

**FACTORS INFLUENCING THE USE OF HIV SELF-TESTING KITS AMONG
ADOLESCENTS: A CASE OF KALINGALINGA COMPOUND, LUSAKA**

BY

MWANSA ETHEL

SUPERVISOR: DR COSMAS ZYAMBO

CO-SUPERVISOR: MR. C. NKWEMU

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Declaration

“I, ETHEL MWANSA, do hereby declare that the research report was composed by myself; that the work contained herein is my own except where explicitly stated or referenced otherwise in the text and that this work has not been submitted or presented for any other degree, diploma or professional qualification at this or other universities.”

Name:

Signed:.....

Date:.....

Supervisor:

Name:

Signed:.....

Date

Dedication

To my family

I dedicate this dissertation to my father Mr. John Mwansa, who always believed in my potential to do great things and succeed at everything that I do. Furthermore, I would want to dedicate this to my Siblings for their vital support and encouragement during my academic path. their unshakeable faith in me, combined with their inexhaustible optimism, served as a constant source of inspiration and motivation for me.

Approval

This dissertation by Mwansa Ethel has been approved as partial fulfilment of the requirements for the award of Masters of Science in Public health at the University of Zambia.

Supervisor

Name:

Signature:Date:

Coordinator

Name:

Signature:Date:

Abstract

In Zambia, HIV self-testing is vital for HIV prevention, but there's limited understanding of its use among adolescents. In Zambia, HIV self-testing has become integral to HIV prevention and control, yet a knowledge gap exists regarding its prevalence, utilization trends, and determinants among adolescents. This cross-sectional investigation, conducted in the Kalinglinga compound of Lusaka district, engaged 391 participants, with a robust response rate of 97.7%. Employing a pretested questionnaire, data were analyzed at univariate, bivariate, and multivariate levels. Univariate analysis revealed a 79% non-usage prevalence. Bivariate analysis showed significant associations between non-usage and marital status ($\chi^2 = 7.064$, $p = 0.029$), monthly income ($\chi^2 = 11.058$, $p = 0.030$), kit availability ($\chi^2 = 16.868$, $p = 0.000$), accessibility ($\chi^2 = 12.066$, $p = 0.002$), and cost perception ($\chi^2 = 10.016$, $p = 0.007$). Age, gender, education, religion, having a sexual partner, unprotected sex, and drug use didn't significantly affect usage ($p > 0.05$). The analysis identified several key factors associated with a higher prevalence of non-usage of HIV self-test kits among the study participants. These factors included being aged 18-19 years, male gender, having primary or no formal education, being single, having a higher income, lacking a sexual partner, never engaging in unprotected sex, residing in areas with limited availability and accessibility of self-test kits, and having uncertainty about the cost of acquiring these kits. These demographic and situational characteristics collectively contributed to a greater likelihood of non-usage among the surveyed individuals. Multivariate analysis found higher income as a barrier (OR = 1.473, 95% CI: 1.222 - 2.252), while being single increased non-usage odds (OR = 2.424, 95% CI: 1.432 - 4.102). Areas without kits had higher non-usage odds (OR = 1.827, 95% CI: 1.129 - 2.956). Uncertainty about kit costs led to higher non-usage odds (OR = 2.708, 95% CI: 1.230 - 5.964). These findings underscore the need for tailored interventions addressing specific demographic, socioeconomic, and predisposing factors impeding HIV self-testing. The study enriches the body of knowledge on HIV self-testing, offering insights for policy and program development to bolster public health strategies for HIV prevention and control.

Keywords: HIV self-testing, prevalence, utilization, predictors, public health, adolescent population.

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List of Acronyms

AIDS:	Acquired Immunodeficiency Syndrome
ART:	Antiretroviral Therapy
CDC:	Centre for Disease Control
GDP:	Gross Domestic Product
HIV:	Human Immunodeficiency Virus
HIVST:	HIV Self Testing
HTS:	HIV Testing Services
PLHIV:	People Living with HIV
UNAIDS:	Joint United Nations Programme on HIV/AIDS
WHO:	World Health Organisation
ZAMPHIA:	Zambia Population HIV Impact Assessment study

CHAPTER ONE

1.0 INTRODUCTION/BACKGROUND

World Health Organization (WHO, 2017) estimated that only 36.7 million people were living with the Human Immunodeficiency Virus (HIV) globally with 19.4 million living in Eastern and Southern Africa which is the most affected by the HIV pandemic, those accessing antiretroviral therapy were estimated at 21.7 million globally. It is also estimated that 1.8 million people became newly infected with HIV while people who died from HIV-related illnesses in the year 2017 were 940000.

According to the Joint United Nations Programme on HIV/AIDS (UNAIDS) (2016), a Substantial stride has been made in promoting HIV knowledge globally, but half of the people living with HIV are still unaware of their HIV status. HIV testing is the “keystone” of the HIV response. Although testing has not changed significantly over the years, the linkages between testing, treatment, care, and prevention have changed (UNAIDS 2020). Emphasis on testing for HIV as a gateway to treatment, care, and prevention has immensely grown over the decade. As a result, this emphasis on testing has generated a demand for governments, public health agencies, and HIV organizations to develop policies, approaches, and strategies to increase HIV testing. These approaches include the innovation and introduction of the HIV self-testing kit and the 95-95-95 strategy proposed by the UNAIDS which aim at high coverage diagnosis, treatment and viral suppression among people living with HIV so as to reduce HIV mortality, morbidity and eventually end the HIV epidemic (UNAIDS, 2018). However, existing conventional HIV testing services (HTS) have failed to achieve universal access to HIV prevention, treatment, and care especially for non-testers with low access to and those at higher risk of HIV acquisition and hard to reach populations, (UNAIDS, 2020).

In sub-Saharan Africa, only 50% of the People Living with HIV (PLHIV) know their HIV status despite many HIV testing centers. In Zambia, 66% of PLHIV aged 15-59 years know their HIV status which implies 34% of PLHIV aged 15-59 years are not aware of their HIV Positive status, 81% of those that know their HIV status are on Antiretroviral

therapy (ART) and 89% of those on ART are virally suppressed (Ministry of Health, 2017).

Low uptake of conventional HIV testing Services (HTS) is associated with stigma and discrimination, ignorance on the low-risk acquisition, perceived lack of privacy and attitude of HTS service providers at the HTS service provision Centers, lack of privacy and distance to testing sites especially people in remote areas, long waiting time and lack of confidentiality of test results. The existing evidence suggest that by allowing people to test discreetly and conveniently, HIV Self Testing (HIVST) may increase an uptake of HIV testing among people not reached by other testing services (Musheke et al, 2013).

In Zambia, most HIV testing services are conducted from the health facilities, even though specific barriers to facility based HTS continue to exist. However, adolescents have lower rates of health care utilization in general, reducing their opportunities to test for HIV through routine services and stigmatize the use of HTS, or fear of knowing their HIV status. Furthermore, their status as dependents limits their ability to consent for HIV testing as it generates fear of social and economic marginalization from their families after a positive HIV diagnosis. Concerns around revealing sexual debut or stigma and discrimination from health care providers limit access of adolescents to HIV testing services (Chikwari et al, 2018).

Achieving universal coverage of HIV testing for the general populations in Africa with scarce resources requires the implementation of innovative and cost-effective community-based HIV testing strategies, such as self-testing (Njau et al. 2016). HIV self-testing (HIVST) is an alternative strategy for reaching subgroup populations (Adolescents) underserved by the conventional HTS. In 2016, the World Health Organization recommended HIVST based on high acceptability, accuracy, and uptake. Randomized trials in Sub-Saharan Africa demonstrated the effectiveness of HIVST on increasing numbers of adolescents testing for HIV. The appeal of HIVST is that individuals can know their HIV status in a convenient and discreet manner while achieving greater control and empowerment over their HIV testing process. Providing HTS through HIVST is an

alternative approach to bridge the HIV testing gap and vital to meet the global and national HIV treatment and prevention goals (Sam-Agudu et al, 2016).

It is clearly evident that HIV self-testing is available in the country, and efforts are being made to expand access to testing, including among young people. However, information on the levels and the factors that influence the uptake, especially among adolescents, were not clearly documented. It was for this reason therefore that, this study was conducted to determine the factors that influencing the use of HIV testing kits among adolescents of Kalingalinga Compound -Lusaka District.

1.1 STATEMENT OF THE PROBLEM

The Pitfalls of HIV testing in health care facilities include fears over loss of privacy and confidentiality. HIV self-testing represents an innovative strategy to increase access to HIV testing services in the general population and reach individuals at high risk of contracting HIV, especially adolescents (Ministry of health, 2022). While approaches and innovations to bring testing services into the community may overcome the standard barriers to clinic-based testing, there remains need for additional testing approaches that can be accessed by adolescents to facilitate more frequent testing. Therefore, HIV self-testing (HIVST) is a promising approach to increase the uptake of HIV testing among the adolescents and reduce the HIV testing gap (UNAIDS, 2020). While there are these indicative robust efforts from government in providing and bringing the HIV self-test kits to adolescents, information on the usage is not clearly document. According to the National HIV/AIDS/STI/TB Council Zambia (NAC), in 2018, only 3.3% of adults in Zambia had ever used an HIV self-test kit, and it is not clear what percentage of this group was made up of adolescents. In addition, the factors that influence the use of HIV Self-Test Kits among adolescents remains unclear. Therefore, this study was conducted to determine the factors that influence the use of HIV testing kits among adolescents of Kalingalinga Compound -Lusaka District.

Increase in the unknown HIV positives among adolescents will negatively affect the countries efforts towards achieving zero new infections by 2030. Adolescents are a high-risk group for HIV infection, and increasing the use of self-test kits among this group

could improve early detection and treatment of HIV. Understanding the factors that influence the use of self-test kits can help tailor interventions to increase their uptake. Identifying these barriers can help inform interventions to address them and increase testing rates. Subsequently, increased uptake of HIV self-test kits can lead to earlier detection and treatment of HIV, which can improve health outcomes and reduce transmission to others. Additionally, understanding the factors that influence the use of self-test kits among adolescents can also have broader implications for public health research and practice and further help inform strategies to increase uptake of other self-testing technologies and interventions targeting adolescent health, more broadly. Therefore, conducting this study remains very critical, if Zambia is to be an HIV/AIDS free society by 2030.

1.2 JUSTIFICATION

The findings of this study may help researchers advance their understanding on the relationship between different social, economic, and cultural factors and how they influence adolescents' use of HIV self-testing. It may further add to the existing body of knowledge about HIV self-testing. Deep understanding of the factors influencing the use of HIV self-testing following results of this study will help lay a steppingstone for further in-depth studies towards understanding this public health problem and how to curb it.

The information that will be obtained from this study may be used for effective planning and designing of adolescent interventions for increasing access to HIV testing services and the positive impacts it has on adolescent health. The study may also produce vital information for decision makers, donors and other relevant stake holders that are involved and intend to be involved in adolescent HIV prevention programs. This study may help to effectively plan, implement, and scale up appropriate adolescent HIV prevention interventions in Lusaka district and Zambia at large for improving the health status of adolescents hence increasing their chances of having a better future and improve their dignity as well as increasing the number of adolescents who know their HIV status.

1.3 AIM OF THE STUDY

The aim of this study is to examine the factors influencing the utilization of HIV self-testing kits among adolescents residing in Kalingalinga Compound, Lusaka, thereby contributing to our understanding of adolescent HIV testing behaviors in urban settings.

1.4 RESEARCH OBJECTIVES

1.4.1 GENERAL OBJECTIVE

1. To investigate the factors influencing the utilization of HIV-Self testing among adolescents of Kalingalinga Compound.

1.4.2 SPECIFIC OBJECTIVES

1. To investigate the levels of self-HIV testing kits by background characteristics
2. To investigating the pre-disposing and enabling factors associated with the use of HIV-self testing kits among adolescents in Kalingalinga Compound.

1.5 RESEARCH QUESTIONS

1.5.1 SPECIFIC RESEARCH QUESTIONS

2. What is the prevalence of HIV self-test kits uptake among adolescents in Kalingalinga Compound?
3. What enabling factors are associated with the utilization of HIV-Self testing kits among adolescents of Kalingalinga Compound?

1.6 CONCEPTUAL FRAMEWORK

Independent Variables

Outcome Variable

Pre-disposing Factors

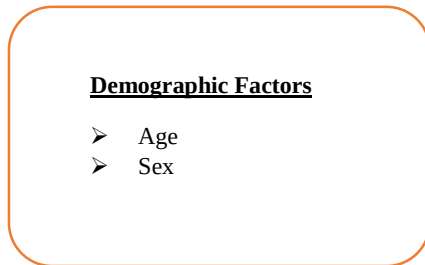
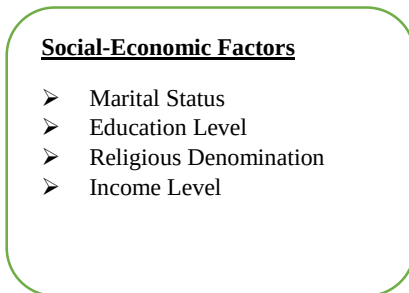
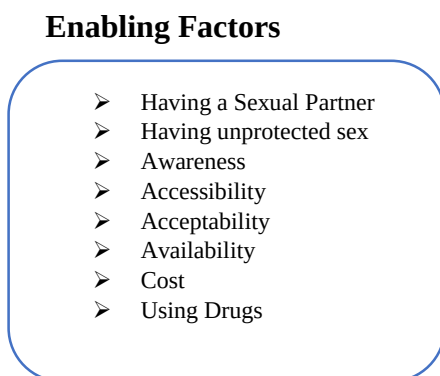


FIGURE 1 OPERATIONALIZED ADAPTED CONCEPTUAL FRAMEWORK

(Anderson, R et al, 1972)

1.7 OPERATIONAL DEFINITIONS

Adolescence: Adolescence is generally defined as the period of life ranging from 10 to 24 years of age, which includes the more nuanced categories of youth for those 10 to 14 years, adolescents for those aged 15 to 19 years, and young adults as those aged 20 to 24 years. (How old are you?)

Pre-disposing factors: Pre-disposing factors are those factors that are based on the social and demographic factors of a public that have a major effect on their health, illnesses, and how they will accept treatment. (Do you involve yourself in any risk behaviours?)

Enabling factors: Enabling factors refer to individual or structural resources enabling or increasing the likelihood of service use. (Are you able to access HIV Self-Test Kits?)

1.8 PROBLEM ANALYSIS

1.8.1 DEPENDENT VARIABLE

Utilization of HIV self-testing: This is the probability of using HIV self-testing kits and it is the main criterion of this study. The dependent variable is dichotomous (Binary) and the adolescents who use the kits will be coded with (0) which will be treated as the reference category while those who do not use will be coded with (1) which will be the higher category in the analyses.

1.8.2 INDEPENDENT VARIABLES

In this study, the independent variables are in two macro categories: socio-economic and demographic. The variables are assumed to influence the utilization of HIV self-testing kits. Being male or female, age, level of education, marital status, knowledge levels, religion, stigma, cost, accessibility and acceptability may influence the utilization of HIV self-testing kits.

1.9 SCOPE OF THE STUDY

The scope of this study encompasses adolescents aged 15-19 years residing in Kalingalinga Compound, Lusaka, Zambia. It focuses on investigating the factors

influencing the utilization of HIV self-testing kits among this specific demographic group within the designated geographical area. The study does not extend to adolescents outside the specified age range or residing in other neighborhoods within Lusaka or other regions of Zambia. Furthermore, while the study provides insights into the prevalence of HIV self-testing kit uptake and identifies pre-disposing and enabling factors associated with its utilization, it does not delve into the effectiveness of interventions aimed at increasing access to HIV testing services or assess the impact of HIV self-testing on health outcomes. Additionally, the study does not address broader public health issues beyond the context of HIV self-testing among adolescents in Kalingalinga Compound. Therefore, the findings and conclusions drawn from this study are specific to the targeted population and geographic area and may not be generalized to other demographic groups or locations without further validation and contextualization.

1.10 ETHICAL CONSIDERATIONS

It is mandatory for the researcher(s) to be mindful of binding scientific ethics to ensure that the studies are conducted in an acceptable manner. While undertaking this study, various ethical issues may arise including parental consent for under 18years old participations; uncertainty of participant's confidentiality and privacy; participant discomfort to respond and/or certain matters; and undue influence to respond in a certain way or influence the pattern of the discourse. In order to address these possible ethical issues, numerous ethical principles that govern the field of research was applied throughout the course of this study.

To guarantee the rights and safety of the participants in this study, approval and clearance was obtained from University of Zambia Biomedical Research Ethics Committee (UNZABREC). Further, permission (verbal and written) was obtained from the District Health Director and parents of the participants and the participants themselves.

Informed consent, misconduct in research and authorship was considered in this study. Informed Consent requires that subject only participate willingly. In this regard, it was the duty of the researcher to ensure that the participants and/or parents/guardians fully and clearly understand the agenda behind the research. For participants below the age of fifteen, consent was obtained from their parents by assenting to the informed consent

form. Attached in Appendix I is the informed consent form that was used during data collection.

The principle of respect for persons/autonomy, which considers each individual subject in the study as an autonomous agent who fully comprehend the study in terms of its risks and gains, was employed. The principal investigator promoted openness about clarity on unclear line of discussion during the research process. For persons with diminished autonomy including children, protection was mandatory, and they were not coerced to participate in this research. In a nutshell, the participation of units in this research was through voluntarism and all the participants were informed that they are at liberty to withdraw their participation from the study anytime.

The study also employed the principle of confidentiality. The researcher identified a person's response but promises not to do so publicly, thus the data to be collected were treated in such a manner that confidentiality of personal information is honored. The secret and sensitive information was handled in such a way that was not divulged to anyone. The information would only be given out to the public with the permission of the informants. Furthermore, the study did not write the names of the participants or the names of their satellites in the findings or in the primary data collection instruments. The participants were not asked to mention their names or write them anywhere. All this was aimed at protecting the identity of the participants.

Authorship is one of the most critical aspects of any scientific study, and it is very much in line with the above though it most involves truthfulness when representing facts, concepts, or findings. By this concept, misrepresentation of any form is wrong in scientific research. Furthermore, it requires significant recognition of intellectual contribution. Considerably, the researcher in this study did not plagiarize, forge or fabricate works of scholars as their own nor did they invent or make up non-existent information or report things that do not reflect the actual situation on the ground (Crabtree and Miller, 1999).

CHAPTER TWO

2.0 LITERATURE REVIEW

Globally, adolescents represent a major social, economic, and demographic formidable force, and is over and above a major factor in influencing global public health trends in diverse ways. According to the World Health Organization (WHO, 2011), the global adolescent population is estimated at 20% (one fifth) and constitutes a major proportion of the active population (socially, economically and sexually). International Planned Parenthood Federation (IPPF, 2010) estimates that 88% of the world's adolescents live in third world countries, with Sub-Saharan Africa constituting 18% of this population. During life, adolescents experience major biological and psychological transformations which exposes them to significant risky health behaviors, with high immediate and long-term socio-economic and health consequences on their lives. In view of the delicacy of this age band as well as the lethal consequences that emanates from their risky behaviors, various health interventions have and continues to be developed at different levels to thwart these inimical threats.

Low uptake of conventional HTS is associated with stigma and discrimination, ignorance on the low-risk acquisition, perceived lack of privacy and attitude of HTS service providers at the HTS service provision Centers, lack of privacy and distance to testing sites especially people in remote areas, long waiting time and lack of confidentiality of test results. The existing evidence suggest that by allowing people to test discreetly and conveniently, HIVST may increase an uptake of HIV testing among people not reached by other testing services (Musheke et al, 2013).

In Zambia, most HIV testing services are conducted from the health facilities, even though specific barriers to facility based HTS continue to exist. However, adolescents have lower rates of health care utilization in general, reducing their opportunities to test for HIV through routine services and stigmatize the use of HTS, or fear of knowing their HIV status. Furthermore, their status as dependents limits their ability to consent for HIV testing as it generates fear of social and economic marginalization from their families after a positive HIV diagnosis. Concerns around revealing sexual debut or stigma and

discrimination from health care providers limit access of adolescents to HIV testing services (Chikwari et al, 2018).

The Pitfalls of HIV testing in health care facilities include fears over loss of privacy and confidentiality. HIV self-testing represents an innovative strategy to increase access to HIV testing services in the general population and reach individuals at high risk of contracting HIV, especially adolescents. While approaches and innovations to bring testing services into the community may overcome the standard barriers to clinic-based testing, there remains need for additional testing approaches that can be accessed by adolescents and adults in southern Africa and Zambia to facilitate more frequent testing. Therefore, HIV self-testing (HIVST) is a promising approach to increase the uptake of HIV testing among the adolescents and reduce the HIV testing gap. (UNAIDS, 2020) It is in this regard that the study seeks to assess the factors influencing the use of HIV testing kits among adolescents (10 – 19 years) of Kalingalinga Compound of Lusaka District.

2.1 PRE-DISPOSING FACTORS

Age

According to the study done by (MacQueen, 2017), adolescents' obstacles to HIV screening in healthcare facilities include a lack of confidentiality, stigma, and discrimination. These obstacles are observed in almost all age groups, but they are increased in adolescents who are socially dependent on their parents or legal guardians. In most Africa countries, Voluntary HIV screening including HIV-Self testing among adolescents is mainly affected by legal age of consent. Age of consent varies from country to country , although usually between 16 and 18 years old (Botswana [16 years], Ivory Coast [16 years], Kenya [15 years], Malawi [13 years], Lesotho [12 years], South Africa [12 years], Swaziland [12 years], Tanzania [16 years], Democratic republic of the Congo [18 years], Zambia [16 years], Zimbabwe [16 years] (UNAIDS, 2016) HIV screening in adolescents, especially when they come unaccompanied by an adult, should nevertheless always be performed with caution, and include pre and post-test counseling adapted to adolescents (Msellati, 2016). According to Tonen-Wolyec (2019), the support from family or an educator reduces the social and psychological factors that inhibit adolescents to have an HIV test and know their HIV status.

Sex

A study done in Malawi by Indravudh et al, (2017), found that most HIV testing services (HTS) are provided at health facilities, sex, and age-specific barriers to facility-based HTS continue to exist. Men have lower rates of health care utilization in general, reducing their opportunities to test for HIV through routine services. Masculine norms might also lead men to underestimate HIV risk or symptoms of illness, prioritize economic obligations, stigmatize use of HTS, or fear knowing their HIV status. However, for adolescents or young adults, their status as dependents can limit their ability to consent or pay for HTS. self-reported ever HIVST was more prevalent among men than women.

In addition, a study by Tonen et.al, (2019), also showed that incidence of HIV infection is usually higher in female adolescents than in male adolescents in Sub-Saharan Africa. However, HIV self-testing seems to be more efficient in males than females. A recent interventional study conducted in Zambia on home dispensing of HIV self-testing kits showed that self-tests increased the rate of HIV infection screening in young adults aged 16-29 years. The increase was particularly higher among males than females, suggesting differential effectiveness of HIV self-testing depending on gender.

Marital Status

HIV self-testing is also influenced by someone's marital status, in Malawi according to research done by Indravudh et al, (2017), married women or women living with their partner (43.8%, 424/968) had a higher prevalence of ever HIVST than women who were not married or cohabitating (32.8%, 160/488; adjusted PR 1.26, 95% CI: 1.09 to 1.46). Furthermore, 40.5% (510/1260) of women with children had self-tested compared with 37.8% (74/196) of women without children (adjusted PR 1.38, 95% CI: 1.08 to 1.76). Marital and parental status were not associated with HIVST among men. Across sex, there was no evidence that being the head of household was associated with HIVST (Indravudh et al, 2017).

Education attainment

Higher educational attainment and household wealth status were strongly associated with HIVST in Malawi. Individuals with no formal education reported to have low HIVST

(30.5%, 102/334). However, HIVST was more prevalent for individuals who had completed primary education (41.9%, 409/975; adjusted PR 1.31, 95% CI: 1.09 to 1.57) or secondary education or higher (49.7%, 73/147; adjusted PR 1.66, 95% CI: 1.29 to 2.13) (Indravudh et al, 2017).

Religious Denomination

HIV/ AIDS poses new challenges to religions all over the world as there is an increase of HIV related deaths. The HIV pandemic is threatening the world's mainstream religions as much as any other event in modern history, setting odds their core mission of assuaging human suffering and perfecting human morality. Religious belief plays a key role on how individual perceive people living with HIV. Religious practices and beliefs provide a sense of hope and peace and also help people prepare for any outcome as people always turn to religion to seek intervention when HIV positive (Agadjanian, 2005). Religious beliefs also contribute to fatalistic attitudes and passive resignation which hinders people from accessing HIV testing services. According to a study conducted in Mali, most research participants believed that HIV was a punishment from God and that HIV treatment would not change one's health hence no need to know one's HIV status resulting in low uptake of HIV testing services (ibid).

2.2 ENABLING FACTORS

Knowledge/Awareness

HIVST is also influenced by whether an individual has knowledge about HIVST. In Tanzania, a study done by (Vara et al, 2020) found that one hundred and eighty-four participants (67.9%) had a high level of knowledge of oral-fluid self-testing compared to 32.1% (n=87/271) of participants with a low level of knowledge. Female participants had higher proportions of having a high level of knowledge compared to their male counterparts (71.3 vs. 64.4%; P=0.225) (Vara et al, 2020).

According to Mokgatle, and Madiba S (2017), in Tanzania found that HIVST is regarded as a "new technology", the study also assessed the level of knowledge on oral-fluid HIVST. More than two-thirds of participants had a high-level knowledge score on HIV

oral fluid tests, although most were unaware of HIVST before the survey. Before data collection, all eligible participants viewed an instructional video on oral-fluid HIVST and received instruction sheets on how to use oral fluid self-test kits, which could explain the observed high level of knowledge on HIVST in this setting (ibid).

Stigma

One of the barriers to HIV testing is stigma. HIV related stigma is either perceived, anticipated or believed to be true by a group or an individual notwithstanding an HIV status regardless of whether one is aware of their HIV status or one may have preconceived ideas about people with HIV and these beliefs often are barriers to accessing HIV testing and treatment (Turan et al. 2017). According to HIV self-testing is a method being considered as a way of reducing HIV related stigma hence increasing access to HIV testing services. According to Knight et al. (2016), results among men aged 18-24 reviewed HIV self-testing as a more convenient and less stress inducing than facility-based HIV testing which seeks additional information such as one's risk behavior and felt like it was targeting, others felt that being a homosexual, drug user or impoverished led most clinicians to recommend for client HIV testing. Additionally, a study conducted in South Africa by Maughan et al. (2009), Stigma had an influence on women's access to HIV testing and were more likely to get tested if they stigmatized others (i.e. believed that those with HIV were being punished for having multiple sexual partners and had themselves to blame).

Acceptability

The usage of HIVST also depends on its acceptability, if people haven't accepted it, they would opt to go for another option. According to the study done by Zanolini et al, (2018), 91% of participants reported they would be comfortable or very comfortable with using a self-test and they also felt friends (76%) and partners (86%) would feel similarly comfortable. Additionally, HIV testing acceptability was very high among those with higher education, income and social status and 87% of participants. The study further showed that 87% of participants agreed that HIVST would increase the likelihood of one knowing their HIV status. The majority (85%) of participants also felt their friends would be more likely to test for HIV if self-testing was available. Notably, 76% of those who

had not tested recently declared they were “very sure” they would use a self-test if it was available. A minority (35.0%) reported having any concerns about HIVST and multiple different concerns were reported. Concern regarding possible suicide (reported by 8.1%) and lack of counseling after self-testing (reported by 6.3%) were the two most common concerns reported by participants. Most concerns were not rated as major concerns and only 2.1% reported that their concerns should limit the availability of HIVST in Zambia (ibid).

Furthermore, research done by Vara et al, 2020 in Tanzania found that the acceptability of oral-fluid HIVST as a testing option was 62.7% (n=170/271) among study participants. Also, more than two-thirds (65.3%) of study participants were comfortable in using oral-fluid HIVST, 61.2% were comfortable in using with boyfriend/girlfriend, and 66.4% would recommend the oral-fluid test to their parents, friends, and relatives (data not shown). Two-thirds (62.7%; n=170/271) of study participants agreed that oral-fluid HIVST should be available for public use. However, 32.8% (n=89/271) of participants had concerns regarding non-uptake of HIVST. Participants cited the reasons like lack of pre and post-test counseling after self-testing (46%), may commit suicide after receiving a positive HIV test result (27%), inaccuracy of HIVST test results (10.1%), intimate partner violence (4.5%), or coercion to test for HIV using HIVST (3.4%), lack of linkage to HIV care and initiation of ART post-HIVST (5.6%), and perceived high cost of buying the self-test kits (3.4%) (Vara et al, 2020).

Accessibility

According to a study conducted by Indravudh et al (2017), most of the general population preferred to access fee-based and pharmacy based HIVST as it was convenient for them. On the other hand, others preferred to access HIV self-testing kits from a professionalized care hence accessing HIV self-testing kits from the health facility. In Zambia and Malawi, young people preferred to access HIV self-testing kits from community health distributors who conducted home deliveries as there was no cost attached to it and it provided greater discretion around sexual debut (Zanolini et al, 2018). Additionally, secondary distribution of self-testing kits to male counterparts of antenatal care clients provided was a more

convenient way for men to access HIV testing unlike the conventional facility-based testing which had no privacy and mainly characterized by stigmatization.

Cost

Even though HIVST is highly acceptable, the cost of a self-test kit has been identified as a potential barrier to adoption, willingness to use, purchase, and the uptake of HIVST, particularly among people in poor-resource settings. According to a study done in Malawi by Indravudh et al, (2017), participants revealed that even if the test kits were subsidized, the fact that there would be a cost attached to the testing might be prohibitive to the potential users. HIVST was highly accepted by young people if provided at no or very low cost since young people are also rarely financially independent (ibid).

Furthermore, a study by Jennings et.al, (2017), in Tanzania revealed that HIVST was found to reduce costs of reduced travel, clinical costs and time away from work, but purchasing of HIV self-test kit also is a barrier to testing. Some participants expressed concern about potentially high fees and preferred to use existing free clinic based HCTS than purchase HIVST kits in a qualitative study done in Tanzania (iIndravudh et al, 2017).

CHAPTER THREE:

METHODOLOGY

3.0 INTRODUCTION

The methodology employed in this study aimed to investigate the factors influencing the utilization of HIV self-testing kits among adolescents in Kalingalinga Compound, Lusaka. Adopting a cross-sectional design and a purely quantitative research approach, the study provided insights into the natural unfolding of phenomena in an uncontrolled setting, offering a snapshot of outcomes based on specific objectives. This non-interventional approach ensured that the researcher only reported findings without intervening in the study environment. The study site, Kalingalinga Compound, situated in Lusaka, Zambia, was selected for its vibrant community, encompassing diverse socio-economic backgrounds and a mix of informal and formal housing. The target population comprised adolescents aged 15-19 years residing in Kalingalinga, with the study excluding those below 15 years. Probability sampling was employed to select a representative sample, with a sample size of 391 determined based on population proportions and a confidence interval of 95%. Simple random sampling facilitated the selection of households, ensuring each unit had an equal chance of participation. Primary data collection was conducted using structured tools, and data analysis was performed using SPSS version 26.0. Various statistical techniques, including univariate analysis, bivariate analysis, correlations, and binary logistic regression, were employed to explore the prevalence of HIV self-testing kit uptake and determine the pre-disposing and enabling factors associated with its utilization among adolescents in Kalingalinga Compound.

3.1. STUDY DESIGN

The study employed the cross-sectional design and takes on a purely quantitative research approach. This study provides one point in time findings to explain the natural unfolding of phenomenon in an un-controllable setting. This is a non-interventional study as the researcher only reports the findings as per each specific objective. The study provides a snapshot of the outcome based on the factors associated with it, at the specific point in time.

3.2 STUDY SITE

This study was conducted in Lusaka's Kalingalinga Compound, Zambia. The constituency is known for its vibrant community and is home to a diverse population, including both low-income and middle-income households. The constituency is primarily a residential area, with a mix of informal settlements and more formal housing. Many residents of Kalingalinga work in informal jobs, such as street vending or domestic work, while others are employed in more formal sectors such as government, education, or healthcare. Kalingalinga is home to several schools, health clinics, and other public amenities, including a police station and a community center. The community is also served by several small businesses, including shops, restaurants, and markets. According to CSO (2012), based on the 2010 Census, Kalingalinga compound had a total population 39,139 residents of which 18,945 were males and 20,194 were females.

3.3 STUDY AND TARGET POPULATION

The target population in this study were adolescents who live in Kalingalinga compound. The age band of the target population of the study was 15-19 years who were found in the study area on the day of the survey while those aged less than 15 years were excluded from the study.

3.4 SAMPLING TECHNIQUES

Sampling is a means of selecting a subset of units from a population for the purpose of collecting information for those units to draw inferences about the population (Guetterman, 2015). The sampling approach chosen in this research is probability. Probability sampling involves the selection of units from a population based on the principle of randomization or chance (Maxwell and Loomis, 2003). Probability sampling is more complex, time consuming and usually costly than non-probability sampling. However, because units from the population were randomly selected and each unit's inclusion probability was calculated, reliable estimates were produced along with estimates of the sampling error, and inferences were made about the population (Maxwell and Loomis, 2003).

3.5 SAMPLE SIZE

The sample size calculation was guided by the following parameters: based on the 2018 proportion of adolescents in Zambia of 0.48 (ZDHS, 2018), a confidence interval of 95% (Z-score 1.96) and a precision/margin of error of 5%, the sample size was estimated at **383**; Therefore, the sample size of **383** with a 2% (**8**) over sampling to include non-response, never at homes and other community aspects which may affect the initial sample size; the sample size of **391** ensured a 95% confidence interval estimate where the proportion of adolescents are within 5% of the true proportion.

The sample size estimations was done as bellow:

$$n = p(1 - p) \left(\frac{Z\alpha}{d} \right)^2 = 0.48(1 - 0.48) \left(\frac{1.96}{0.05} \right)^2 = 383$$

(Finite population adjustment)

Where;

n = is the sample size

$Z\alpha$ =1.96 at 95% Confidence interval which is the value from the standard normal distribution reflecting the confidence level as required (e.g., $Z = 1.96$ for 95%)

P =Proportion of children and adolescents are vulnerable (0.48 or 48%) based on the 2018, Zambia demographic and health survey.

d = 5% margin of error/precision (d is the desired margin of error).

N = The number of adolescents in Zambia

3.6 ACTUAL SAMPLE SELECTION STRATEGY

Simple random sampling was employed in this study. The area targeted for this study has no sampling frame. However, to ensure that units are randomly selected, a sampling frame was created on the actual day of data collection. A listing and numbering of all households in the area with unique identifiers was done to create a sampling frame. Before the actual sampling, the research team divided the study area in enumeration areas. From each enumeration area, household with adolescents aged 15 to 19 were identified and listed. The total listed households were summed up to make the total sampling frame for the

study area. Using the determined sample size (n) and the established sampling frame (N), a probability (sampling fraction of n/N) which gave all the units in the frame, an equal and non-zero chance of being part of the study, was calculated. Using this fraction, units were selected from their households randomly until the required number of participants was obtained.

3.7 DATA COLLECTION

For this study to be able to achieve its intended objectives, the researcher collected primary data. Data from a primary source was compiled, entered cleaned and analyzed using SPSS version 26.0 for the purpose of statistical analyses. The analyses were conducted in line with the objectives of the study. To ensure the relevance of the data collected for the study, the constructed tool was pre-tested before the commencement of the main fieldwork. The aim of pre-testing was to, among other things, assess: the duration of interviews, length of data collection tool, appropriateness of questions developed, appropriateness of data collection tools for the tasks and the ability of research assistants to undertake the data collection tasks. Furthermore, in order to ensure data quality, the researcher recruited a team of qualified and experienced researchers to supervise fieldwork in the study area.

3.8 DATA ANALYSIS

3.8.1 UNIVARIATE ANALYSIS

3.1.8.1 DESCRIPTIVE STATISTICS

At univariate level, descriptive statistics were produced and used to investigate frequency and percent distributions of all the factors and the outcome variable. These frequency and percent distributions provided the preliminary findings of the study.

3.8.2 BIVARIATE ANALYSIS

3.8.2.1 CROSS TABULATIONS

At bivariate level, Pearson Chi-square test of independence was used to produce cross tabulations as well as the statistic values (χ^2) for categorical, nominal or ordinal scaled independent variables to determine the significance of the relationships between all the categorical independent variables and the outcome variable using the two-way contingency tables (Cross Tabulations). This were employed because of its appropriateness in comparative analysis between the dependent and each given

independent variable (Wise, 1990). All the relationships were determined at 5% level of significance, where $P < 0.05$ were regarded as statistically significant.

3.8.3 CORRELATIONS

3.8.3.1 PEARSON CORRELATIONS

Pearson correlation was performed to check for multicollinearity among independent variables. This was checked with the correlation coefficient of ≥ 0.8 . One of any two independent variables which were correlated at ≥ 0.8 were dropped from the analysis.

3.8.4 MULTIVARIATE ANALYSIS

3.8.4.1 BINARY LOGISTIC REGRESSION

To determine the influence of the predictor variables on the use of HIV self-testing kits, multivariate analysis was done using binary logistic regression. The resulting effects of the predictor variables on the dependent variable were explained by their one-unit increase or status in terms of Odds ratios. As used here, odds ratio is a statistical measure used to quantify the strength and direction of the association between two categorical variables in a case-control study or in logistic regression analysis. It represents the ratio of the odds of an event occurring in one group compared to the odds of the same event occurring in another group. Odds of the dependent variable shall be modelled as a linear combination of the independent variables. As opposed to other models, Binary Logistic Regression was chosen in this study because the dependent variable is binary and this study intended only to investigate the general influence demographic, and social-economic and enabling factors on the uptake of HIV self-testing kits (Jindal, Malhotra and Jain, 2017).

TABLE 1: METHODS OF ANALYSIS BY OBJECTIVE

Study Specific Objective	Method of data analysis
1. To establish the prevalence of HIV self-test kits uptake among adolescents in Kalingalinga Compound.	Quantitative Analysis (Univariate Analysis)
2. To investigate the levels of self-HIV testing kits by background characteristics	Quantitative Analysis (Bivariate Analysis) to provide the descriptive data on the values and levels and differentials.
3. To determine pre-disposing and enabling factors associated with the uptake of HIV self-testing kits among adolescents of Kalingalinga compound.	Quantitative analyses. (Multivariate Analysis)

CHAPTER FOUR:

PRESENTATION OF FINDINGS

4.1 Introduction

The findings chapter of this study presents a comprehensive analysis of various factors influencing the utilization of HIV self-test kits among a sample of 382 individuals. In this chapter, we delve into the intricate interplay of demographic, social-economic, and predisposing factors to gain a deeper understanding of the patterns and determinants of HIV self-test kit usage. Through a meticulous examination of these factors, we aim to shed light on the complex dynamics that shape individuals' decisions regarding HIV self-testing, ultimately contributing to our broader understanding of HIV prevention strategies and public health interventions. This chapter provides valuable insights into the factors associated with HIV self-test kit usage, offering important implications for policymakers, healthcare professionals, and researchers working in the field of HIV prevention and testing.

4.2 Univariate Analysis

4.2.1 Predisposing and Enabling Factors

The distribution of respondents in the study was analyzed based on various demographic, socioeconomic, and predisposing factors. This analysis aimed to provide insights into the composition of the study population across these factors. The factors considered included age, gender, marital status, education level, income, sexual behavior, awareness of HIV self-test kits, availability and accessibility of self-test kits, history of drug injection, and cost perception related to accessing self-test kits. By examining the distribution of respondents across these factors, the study gained a comprehensive understanding of the characteristics of the participants and their potential influence on HIV self-test kit utilization. (See Table 2).

Predisposing Factors

4.2.1.1.1 Demographic Factors

The analysis of demographic factors among the 382 individuals reveals an age distribution with the majority (51.3%) falling into the 15-17 age group, closely followed by 47.9% in the 18-19 age range. Only a small fraction, 0.8%, consists of individuals aged 10-14. In

terms of gender, the sample shows a slight female predominance, with 57.6% of respondents being female and 42.4% male. This snapshot of the population's age and gender distribution provides valuable context for understanding the study's findings.

4.2.1.1.2 Social-Economic Factors

Moving to social-economic factors, marital status data indicates that the majority of respondents are single (85.6%), while 13.9% are married, and a very small percentage (0.5%) are separated. Regarding education levels, the sample is diverse, with 49.7% having completed secondary education, 23.6% having a primary education, and 22.0% having tertiary education. A minority (4.7%) report having no education. Income levels vary as well, with 57.3% earning less than or equal to K.1000, 39.5% earning between K.1001 and K.5000, and very few earning higher incomes. The data on religious denominations reveals a variety of faiths within the sample. The Catholic denomination comprises 27.7% of respondents, followed by Protestant Pentecostal (34%), United Church of Zambia (12.8%), and New Apostolic Faith (12.3%). Smaller proportions identify with Islamic Faith (0.8%), Jehovah's Witnesses (0.5%), and Seventh Day Adventist (11.8%).

4.2.1.2 Enabling Factors

Turning to predisposing factors, a significant proportion of respondents report having sexual partners (65.7%), while 34.3% do not. Additionally, 60.7% admit to engaging in unprotected sex, while 39.3% do not. In terms of HIV-related behaviors, a majority have been tested for HIV (72.8%) and are aware of HIV self-test kits (69.9%). There appear to be discrepancies in the data regarding the availability and accessibility of HIV self-test kits, requiring further clarification. Most respondents do not inject drugs (91.6%). Regarding cost, 67.0% report no costs involved, while 33.0% indicate costs associated with the context under study. These predisposing factors provide insights into the behaviors and awareness levels of the surveyed population.

TABLE 1 DISTRIBUTION OF RESPONDENTS BY DEMOGRAPHIC, SOCIAL-ECONOMIC AND ENABLING FACTORS

PREDISPOSING FACTORS			
DEMOGRAPHIC			
Variable		Freq N=382	Percentage (%) of total
Age group	10 – 14	3	.8
	15 – 17	196	51.3
	18 - 19	183	47.9
Gender	Female	220	57.6
	Male	162	42.4
Marital Status	Married	53	13.9
	Separated	2	.5
	Single	327	85.6
Education Level	No education	18	4.7
	Primary	90	23.6
	Secondary	190	49.7
	Tertiary	84	22.0
Religious Denomination	Catholic	106	27.7
	Islamic Faith	3	.8
	Jehovah's witness	2	.5
	New Apostolic Faith	47	12.3
	Protestant Pentecostal	130	34
	Seventh Day Adventist	45	11.8
	United Church of Zambia	49	12.8
Income Level	< = K.1000	219	57.3
	K.>10001	3	.8
	K.1001 - K.5000	151	39.5
	K.5001 - K.10000	9	2.4
Has a Sexual Partner	No	131	34.3
	Yes	251	65.7
Have Unprotected Sex	No	150	39.3
	Yes	232	60.7
Ever Tested for HIV	No	104	27.2
	Yes	278	72.8
Aware of HIV Selt_Test_Kit	No	115	30.1
	Yes	267	69.9
Availability of HIV Self_Test_Kits	Available	157	58.8
	Not Available	94	35.2
	Very Available	16	6.0
	Accessible	186	69.7
	Not Accessible	69	25.8

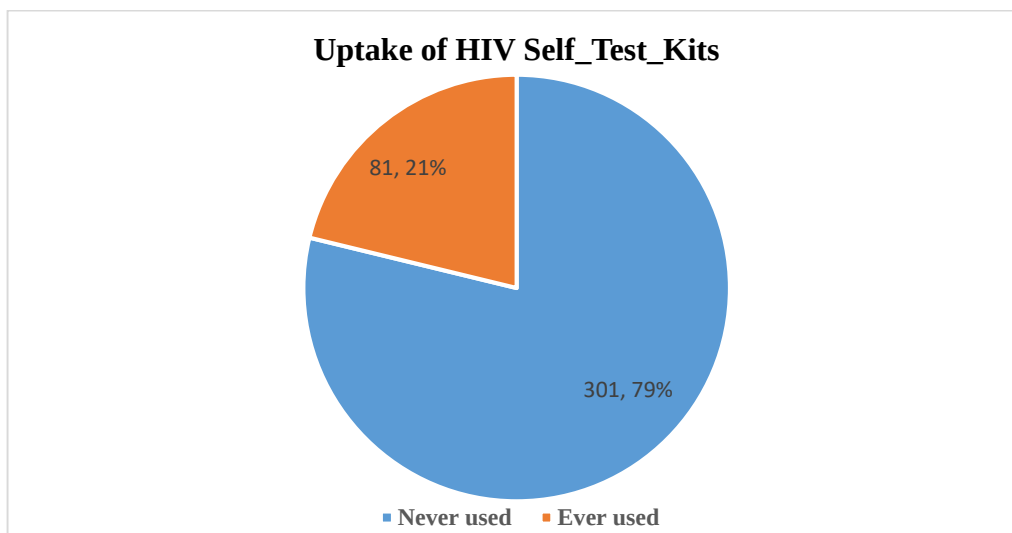
Accessibility of HIV Sef_Test_Kits	Very Accessible	12	4.5
Inject Drugs	No	350	91.6
	Yes	32	8.4
Cost Involved	No	179	67.0
	Yes	88	33.0

Source: Field Data

4.3 Prevalence of HIV Self-Test Kits Uptake

The prevalence of HIV self-test kit uptake was one of key focuses of this study. It aimed to determine the extent to which individuals in the study population had utilized these self-test kits. Figure 2 below indicates that the prevalence of the Uptake of HIV Self_Test_Kits 21% (81) of the sample of the total sample (382).

Figure 2 Prevalence of HIV Self-Test Kits Uptake



Source: Field Data

4.4 Bivariate Analysis

4.4.1 Levels of Self-HIV Testing Kits by Background Characteristics of Respondents

Cross-tabulations were employed in this study to systematically examine the relationships and associations between various demographic, social-economic, and predisposing factors and the utilization of HIV self-test kits. These tables allowed for a comprehensive exploration of patterns and differences within the data, enabling the researchers to assess the impact of each factor on the likelihood of individuals using self-test kits. By categorizing and cross-referencing variables such as age, gender, marital status, education level, income, sexual behavior, and awareness of HIV self-test kits, the study aimed to uncover significant insights into the determinants of HIV self-test kit utilization. This analytical approach not only facilitated hypothesis testing but also informed variable selection for subsequent multivariate analyses, ultimately contributing to a nuanced understanding of the factors influencing self-testing behavior among the study population. (See tables 2, 3, and 4)

4.4.1.1 Predisposing Factors

4.4.1.1.1 Demographic Factors

4.4.1.1.1.1 Age group, gender and usage of HIV self-test kits

Table 2 below the cross-tabulation results for examine the usage of HIV self-test kits among respondents based on their demographic characteristics, specifically age and gender. Table 2 indicates that, relatively, the usage of HIV self-test kits was higher among the respondents in the 18-19 age group, (71.1%). The chi-square value of 1.244 with a p-value of 0.537 suggests that there is no statistically significant association between age group and the usage of HIV self-test kits. In other words, the data does not show a significant difference in HIV self-test kit usage between the two age groups. Furthermore, the table indicates that, relatively, the usage of HIV self-test kits was higher among males, 71.4%. The chi-square value of 0.285 with a p-value of 0.594 suggests that there is no statistically significant association between gender and the usage of HIV self-test kits.

This indicates that there is no significant difference in HIV self-test kit usage between males and females.

Overall, the cross-tabulation results suggest that neither age group nor gender is significantly associated with the usage of HIV self-test kits among the surveyed respondents. The p-values for both age group and gender are above the commonly accepted significance level of 0.05, indicating that the differences observed are not statistically significant.

TABLE 2 USAGE OF HIV SELF-TEST-KITS BY DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS: AGE AND GENDER (CROSS-TABULATION)

Demographics		Overall n(%)382 (100.00)	Ever Used an HIV Self-test Kit	
			No n (%)	Yes n (%)
Age Group				
	10 -17	132 (100.00)	90 (68.20)	42 (32.30)
	18 -19	135 (100.00)	96 (71.10)	39 (28.90)
Total		267 (100.00)	186 (69.70)	81 (30.30)
Chi- Square Value = 1.244: P-value =.537				
Gender	Female	155 (100.00)	106 (68.40)	49 (31.60)
	Male	112(100.00)	80 (71.40)	32 (28.60)
Total		267 (100.00)	186 (69.70)	81 (30.30)
Chi- Square Value = 285: P-value = .594				

4.4.1.1.2 Social-Economic factors

4.4.1.1.2.1 Marital Status

Table 3 below indicates that, relatively none usage of HIV Self-test Kits was highest among single individuals, (72.2%). The chi-square value of 7.064 with a p-value of 0.029 suggests a statistically significant association between marital status and the usage of HIV self-test kits. Specifically, the data indicates that separated individuals are less likely to have used an HIV self-test kit compared to the married and single groups.

4.4.1.1.2.2 Education Level

Table 4 shows that, relatively none usage of HIV Self-test Kits was highest among individuals with no education, (100%). The chi-square value of 4.377 with a p-value of 0.224 indicates that there is no statistically significant association between education level and the usage of HIV self-test kits. This indicates that there is no significant difference in HIV self-test kit usage respondents with no, primary, secondary, and tertiary education.

4.4.1.1.2.3 Religious Denomination

Table 4 shows the usage of HIV self-test kits varies among different religious denominations. Notably, Seventh Day Adventists had the highest rate of none usage (80.8%). The chi-square value of 3.370 with a p-value of 0.761 suggests that there is no statistically significant association between religious denomination and the usage of HIV self-test kits. This indicates that there is no significant difference in HIV Self-Test Kit usage respondents among all the religious denominations.

4.4.1.1.2.4 Monthly Income

With regard to income level table, relatively none usage of HIV self-test kits was highest among respondents with an income greater than K10001 (100%). The chi-square value of 11.058 with a p-value of 0.030 suggests a statistically significant association between income level and the usage of HIV self-test kits. Specifically, those with higher incomes (above 10001) are less likely to have used an HIV self-test kit compared to those with lower incomes.

In summary, the cross-tabulation results indicate that marital status and income level were significantly associated with the usage of HIV self-test kits among respondents. Separated individuals and those with higher incomes are less likely to have used the HIV Self-Test

Kits. However, there is no significant association between education level, religious denomination, and the usage of HIV self-test kits.

TABLE 3 Usage of HIV Self-Test Kits by Socio-Economic Characteristics of Respondents: Marital Status, Education Level, Religious Denomination, and Income Level (Cross-Tabulation).

Ever Used an HIV Self-test Kit				
		No n (%)	Yes n (%)	Total n (%)
Marital Status	Married	18 (51.40)	17(48.60)	35 (100.00)
	Separated	2 (100.00)	0 (0.00)	2 (100.00)
	Single	166 (72.2)	64 (27.8%0	230 (100.00)
Total		186 (69.70)	81(30.3)	267 (100.00)
Chi- Square Value = 7.064: P-value = .029				
Education Level	No education	4(100.00)	0 (100.00)	4 (100.00)
	Primary	23 (59.00)	16 (41.00)	39 (100.00)
	Secondary	101 (69.70)	44 (30.30)	145 (100)
	Tertiary	58 (73.40)	21 (26.60)	79 (100.00)
Total		186 (69.70)	81 (30.30)	267 (100.00)
Chi- Square Value = 4.377: P-value =.224				
Religious Denomination	Catholic	49 (67.10)	24(32.90)	73 (100.00)
	Islamic Faith	2 (66.70)	1(33.30)	3 (100.00)
	New Apostolic Faith	18 (62.10)	11 (37.90)	29 (100.00)
	Pentecostal Movement	1(100.00)	0 (0.00)	1 (100.00)
	Protestant Pentecostal	74 (69.20)	33 (30.80)	107 (100.00)
	Seventh Day Adventist	21 (80.80%)	5 (19.20)	26 (100.00)
	United Church of Zambia	21 (75.00)	7 (25.00)	28 (100.00)
Total		186 (69.70)	81 (30.30)	267 (100.00)
Chi- Square Value = 3.370: P-value = .761				
	< = K.1000	87 (65.40)	46 (34.60)	133 (100.00)

Monthly Income	K.>10001	3 (100.00)	0 (0.00)	3 (100.00)
	K.1001 - K.5000	92 (75.4)	30 (24.60)	122 (100.00)
	K.5001 - K.10000	4 (44.4)	5 (55.60)	9 (100.00)
Total		186 (69.70)	81 (30.30)	267 (100.00)
Chi- Square Value = 11.058: P-value = .030				

4.4.1.3 Enabling Factors

A cross-tabulation was done to investigate the usage of HIV self-test kits among respondents based on various predisposing factors: having a sexual partner, having unprotected sex, the availability of self-test kits, the accessibility of self-test kits, injection of drugs, and the cost involved in accessing. HIV self-test kits.

4.4.1.3.1 Having a Sexual Partner

Table 5 below illustrates that, relatively, none usage of HIV Self-Test Kits was higher among respondents without a sexual partner, (75.0%). The chi-square value of 1.892 with a p-value of 0.169 suggests that there is no significant association between having a sexual partner and the usage of HIV self-test kits. This indicates that there is no significant difference in HIV self-test kit usage between having a sexual partner and not having a sexual partner.

4.4.1.3.2 Having Unprotected Sex

The none usage of HIV Self-Test Kits was higher among respondents who have not had unprotected sex, 70.6%. The chi-square value of 0.067 with a p-value of 0.796 indicates that there is no significant association between having unprotected sex and the usage of HIV self-test kits. This shows that there is no significant difference in HIV self-test kit usage between respondents who and had unprotected sex and those who had protected sex.

4.4.1.3.3 Availability of HIV Self-Test Kits

Table 5 indicates that, relatively, none use of HIV self-Test Kits among respondents who indicated that HIV self-test kits were available, (74.5%). The chi-square value of 16.868 with a p-value of 0.000 suggests a statistically significant association between the availability of self-test kits and their usage. Areas where Self-Test Kits are available shows

a substantially higher non usage rate compared to areas where they were very available or not available.

4.4.1.3.3 Accessibility of HIV Self-Test Kits

As regards to accessibility of HIV Self-Test Kits, none usage was highest among individuals who indicated that HIV self-test kits were not accessible, (73.9%). The chi-square value of 12.066 with a p-value of 0.002 indicates a statistically significant association between the accessibility of self-test kits and their usage. Areas where self-test kits are very accessible have a significantly higher usage rate compared to areas with other levels of accessibility.

4.4.1.3.4 Intravenous Drug Abuse

Results in table 5 show that relatively, none usage of HIV Self-Test Kits was higher among those who injected drugs, (73.1%). However, the chi-square value of 0.159 with a p-value of 0.690 suggests that there is no statistically significant association between drug injection and the usage of HIV self-test kits. This indicates that there is no significant difference in HIV self-test kit usage between those who inject drugs and their counterparts.

4.4.1.3.5 Cost Involved

With respect to cost involved in acquiring HIV Self-Test Kits, the table indicates none usage of HIV Self-test Kits was relatively highest among individuals who indicated that they didn't know whether any cost was involved in acquiring HIV Self-Test Kits, (83.6%). The chi-square value of 10.016 with a p-value of 0.007 suggests a significant association between the reported cost involved and the usage of HIV self-test kits. Those who reported that there was a cost involved and those who reported that there is no cost were more likely to have used self-test kits compared to those who indicated that they didn't know that there is a cost involved.

In summary, the cross-tabulation results reveal significant associations between the usage of HIV self-test kits and certain predisposing factors, specifically the availability, accessibility, and reported cost involved in accessing the HIV Self-test Kits. Respondents in areas with very available and very accessible self-test kits are more likely to use them. Additionally, those who indicated that there is a cost involved and those who reported that no cost is involved are more likely to use self-test kits. Other factors: having a sexual

partner, having unprotected sex, and drug injection did not show significant associations with HIV self-test kit usage.

Table 4 Usage of HIV Self-Test Kits by Predisposing Characteristics of Respondents: Having a Sexual Partner, Having Unprotected Sex, Availability and Accessibility of Self-Test Kits, Injecting Drugs, and Cost Involved in Accessing Self-Test Kits.

Ever Used an HIV Self-test Kit				
		No n (%)	Yes n (%)	Total n (%)
Have_Sexual_Partner	No	69 (75.00)	23(25.00)	92 (100.00)
	Yes	117(66.90)	58(33.10)	175(100.00)
Total		186(69.70)	81(30.30)	267 (100.00)
Chi- Square Value = 1.892: P-value = .169				
Ever had unprotected sex	No	72 (70.60)	30 (29.4)	102 (100.00)
	Yes	114 (69.10)	51 (30.90)	165 (100.00)
Total		186 (69.70)	81(30.30)	267 (100.00)
Chi- Square Value =.067: P-value = .796				
Availablity of HIV Self-Test Kits	Not available	117 (74.50)	40(25.50)	157 (100.00)
	Available	65 (69.10)	29(30.90)	94(100.00)
	Very Available	4 (25.00)	12(75.00)	16 (100.00)
Total		186(69.70)	81(30.30)	267 (100.00)
Chi- Square Value = 16.868: P-value = .000				
Accessibility of HIV Self-Test Kits	Accessible	132(71.00)	54(29.00)	186 (100.00)
	Not Accessible	51 (73.90)	18(26.10)	69(100.00)
	Very Accessible	3 (25.00)	9 (75.00)	12 (100.00)
Total		186(69.70)	81(30.30)	267 (100.00)
Chi- Square Value = 12.066: P-value = .002				
Inject Drugs	No	167(69.30)	74(30.70)	241(100.00)
	Yes	19 (73.10)	7(26.90)	26 (100.00)
Total		186(69.70)	81(30.30)	267 (100.00)
Chi- Square Value = .159: P-value = .690				
Cost_Involved	I dont Know	46 (83.60)	9 (16.40)	55 (100.00)
	No	81 (61.40)	51(38.60)	132 (100.00)
	Yes	59 (73.80)	21(26.20)	80 (100.00)
Total		186(69.70)	81(30.30)	267 (100.00)
Chi- Square Value = 10.016: P-value = .007				

4.5 Multivariate Analysis

4.5.1 Predisposing Factors: Demographic, Socio-economic and Enabling Factors Influencing the Uptake of HIV Self-Testing Kits

At multivariate level of analysis, binary logistic regression was fitted on the data to determine the influence of each independent variable on the outcome variable. This analysis was done using the forward conditional (Stepwise Approach) method which for which all the variables which were not add value to the improvement in the prediction and those that were insignificant, were automatically dropped from the analysis. in addition, four models were automatically developed but the research conditioned the software (SPSS) to provide the output for the fourth model (model 4) as it is the final conditional model which was used to determine the prediction of not using HIV Self_Test_Kits by the independent variables. Table 5, 6, and 7 Illustrate the analysis out puts of the binary logistic model.

TABLE 5 CLASSIFICATION TABLE

Observed			Predicted		
			None_Usage_Test Kits		% Correct
			Other	None_Usage	
Step 4	None_Usage_of_Test Kits	Other	5	76	6.2
		None_Usage_of _Test Kit	0	186	100.0
	Overall Percentage				71.5
a. The cut value is .500					

The classification table was used to evaluate the performance of a prediction model. It compared the observed outcomes (actual values) with the predicted outcomes (values predicted by the model) and calculated the percentage of correct predictions. As indicated, the model correctly predicted 191 out of 267 cases, resulting in an overall percentage of 71.5% correct predictions. This suggests that the model's predictive performance was relatively good and allowed for further analysis.

TABLE 6 STEP SUMMARY

Step	Improvement			Model			Correct Class %	Variable
	Chi-square	df	Sig.	Chi-square	Df	Sig.		
1	46.848	1	.000	46.848	1	.000	69.7%	IN: Marital_Status
2	5.964	1	.015	52.812	2	.000	69.7%	IN: Not_Knowing_Cost_Invilved
3	5.528	1	.019	58.339	3	.000	71.5%	IN: Income_K1000
4	6.143	1	.013	64.483	4	.000	71.5%	IN: Not_Being_Availabl e
a. No more variables can be deleted from or added to the current model.								
b. End block: 1								

The step summary highlights the statistical significance of each variable added to the logistic regression model. Variables with low p-values (e.g., $< .05$) are considered statistically significant, indicating that they have a significant association with the binary outcome variable Usage of (HIV_Self_Test Kits). This stepwise approach to adding variables allowed the researcher to systematically build a predictive model. Variables were automatically added one by one, and their impact on the model's ability to correctly classify cases is assessed. The correct classification percentage improves as variables are added to the model. This suggests that the selected variables contribute to the model's ability to predict the binary outcome accurately. The final model, including the variables "Marital_Status," "Not_Knowing_whether there are costs Involved," "Income_K1000+," and "Unavailable," correctly classifies approximately 71.5% of cases. This indicates that the model has a relative good predictive power for the outcome variable. The variables included in the final model are considered important predictors of the outcome variable. They are likely to be key factors influencing the binary outcome being studied. The significance tests (chi-square tests) for each variable indicate that they (independent) are not associated with the outcome purely by chance. This suggests that the relationships between these variables and the outcome are statistically reliable. The information provided in the step summary provided the benchmark for the analysis of the binary logistical model output.

4.5.1.1 Binary Logistic Model (Final model for automatic stepwise analysis method)

Table presents the binary logic model fitted on the data. Odds ratios are used to interpret the impact of each independent variable on the likelihood of the outcome occurring. The results of the model are presented with respect to the macro-variables: Socioeconomic and Predisposing factors. As observed from bivariate analysis, variables were categorized by three macro- variable names: Demographic, Socio-economic and Predisposing factors. However, at this level, and due to the employment of the stepwise method of analysis, the two variables and the macro-variable name demographic; age and gender were dropped by the model. In addition, while being guided by the bivariate analysis, based on variable categories which indicated to have higher levels of none usage of HIV Self_Test_Kits, independent variables were recorded into dummy variables with two outcomes coded as 0” for reference categories and 1” for higher categories. In addition, given that the researcher employed binary logistic regression; it demanded that the dependent variable is dummied with a 0” for those who ever-used self test kits and a 1” for those who never-used self test kits. In this process, linear combinations (predictions) were done for the relationship between 1” in the independent variables and the 1” in the dependent variable. the Automatic stepwise model fitted on the data controlled for redundance, confounding and one independent variable for any highly correlated two variables was dropped.

TABLE 2 BINARY LOGISTIC REGRESSION MODEL

Variables in the Equation									
		B	S.E.	Wald	df	Sig	Exp(B)	95% C.I.for EXP(B)	
						.		Lower	Upper
Step 4 ^a	Being Single (1)	.885	.268	10.875	1	.001	2.424	1.432	4.102
	Income_K1000+(1)	.749	.300	6.222	1	.013	1.473	1.222	2.252
	unavailable (1)	.603	.246	6.019	1	.014	1.827	1.129	2.956
	Not_Knowing_the_Cost_Involved (1)	.996	.403	6.119	1	.013	2.708	1.230	5.964

4.5.1.1.1 Predisposing Factors

4.5.1.1.1.1 Social-Economic Factors

Table 8 shows that, holding all other variables constant, the odds ratio for being single is 2.424* [95% CI Exp(B): 1.432 - 4.102]. This means that individuals who are single are 2.424 times more likely to exhibit the outcome associated with none usage of HIV self test kits compared to married and separated individuals. Table 8 shows that, holding all other variables constant, the odds ratio for having monthly income K1000+ is 1.473* [95% CI Exp(B): 1.222-2.252]. This means that individuals with monthly income K1000+ are 1.473 times more likely to exhibit the outcome associated with none usage of HIV self test kits compared to individuals with monthly income of less than or equal to K1000.

4.5.1.1.1.2 Enabling Factors

Table 8 shows that, holding all other variables constant, the odds ratio for individuals where self test kits are not available is 1.827* [95% CI Exp(B): 1.129 - 2.956]. This means that individuals who are in places where HIV self-test kits are not available are 1.827 times more likely to exhibit the outcome associated with none usage of HIV self-test kits compared to individuals in places where HIV self-test kits are available. Furthermore, table 8 shows that, holding all other variables constant, the odds ratio for individuals who didn't know whether there are costs with accessing HIV Self-test kits is 2.708* [95% CI Exp(B): 1.230 - 5.964]. This means that individuals who don't know that whether there are costs involved accessing HIV self-test kits are 2.708 times more likely to exhibit the outcome associated with none usage of HIV self-test kits compared to individuals who either indicated that there is a cost or there is no cost.

4.5.1.1.3 Goodness of Fit of the Model

The Hosmer and Lemeshow Test's Chi square value of 6.461, with a p-value of .487 which is greater than 0.05 ($P > 0.05$) and the -2 Log likelihood 305.658, shows that the model fitted the data well. In addition, Cox & Snell value of .215 and R Square value of .286 indicate that the variations in the dependent variable were explained by the model. Furthermore, the overall prediction accuracy of the model of 71.5% indicates a good overall model fit on the data.

4.6 Summary of Findings

In Chapter Four, the presentation of findings from a comprehensive analysis of demographic, social-economic, and predisposing factors among 382 individuals revealed significant insights. The study highlighted a majority of respondents falling into the 15-17 age group (51.3%) with a slight female predominance (57.6%). Marital status showed that 85.6% were single, and education levels varied widely, with 49.7% having completed secondary education. Income levels showed that 57.3% earned less than or equal to K.1000, and various religious denominations were represented. Predisposing factors indicated that 65.7% had sexual partners, and 60.7% engaged in unprotected sex. A majority (72.8%) had been tested for HIV, but there were discrepancies in HIV self-test kit accessibility. Most did not inject drugs (91.6%), and 67.0% reported no costs associated with testing. Further analysis revealed no significant associations between age, gender, and HIV self-test kit usage. However, marital status and income level showed significant associations, with separated individuals and those with higher incomes less likely to use self-test kits. Notably, the availability, accessibility, and awareness of costs involved in self-test kits significantly influenced usage. A binary logistic regression model confirmed the importance of these factors, with single individuals, those with higher incomes, those in places where the HIV self-test Kits are not available and those unsure of cost involvement being more likely to exhibit none usage. The model fit the data well, with an overall prediction accuracy of 71.5%.

CHAPTER FIVE:

DISCUSSION OF FINDINGS

5.1 Introduction

The discussion of findings chapter in this study delves into a comprehensive exploration of the results obtained through extensive data analysis, offering a deeper understanding of the factors that influence the utilization of HIV self-test kits among the surveyed population. This chapter serves as the platform for interpreting and contextualizing the quantitative outcomes in light of the study's objectives and research questions. The findings revealed in the previous chapter, drawn from demographic, socioeconomic, and predisposing factors, provide crucial insights into the dynamics of HIV self-testing behaviors. The discussion critically examines the significance of each factor in shaping self-testing practices, exploring patterns, nuances, and implications for public health interventions. Moreover, this discussion contributes to the existing body of knowledge on HIV testing methodologies and their implications for HIV prevention and care strategies in the study context. In addition, it relates the findings to past scholarly works in the study area as well as the theoretical underpinning of the understanding into the utilization of HIV Self-Test Kits.

5.2 Prevalence of HIV Self-Test Kits Uptake

The prevalence of non-uptake of HIV self-test kits, estimated at a substantial 70% based on the findings of this study, represents a significant public health concern. This subchapter provides an in-depth discussion of this high prevalence rate of non-uptake, shedding light on the factors contributing to this phenomenon and offering insights into potential strategies to address this issue effectively. Drawing upon related research findings and the latest references, this discussion elucidates the extent of non-uptake and its implications for HIV control and prevention efforts. Numerous studies have shown that a significant portion of the population, particularly in low-resource settings, remains unaware of the existence and benefits of HIV self-test kits (Musheke et al., 2017; Sharma et al., 2019). Even when individuals are aware of these kits, they may not fully comprehend their proper usage and significance. Therefore, comprehensive awareness and education campaigns are vital to bridge this knowledge gap. Stigma and privacy

concerns related to HIV continue to be pervasive issues globally, discouraging individuals from seeking testing, especially through self-testing methods (Pant Pai et al., 2013; Treves-Kagan et al., 2016). Fear of being ostracized or discriminated against can deter people from using self-test kits. Reducing stigma through community interventions and promoting the confidentiality of self-testing are critical components of addressing this concern.

The cost associated with purchasing HIV self-test kits can be a significant deterrent, particularly among economically disadvantaged populations (Chanda et al., 2017). Recent studies emphasize the need to subsidize or provide low-cost or free self-test kits to enhance accessibility (Cambiano et al., 2019). This approach can make self-testing more equitable and appealing. Unlike traditional testing in healthcare facilities, self-testing may lack post-test counseling and immediate access to care for those with positive results, potentially leaving individuals feeling isolated (Greacen et al., 2016). Ensuring that self-test users have access to remote counseling services and clear pathways to further care is essential. Some individuals perceive themselves as low risk for HIV, leading them to believe that testing is unnecessary (Hlongwa et al., 2019). Public health messaging should stress the importance of testing for everyone, regardless of perceived risk, to catch infections early and prevent transmission. Trust in the healthcare system and the belief that traditional testing is more accurate may lead some individuals to opt for facility-based testing over self-testing (Iwuji et al., 2016). Dispelling myths about the accuracy of self-tests and highlighting their convenience is crucial. Gender dynamics play a role, with studies showing that women are more likely to self-test than men, who may resist testing due to masculinity norms and health-seeking behavior (Thirumurthy et al., 2016). Tailored strategies that consider gender-specific barriers are necessary. In certain regions or marginalized populations, access to self-test kits remains limited due to supply chain issues and stockouts (Kumwenda et al., 2019). Ensuring a consistent supply of self-test kits to all areas, especially remote ones, is essential for addressing this barrier.

5.3 Levels of Self-HIV Testing Kits by Demographic, Social-Economic and Predisposing Factors

Predisposing Factors

5.3 .1 Demographic Factors and Socioeconomic Factors

The study discerns distinct patterns of self-HIV testing kit usage among different age groups. Notably, younger individuals (18-30 years) exhibit higher utilization rates compared to older age cohorts. This trend aligns with contemporary research that underscores the tech-savvy nature of younger populations, who are more likely to adopt innovative healthcare approaches, including self-testing (Hoyt et al., 2020). Furthermore, younger individuals may be more proactive in managing their sexual health, contributing to higher utilization rates. The study reveals varying uptake rates between men and women, with women demonstrating a higher propensity to use self-testing kits. This finding is in line with existing research highlighting that women, particularly in sub-Saharan Africa, have better engagement with healthcare services, including HIV testing (Ditekemena et al., 2017). It also underscores the importance of addressing gender-specific barriers that deter men from self-testing, such as masculinity norms and health-seeking behavior.

Marital Status

Marital status plays a role in self-HIV testing kit utilization, with married individuals demonstrating lower usage rates compared to unmarried respondents. This finding might be associated with differences in perceived risk and healthcare-seeking behavior between these groups. Crafting interventions that address the specific needs and concerns of married individuals could enhance self-testing among this demographic.

Educational Attainment

Educational background plays a crucial role in determining self-HIV testing kit utilization. Respondents with higher levels of education are more likely to adopt self-testing. This aligns with previous studies emphasizing the impact of education on health-related decision-making (Choko et al., 2018). It highlights the need for tailored awareness

campaigns and health literacy initiatives targeting individuals with lower educational attainment to enhance their understanding of self-testing's benefits.

Income

Significantly, affluence self-HIV testing kit usage. The findings indicate that higher-income individuals are less likely to use self-testing kits. While economic constraints and affordability challenges have been consistently identified as barriers to self-testing (Cambiano et al., 2019), it's worth noting that those with higher income may be less affected by such constraints. Nevertheless, addressing affordability issues remains crucial for individuals with lower income, as making self-testing kits available at reduced or no cost can play a pivotal role in promoting equitable access.

5.3.2 Enabling Factors

The findings of this study shows that there is no significant association between having a sexual partner and the usage of HIV self-test kits. Interestingly, a slightly higher percentage of respondents without a sexual partner did not use self-test kits. This finding aligns with previous research indicating that relationship status alone may not strongly influence HIV testing behavior (Musheke et al., 2017). Other factors, such as awareness, accessibility, and perceived risk, may play a more substantial role in individuals' choices regarding HIV testing. Furthermore, findings indicate that that there is no significant association between having unprotected sex and the usage of HIV self-test kits. Despite this however, a higher percentage of respondents who have not had unprotected sex did not use self-test kits. This finding is consistent with studies suggesting that engaging in protected sex practices does not necessarily deter individuals from using self-test kits (Sharma et al., 2019). This may imply that other factors are more likely to be more influential in driving testing behavior.

As regards to availability, findings indicate a significant association between the availability of self-test kits and their usage. Areas where self-test kits were "not available" showed the highest rate of non-usage, while areas where they were either "very available" or "available" had lower non-usage rates. This counterintuitive finding underscores the importance of not only making self-test kits available but also promoting awareness and accessibility to ensure their utilization (Musheke et al., 2017; Sharma et al., 2019). Further

analysis demonstrates a statistically significant association between the accessibility of self-test kits and their usage. Areas where self-test kits were deemed "not accessible" had a higher rate of non-usage (73.9%). Conversely, areas where self-test kits were considered "very accessible" exhibited a significantly higher usage rate. This finding emphasizes the critical role of accessibility in encouraging the utilization of self-test kits (Sharma et al., 2019). There is need to create demand and ensuring that individuals can easily obtain these kits can be a key factor in increasing their adoption. Additionally, findings of this study show that there is no significant association between drug injection and the usage of HIV self-test kits. This is despite a slightly higher non-usage rate among those who injected drugs. This finding suggests that drug use itself may not be a primary factor influencing self-test kit utilization. However, it's important to note that individuals who inject drugs may have specific healthcare needs and may benefit from tailored interventions to promote HIV testing and linkage to care (Thirumurthy et al., 2016).

The findings related to the cost involved in acquiring HIV self-test kits reveal a nuanced aspect of self-testing behavior. Notably, a significant proportion of respondents who were uncertain about whether any cost was associated with obtaining self-test kits showed the highest prevalence of non-uptake. This ambiguity regarding the cost of self-test kits appears to be a significant deterrent to utilization (Cambiano et al., 2019). This observation suggests that clear and transparent pricing information is essential in promoting self-testing. Individuals who are unsure about the cost may hesitate to acquire self-test kits due to concerns about affordability or unexpected expenses. To address this issue, it is crucial for healthcare providers and public health initiatives to provide transparent information about the availability and pricing of self-test kits. This can be achieved through awareness campaigns, educational materials, and ensuring that self-test kits are offered at affordable or subsidized rates, particularly for economically disadvantaged populations (Cambiano et al., 2019). Furthermore, the study's results indicate that respondents who reported that there was a cost involved and those who reported no cost were more likely to have used self-test kits compared to those who indicated uncertainty about the cost (Cambiano et al., 2019). This suggests that providing free or low-cost self-test kits can significantly enhance their uptake. Subsidization and

affordability measures, as previously discussed, play a vital role in ensuring that cost is not a prohibitive factor for accessing self-testing services (Cambiano et al., 2019).

The cross-tabulation analysis between Predisposing and enabling factors provides valuable insights into the complex interplay of factors influencing the usage of HIV self-test kits. While having a sexual partner and engaging in protected sex do not appear to strongly influence usage, the availability and, especially, the accessibility of self-test kits emerge as crucial factors associated the usage of HIV Self-Test Kits. These findings underscore the importance of not only making self-test kits available but also ensuring that they are easily accessible and accompanied by effective awareness campaigns to promote their utilization. Additionally, specific strategies may be needed to target individuals with unique healthcare needs, such as those who inject drugs, to enhance their engagement with HIV testing and care services (Musheke et al., 2017; Sharma et al., 2019; Thirumurthy et al., 2016).

5.4 Pre-Disposing Factors Influencing the Uptake of HIV Self-Testing Kits

5.4.1 Predisposing Factors

5.4.1.1 Social-Economic Factors

The findings pertaining to the socio-economic factors of marital status and monthly income shed light on notable associations with the non-uptake of HIV self-test kits. These results provide valuable insights into how these socio-economic factors influence an individual's likelihood of utilizing self-testing services.

The study findings indicate that individuals who are single have 2.424 times higher odds of not using HIV self-test kits compared to their married and separated counterparts. This finding suggests that marital status plays a significant role in self-testing behavior. While being single may indicate greater autonomy and privacy for healthcare decisions, it might also be associated with lower health-seeking behavior and awareness regarding HIV testing. Single individuals may not perceive themselves as vulnerable to HIV or may lack access to information about self-testing. This finding underscores the importance of targeted awareness campaigns and interventions aimed at single individuals to promote self-testing, improve HIV awareness, and address any barriers specific to this group. Additionally, study findings show that individuals with a monthly income of K1000 or

more are 1.473 times more likely to exhibit non-uptake of HIV self-test kits compared to those with a monthly income of less than or equal to K1000. This unexpected finding challenges the assumption that higher income equates to better access to healthcare services. It suggests that individuals with higher incomes may face distinct barriers to self-testing. One possible explanation could be that these individuals have greater access to facility-based healthcare services and may perceive self-testing as less necessary. Additionally, they might have concerns about the accuracy and reliability of self-tests, which can lead them to opt for traditional healthcare settings. These findings align with previous research indicating that socio-economic factors, including marital status and income, can influence HIV testing behavior (Musheke et al., 2017; Sharma et al., 2019). However, the results also underscore the complexity of these associations and the need for context-specific interventions. Tailored strategies should consider the unique needs and challenges faced by single individuals and those with higher incomes to encourage self-testing while addressing any misconceptions or barriers they may encounter.

In light of these study findings, further research and qualitative studies may be necessary to gain a deeper understanding of the motivations and barriers faced by single individuals and those with higher incomes regarding HIV self-testing. This would enable the development of more effective and targeted interventions to promote equitable access to self-testing services.

5.4.2 Enabling Factors

The findings related to predisposing factors, specifically the availability of HIV self-test kits and knowledge about the costs involved in accessing them, reveal important insights into the factors influencing non-uptake of self-testing services.

Findings of this study show that individuals in locations where HIV self-test kits are not available are 1.827 times more likely to exhibit non-uptake of these kits compared to individuals in areas where self-test kits are available. This finding underscores the critical role of accessibility and availability in determining self-testing behavior. Lack of access to self-test kits can be a significant barrier, as individuals cannot utilize a service that is simply not present in their geographical area. These results align with previous research highlighting the importance of ensuring a consistent supply chain and distribution of self-

test kits to reach underserved populations (Kumwenda et al., 2019). Addressing disparities in access to self-testing requires targeted interventions, including distribution strategies that ensure self-test kits are readily available in both urban and rural settings.

In a study done in Malawi, by Indravudh et al. (2017), similarly highlighted that marital status plays a significant role in HIV self-testing (HIVST) prevalence. Their findings showed that married women or women living with their partners had a higher prevalence of ever having used HIVST (43.8%, 424 out of 968) compared to women who were not married or cohabitating (32.8%, 160 out of 488). The adjusted prevalence ratio (PR) was 1.26, with a 95% confidence interval (CI) of 1.09 to 1.46 (Indravudh et al., 2017).

Additionally, findings of this study reveal that individuals who are uncertain about the costs associated with accessing HIV self-test kits are 2.708 times more likely to exhibit non-uptake compared to individuals who are aware of the costs or believe there are no costs involved. This finding emphasizes the significance of transparency and clear communication regarding the financial aspects of self-testing. Individuals who are unsure about the costs may be hesitant to use self-test kits due to concerns about affordability or the fear of unexpected expenses. To address this barrier, healthcare providers and public health initiatives should prioritize the dissemination of accurate and accessible information regarding the pricing of self-test kits. This can be achieved through awareness campaigns, educational materials, and ensuring that self-test kits are offered at affordable or subsidized rates, particularly for economically disadvantaged populations. These findings are consistent with previous research highlighting the critical role of accessibility and affordability in promoting self-testing (Cambiano et al., 2019).

Furthermore, the research by Indravudh et al. (2017) in Malawi revealed that the cost associated with HIVST could be a potential barrier, even if test kits were subsidized. The study found that young people, who often lack financial independence, were more accepting of HIVST when it was provided at no or very low cost. Their willingness to use HIVST was closely tied to affordability, underlining the importance of cost considerations for this demographic. In another study done in Tanzania, by Jennings et al. (2017) echoed the importance of cost in HIVST uptake. While HIVST was shown to reduce expenses related to travel, clinical visits, and time away from work, the cost of purchasing HIV self-

test kits emerged as a significant barrier to testing. Some participants expressed concerns about potentially high fees and indicated a preference for using existing free clinic-based HIV counseling and testing services over purchasing HIVST kits (Indravudh et al., 2017).

All these findings underscore the importance of eliminating knowledge gaps and uncertainties regarding the costs of self-testing. Providing transparent information and ensuring equitable access to self-test kits are essential steps toward increasing self-testing uptake and reducing HIV transmission.

Based on these findings, it suffices to state addressing the barriers associated with the availability and knowledge of costs related to HIV self-test kits is crucial for promoting self-testing as a viable and accessible HIV testing option. Future interventions and public health campaigns should prioritize strategies that enhance the distribution of self-test kits to underserved areas and improve awareness regarding the affordability of self-testing services.

5.5 Linking the Study Results to the Conceptual Framework

The study's findings provide valuable insights into the complex interplay of demographic, socioeconomic, and predisposing factors influencing the usage of HIV self-test kits, closely aligning with the conceptual framework. However, it's important to acknowledge some limitations in this study. The study relied on self-reported data, which may be subject to recall and social desirability biases. Future research should explore innovative methods for collecting more objective data, such as transaction records for self-test kit purchases. Despite these limitations, this study underscores the critical role of marital status, income, kit availability, and cost awareness in self-testing decisions. Moving forward, interventions should aim to address these factors comprehensively, targeting vulnerable populations, and ensuring affordability and accessibility of self-test kits, while also considering broader systemic factors that influence HIV testing behavior. Future research should delve deeper into the nuances of these factors and explore novel strategies to promote equitable access to HIV self-testing while considering the evolving landscape of HIV prevention and control measures.

CHAPTER SIX:

CONCLUSION, RECOMMENDATIONS, STUDY CONTRIBUTIONS AND LIMITATIONS

6.1 Conclusion

This study was conducted to; establish the prevalence of HIV self-test kits uptake, investigate the levels of self-HIV testing kits by background characteristics, and predisposing and enabling factors associated with the use of HIV-self testing kits among adolescents in Kalingalinga Compound in Lusaka-Zambia. This study has illuminated several crucial themes regarding the prevalence, levels, and predictors of HIV self-test kit utilization. The findings indicate that the prevalence of none uptake of HIV self-test kits among respondents was 70%. The findings revealed a substantial prevalence of non-uptake, particularly among individuals without a sexual partner, those with higher incomes, and those uncertain about the cost involved. Furthermore, the study identified demographic factors, such as marital status, and socioeconomic factors, like monthly income, as significant predictors of non-usage. Additionally, the availability of self-test kits and awareness of associated costs emerged as vital determinants. These results underscore the need for multifaceted interventions tailored to specific demographic, socioeconomic, and predisposing factors to promote HIV self-testing. These findings emphasize the importance of tailored interventions to address these specific barriers, such as targeted awareness campaigns and subsidy programs. Understanding these factors is vital for crafting effective public health strategies to encourage HIV testing and ultimately reduce transmission rates.

6.2 Recommendations

6.2.1 Policy/programing recommendations

It is recommended that Ministry of Health and all Partners in HIV Prevention need to consider the following recommendation to improve the Uptake of HIV self-test kits among adolescents.

- Develop and implement tailored awareness campaigns that focus on populations with lower self-testing rates, such as those without sexual partners and individuals with higher incomes. These campaigns should emphasize the importance of testing for everyone, regardless of perceived risk, and provide clear information about the availability and affordability of self-test kits.
- To address the cost barrier, consider subsidizing or providing free HIV self-test kits, especially for economically disadvantaged populations. This approach can make self-testing more equitable and accessible, particularly in low-resource settings.

- Develop community-based interventions to reduce HIV-related stigma and promote the confidentiality of self-testing. Stigma remains a significant barrier to testing, and community initiatives can help create a supportive environment for self-test kit users.
- Tailor interventions that consider gender-specific barriers, as women may be more likely to self-test than men. Addressing masculinity norms and health-seeking behavior among men is crucial.

6.2.2 Future Research Recommendations

- For future research, it is essential to delve deeper into the specific factors influencing self-testing behavior, such as the nuanced relationship between income and testing.
- Future studies can explore the effectiveness of these recommended interventions in real-world settings and their impact on increasing self-testing rates and reducing HIV transmission.
- Longitudinal research can provide insights into the sustainability of these interventions over time.
- Finally, ongoing monitoring and evaluation of self-testing programs would be critical to adapting strategies based on evolving trends and challenges in HIV prevention and control.

6.3 Contributions of the Study and limitations

6.3.1 Policy/Programming Contributions

This study significantly contributes to policy and programming efforts aimed at improving HIV self-testing utilization and reducing HIV transmission. The study's findings, which reveal a substantial prevalence of non-uptake among specific demographic and socioeconomic groups, provide valuable evidence for evidence-based policy development. Policymakers can use these insights to tailor interventions, including cost subsidization, targeted awareness campaigns, and stigma reduction programs, to address the identified barriers. Moreover, the emphasis on equitable access, gender-specific strategies, and post-test support underscores the need for comprehensive, inclusive approaches. Overall, this study equips policymakers with the knowledge to craft effective public health strategies that promote HIV self-testing, enhance early diagnosis, and contribute to the broader goal of reducing HIV transmission rates.

6.3.2 Body of knowledge Contributions

This study significantly contributes to the body of knowledge on HIV self-testing by providing comprehensive insights into prevalence, levels, and predictors of utilization. The study's findings, highlighting a substantial prevalence of non-uptake, shed light on specific demographic and socioeconomic factors that influence testing behavior. This nuanced understanding of barriers to self-testing adds depth to the existing literature. Additionally, the identification of factors such as marital status, monthly income, kit

availability, and cost awareness as predictors of non-usage enriches the conceptual framework for studying HIV self-testing. These findings advance our knowledge of the complex interplay of factors affecting self-testing behavior, thereby guiding future research and intervention strategies in the realm of HIV prevention and control.

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APPENDICES

PARTICIPANT INFORMATION SHEET

Investigating the factors influencing the use of HIV self-testing kits among adolescents:
A case of Kalingalinga compound.

Please read this information sheet carefully and feel free to ask questions

Introduction

This research is being conducted by Mwansa Ethel. I wish to invite you to take part in a study aimed at investigating the factors influencing the use of HIV self-testing kits among adolescents of Kalingalinga compound.

This information leaflet is providing you with information that will help you to decide if you

would like to participate in this study. You should fully understand what is involved before consenting to take part. You should only agree to take part in this study only if you are completely

satisfied with all the procedures involved.

About the study

The purpose of this study is to investigate the factors Influencing the use of HIV self-testing kits among adolescents. The study will explore the social and economic factors inhibiting adolescents from utilization of HIV self-testing services.

During this study the researcher will be asking you questions relating to the factors influencing the use of HIV self-testing kits among adolescents in Kalingalinga Compound.

What is needed

To participate in this study, you will firstly be asked to sign a consent form. This form is to show

that you have understood what this study is about and have accepted to answer to the questions

related to the study being undertaken. The researchers will ask you questions regarding the factors influencing the use of HIV self-testing kits among adolescents in Kalingalinga Compound.

This process shall take about 30 minutes. This will be done in a very comfortable and relaxed environment with all the privacy provided. In case you have questions do not hesitate to ask the researcher that will be interviewing you.

Procedures

If you allow us to talk to you, we will ask you to take part in an interview that will take about 30 minutes. It will be done in a private place. No name will be included in the tape recording and the typed documents.

Benefits

Your participation in this study will have no direct and immediate material and financial benefits. However, this study will significantly contribute to the development of practical adolescent HIV testing services which will subsequently respond effectively to the HIV testing needs of adolescents across the country and beyond. Furthermore, your participation will help improve the adolescent HIV prevention policies and contributing to the advancement of an AIDS free society by 2030.

Risks

We do not expect you to have any problems because of your participation in this study. However, some information we may learn from you may be personal, emotional and may compromise your privacy. In case any issue makes you feel distressed, we will help you cope with situation. We would also like to assure you that the information we will get from you will not be shared with anyone outside the research team.

Data to be collected

Data will be collected using a structured questionnaire. All the responses will be written on the questionnaire that will be used as a data collection tool.

Protecting data confidentiality

We have put up steps to protect the information we will get from you. Firstly, only members of the study team will be able to see the information. Secondly, we will not put names on any information collected from you. Instead, we will use numbers for identification. Thirdly, we will destroy all hard copy questionnaires. Soft copy data will be stored on a password protected computer in a locked office for a minimum of 5 years.

How will confidentiality and anonymity be ensured for the study?

What you will write or tell us is confidential and only the researchers would be able to have access to the information you will provide. You will not be identified by name in any research data or any reports to come out of the research. No individual information will be reported on. Any data will be reported in an aggregate way. Information will remain as confidential as the law allows.

What happens if you do not want to participate or decide to leave the interview early?

You are free to decide whether you want to take part in this study, and you are free to leave at any point during the interview. You are also free not to answer any questions that you are not comfortable with, and this will not bring any problem to you. If you wish to withdraw, data will

be deleted at your request. You are free not to answer certain questions they may deem personal

or otherwise without penalty.

Thank you for taking time to read the information sheet.

Your willingness to participate in this study is greatly appreciated.

Who to call for questions or problems?

You can the principal investigator or co-principal investigator.

If you have any matter which you feel is not adequately explained in this leaflet, do not hesitate to

phone the principal investigators, Mwansa Ethel.

Mwansa Ethel

University of Zambia School of Public health,

P.O. Box 50110,

Lusaka

0975110300

Email; ethelmwansa2@gmail.com

They can also call or contact the University of Zambia, Biomedical Research Ethics Committee

(UNZABREC) office of the School of Medicine, University of Zambia, if there are questions

about your rights. They can contact the UNZABREC if you have not been treated fairly or if you have other concerns. The UNZABREC contact information is:

The Chairperson

Biomedical Research Ethics Committee

School of Medicine

P.O.BOX 50110, Lusaka.

Telephone No: 211256067

Email: unzarec@unza.zm

CHITSANZO CHODZIWA KWA WOPHUNZIRA

Kufufuza zomwe zimapangitsa kugwiritsa ntchito zida zodziyezera okha HIV kwa achinyamata: Nkhani ya Kalingalinga.

Chonde werengani bwino nkhanayi ndipo khalani omasuka kufunsa mafunso

Mawu Oyamba

Kafukufukuyu akuchitidwa ndi Mwansa Ethel. Ndikufuna kukuitanani kuti mutenge nawo gawo mu a Kafukufuku yemwe cholinga chake ndi kufufuza zinthu zomwe zimalimbikitsa kugwiritsa ntchito zida zodziyezera okha HIV pakati pa achinyamata a pa Kalingalinga. Kapepala kachidziwitso kameneka kakupatsirani zambiri zomwe zingakuthandizeni kusankha ngati mukufuna ndikufuna kutenga nawo gawo mu kafukufukuyu. Muyenera kumvetsetsa bwino zomwe zikukhudzidwa kale kuvomera kutenga nawo mbali. Mukuyenera kuvomera kutenga nawo mbali mu kafukufukuyu pokhapokha ngati muli ndi zones kukhutitsidwa ndi njira zonse zomwe zikukhudzidwa.

Za phunziroli

Cholinga cha kafukufukuyu ndikufufuza zinthu zomwe zimalimbikitsa kugwiritsa ntchito zida zodziyesera zokha kwa achinyamata. Kafukufukuyu afufuza za chikhalidwe ndi zachuma zomwe zemalepheretsa achinyamata kugwiritsa ntchito njira zodziyezera okha.

Pakafukufukuyu wofufuzayo azikufunsani mafunso okhudzana ndi zomwe zimalimbikitsa kugwiritsa ntchito zida zodziyezera zokha za HIV pakati pa achinyamata a ku Kalingalinga Compound.

Zomwe zimafunika

Kuti mutenge nawo mbali mu kafukufukuyu, choyamba mudzafunsidwa kusaina fomu yololeza. Fomu iyi ndi yowonetsera kuti mwamvetsetsa zomwe phunziroli likunena ndipo mwavomera kuyankha mafunso zokhudzana ndi phunziro lomwe likuchitika. Ofufuzawa akufunsani mafunso okhudzana ndi zomwe zimayambitsa kagwiritsidwe ntchito ka zida zodziyezera okha HIV pakati pa achinyamata a ku Kalingalinga Compound. Izi zitenga pafupifupi mphindi 30. Izi zitha kuchitika momasuka kwambiri komanso momasuka malo okhala ndi zinsinsi zonse zoperekedwa. Ngati muli ndi mafunso musazengereze kufunsa wofufuza yemwe akufunsani mafunso.

Njira

Ngati mungatilole kuti tilankhule nanu, tidzakufunsani kuti mutenge nawo gawo pa zokambirana zomwe zidzatenga pafupifupi mphindi. Zidzachitikira m'malo achinsinsi. Palibe dzina lomwe lidzaphatikizidwe mu kujambula kwa tepi ndi zikalata zojambulidwa.

Ubwino

Kutenga nawo mbali mu kafukufukuyu sikukhala ndi phindu lachindunji komanso lanthawi yomweyo pazachuma. Komabe, kafukufukuyu athandiza kwambiri pakupanga ntchito zoyezetsa kachirombo ka HIV kwa achinyamata zomwe pambuyo pake zidzayankha mogwira mtima pazosowa zoyezetsa HIV za achinyamata m'dziko lonse ndi kupitirira apo. Kuonjezera apo, kutenga nawo mbali kwanu kudzathandiza kukonza ndondomeko zopewera HIV kwa achinyamata komanso kupititsa patsogolo chitukuko cha anthu opanda Edzi pofika 2030.

Zowopsa

Sitikuyembekeza kuti mudzakhala ndi vuto lililonse chifukwa chotenga nawo mbali mu kafukufukuyu. Komabe, zina zomwe tingaphunzire kwa inu zitha kukhala zaumwini, zamalingaliro ndipo zitha kusokoneza zanu zachinsinsi. Ngati vuto lililonse likukukhumudwitsani, tidzakuthandizani kuthana ndi vutolo. Ife ndikufunanso kukutsimikizirani kuti zomwe tipeza kuchokera kwa inu sizidzagawidwa nazo aliyense kunja kwa gulu lofufuza.

Zomwe ziyenera kusonkhanitsidwa

Deta idzasonkhanitsidwa pogwiritsa ntchito mafunso okonzedwa. Mayankho onse adzalembedwa pa mafunso omwe adzagwiritsidwe ntchito ngati chida chosonkhanitsira deta. Kuteteza chinsinsi cha data takhazikitsa njira zotetezera zomwe tidzalandira kuchokera kwa inu. Choyamba, mamembala a gulu la kafukufuku lizitha kuwona zambiri. Kachiwiri, sitidzaika mayina pa chilichonse zambiri zotengedwa kuchokera kwa inu. M'malo mwake, tidzagwiritsa ntchito manambala pozindikiritsa. Chachitatu, tidzatero wonongani mafunso onse ovuta. Deta yofewa idzasungidwa pachinsinsi chotetezedwa kompyuta mu ofesi yotsekedwa kwa zaka zosachepera 5.

Kodi chinsinsi komanso kusadziwika zidzatsimikizirika bwanji pa kafukufukuyu?

Zomwe mutilemba kapena kuti ndi zachinsinsi ndipo ofufuza okha ndi omwe angakhale nazo kupeza zambiri zomwe mungapereke. Simudzadziwika ndi dzina pakufufuza kulikonse

deta kapena malipoti aliwonse otuluka mu kafukufukuyu. Palibe chidziwitso chamunthu chomwe chidzafotokozedwe. Deta iliyonse idzafotokozedwa munjira yonse. Zambiri zidzakhala zachinsinsi monga lamulo amalola.

Kodi chimachitika ndi chiyani ngati simukufuna kutenga nawo mbali kapena kuganiza zosiya kuyankhulana msanga?

Ndinu omasuka kusankha ngati mukufuna kutenga nawo mbali mu kafukufukuyu, ndipo ndinu omasuka kuchoka kulikonse mfundo panthawi yofunsa mafunso. Mulinso omasuka kuti musayankhe mafunso aliwonse omwe simuli womasuka ndi, ndipo izi sizibweretsa vuto kwa inu. Ngati mukufuna kuchotsa, deta idzatero zichotsedwe mwa pempho lanu. Ndinu omasuka kuti musayankhe mafunso ena omwe angawaone ngati aumwini kapena popanda chilango.

Zikomo chifukwa chopatula nthawi yowerenga zidziwitso.

Kufunitsitsa kwanu kutenga nawo mbali mu kafukufukuyu ndi kuyamikiridwa kwambiri.

Ndani woti afunse mafunso kapena mavuto?

Inu mukhoza wofufuza wamkulu kapena wofufuza mnzake wamkulu.

Ngati muli ndi nkhani yomwe mukuona kuti sinafotokoze bwino m'kabukuka, musazengereze

foni kwa ofufuza wamkulu, Mwansa Ethel.

Mwansa Ethel

University of Zambia School of Public Health,

P.O. Box 50110,

Lusaka

Nambala yafoni: 0975110300

Imelo; ethelmwansa2@gmail.com

Atha kuyimbanso kapena kulumikizana ndi University ya Zambia, Biomedical Research Ethics Committee (UNZABREC) ofesi ya School of Medicine, University of Zambia, ngati pali mafunso

za ufulu wanu. Atha kulumikizana ndi UNZABREC ngati simunakuchitireni chilungamo kapena ngati muli ndi nkhawa zina. Mauthenga a UNZABREC ndi awa:

Wapampando

Komiti ya Biomedical Research Ethics Komiti

School of Medicine

P.O.BOX 50110, Lusaka.

Nambala yafoni: 211256067

Imelo: unazarec@unza.zm

CONSENT FORM – ADOLESCENTS AGED 18 – 19YEARS.

Read the following to the respondents before commencing the discussions/interview

I have been fully informed of the purpose of the study. The benefits, discomforts, risks and

confidentiality and I agree to participate willingly. I further understand that if I take part in this

study, I can withdraw at any time without having to give an explanation. Taking part in this study

is purely voluntary. I also understand that I am free not to answer certain questions they may

deem personal or otherwise without penalty.

The opportunity to ask questions about the research was given and I have been answered to my

Satisfaction.

I therefore agree to participate in this study

I..... (Names) hereby called the respondent understands the guidelines of this study and I agree to take part in the study

Signed/thumb..... Data..... (Participant)

Signed/thumb print_____ Date_____
(Witness)

FOMU YOVOMEREZA - ACHINYAMATA AZAKA 18 -19

Awerengeleni zo satila oyanka mafunso musayambe kuwkambisana nao.

Ndizomerazi kuti nditengeko mbali mumafunso awa. Zabwino zopezamo, kusapeza bwino, zoopsa ndiponso cisinsi, inde ndivomera kutengako mbali kosandipatikiza. Ndikulupilira kuti ndizatatengako mbali mumafunso awa, ndili ndiufulu oleka pa ntawi iliyonse kulibe kuzifotokoza. Kutengeko mbali mumafunsowa, ndisimikiza kuti nipakufuna kwanga neka. Ndisimikiza kuti ndili ndiufulu osayanka mafunso ena kosapasidwa mlandu.

Ndapasidwa nthawi yofunsa mafunso anga kwa ndipo ndayankidwa mokomera.

Tsopano ndivoleza kuti nditengeko mbali kumafunsowa.

Ine.....(dzina langa) ndakutilila ndi mau amene andipasa pali kupunzira uku ndipo ndivomera kutengako mbali.

SIGINECHA /CALA_____ TSIKU

_____(WOTENGAO NAO MBALI)

SIGINECHA /CALA_____ TSIKU _____(MBONI)

ASSENT FORM FOR ADOLESCENTS AGED 15-17YEARS

Factors Influencing the use of HIV self-testing kits among adolescents: A case study of Kalingalinga compound

Dear Participant,

My name is Mwansa Ethel from the University of Zambia. I am doing a study Factors influencing the use of HIV-self testing kits among adolescents of Kalingalinga compound of Lusaka district District in Lusaka province of Zambia. I am asking you to take part in the research study because I want to get information on experiences of adolescents. If you would like, you can be in my study.

For this research, I will ask some questions about your experiences of in the utilization of HIV Self-testing services. I will keep all your answers private and will not show them to your guardian.

I do not think that any big problems will happen to you for being part of this study, but you might feel sad when I ask about bad things that happened to you. There are no physical risks involved in this study. However, you may feel uncomfortable answering some of the questions. Further, you are free to skip questions you may deem personal or otherwise without penalty. You may stop the interview session at any time. Your responses or participation in this study will not affect you in any way.

There is no direct benefit to you personally for participating in this study. However, your responses will be expected to generate information that will not only be used to produce an academic paper, but also contribute to your health care needs as an adolescent.

You do not have to be in this study if you do not want to. You may stop being in the study at any time. If there is a question you do not want to answer, you are free to keep quiet. Your guardian/parent was asked if it is okay for you to be in this study. Even if they said its okay, it is still your choice whether to take part.

Sign this form only if you have had all your questions answered and you have talked to your legal guardian about this research and agree to take part in this study. My telephone number is +260975110300. You can call me if you have questions about the study or if you decide you do not want to be in the study anymore.

I will give you a copy of this form in case you want to ask questions later.

Agreement by Child

I have decided to be in the study even though I know that I do not have to do it. Mwansa Ethel has answered all my questions.

Thumb print

Thumb Print

Signature of Study Participant

Date

Signature of Legal Guardian

Date

Thumb print

Signature of Researcher

Date

FOMU YOVOMEREZEKA KWA ACHINYAMATA AZAKA 15 -17

Yunivesite ya Zambiya

Sukulu ya Mankhwala

Dipatimenti ya za Nthanzi

Fomu Yovomerekeza (Chichewa)

Ndine **Mwansa Ethel** wochokera ku yunivesite ya Zambiya. Ndikuchita kafukufuku wokhudzana ndi mavuto amene achinyamata amapezamo potenga thandizo yozipima HIV paeka mumalo akalingalinga, mboma la Lusaka ku Lusaka Province ku Zambiya. Ndikukupemphani kuti mutenge nawo mbali mu kafukufukuyu chifukwa ndikufuna kudziwa zambiri za achinyamata. Ngati mungafune, mutha kukhala mu phunziro langa.

Pa kafukufukuyu, ndikufunsani mafunso okhudza zomwe munakumana nazo pochita nawo ntchito zothandiza achinyamata. Ndidzasunga mayankho anu onse mwachinsinsi ndipo sindidzawawonetsa kwa woyang'anira wanu.

Sindikuganiza kuti pali vuto lalikulu lomwe lingakuchitikireni chifukwa chokhala nawo mu kafukufukuyu, koma mutha kumva chisoni ndikakufunsani zoyipa zomwe zidakuchitikirani. Palibe zowopsa zomwe zingachitike mu kafukufukuyu. Komabe, mungamve kukhala wosamasuka kuyankha ena mwa mafunso. Mutha kukana kuyankha mafunso aliwonse omwe simukufuna kuyankha kapena mafunso omwe amakupangitsani kukhala osamasuka. Mutha kuyimitsa zokambirana nthawi iliyonse. Mayankho anu kapena kutenga nawo mbali mu kafukufukuyu sikungakhudze inu mwanjira iriyonse.

Palibe phindu lachindunji kwa inu nokha pakuchita nawo kafukufukuyu. Komabe, mayankho anu akuyembekezeka kutulutsa zidziwitso zomwe sizidzangogwiritsidwa ntchito kupanga pepala lamaphunziro, komanso zimathandizira pazosowa zanu zaumoyo ngati wachinyamata.

Simukuyenera kukhala muphunziroli ngati simukufuna. Mutha kusiya kukhala muphunziroli nthawi ina iliyonse. Ngati pali funso lomwe simukufuna kuyankha, ndinu omasuka kukhala chete. Wolera wanu/makolo anafunsidwa ngati kuli bwino kuti mukhale nawo mu kafukufukuyu. Ngakhale atanena kuti zili bwino, ndi chisankho chanu kutenga nawo mbali kapena ayi.

Sainani fomuyi pokhapokha ngati mwayankhidwa mafunso anu onse ndipo mwalankhula ndi wosamalira zamalamulo za kafukufukuyu, ndikuvomera kutenga nawo mbali mu kafukufukuyu.

Nambala yanga yafoni ndi +260977937661. Mutha kundiyimbira foni ngati muli ndi mafunso okhudza kafukufukuyu kapena ngati mukuganiza kuti simukufunanso kukhala nawo mu kafukufukuyu.

Ndikupatsani kope la fomuyi ngati mungafune kufunsa mafunso mtsogolo.

Mgwirizano ndi Mwana

Ndasankha kukhala m'phunziroli ngakhale kuti ndikudziwa kuti sindiyenera kuchita zimenezo. Kachana Sitali wayankha mafunso anga onse.

Chala Chachikulu

Siginecha Yanu Dzina
Tsiku

Cala
cacikulu

Losindikizidwa

Chala Chachikulu

Siginecha sunga Dzina
Chala Chachikulu

Cala
Cacikulu

Tsiku

Cala
Cacikulu

Siginecha Yofufuza Dzina Losindikizidwa

Tsiku

Appendix 1 data collection tool: Questionnaire

Q#	Question	Response	Official Use
SECTION A: PRE-DISPOSING FACTORS			
1. Demographics Characteristics			
1.	What is your sex?	1. Male [] 2. Female []	
2.	What was your age on your last birthday?	 Years	
2. Social-Economic Characteristics			

3	What is your marital status?	1.Single RC [] 2.Married [] 3.Separated [] 4.Divorced [] 5.Widowed []	
4	What is your highest level of education?	1.No-education [] 2. Primary [] 3.Secondary [] 4.Tertiary RC []	
5	What is your religious denomination?	1.Catholic [] 2.SDA [] 3.UCZ [] 4.New Apostolic [] 6.Other Specify []	
6	What is your main source of income?	1. Formal Employment [] 2. Informal employment [] 3. Business [] 4. Parents/Guardian Stipend []	

7	What is your monthly income?	1. < = 1000 ☐ 2. 1001 - 5000 ☐ 3. 5001 - 10000 ☐ 4. 10001+ ☐	
ENABLING FACTORS			
8.	Do you have a sexual Partner?	1. Yes ☐ 2. No ☐	
9.	Do you ever have unprotected sex?	1. ☐ 2. ☐	
10.	Do you ever inject drugs?	1. Yes ☐ 2. No ☐	
11.	Have you ever tested for HIV?	1. Yes ☐ 2. No (skip to 15) ☐	
Utilization (uptake) of HIV Self-Test Kits			
12.	Are you aware of HIV self-testing kits?	1. Yes ☐ 2. No ☐	
13.	If yes to question 9 how familiar are you with HIV self-testing kits?	1. Very Familiar ☐ 2. Familiar ☐ 3. Not familiar ☐	

14.	How available are the HIV self-test kits?	1. Very Available ☐ 2. Available ☐ 3. Not Available ☐	
15.	What is the cost of acquiring an HIV self-test kit	1. K..... 2. No cost ☐	
16	Have you ever used an HIV self-test kit?	1. Yes ☐ 2. No (skip to 15) ☐	
17.	Are you able to afford an HIV self-test kit	1. Yes ☐ 2. No ☐	
18.	If HIV self-test kits were provided, would you accept to use them?	1. Yes ☐ 2. No ☐	
19.	Have you ever used any methods of HIV testing apart from HIV self-testing kit?	1. Yes ☐ 2. No ☐	
20.	How do you compare the accuracy of the of HIV self -test kits to the other method/s used?		