted for men and divorce is somehow easy, prohibitions against extramarital sex may supersede the susceptibility posed by the former two. Islam also prohibits consumption of alcohol and alcohol is associated with higher likelihood of engaging in risky sexual behaviour, reported, the study. Other explanation for this association of religion and HTC was that all Muslims are circumcised and circumcision has been identified as a practice decreasing HIV transmission. The study explained it is likely that Muslim men have a lower self-perceived risk of HIV and thus are less motivated to be tested for HIV (Addis et al., 2013).

Studies have reported demographic factors such as education, gender, age, poverty, and location under one umbrella, social economic status as influencing HTC behaviour. Gender has also been found to be significantly associated with HIV testing behavior. Meanwhile, other studies found that persons who test late for HIV were more likely to be between ages 18 to 29 as compared to their older counterparts. Poverty was also found to be associated with HIV testing and counseling behavior just as it has been shown in health seeking behavioral studies.

In a study conducted in Nigeria by Bwambale, Ssali, Byaruhanga, Kalyango, & Karamagi, (2008) poverty was found to be a big barrier for seeking health care from professionals. The relationship between health seeking behavior and poverty is also supported in a study in Bangladesh. Many other literature have shown that those with higher education were more likely to report having tested for HIV as compared to the less educated. Kalanzi,

(2013) study revealed that 63% of those with some college education had tested for HIV, compared to 47% of those with a high school education having tested for HIV. This was attributed to the potential of education to empower individuals with more financial ability to access testing services and also knowledge regarding the importance of disease prevention and control. The findings of the same study also revealed that university students were more likely to have tested as compared to participants from the general public. The study found 62% of the university students saying they had tested for HIV compared to 49% from the general public that had tested for HIV (Kalanzi, 2013).

Again, Kalanzi, (2013) found that urban settlers were more likely to have tested (60%) compared to 46% rural settlers. The association between geographical location and testing for HIV was again found to be highly significant by the study. The study however, attributed the association to accessibility in terms of proximity to testing facilities just as health seeking behavioral studies have reported. It was reported in the study that although the percentage of females (58%) that tested slightly superseded that of males (54%), results of HIV testing across gender are insignificant.

Addis et al. (2013) also found sex, previous residence and religion as having statistically significant association with level of HTC uptake. In their study conducted among university students in North west Ethiopia in 2013, Addis et al., reported that large proportion of the students who were single (59%) were more likely to have taken an HIV test than those “in-relationship” (25%) and married (16%). The study further reported a greater proportion of never married students (66%) as likely to test for HIV in the future

as compared to those “in relationship” (27%) or married (7%) students. The results of the study revealed an association between knowing where to get tested and taking an HIV test.

Again, the study found religion to be significantly associated with having taken an HIV test ($p = 0.027$). It was further explained in the study that respondents who were single were six times more likely to have ever taken an HIV test than those married/in relationship. The results of the study found a significant association between knowing where HIV test could be located and being a student aged 17–20 years respectively with the odds of having had an HIV test. Males were found to be three times more likely to be willing to take an HIV test in the future than females.

2.1.2 Personal-Related Factors Influencing Uptake of HIV Testing Counselling

Kaai et al., (2012) studied on factors that affect HIV Testing and Counseling and testing among heterosexuals in Canada and the United Kingdom, reported that several personal-related factors were found to be associated with HTC. The study categorized these factors into six broad categories as follows: risk perception, illness or having HIV symptoms, fear of HIV-related stigma and other fears, level of HTC education, mandatory or partner recommended HTC, and culture. The study found risk perception as the most commonly cited personal-related factor playing the roles of both a facilitator and barrier of HTC. This was reported to have been cited in 70% of 77 studies reviewed during their study. Kaai et al., (2012) also found perceived risk as the strongest predictor of HTC using the model of health care utilization.

According to Strauss, Rhodes, & George,(2015) at the level of the individual, one fundamental finding that influence uptake of HTC is the importance of knowledge about

testing and HIV. The study further explained that lack of knowledge can be an important barrier to HIV testing status. The potential of young person's behaviour affecting their belief and intention to test for HIV was also carefully established in the study. They added that people who perceived themselves as high risk because of unhealthy sexual behaviours and suspecting that they may be positive were likely to undertake HIV test. Again, the study explained that students who have never engage in sexual activity and hence believe they are not infected by HIV are less likely to take HIV test. The study however, history of frequent HTC as well as frequent visit to health facility among the youth as predictors of continuity to HIV testing. The study identified fear of HIV-related stigma and discrimination as significant barriers to uptake of HTC.

Concerns regarding confidentiality were also linked to stigmatization. Direct trust relating to health workers providing HTC services was significant determinant of uptake of HTC. Also, the challenge of travel hours, long queues and limited opening hours of health facilities especially affects students' ability to access HTC services because students may have to miss classes in order to undergo the test. The cost of HTC was found to be significant determinant of HIV testing especially among students. The study revealed that offering HTC free of charge as well as conducting mobile HTC services significantly facilitates young people's demand for HIV testing (Strauss et al., 2015).

In another study that was reported by Kaai et al. (2012) where the researchers evaluated factors associated with HTC among heterosexual black Africans aged 16–44 years living in Britain, found increased perception of risk was significantly associated with HIV testing and counselling. Other personal-related factors of HTC reported in the study were having

HIV symptoms or illness where 44% of the studies cited, the fear of HIV-related stigma and other forms of fear (e.g., fear of a positive result, AIDS, death, effect of a positive status on employment, family, insurance, having children, documenting HIV positive status in medical records and disclosing risk or sexuality to a provider) as important barriers to the uptake of HTC in 37% of the studies they reviewed.

Cultural backgrounds was also found to affect peoples' beliefs and attitudes on prevention, leading to underutilization of HTC as demonstrated in 19% of the studies. The study found for instance in a qualitative study among Canadian Aboriginal women that cultural norms about not disclosing any problems, including sexual issues, to outsiders (e.g., health providers) as key barriers to testing for HIV.

A qualitative study reported that the philosophy of health promotion and preventive medicine regarding HIV Testing and Counseling are not well comprehensible in most African communities. Thus, the latter only assess health services when there is a specific health concern that is perceived to be serious (Kaai et al., 2012).

HIV/AIDS-related stigma was also found to be strongly and inversely associated with HTC utilization. Stigma was found to have significant and dangerous effects on health and HIV transmission by influencing persons to delay care seeking and also failure to disclose health conditions due to fear of being isolated or rejected, and may subsequently result in non-adherence to medical advice. According to Kaai et al., (2012) "Stigma and discrimination have taken their toll in Ethiopia not only at the work place, in housing, health facilities, schools, and family and personal relations but also in medical services, discouraging people from being tested for HIV".

A related study conducted in 2006 in South Africa was cited to have found low stigma among urban adults with better education and those with higher economic status. The authors reported in their study that in rural areas with smaller communities and less anonymity there may be fear about compromised confidentiality, which will eventually increase stigmatization from a positive test. The difference in HTC utilization between urban and rural areas was purportedly attributed to the perceived differences in access to health care facilities where HIV-testing and HIV/AIDS-related information are provided (Leta, Sandøy, & Fylkesnes, 2012).

In a study where Addis et al. (2013) assessed knowledge, attitudes and practice towards voluntary counseling and testing for HIV among university students in Ethiopia, they found that the main reason for persons who had never had HTC in the past was fear of positive result and stigma and discrimination following the result. This finding was reported to have been found in several other studies across different study areas including community based surveys. The authors therefore stressed on the need for more work in creation of awareness regarding stigma and discrimination and the possibility to live longer with the virus as far as HIV positive individuals lead their lives as per physicians and counselors recommendations.

A study by Asante, (2013) among university students in Ghana found that over 90% of the students had knowledge about where to get an HIV test, however, only 45% had tested for HIV. This finding was found consistent with previous studies where it was reported that majority of public university students had not taken an HIV test. The resistance of students to access HIV test was attributed to fear, anxiety and stigma as well as discrimination

associated with the counseling and testing and AIDS respectively. The study reported that fear of stigma has shown to influence the youth not to practice preventive behaviours and an increase in knowledge about HIV does not predict behavioural change.

The study also reported that over 90% of the subjects were not married (single and “in relationship”) which is of health concerns because 39% and 56% of females and male students respectively showed some interest in testing for HIV in the future. Despite the fact that knowing where to test for HIV significantly increased the likely of getting tested, it does not necessarily influence people desire to get tested in the future. The study reported that unavailability of HIV Testing and Counseling facilities on various public and private university campuses in Ghana could be a possible factor for the current behavioural trend.

2.1.3 Health System-Related Factors Influencing Uptake of HIV Testing and Counselling

Kaai et al. (2012) reported in their study that obtaining HTC as part of a physical check-up (e.g., integrating HIV testing with other services occurring in sexual health clinics or hospitals) or routine prenatal HIV screening during a past pregnancy (men referred to spouse’s pregnancy) was the most commonly reported system-related facilitator in 33% (9/27) of the studies that were reviewed. Respondents as reported in the study cited lack of anonymity and unsuitable testing (e.g., inaccessible, inconvenient and not private) venues as barriers to HTC uptake in 30% (8/27) of the studies.

Accordingly, several of these studies reviewed reported that study participants mostly from small communities avoided STI clinics because they are afraid their neighbours may see them and reveal their risk behavior to others (Kaai et al., 2012). The study also found

similar studies emphasizing mistrust of the health care services by Aboriginal populations due to past colonial negative experiences, and difficulties that newcomers face as they visited the health care system.

According to the findings of a cross-sectional survey conducted by Leta et al. (2012) on factors affecting voluntary HIV counseling and testing among men in Ethiopia, studies from Sub-Saharan Africa have documented that uptake of HTC increases when provided under hospital-based, home-based and work place-based compared to clinic-based HTC. This shows that there are some hindrances of facility-related HTC use.

Tsegay et al. (2013) in their study to assess voluntary counseling and testing services among Debre Markos University students in Ethiopia identified the availability of ART as a positive predictor of HTC acceptance. They reported that students who are aware that ART will be available in the HTC site were 3.12 times more likely to utilize HTC service as opposed to their counterparts who are not aware of the availability of ART in the HTC site. The study further reported that the provision of ART will significantly prolong the lives of students who were infected and eventually motivate the students to create positive attitude and acceptance towards HTC service. Evidence from the study revealed that increasing availability of ART will lead to increase in HTC acceptance by the students because students, who perceive risks associated with the HIV/AIDS test result were 2.4 times more likely to utilize HTC service as opposed to their counterpart (Tsegay et al., 2013).

2.1.4 Knowledge Factors Regarding Uptake of HIV Testing and Counselling

HTC is the process by which an individual undergoes counselling that will enable him or her to make an informed choice about being tested for HIV. This decision to get tested must be entirely the choice of the individual with confidentiality assured. HTC has been found effective in facilitating behavioral change to both prevent HIV as well as getting access to early care and support. HTC plays a major role in bringing about behavioral change, reducing unprotected sex and helping reduce the incidence of HIV and other STIs (Addis et al., 2013).

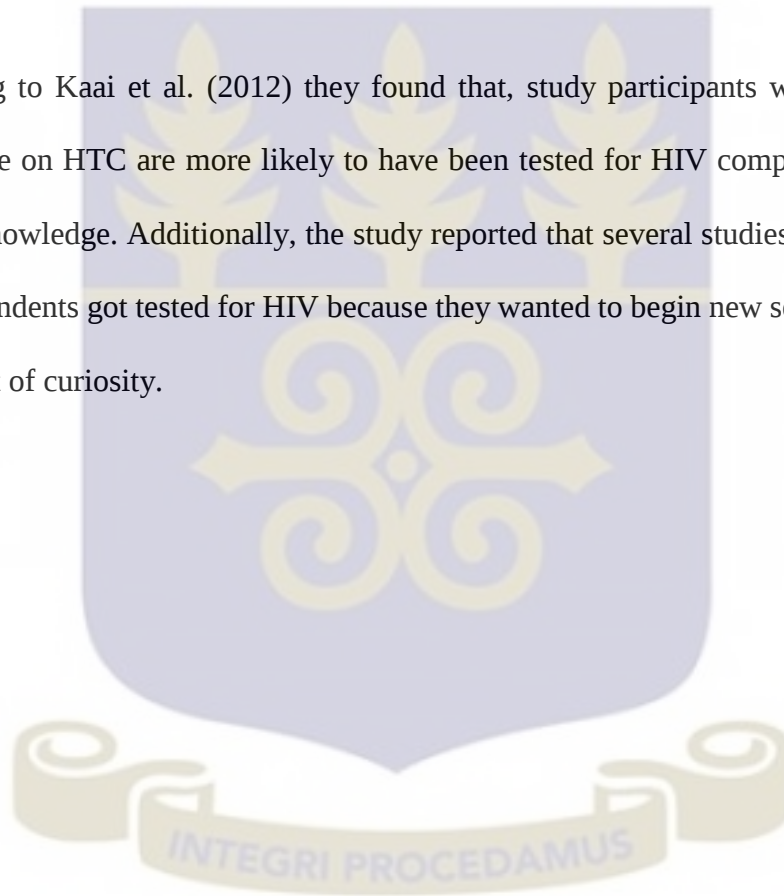
According to Kalichman, Eaton, & Cherry, (2011) fact-based education about HIV transmission is necessary, but not sufficient for promoting HIV testing. Knowledge about HIV/AIDS and HTC utilization has positive association. Students who have knowledge about HIV were 3.69 times more likely to utilize HTC service as compared to those who did not have knowledge about HIV.

Moreover, knowledge about HIV, knowledge about HTC and attitude towards HTC showed association with practice on HTC for HIV which indicates the relation of one with the other. Hence, working on the knowledge and attitude change will facilitate the uptake of HTC service (Addis et al., 2013).

Gadegbeku & Saka (2013) in their study regarding attitude of the youth towards HTC of HIV/AIDS in Accra reported that despite the fact that HTC services have numerous advantages, acceptance of this service in many countries (including Ghana) especially where HIV is highly stigmatized and access to this services and support for people who

test serous positive or HIV infected individuals are limited. The study further revealed that although 95% of respondents knew their sero-status could be checked, only 37% had actually heard about availability of HTC services. Out of the 37% who were aware of this service few (6%) had actually been to the HTC centre either to visit a friend (2%) or to check their status (4%). This suggests the level of awareness and use of this service by the studied youth was low.

According to Kaai et al. (2012) they found that, study participants who have adequate knowledge on HTC are more likely to have been tested for HIV compared to those with limited knowledge. Additionally, the study reported that several studies reviewed showed that respondents got tested for HIV because they wanted to begin new sexual relationships or just out of curiosity.



CHAPTER THREE

METHODOLOGY

3.0 Study Design

A cross sectional survey was conducted on factors influencing uptake of HIV Testing and Counselling among the youth between 15 and 24 years. This design was used because it allows both the exposure and outcome of the variables to be measured at the same point in time.

3.1 Study Area

Population size, structure and composition

The population of Kintampo South District, according to the 2010 Population and Housing Census, is 81,000 with more males (52.0%) than females (48.0%). Nine in every ten (91.1%) of the population reside in rural areas while 8.9 percent are in urban areas. The population of the district is youthful with more than two-fifth (42.3%) aged below 15 years and the elderly persons (aged 60 years and older) in smaller proportion (6.6%). Thus, the District's population pyramid has a broad base and tapers off with a small number of elderly persons. The total age dependency ratio for the District is 88.8 with the males ratio (89.2) is being slightly higher than that of females (88.4).

Literacy and education

The district population for persons 11 years and above represents 58.4% literate and 41.6% non-literate. The proportion of literate males is higher (63.1 %) than that of females (53.4%). Six out of every ten people (60.7%) can read and write both English and Ghanaian

languages. The population aged 3 years and older in the district, 35.5% has never attended school, 25.0% have attended school in the past and 39.5% are currently attending school. Among those currently attending school, 16.9% are in Kindergarten, 51.6% are at primary level and 15.6% are in Junior High Schools. Thus, 84.1% of the pupils in the district are in Basic schools.

Economic Activity Status

Four-fifth (80.9%) of the population aged 15 years and older are economically active while 19.1% are economically not active. The economically active population is made up of 97.6% are employed while 2.4% are unemployed. About 58.9% of the unemployed population are seeking work for the first time. For those who are economically not active, a larger percentage of them are students (45.6%), 26.4% perform household duties and 12.4% are either too old or too young to work.

Occupation

The majority of the employed population (80.5%) are engaged as Skilled agricultural, forestry and fishery workers, 6.4% are in Service and sales work and 4.8% are engaged as Craft and related trades workers. Females are more likely than males to be engaged as service and sales and craft and related trades workers. In contrast, males (83.7%) are more likely than females (76.8%) to be engaged as skilled agricultural, forestry and fishery workers.

Employment status and sector

More than half of the district population who are 15 years and older (61.7%) are self-employed, 26.5% are contributing family workers and 5.6% are government employees.

Male employees (7.1%) are in higher proportion than their female counterparts (3.8%). On the contrary, females (33.3%) are more likely than males (20.7%) to be contributing family workers. Males who are self-employed without employees (65.6%) are also in relatively higher proportion than their female counterparts (57.1%). The private informal sector is the largest employer in the district, employing 95.3% of the population followed by the public sector with 3.4%.

Table 2: Health and Health System Structure

Type of facility	Number included in this study
Hospital	1
Health Centre	4
CHPS Compound	8

Source: Kintampo South District Profile

The District has a Government Hospital located at Jema, four (4) Health Centres located at Mansie, Amoma, Anyima and Apesika and eight (8) Community-based Health Planning Services (CHPS) Compounds at Krabonso, Dumso, Ayorya, Ampoma, Bredi, Agyegyemakunu, Kwabia and Paninamisa.

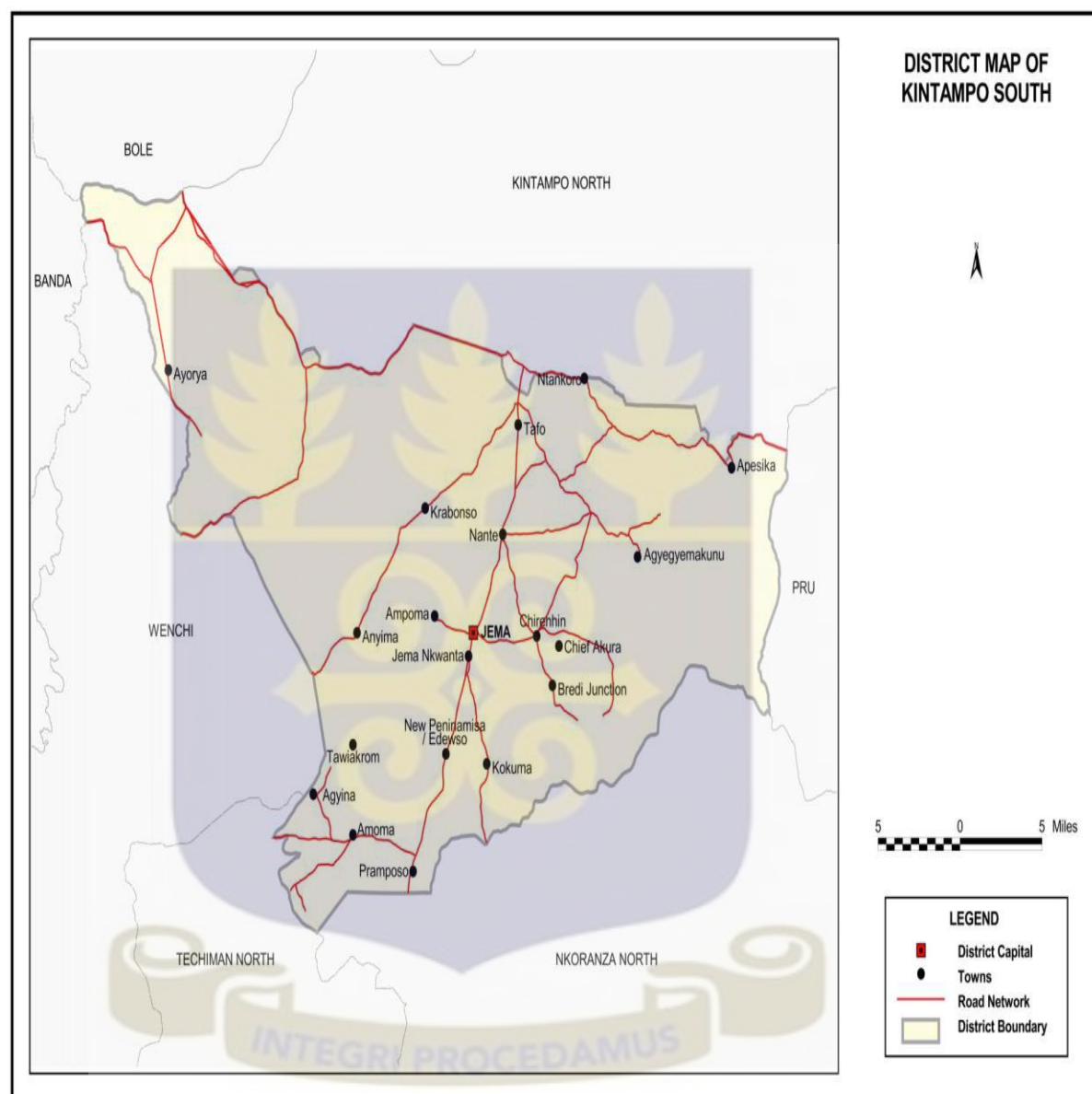


Figure 2: District Map of Kintampo South

3.2 Study Population

The target population of this study was the youth (15-24 years) living in the Kintampo South District for at least the past 6months. This population was targeted due to the perceived high risk of HIV infection among them because they are sexually active and are mostly involved in sexual risk behaviours. Data from the district also showed low uptake of HIV Testing and Counseling among this population hence the need for this study.

3.3 Sample Size Determination

Based on studies conducted in Africa and Ghana on HIV testing and counselling, the average proportion of the population that have ever tested for HIV have been estimated to be about 24%. Using a confidence interval of 95% $Z_{\alpha/2}$ with a 5% margin of error ($d=0.05$) the sample size of 309 was estimated for this study. This estimated proportion of HIV Testing and Counseling was used as a precision because there is no such study conducted in the Kintampo South District. The 10% non-response rate was used because HIV studies are sensitive and the youth especially below 18 years may not be willing to speak to issues concerning the topic. Based on these assumptions, the actual sample size (n) for the study was calculated as follows:

$$n = \frac{Z^2_{\alpha/2} \times P (1-P)}{d^2}$$

$$n = \frac{1.96^2 * 0.24 (1- 0.24)}{0.05^2} = 280 + 29 = 309$$

3.4 Sampling Method

A multi-stage sampling was used to select communities and study participants. The district has six existing sub-districts which were used as clusters. A simple random sampling

technique without replacement was used to select four (4) sub-districts out of the total six (6) sub-districts. All the names of the six sub-districts were written on pieces of paper and shuffled in a plate. Three of the sub-districts were randomly selected without replacement. The Jema sub-district which is the district capital however was purposively selected for the study due to the high population of the youth there to make up a total of four sub-districts.

The same procedure was used to select four 4 communities in each sub-district and the eligible youth (males and females) living in households of these communities interviewed by consent. In each community, a central point was located and a pen thrown to select the first household for the study. The first household was selected when the ball point of the pen pointed towards the direction of the house. In each household, eligible participants were interviewed by consent. Where there were more than one eligible participant in a household, one was selected by writing “yes” and “no” on pieces of paper for them to pick and the one who picked yes was interviewed. Each household that was visited was numbered serially until the sample size was exhausted. The first household in each community was numbered as H/001 and the second household numbered H/002 until the sample size was exhausted. This procedure was repeated until the sample size was exhausted.

3.5 Data Collection Tool

A structured and pre-tested questionnaire was designed and used to collect the data using fact-to-face interview. The questionnaire was constructed using both open ended and close ended questions. The questions in the interview guide were constructed to reflect the variables of the study. Questions covered demographic characteristics of respondents, respondents’ knowledge regarding HIV testing and counseling and factors that influence

uptake of HIV testing and counseling. The questions were constructed in English and translated into Twi during the administration process. The tool was pretested among 20 eligible youth in the Kintampo North Municipality and some few ambiguities corrected to reflect the objectives of the study and to ensure that accurate information is provided by participants. The questions were constructed in simple English language to enable easy translation by data collectors in the twi language. A day's training was organized for data collectors where the tool was interpreted in twi to enable them ask the right questions.

3.7 Variables of the Study

The outcome variable in this study was uptake of HIV Testing and Counseling among the youth. Other independent variables that were measured included demographic variables such as age of respondents, sex of respondents, educational status of respondent and marital status of respondents. Also, the study measured the proportion of youth who ever tested for HIV, and factors that influence uptake of HIV testing and counselling.

3.8 Data Management and Analysis

The data collected was edited manually to correct any duplications and wrong recordings. The edited data were coded and statistically analyzed using stata software version 13. Basic descriptive statistics was performed and the results presented in frequencies and percentages using tables and charts. The relationship between variables was further analyzed using logistics regression analysis to show the strength of the association between the dependent variable and independent variables.

3.9 Ethical Consideration

Ethical approval was sought from the Ghana Health Service Ethical Review Committee before the commencement of the study. Permission was also sought from the Kintampo South District Director of Health Services as well as leaders of the communities where the study was conducted. The interview was conducted on one-on-one basis in an environment that was devoid of distraction and provided privacy for the participants. The objectives of the study were explicitly explained to each participant and their informed consent sought before they answered the questions. Participants who only consented to participate in the study were given a consent form to sign/thumbprint before they were interviewed.

For participants below 18 years, an assent form was provided for their parents/guardians to consent by signing/thumb printing before they were interviewed. Participants were also made to understand that participation in the study was voluntary and that every participant had the right to withdraw at any time during the study. Confidentiality of data collected was ensured by using identifiers rather than names of participants and the participants were equally assured that the data collected will only be used for academic purpose. The participants were assured of the safety of every information collected by ensuring that it is stored in an electronic format on different personal computers and as hard copies under key and lock in fire-proof cabinets. Apart from those involved in this study such as the data collectors and supervisor, no other party was given access to the data collected.

The study involved only the administration of questionnaire with no risk to the participants. Therefore, no compensation package was given to the participants. The administration of the questionnaire lasted about 30 minutes per participant and they were told before the start

of each interview session. Participants in the study were not provided with any material benefits from the study, however, their participation in the study helped them acquired some understanding of HIV and its transmission, the benefits of testing for and knowing their HIV status and where to get tested for HIV in the district and beyond.



CHAPTER FOUR

4.0 RESULTS

This chapter presents the results of the study on demographic characteristics of respondents as well as factors that influence uptake of HIV testing and counselling. The results had been presented in frequencies and percentages using both tables and figures. Statistical analysis in the form of simple and multiple logistic regression were equally conducted and the results presented in this section.

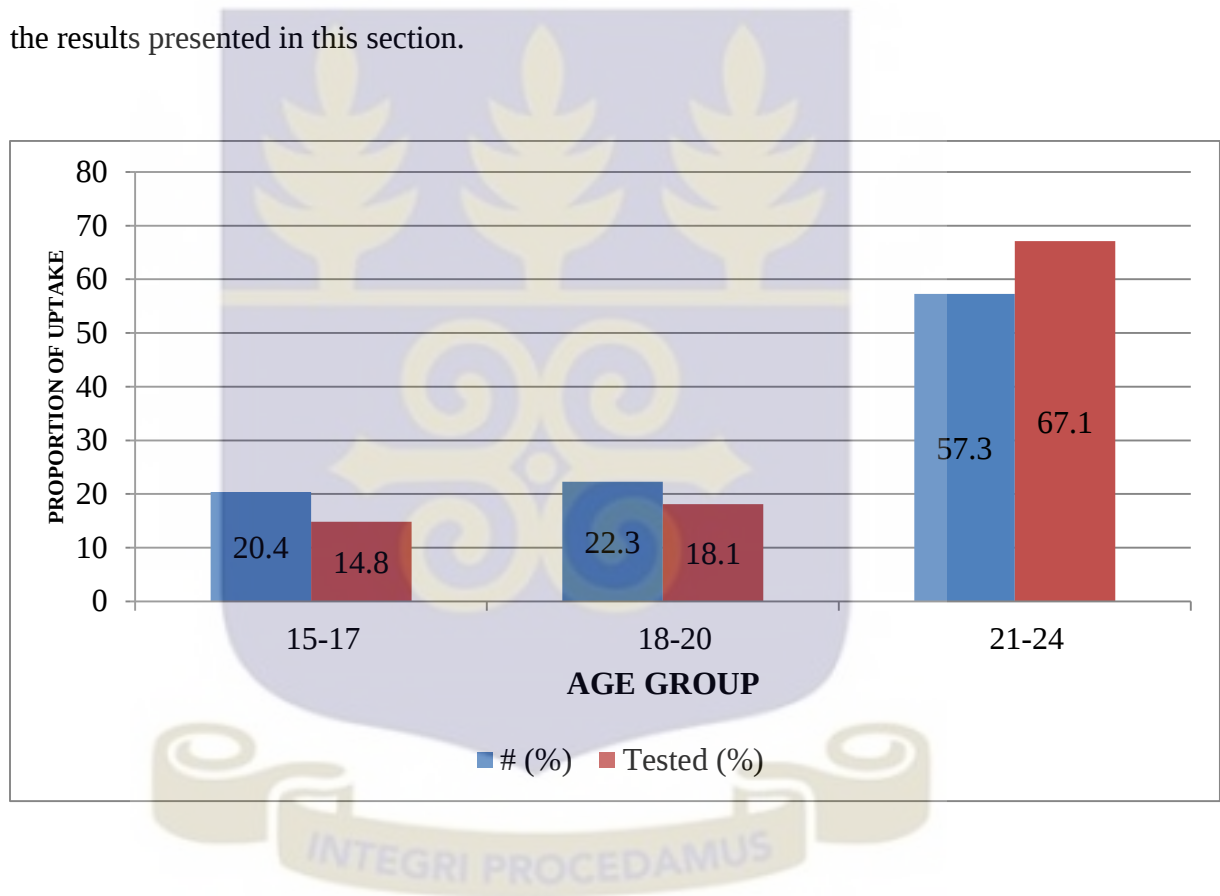


Figure 3: Uptake of HIV Testing and Counselling by Age in Kintampo South District

Most 177(57.3%) of the study participants were between 21-24 years old. Majority of the youth aged 21-24 years representing 67.1% have ever tested for HIV as indicated in figure 3.

Table 3: Distribution of HIV Testing and Counselling uptake in Kintampo South District among the**Youth**

Variable	Number of Respondents N=309 (%)	Number ever tested for HIV n=155 (%)
Age of Respondents (years)		
15-17	63(20.4)	23(36.5)
18-20	69(22.3)	28(40.6)
21-24	177(57.3)	104(50.8)
Sex of Respondents		
Female	152(49.2)	79(52.0)
Male	157(50.8)	76(48.0)
Occupational Status of Respondents		
Student	211(68.3)	93(44.1)
Farmer	17(5.5)	6(35.3)
Business	39(12.6)	20(51.3)
Professional	31(10.0)	28(90.3)
Others	11(3.6)	8(72.7)
Religion of Respondents		
Catholic	91(29.4)	43(47.3)
Protestant	131(42.4)	68(51.9)
Moslem	51(16.5)	21(41.2)
African Traditional Religion	7(2.3)	3(42.9)
Others	29(9.4)	20(69.0)
Marital status of Respondents		
Single	257(83.2)	118(45.9)
Married	41(13.2)	32(78.0)
Divorced	7(2.2)	3(42.9)
Widowed/widower	4(1.3)	2(50.0)
Educational status of Respondents		
Never	13(4.2)	6(46.2)
Primary	60(19.4)	27(45.0)
Secondary	154(50.0)	68(44.2)
Tertiary	82(26.5)	54(65.9)

Majority of the participants 177 (57.3%) were aged 21-24 years. The highest number of participants attained secondary education level (50.0%). Students and Protestants represented 68.3% and 42.4% respectively of the sample as shown in Table 3. A total 257 (83.2%) of the participants were not married and 118(45.9%) of the unmarried participants ever tested for their HIV status.

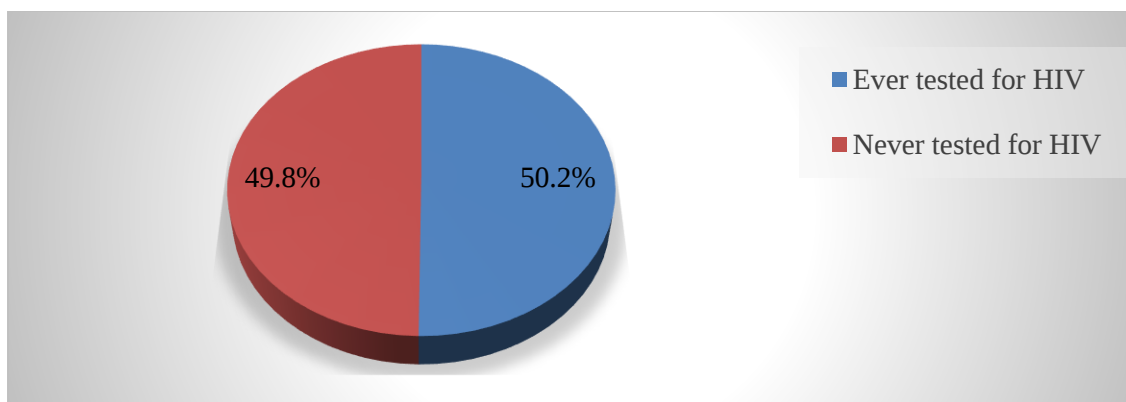


Figure 4: Proportion of Youth in Kintampo South District who never tested for HIV

While 50.2% of the youth ever tested and know their HIV status almost equal proportion (49.8%) had never tested for HIV and therefore did not know their status as shown in Figure 4. This is not good enough since spreading of the disease could continue among those who do not know their status.

Table 4a: Factors Influencing Uptake of HIV testing and counselling among the Youth of Kintampo South District

Variable/Response	Number of respondents N=309 (%)	Number ever tested for HIV n=155 (%)
Ever Heard about HTC		
Yes	245 (79.3)	144 (58.8)
No	64 (20.7)	11(17.7)
If yes where		
Hospital	169 (54.7)	110(65.1)
Friends	29(9.4)	10(34.5)
Private clinic/hospital	12(3.9)	8(66.7)
NGO	23(7.4)	11(47.8)
Other	12(3.9)	6(50.0)
Know where HTC Services are Provided		
Yes	200(64.7)	134(67.0)
No	109(35.3)	21(19.3)
Cost of HTC		
Free	136(44.0)	136 (100.0)
GHC 1.00 – 5.00	6(1.9)	6 (100.0)
GHC 5.00 – 10.00	8(2.6)	8 (100.0)
> GHC 10.00	2(0.7)	2 (100.0)

Reasons for testing for HIV

Medical Reason	68 (22.0)	67(98.5)
Marital Requirement	25 (8.1)	25 (100.0)
Fear of AIDS	46 (14.9)	46 (100.0)
Parental Pressure	5(1.6)	5 (100.0)
Others	11(3.7)	11(100.0)

Intention to test

Yes	95(30.7)	4(4.2)
No	63(20.4)	0(0.0)

Majority of the respondents (79.3%) have ever heard about HTC as shown in Table 4a. Among those who have heard about HTC, 58.8% have ever tested for HIV. More than half of the participants who heard about HTC heard it from the hospital and about 65.1% have ever tested after the awareness was created. About 67.0% of the participants who knew where HTC services were provided tested for HIV. Knowledge about the location of HIV testing and counselling services seems to improve uptake of the HIV testing among the youth. Most of the respondents (98.5%) tested for their HIV status due to medical reasons. The study revealed that the youth only tested for their HIV status when they visit the hospital for other reasons and will not voluntarily visit the testing centre. Even though a good number of the participants (95) indicated they have the intention to test for their HIV status, a few (4) have ever tested for HIV. Intention to test did not translate into uptake of HIV testing and counselling among the youth. All the participants who said HTC services were provided free also tested for HIV.

Table 4b: Factors Influencing Uptake of HIV testing and counselling among the Youth of Kintampo**South District Continued**

Variable/Response	Number of respondents N=309 (%)	Number ever tested for HIV n= 155 (%)
Type of HIV Testing		
Voluntary Testing	33 (10.7)	33(100.0)
Know your status	86(27.8)	85(98.8)
PMTCT	21(6.8)	21(100.0)
Provider Initiated	11(3.6)	11(100.0)
Others	3(0.9)	3(100.0)
Not Applicable	155(50.2)	2(1.3)
Importance of HIV Testing		
Yes	264(85.4)	144(54.5)
No	45(14.6)	11(24.4)
If important why?		
Know your status	136(44.0)	136 (100.0)
Prevent HIV Transmission	6(1.9)	6 (100.0)
Know about HIV	8(2.6)	8 (100.0)
Self Confidence	2(0.7)	2 (100.0)
Know blood Group	157(50.8)	3 (1.9)
Convenience of HTC Services		
Yes	179 (57.9)	105(58.7)
No	130 (42.1)	50 (38.5)
Reasons for inconvenience of HTC Services		
Lack of confidentiality	54(17.5)	25(46.3)
Distance too far	18(5.8)	4(22.2)
Services not always available	9(2.9)	5(55.5)
Lack of privacy	20(6.5)	11(55.0)
Inconvenient time	7(2.3)	1(14.2)
Lack of trust for health system	13(4.2)	4(30.8)
Poor attitude of providers	10(3.2)	3(30.0)
Others	1(0.3)	0(0.0)
Not Applicable	177(57.3)	102(57.6)

Most of the participants mentioned fear of positive results 93(30.1%) as the main reason for not testing for HIV. About 264 (85.4%) knew the importance of testing for their HIV status. Out of the 264 who knew the importance of HIV testing and counselling, 144

(54.5%) ever tested for their status. Knowledge about the importance of HTC seems to improve uptake of HIV testing. All the participants tested for their status through irrespective of the reason for the test. Though 57.9% thought the service provision was not convenient, 58.7% tested for their HIV status.

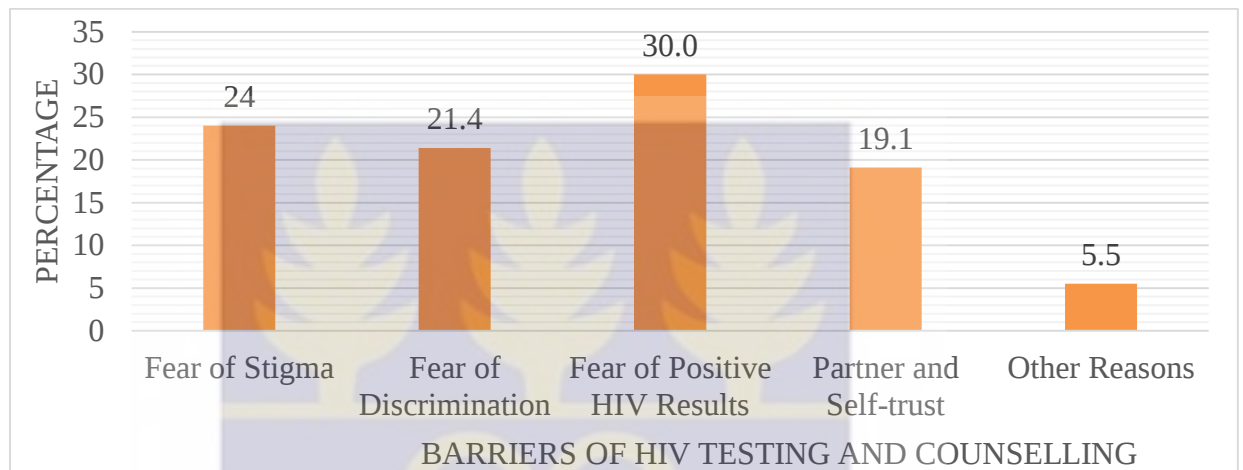


Figure 5: Barriers of HIV Testing and Counseling among the Youth

As shown in Figure 5, most of the youth (30.0%) said that fear of positive HIV test results is the main barrier that would prevent them from testing for HIV. Other significant barriers of HIV testing and counselling from the study were fear of stigma (24.0%), fear of discrimination (21.4%) and lack of partner and self-trust (19.1%).

Table 5: Simple Logistic Regression Analysis of Demographic Variables of Participants

Variable	Respondents N=309	COR	95% Confidence Interval	<i>p</i>-value
Age (years)				
15-17	63(20.4)	Ref		
18-20	69(22.3)	1.19	0.588 - 2.398	0.631
21-24	177(57.3)	2.48	1.368 - 4.487	0.003
Occupation				
Student	211(68.3)	Ref		
Farmer	17(5.5)	0.69	0.247 - 1.941	0.484
Business	39(12.6)	1.34	0.674 - 2.647	0.407
Professional	31(10.0)	11.84	3.492 - 40.164	0.001
Others	11(3.6)	3.38	0.873 -13.110	0.078
Marital status				
Single	257(83.2)	Ref		
Married	41(13.2)	4.19	1.922 - 9.129	0.001
Divorced	7(2.3)	0.88	0.194 - 4.027	0.873
Widowed/widower	4(1.3)	1.18	0.163 - 8.491	0.871
Educational status				
No Education	13(4.2)	Ref		
Primary	60(19.4)	0.95	0.287 - 3.179	0.940
Secondary	154(50.0)	0.92	0.296 - 2.872	0.889
Tertiary	82(26.5)	2.25	0.689 - 7.338	0.179

Most of the study participants were aged 21-24 years as indicated in Table 5. Again, professionals and married couple were most likely to test for their HIV status than their counterparts. The result from Table 4 also shows that participants with secondary education represented 50.0% of the total sample. Majority of the study participants (83.2%) were unmarried and 211(68.3%) were students.

**Table 6: Simple Logistic Regression Analysis of Factors Influencing HIV Testing and Counselling
among the youth of Kintampo South District**

Variable/Response	Respondents N=309 (%)	COR	95% Confidence Interval	<i>p</i> -value
Ever Heard about HTC				
No	64(20.7)	Ref		
Yes	245(79.3)	0.15	0.072 – 0.292	0.001
If yes where				
Hospital	169(54.7)	Ref		
Friends	29(9.4)	0.28	0.123 - 0.646	0.003
Private clinic/hospital	12(3.9)	1.07	0.310 – 3.711	0.912
NGO	23(7.4)	0.49	0.205 – 1.182	0.113
Other	12(3.9)	0.54	0.166 – 1.737	0.299
Not Applicable	64(20.7)	0.10	0.471 – 0.209	0.001
Know place of HTC Services				
Yes	200(64.7)	0.12	0.067 – 0.206	0.001
No	109(35.3)	Ref		
Convenience of HTC Services				
Yes	179(57.9)	0.44	0.278 – 0.699	0.001
No	130(42.1)	Ref		
Reasons for inconvenience of HTC Services				
Lack of confidentiality	54(17.5)	Ref		
Distance too far	18(5.8)	0.33	0.966 – 1.138	0.079
Services not always available	9(2.9)	1.45	0.351 – 5.995	0.608
Lack of privacy	20(6.5)	1.42	0.506 – 3.974	0.507
Inconvenient time	7(2.3)	0.19	0.022 – 1.716	0.140
Lack of trust for health system	13(4.2)	0.52	0.141 – 1.879	0.315
Poor attitude of providers	10(3.2)	0.50	0.116 – 2.129	0.346
Not Applicable	177(57.3)	1.55	0.855 – 2.910	0.145
Willingness to test	95(30.7)	1.09	1.066 – 1.115	0.001

From the regression analysis in Table 6 shows that participants who had ever heard about HTC from their friends were most likely to test for their HIV status. Again, participants who knew where HTC services were provided and convenience to undertake the test were also significant in influencing uptake of HTC. There was also positive association regarding participants' willingness to test for their HIV status and uptake of the service.

Table 7: Multiple Logistic Regression Analysis of Uptake of HIV Testing and Counselling

Variable	Adjusted Odds Ratio	95% confidence interval	p-value
Age	4.95	0.675-36.341	0.115
Occupation	1.81	0.892-3.656	0.101
Marital status	1.61	0.327-7.904	0.560
Convenience of test	0.44	0.069-2.779	0.383
Willingness to test for HIV	1.11	1.064-1.151	<0.001
Importance of HTC	0.29	0.013-6.343	0.379
Know where HTC Services are provided	0.38	0.032-4.544	0.444
Location of HTC services	0.97	0.848-1.109	0.659
Ever heard about HTC services	17.19	0.000-7691001	0.668

The multiple logistics regression model shows that occupation was not a significant determinant of the uptake of HIV testing and counselling (AOR=1.81, 95% CI=0.892-3.656, $p>0.05$). apart from intention to test for HIV in the future that shows statistical significance on uptake of HIV testing and counselling (AOR=1.11, 95% CI=1.064-1.151, $p<0.001$) all the other variables were not significant in the multiple regression model as shown in Table 7 above.



CHAPTER FIVE

5.0 DISCUSSION

The study sought to assess the factors influencing uptake of HIV testing and counselling among the youth aged 15-24 years in the Kintampo South District.

Most of the respondents were between the ages of 21-24 years representing about 57.3%. The proportion of youth that ever tested for HIV among the same age stratum was average (50.8%). The simple logistic regression analysis shows that age was significantly associated with uptake of testing for HIV ($p < 0.003$). Even though the odds of testing for HIV shows significant association with age this association was only significant for participants aged 21-24 years as indicated in Table 4 (OR=2.48, 95% CI=1.368-4.487, $p=0.003$).

Being 21 years or older was therefore found to be associated with the odds of testing for HIV among the youth. This may be due to the fact that most of the adolescents that participated in the study were afraid to go for a test in order not to create the impression that they have engaged in sexual intercourse at that age. The fact that the study combined adolescents with young adults might have introduce some information bias among the respondents. This finding was consistent with a similar study conducted by Kaai, Bullock, Burchell, & Major (2012) on factors that affect HIV testing and counseling services among heterosexuals in Canada and the United Kingdom where it was reported that age was the most frequently mentioned socio-demographic factor associated with HTC. The study

reported to suggest that the highest testing rates were among the middle-aged study participants and lower among the young and older populations.

The multiple regression analysis however indicates that age is not statistically significant (AOR =4.95, 95% CI= 0.675 – 36.341, $p=0.115$) regarding uptake of HIV testing and counselling among the youth. The youth who ever tested for HIV were 14.8% and 18.1% for the ages 15-17 years and 18-20 years respectively. Despite this negative association, HIV testing strategies must continue to consider the different age distributions in the district when implementing activities to improve HIV testing and counselling among the youth. Because the data collected was self-reported, some respondent may have forgotten their HIV testing status. Recall bias in studies such as this may have caused respondents to report some important information regarding their testing status. Averagely, the proportion of males to females who ever tested for HIV in the study was 48% and 52% respectively.

This finding differed from the 2008 Ghana Demographic and Health Survey (GDHS) finding in the general population where it was revealed that the proportion of females and males aged 15-49 years that have ever tested for HIV was 21% and 14% respectively. In several other studies in Africa and especially in Ghana, females consistently tested higher than males in the population. This might be because of the ongoing mandatory prevention of mother-to-child transmission strategies during antenatal services in Ghana. The need to design a strategy that give males the opportunity to routinely test for their HIV status to improve uptake of HIV testing among males.

Again, the finding of this study about uptake of HIV testing by gender was higher compared to a similar study by Ogaji, Oyeyemi & Ibrahim (2013) where they reported low

uptake of HTC services of 14.4% and 14.7% of females and males respectively. Likewise, the 2005 Ethiopia Demographic Health Survey (EDHS) reported that only 4% of women and 6% of men aged 15–49 years had ever been tested for HIV. Females slightly tested more than males. The findings of the current study was however consistent with a similar study by Bond et al. (2005) conducted in Philadelphia where it was reported that women were highly more likely to have tested for HIV as compared to males. The study also agrees with data of the annual reports of the NACP between 2007–2010 where it has been reported that females contributed 58.2% of all persons who tested for HIV in health facilities across the country. Students were the majority in the sample with about 60% of them ever testing for HIV. Out of the 31 professionals who participated in the study, 28(18.1%) of the total sample had ever tested for HIV.

A cell content analysis of occupational variables revealed that the proportion of professionals and business people who have ever tested for HIV was above average (51.3%) each compared to all other occupations in the study. This indicates that professionals were more likely to test for their HIV status compared to other categories of occupation. This might be due to the fact that they are in formal employment and able to afford the services of HIV testing and counselling. It is important to consider providing HIV testing and counselling services free of charge especially for the youth to encourage the youth who are unemployed to test for their HIV status.

Majority 131(42.4%) of the study participants were Protestants while the least religious denomination were African Traditionalist. While 51.9% of the Protestants tested for their HIV status, 42.9% of the African traditionalist ever tested for their HIV status. Being a

Protestants and a Catholic increases the odds of ever testing for HIV among the youth. Catholics who ever tested for HIV represented 47.3% while Muslims represented 41.2% of the total participants. Religion was however not significantly associated with HIV testing and counselling status. This was found not to be consistent with Addis et al. study where they found religion to be significantly associated with having taken an HIV test. Majority of the participants were not married (83.2%).

Also, the highest tested population in the study was among those who were married (78.0%). This finding contradicts a study by Kai et al (2012) where they cited marital status as a factor associated with HTC. The study reported that unmarried people were more likely to test for HIV compared to those who were married or those cohabitating. Married people may avoid testing for HIV due to lack of partner and self- trust. This however was the opposite in this recent study among the youth.

A cell content analysis however revealed more testing of HIV among the married people in this study. Out the 41 married participants in the study, 32 of them have ever tested for their HIV status. Being married significantly influence the participants uptake of HIV testing and counselling (OR=4.19, 95% CI=1.922-9.129, $p<0.001$). The study revealed that the proportion of participants who tested for HIV increases with increasing level of education. Persons who attained tertiary level education were found to have tested for HIV more compared to the other lower categories. This was also reported in a similar study by Kalanzi (2013) that university students were more likely to have tested for HIV as compared to participants from the general public.

The study found 62% of the university students saying they had tested for HIV compared to 49% from the general public that had tested for HIV.

The occupational status of the participants was also a significant determinant of their HIV testing status ($p < 0.001$). Professionals were found to have tested more than non-professionals. Being a professional seems to increase the odds of ever testing for HIV ($OR = 11.84$, $95\% CI = 3.492-40.164$, $p < 0.001$).

The factors influencing uptake of HIV testing and counselling was one specific interest of this study. The study found that awareness about HIV testing and counselling increases the uptake of the service. The results in Table 4a shows that 245 (79.3%) of the respondents have ever heard about HIV testing and counselling. Majority of those who have ever heard about the service also tested for their HIV status representing 58.8%. This meant that when awareness is increased among the youth their uptake of the service will also increase. The regression analysis showed a significant association between hearing about HIV and the decision to have tested for HIV ($OR = 0.15$, $95\% CI = 0.072-0.292$, $p < 0.001$). This was found to agree with findings of Strauss, Rhodes & George (2015) that lack of knowledge can be an important barrier to HIV testing status. The major source of information regarding HIV testing and counselling was the government hospitals (54.7%). Among those who heard about HIV from the government hospitals, about 65.1% have ever tested for their HIV status.

Other sources of information identified were friends (34.5%), private clinics (66.7%) and NGOs (47.8%). This means that the major source of information regarding HIV testing has been localized at the various state owned hospitals. The need for expansion and

involvement of other agencies interested in HIV to create and increase awareness among the youth who visit those facilities to test for HIV. Testing and counselling of HIV should not only be strengthened at the government facilities as found in this study but must be scaled up to include community outreach programmes. The high uptake of HIV testing and counselling in the government hospitals may be due to the fact that they were recommended to take the test when they visited the hospital for a different reason. The source of information was also a significant determinant of uptake of HIV testing and counselling (OR=0.98, 95% CI=0.972-0.986, $p<0.001$).

The results from Table 4a revealed that majority 134(67.0%) of the youth who knew where HIV testing and counselling services are provided patronized the services compared to 21(19.3%) who did not know where the services were provided. Knowing the point of service delivery for HIV testing and counselling suggest to significantly improve the uptake of the services (OR=0.12, 95% CI=0.067-0.206, $p<0.001$). Asante (2013) found among university students in Ghana that over 90% have high knowledge about where to get an HIV test but only 45% had tested for HIV. Knowing where to get tested for HIV is therefore not enough to assure increase uptake of HIV testing. Regular public education on social stigma and discrimination reduction remained paramount in determining uptake of HIV testing among the youth.

All 136(100.0%) who said the service was provided free of charge took the test. This suggest that cost of HIV testing and counselling may significantly determine uptake of the service. Though majority of the youth may be willing to test for their HIV status they can only do that when the test is affordable. It is therefore very important for policy direction

from the Ministry of Health to make HIV testing and counselling free or better still part of the National Health Insurance Scheme to enable the youth to afford the cost of testing for HIV. Affordability of the HIV test may improve uptake among the youth since majority of them are unemployed and may not be able to afford the cost of testing.

Almost all the respondents representing 98.5% who ever tested for HIV indicated that the main reason for taking the test was due to medical reasons while 100.0% took the test because they fear they were infected with HIV. All (100.0%) of the respondents also took the test because it was a requirement for their marriage. Apart from specific reasons that mandated the participants to take an HIV test, none of the participants who have ever tested for HIV did that without being compelled by one reason or the other. The decision to take an HIV test among the youth is largely due to reasons beyond their control otherwise they will never have taken the test. The need to intensify education in the communities to increase knowledge about the need to voluntarily test for HIV without been recommended or compelled by any reason is important in increasing HIV testing and counselling.

The results from Table 4a further explained that 95(30.7%) of the respondents have the intention to test for their HIV status but only 4(4.2%) have ever tested for HIV. The intention to test was found to be highly associated with the uptake of HIV testing and counselling among the youth in the district (OR=1.09, 95% CI=1.066-1.115, $p<0.001$). however, the significant associated found may have be due to the fact that participants only responded to questions about whether they will be willing to test for HIV in the future. This may lead to respondents providing information that may seem they are ready to test for HIV. This study was a community-based study and only relied on self-report by the

participants. Self-reporting could be subject to information bias because of the possibility of reporting behaviors that are socially desirable. The need for increase awareness on the importance for testing for HIV may motivate the youth with intention to test to actually undergo the testing. The intention to test therefore did not translate into actual testing. The reasons for the inability to take an HIV test even though the willingness was high need to be addressed and strategies implemented to bridge the gap between the intention to test and actual testing for HIV among the youth in the district.

The results from Table 4b shows that most of the respondents (53.8%) refused to take HIV test due to fear of positive results. Also, about 55.4% and 50.0% respectively said they did not test for HIV because of fear of stigma and fear of discrimination. Furthermore, 44.1% said they will not take HIV test due to lack of trust for their partners and themselves. This was found to be likely source of information bias regarding their testing status because respondents who never tested or tested positive may report they were negative or have ever tested for HIV. This might have affected the average proportion of HIV testing uptake among the youth compared to the relatively low uptake reported in other studies across Africa. This was also reported in a study by Tsegay, Edris, & Meseret (2013) where they found perceived stigma associated with positive HIV test result to be important factor of HTC service utilization. The results from Table 4b further revealed that the most common type of HIV testing strategy in the district was “Know Your Status” campaign. Out of the total respondents who responded to the type of HIV testing strategy, 85 (98.8%) have ever tested for HIV through the “know Your Status” campaigns.

All (100.0%) ever tested for HIV through voluntary counselling and testing, and PMTCT. Likewise, all the respondents who said the test was recommended by the health care provider tested for their HIV status. This suggest that frequent “Know Your Status” campaigns may be a major strategy that the youth prefer in testing for their HIV status. Know Your Status campaign uses a community-based approach and the findings seems to suggest that community-based approach may be appropriate in improving the uptake of HIV testing and counselling among the youth in the district. As many as 264 (85.4%) of the youth knew the importance of HIV testing and counselling. Out of the number who knew the importance of HIV testing and counselling, 54.5% have ever tested for their HIV status. Knowledge about the importance of HIV testing and counselling was therefore found to be strongly associated with HIV testing uptake among the youth (OR=0.23, 95% CI=0.131-0.555, $p<0.001$).

Increasing knowledge may greatly influence the uptake of testing and counselling positively. It is therefore important to create and increase awareness about HIV testing and counselling as well as making the services available and affordable and devoid of any interference for the youth. Most of the respondents said HIV testing and counselling was important because it helps them to know their status. The reasons why respondents failed to undergo HIV testing and counselling was not significantly associated with the uptake of the service (OR=0.85, 95% CI=0.701-1.022, $p= 0.083$). While 179 (59.7%) of the participants said HIV testing and counselling service was convenient, the uptake was also above average (58.7%). The results in Table 4b revealed that 42.1% of the participants found HIV testing and counselling services not convenient. The reasons for the inconvenience was largely due to lack of confidentiality (17.5%), lack of privacy (6.5%),

lack of trust for the health system (4.2%) and service not always available (2.9%). Poor attitude of health services providers also accounted for 3.2% of inconvenience that affects uptake of HIV testing and counselling by clients as shown in Table 4b.

This was consistent with the study conducted by Gadegebeku & Saka (2013) on attitude of the youth towards voluntary counseling and testing of HIV/AIDS in Accra, Ghana, where respondents reported fear of their sero-status, lack of confidentiality about their sero-status to others, lack of anonymity and unsuitable testing (e.g., inaccessible, inconvenient and not private) venues as barriers to HTC uptake and mistrust of the health care services.

From the simple logistics regression analysis in Table 5 the participants who have ever heard about HIV testing and counselling from their friends significantly increased their uptake after controlling for hospital source information (OR=0.28, 95% CI=0.123-0.646, $p=0.003$). Targeting youth groups in the community for dissemination of information regarding testing for HIV may improve the uptake of HIV testing and counselling since peers are better able to discuss issues regarding sexual life than with other community members. The use of community drama on HIV testing and counselling involving the youth may be a good strategy in getting the youth test for HIV. More than 80% of the participants showed interest to test for HIV if they knew where the service was provided. Knowledge about the location for HIV testing and counselling significantly influence the uptake of HIV counselling and testing (OR=0.12, 95% CI=0.067, 0.206, $p<0.001$).

Again, HIV testing and counselling in a convenient environment was found to be a significant determinant of HIV testing and counselling (OR=0.44, 95% CI=0.278-0.699,

$p < 0.001$). There was also positive association regarding participants' willingness to test for their HIV status and uptake of the service ($OR = 1.09$, 95% $CI = 1.066-1.115$, $p < 0.001$).

A multiple regression analysis of age, occupation and marital status as shown in Table 6 reveals that age ($AOR = 4.95$, 95% $CI = 0.675-36.341$, $p = 0.115$) and occupation ($AOR = 1.81$, 95% $CI = 0.892-3.656$, $p = 0.101$) were not significant determinants of uptake of HIV testing and counselling services. The multiple logistics regression model as shown in Table 6 also showed that participants willingness to test for HIV in the future was the only factor that was highly significant ($AOR = 1.11$, 95% $CI = 1.064-1.151$, $p < 0.001$) on uptake of HIV testing and counselling. This implies that education on the reduction of discrimination, confidentiality and stigmatization should be intensified among the youth to create and increase awareness on HIV testing and counselling to encourage the youth to take HIV test and improve uptake in the district. There is also the need for youth friendly strategies that will encourage the majority of the youth who are willing to test for HIV in the future to utilize the service at no cost.



CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSION

The findings of the study that nearly half of the youth had never tested for HIV and citing lack of confidentiality, lack of privacy, mistrust of the health system, inconvenient facility opening hours, fear of positive results and poor attitude of services providers as barriers to uptake of HIV testing and counselling has a serious public health implications. Age, educational status, marital status and occupation were some demographic factors found to be significant determinants of HIV testing and counselling among the youth.

6.2 RECOMMENDATIONS

Implications for Public Health

- Community-based interventions such as “Know Your Status” campaigns in the district should be strengthened to improve uptake of HIV testing and counselling among the youth in the district.
- It will also be strategic if educational campaigns on reduction of discrimination, stigmatization, fear of positive results and bad staff attitude against persons with HIV are implemented in the district.
- Quality assurance training for staff involved in HIV testing and counselling activities should be organized to improve on staff-client relationship to get informed consent of the youth willing to test HIV to test.

Implications for Research

- Further research on uptake of HIV testing and counselling among the general population in Kintampo South district is needed to contribute to additional evidence on the factors influencing uptake of HIV testing and counselling within this age group.



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APPENDIX A

Consent Form for Participation in the study

Household Number.....

Dear Participant,

You have been selected to participate in this survey on factors influencing uptake of HIV Counseling and Testing among the youth who are 15 to 24 years. This study is been conducted by Mr. Mukasa Kabiri, a student of the University of Ghana, School of Public Health as partial fulfillment for the award of a Masters of Public Health degree.

The information you provide will be treated totally confidential and will not be disclosed to anyone except for academic purpose. No response you give will be specifically identified with you but will be combined with the general responses of the entire population.

Your participation in this study is voluntary and you are allowed to withdraw in the course of the interview even after you have agreed to participate without any penalty. If you have any questions about the study you are free to ask the interviewer or the following persons: Mr. Mukasa Kabiri (principal investigator) on 0200287903/0240243219 or Dr. Anthony Danso-Appiah on 0269083789 (supervisor, School of Public Health, Legon).

You will be asked questions about yourself, your knowledge regarding HIV Counseling and Testing and factors that influence HIV Counseling and Testing. The study does not pose any risk except some questions that may go into your private sexual life.

It is important to note that your participation in this study will enable you to learn about HIV and the benefits of knowing your HIV status. You may also be directed to places where HIV test is conducted if you wish.

This study has been approved by the Ghana Health Service Ethics Review Committee which is in-charge of approving studies on health among human population. You can contact the administrator of the Ghana Health Service Ethical Review Committee, Hannah Frimpong, on 0507041223 for further information or clarification, if necessary.

Signing/thumb printing this consent form indicates your understanding of what will be expected of you and your readiness to participate in the study.

Read by participant	√	Read by interviewer	√
Agreed		Refused	

I hereby provide INFORMED CONSENT to participate in this study on factors influencing HIV Counseling and Testing among the youth (15-24 years) without been coerced by the interviewer.

Signature/Thumbprint of Participant.....

Signature/Thumbprint of witness.....

Date

APPENDIX B

ASSENT FORM FOR PARTICIPANTS LESS THAN 18 YEARS

Your child is invited to participate in a research study being conducted by Mukasa Kabiri, a Master of Public Health student, School of Public Health, University of Ghana and his assistants. The purpose of the research is to study factors that influence HIV testing and counselling among the youth aged 15-24 years and your child happens to be selected to participate. He/she will be asked some questions regarding his/her sexual history, HIV testing status and demographic information. There are no known risks associated with this research other than the potential for mild boredom or fatigue. There are no known benefits other than the knowledge gained from having participated in the study.

The questions will take no longer than 30 minutes. Your child's participation is voluntary. He/she may choose not to participate in this research study. If he/she agrees to participate, he/she can withdraw from the study at any time. We will do everything we can to protect your child's privacy. His/her name will be recorded only for scheduling and consent purposes. All data will be identified only by a subject number. Any materials containing his/her name (e.g., consent forms) will be kept in a separate locked file. Any record linking your child's name to a particular subject number will be destroyed once the study is complete. His/her identity will not be revealed in any publication that may result from this study. The study is not meant to diagnose your child HIV status and for that matter we cannot provide you with any results regarding his/her HIV status.

If you have any questions at this point please ask the interviewer. You can also contact the principal investigator, Mukasa Kabiri, on 0200287903/0240243219 or his supervisor, Dr. Anthony Danso-Appiah on 0269083789 for further information.

If you have questions about your child's rights as a research participant, you may contact the Administrator of the Ghana Health Service Ethical Review Committee, Hannah Frimpong on 0507041223 for further information or clarification.

Declaration by parent/guardian

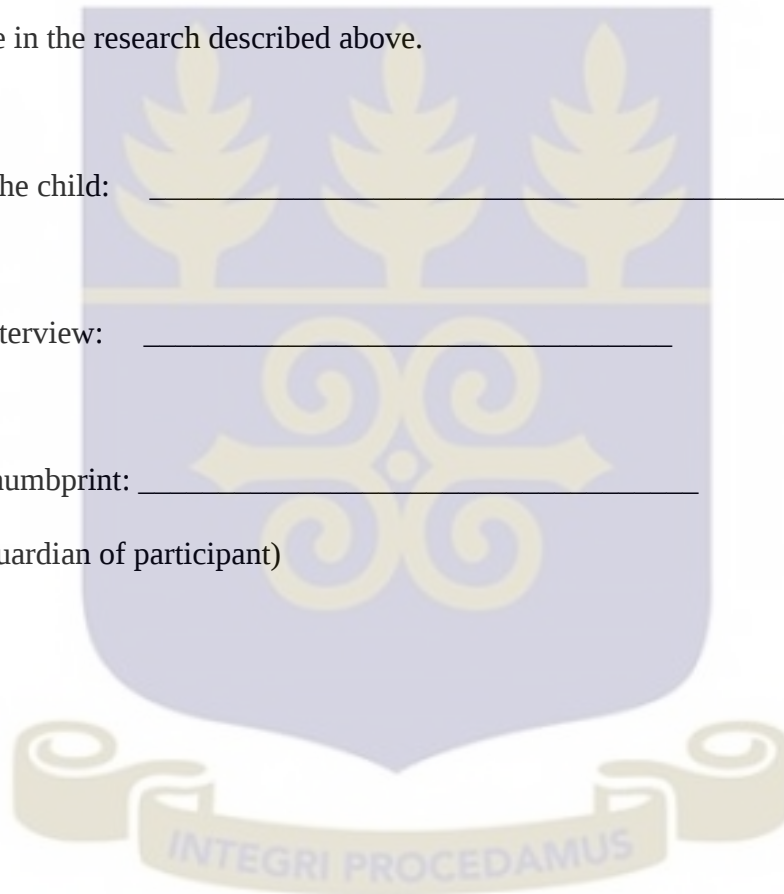
I have read this consent form and know that I may ask questions now and any time. I will also be given a copy of the consent form for my records. I consent for my child to participate in the research described above.

Name of the child: _____

Date of interview: _____

Signed/Thumbprint: _____

(Parent/Guardian of participant)



APPENDIX C

FACTORS INFLUENCING THE UPTAKE OF HIV COUNSELING AND TESTING AMONG THE YOUTH IN KINTAMPO SOUTH DISTRICT OF THE BRONG AHAFO REGION

INTERVIEW GUIDE

SECTION A: PERSONAL DATA

1. Sex
 - a. Female1
 - b. Male2
2. Age (in years)
 - a. 15-17.....1
 - b. 18-20.....2
 - c. 21-24.....3
3. Religious affiliation
 - a. Catholic1
 - b. Protestants2
 - c. Muslim3
 - d. African Traditional4
 - e. Other (specify)5
4. Marital status
 - a. Single1
 - b. Married.....2
 - c. Divorced/separated3
 - d. Widow/widower.4
5. Education status
 - a. Never attended school1
 - b. Primary education2
 - c. Secondary education3
 - d. Tertiary/post-secondary education..4

6. Occupation
 - a. Student1
 - b. Farmer2
 - c. Business3
 - d. Professional4
 - e. Other (specify).....5

SECTION B: KNOWLEDGE REGARDING HTC

7. Have you ever heard about HTC?
 - a. Yes1
 - b. No.....2
8. If yes in Q7, where have you heard it from?
 - a. Hospital.....1
 - b. Friends2
 - c. Private clinic/hospital.....3
 - d. NGO.....4
 - e. Other (specify).....5
9. Do you know where HTC services are provided?
 - a. Yes1
 - b. No.....2

10. Have you ever tested for HIV and knows your status?
- a. Yes1
 - b. No.....0
11. If yes to Q10, how much did you pay for testing?
- a. Free.....1
 - b. GH¢1.00-5.00.....2
 - c. GH¢5.00-10.00.....3
 - d. >10.00.....4
12. What reason accounted for you testing for HIV?
- a. Medical reason.....1
 - b. Marital requirement.....2
 - c. Fear of the disease (AIDS).....3
 - d. Parental pressure.....4
 - e. Others (specify).....5
13. If no to Q10, do you intend to test for HIV?
- a. Yes.....1
 - b. No.....2
14. If yes to Q10, which of the following types of HIV testing was provided for you?
- a. Voluntary counseling and testing...1
 - b. Know Your Status.....2
 - c. During pregnancy (PMTCT).....3
 - d. Provider-initiated testing.....4
 - e. Others (specify).....5

15. Do you think that it is important for you to test for HIV?

- a. Yes.....1
- b. No.....2

16. If yes to 15, what is the importance of HTC in your opinion?

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SECTION C: PERSONAL – RELATED FACTORS

17. What reason can you give that might prevent you from taking a test for HIV?

- a. Fear of stigma1
- b. Fear of discrimination.....2
- c. fear of positive results.....3
- d. Partner and self-trust.....4
- e. Other(s) specify.....99

SECTION D: HEALTH SYSTEM- RELATED FACTORS

18. Do you think the place where HTC services are provided is convenient for you?

- a. Yes.....1
- b. No.....2

19. If No to Q18, what reason can you give that inconvenience you?
- a. Lack of confidentiality.....1
 - b. Distance too far.....2
 - c. Services not always available.....3
 - d. lack of privacy.....4
 - e. Inconvenient operating time of facility.....5
 - f. lack of trust for health system.....6
 - g. Poor attitude of the service providers7
 - h. Others (specify).....8

SECTION E: PROVIDER-RELATED FACTORS

20. What do you expect the providers of HTC to do in order to encourage you or others to voluntarily accept and take HTC services?
- a. Provide HTC services in community/churches.....1
 - b. Be respectful, compassionate and humble.....2
 - c. Recommend testing for people...3
 - d. Positive relationship with clients..4

