

AFRICA UNIVERSITY
(A United Methodist-Related Institution)

CHALLENGES FACED BY USERS OF HIV SELF TEST KITS AT
MBARE POLY CLINIC, HARARE

BY

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Abstract

HIV self-testing (HIVST) was introduced in Zimbabwe by the Ministry of Health and Child Care to increase the uptake and scaling up of HIV testing. HIVST kits are accessed through health centers where individuals get the opportunity to conduct the HIV test on their own as it offers confidentiality, privacy and is very convenient. Despite having many advantages to client, various challenges are still being faced. This paper discusses the challenges being faced by users of HIV self-test kits, a study conducted at Mbare poly clinic, Harare on male and female respondents aged 18 years and above. To help describe these challenges, users' level of understanding of the HIVST procedure was assessed, HIV results interpretation and how individuals and partners cope with their HIV results was also investigated. A sample size of 68 individuals (82% females and 18% males) took part in the study. A mixed method research (qualitative and quantitative research method) was used for data collection to provide in-depth findings of the challenges. Quantitative method was used to collect demographic data. Qualitative data analysis was done using a six step thematic analysis process involving data familiarization, coding, generation of themes, analysis, reporting and lastly a write up. The main findings of the study were that 50% of respondents conducted repeat HIV tests within three months, during the window period and not after three months as stated in the MoHCC HIV testing algorithm. This suggested that users lacked knowledge on when to have their repeat HIV tests as they missed post HIV counseling. 44% of respondents read their results in less than the 20 minutes stated in the instructions and required to read and interpret HIVST results. This leads to incorrect interpretation of results. Respondents who read results in less than the required time had conducted HIVST alone, while respondents who read their result between the required 20 to 40 minutes conducted the HIVST with the assistance from a HCW. Almost all respondents (99%) report that the HIVST is easy and friendly to use but challenges and errors were being faced by the users, prompting recommendations which may improve the HIV testing process to yield correct results. It is important that the users receive a health education talk about HIV, learn HIVST procedure through demonstration and receive HIV pretest and posttest counseling so that they clearly understand the testing procedure and cope with their HIV results.

Keywords: HIV self-test, Results, Knowledge

Declaration Page

I declare that this dissertation is my original work except where sources have been cited and acknowledged. The work has never been submitted, nor will it never be submitted to another university for the award of a degree.

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12/05/2022

Student's Signature (Date)

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Acronyms and Abbreviations

AUREC:	Africa University Research Ethics Committee
Covid-19:	Corona Virus Disease 2019
HCW:	Health Care Worker
HIV:	Human Immuno-Deficiency Virus
HIVST:	Human Immuno-Deficiency Self-Test
HTS:	HIV Testing Services
MoHCC:	Ministry of Health and Child Care
STI:	Sexually Transmitted Infection
UNAIDS:	United Nations Programme on HIV/AIDS
WHO:	World Health Organization
ZIMPHIA:	Zimbabwe Program for HIV Impact Assessment

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CHAPTER 1: INTRODUCTION

1.1 Introduction

The vision for the Ministry of Health and Child Care of Zimbabwe is to provide comprehensive HIV and AIDS package of treatment, care and support to individuals and families who are infected and affected. By the end of 2025, Zimbabwe as a country should have achieved the 95-95-95 targets which ensures that more than 95% of people living with HIV should be identified, more than 95% of people identified as having HIV should be initiated and retained to treatment and more than 95% of people on antiretroviral treatment should be virally suppressed (UNAIDS, 2015).

According to the national survey carried out by (ZIMPHIA, 2020) found out that the annual incidence rate of HIV infection in Zimbabwe is 0.38 percent (0.54 percent among women and 0.24 percent among men) or an estimate of 31 000 people over a year. The prevalence HIV rate among adults stands at 12.9 percent (15.3 percent among women and 10.2 percent among men, translating to about 1.23 million adults in Zimbabwe were living with HIV in 2020.

Zimbabwe's national HIV policies and programs have contributed to the increased access to HIV diagnosis, treatment, care and viral load suppression among adults living with HIV. It is therefore empirical to continue supporting the HIV prevention approaches including HIV self-testing.

1.2 Background to the Study

The initial and critical component to the provision of comprehensive care of HIV and AIDS is HIV testing. Scaling up HIV testing services was required to ensure that more people are reached by introducing the HIV self-test kits which were introduced in Zimbabwe in 2017. HIV self-testing did not replace the standard HIV rapid tests but complemented the testing services as they provided an additional option to standard

HIV testing services to increase access and uptake as long as the testing is done according to the standard operating procedure manual. Some of the advantages of using HIV self-test kits is reduction of stigma associated with HIV testing as the testing procedure can be done with the user alone. It also reduces the workload of health services providers, time and resources which will reduce the running costs on health delivery.

However, it is very important to look at some of the challenges encountered by users of the HIV self-test kits which might have a negative impact on the comprehensive treatment, care and support of HIV and AIDS. HIV self-test kits can be accessed through local clinics, community distributors and private pharmacies for the general population and high risk groups namely sex workers, drug users, long distant truckers and men who have sex with men.

Therefore, HIV self-test being used in the market, at local clinics and pharmacies, should demonstrate their effective through producing correct results and being user friendly as evidenced by customer positive feedback. This feedback is again important to share it with policy makers and test kit manufacturers so that improvements can be made to make them easy to use and effective in HIV screening.

1.3 Problem Statement

Considering that HIV self-test kits have been introduced to increase the uptake of HIV testing, the test kits had to be accessed in local pharmacies and health facilities without any prescription. Individuals can start and end the HIV testing procedure without any professional pre and post HIV counselling which might result in not following the proper procedure associated with the whole process. Some clients may be illiterate and unable to read and understand the provided leaflet in the test package. The leaflets are written in English, Shona and Ndebele, which might be difficult for people who

Speak other languages as according to the 2013 Constitution of Zimbabwe there are 16 official languages but only 3 languages are used in the standard operating leaflets. This can have an impact on the result outcome.

HIV self-test kits have been introduced as a screening test for HIV where all positive results from the test should be confirmed using HIV rapid kits which some users might not be aware of. In this regard the Oraquick HIV1/2 self-test kits have a sensitivity rate of 98.1%, which enables the test kit to identify individuals who are true positives and has a specificity rate of 100 which enables the Oraquick HIV1/2 test kit to identify true negatives. However, clients or individuals who test positive should not conclude their HIV positive as the final HIV result.

Misinterpretation of HIV results may lead to intimate partner violence in cases where results can come out discordant and can again lead to suicide when the user interprets a false positive as a final result or does not accept an HIV positive result because no pre and post counselling was conducted. Therefore, it is important to make sure users of HIV self-test kits fully understand how the test kits are used and know how to correctly interpret HIV results by following the standard operating procedure and HIV testing algorithm.

1.4 Research Objectives

1.4.1 Main Objective

The main aim of the study is to describe challenges faced by users of HIV self-test kits at Mbare poly clinic, Harare.

1.4.2 Specific Objectives

- To find out the level of understanding by users of HIV self-test kits on testing procedure.

- To assess the levels of knowledge for the users on how HIV self-testers interpret their HIV results.
- To find out how individuals and partners cope with their HIV results after self-testing, without pre and post HIV test counselling.

1.4.3 Research Questions

1.4.3.1 Main Research Question

The main research question is, what are the challenges faced by users of HIV self-test kits at Mbare poly clinic. Harare?

1.4.3.2 Specific Research Questions

- How have the users of HIV self-test kits understood the testing standard operating procedure?
- What are the challenges the users are facing during the testing procedure and how best can they be solved?
- How are the users coping with an HIV positive result?

1.5 Assumptions/Hypothesis

The study is anticipated to identify challenges that are being faced by users of HIV self-test kits, resulting misinterpretation of HIV results and users not clearly understanding the standard operating procedures for HIV self-testing. This study will identify gaps in the standard operating procedure manual on laying out of instructions, terminology and languages used for interpretation of correct results. Findings from this research study are expected to assist in developing feasible strategies that can be employed by policy makers and self-test kits manufacturers to make the HIV self-testing user friendly and effective in HIV screening.

1.6 Justification of the Study

The researcher will identify challenges in HIV self-testing, thereby identifying gap associated with carrying out the whole procedure to make HIV self-testing user friendly. The researcher will assist the community in coming up with a well detailed feedback from research participants and through scientifically proven research result.

1.7 Significance of the Study

The study is being conducted to identify challenges being uncouncted by users of HIV self-test kits. The user should be literate so that they understand fully on how to conduct the test for yielding correct results. In cases were instructions of how to use the testing kit are not fully understood and followed, this can result in having a false result. Most users proceed to HIV self-testing without pre and post HIV testing, which can result in them having psychological problems and not accepting their results. Therefore, findings from this study can be used by policymakers to improve on HIV self-testing can be conducted and make it friendly for scaling up of HIV testing services.

1.8 Delimitations of the Study

The study is geographically limited to Mbare, Harare and being conducted at one clinic, which is Mbare poly clinic. The researcher selected Mbare as it is the most densely populated suburb in Harare with a large population. Given that the researcher is a resident of Harare, it will therefore be convenient to conduct research activities as the environment is familiar to the researcher and this will again have an impact on reduction research running costs. In addition, the research is being done by a novice researcher who is using the instruments for the first time, hence it might not produce accurate and detailed information.

1.9 Study Limitations

The limitations of this study, are that the study is being done in Mbare only, which might not be a very true reflection of challenges faced by the whole population of Zimbabwe. Physical group discussions can only be conducted under strict Covid-19 regulations to prevent spread of infection. The time frame for conducting the study is also limited.

1.10 Chapter Layout

Chapter One gives a historical back ground and impact of HIV and importance of HIV self-testing HIV screening in Zimbabwe. The chapter discusses research problem, research questions, aims, assumptions, or hypothesis, significance and objectives of the study. Scope of the study, limitations and chapter layout.

Chapter Two outlines the literature reviewed which is relevant for the study. The literature reviewed will include impact of HIV and HIV testing in the Zimbabwean context, challenges in HIV self-testing faced locally and globally.

Chapter Three discusses the research methodology in this study. This will include the research design and paradigm, data collection methods and sampling techniques used in the study. The chapter will also provide ethical considerations and structure of the study.

Chapter Four will detail the research findings as they relate to the challenges in HIV self-testing in the adult population in Mbare, Harare. The research findings will be statistically presented and analyzed.

Chapter Five comprises of concluding remarks and recommendations based on research findings.

1.11 Summary of Chapter 1

This chapter comprises of introduction, background, problem statement, objectives, research questions, and study justification, significance of study, delimitations, limitations and chapter layout.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

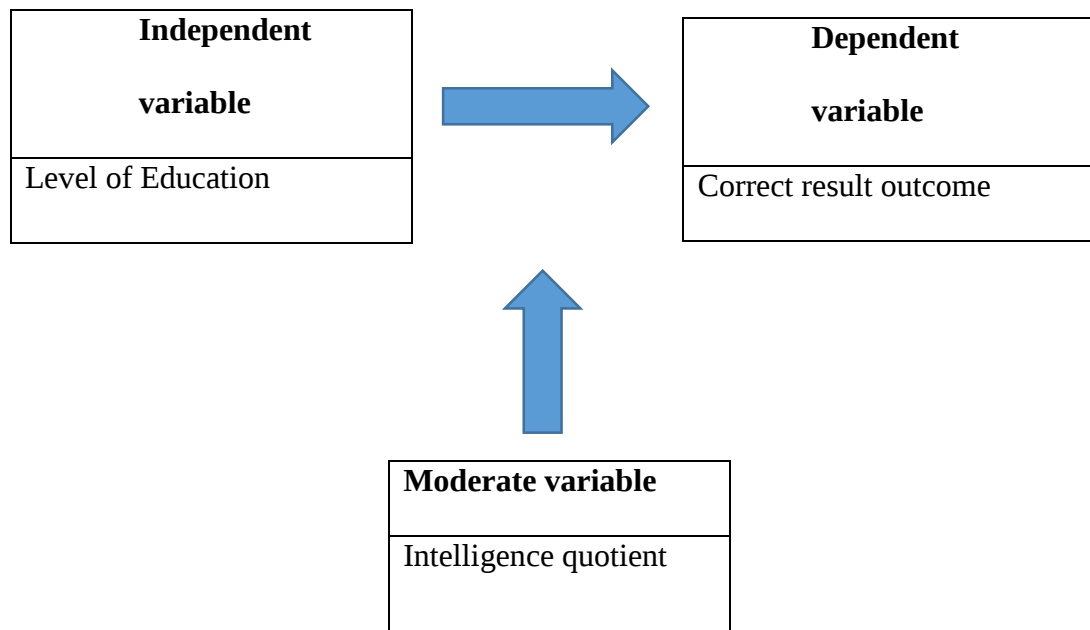
Pant Pai and Klein (2008) pointed out that an HIV positive diagnosis today, although stigmatized, is not a death sentence but a gateway to effective and comprehensive treatment, care and support to HIV. HIV self-testing offers individuals a chance to know their status in comfort of their homes in confidentiality. With the use of HIV self-test kits to increase uptake and coverage, it also comes with other challenges which include risk of psychological outcomes from the users. The psychological outcomes of having an unexpected HIV positive result could lead to stress, intimate partner violence or suicide. HIV testing in the presence of a health care provider with posttest counselling done will ensure accurate understanding, comprehension and correct interpretation of results.

According to Tonen-Wolyec, et al (2020) whether HIV self-test kits can be used properly and results interpreted correctly remains under debate. Challenges can be identified in collecting and transferring the sample. The misinterpretation of results could increase the spread of HIV especially when a positive result is read as negative.

2.2 Conceptual Framework

2.2.1 Conceptual Model

Figure 1: Conceptual Mode with a Moderating Variable



Source: Adapted from Swaen, B (2021) developing a Conceptual Framework for Research.

2.3 Conceptualizing HIV Self-testing

Figueroa, et al (2018) states that the lower one's educational level, the greater the difficulty in conducting an HIV self-test and interpretation of correct test results despite having the instructions written in a local language.

No HIV test is yet 100% accurate at all the time. Self-test kits have a high sensitivity of >98% in a supervised setting whilst unsupervised testing observed 93% sensitivity

which can cause erroneous results, false positive results and emotional distress Pant Pai & Dheda, 2014).

While HIVST is a highly effective tool that can be used to increase the uptake of HIV testing in the general population, various challenges are still being faced, Dzinamarira (2019)

The study therefore, seeks to investigate and identify gaps in HIV self-testing so that tests are conducted accurately, results interpreted correctly and users understand their results. Users should understand that the HIV self-test kit is only used as a screening tool and not for diagnosis so that they do not consider the results as conclusive.

2.4 HIV Self-testing Program

HIV self-testing is an innovative strategy designed to increase the uptake and scaling up of HIV testing, thereby increasing HIV case identification. When individuals get the opportunity to conduct the HIV test on their own, it offers them greater convenience and privacy with the potential to increase number of clients who test regularly. A study being conducted in Zimbabwe by FHI 360 since 2016 is implementing HIV self-testing through mobile clinics, hotspots and index case testing at homes has proven to be an effective method in HIV screening.

To reduce the burden of registered general nurses, testing all clients using the standard rapid HIV Type 1/2 antibody tests, the project introduced HIV-ST using OraQuick test kit type 1 antibody test for HIV screening. The HIV-ST kits are easily distributed by community health workers who can assist the client by reading instructions and demonstrate how the testing is done. When results come out negative, they are reported as such. A client is only referred to the health facility after the HIV-ST is reactive or positive for confirmatory by the qualified nurses using rapid HIV tests and guided by the national HIV testing algorithm. According to FHI 360, from the 11 983

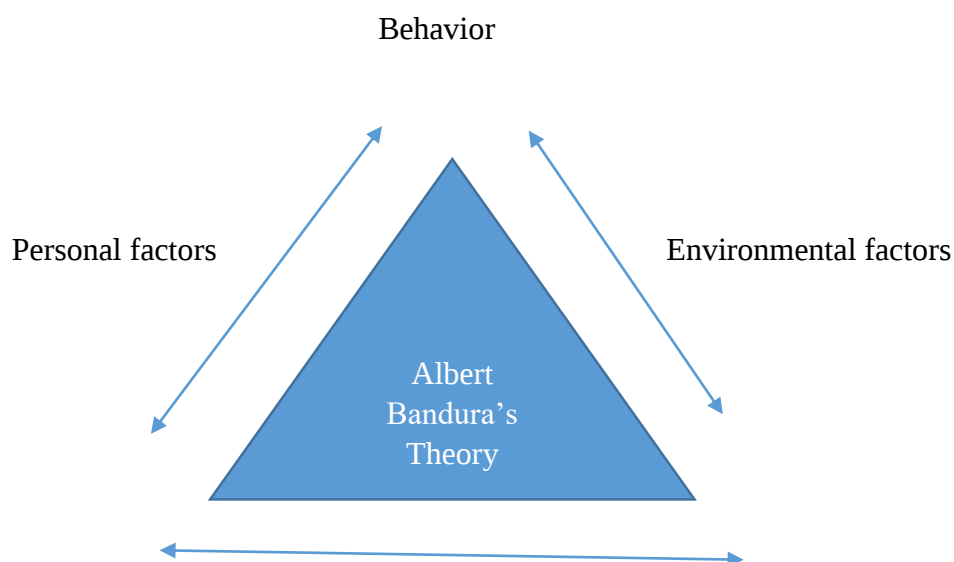
kits distributed, 11 924 were used (99.5%). 22% of the tests were reactive and had a confirmatory test, giving a positivity rate of 21.9%.

According to Dovel. K et al (2020), HIV self-testing interventions included five components, which are, a 10-minute health talk on importance of HIV testing and 15 minutes testing demonstration before the actual testing. This has proven to be effective in making sure that the fully understand the testing process to reduce errors of misinterpretation of results. There is need to clearly explain the importance of clients to receive a retested after 3 months when they get a non-reactive test in view of the window period and receive a confirmatory test at the health facility for a conclusive HIV result.

2.5 Theoretical Framework

2.5.1 Social Cognitive Learning Theory

Figure 2: Internal Principle of Social Cognitive Learning Theory



Source: Adapted from Nabavi, R.T. (2012)

The social learning theory is based on the idea that people learn from interaction from others in a social context. After observing the behaviors of others, people imitate those behaviors, especially if their observational experiences are positive (Bandura, 1977).

In HIVST learning takes place when clients take their time to watch instruction on video or through demonstration by the health care provider. If these instructions are not clearly put across or not clearly observed, then learning has not effectively taken place as this will have a great impact on the client's bad performance in conducting HIVST.

This theory provides a framework for understanding, predicting and changing human behavior (Green & Peil, 2009). Some of the reasons for conducting HIVST in the correct way and using the correct algorithm, is to end up with minimal or no challenges at all. Behavior change can result through individuals and couples receive an effective HIVST.

2.5.2 Literature Related to Education

Level of one's education can influence the way users of HIV self-test understand the testing procedure. The lower the educational level, the greater the difficulty in conducting HIVST and in interpretation of test correctly despite presence of clear instructions (Figueroa, 2018). Considering that each and every individual is unique, understands and perceives what they learn differently, there is potential for wrong interpretation of test results. Therefore, it is important for the health care worker to provide counselling and assist the illiterate during the testing process.

2.5.3 Literature Related to Environment

Learning involves a persistent change in human performance as a result of the learner's interaction with the environment (Driscoll, 1994). Thus learning theories see the environment as the major force in development (Hoffman, 1993). When clients receive health education on HIVST and counselling, this should be conducted in a conducive environment for learning to take place. The environment should ensure privacy and confidential, especially with issues to do with HIV results. An

environment which has guaranteed privacy can encourage other client to have HIVST. An environment which is free from noise can allow the learner to concentrate and pay full attention on what they are being taught.

2.5.4 Literature Related to Psychological Factors

Currently WHO recommendations state that all HIV testing should be informed, voluntary and confidential. Provider initiated counselling and testing being recommended by the WHO in 2007 to increase HIV testing uptake. Different models are currently in use which include HIVST. HIVST models have shown to be effective in scaling up of HTS as less health care workers are required in testing. However, previous studies have shown that other psychological problems have been identified during and after the testing procedure. These problems include lack of information about how to deal with an HIV test result, which created anxiety which is stressful for some clients (Mathews et al, 2020). It is stressful to wait for the unknown regarding test results especially when one is alone in the case of HIVST. There is potential for social isolation when diagnosed HIV positive and in worst circumstances suicide or suicidal thoughts. To some individuals, HIVST is described as inflicting self-harm or considered as a death sentence. It is therefore very important for every individual who goes through HIVST receive pre and post HIV test counseling to assist clients with their psychological issues.

2.5 Summary of Chapter 2

This chapter discusses concepts associated with challenges in HIVST interventions. The chapter further discusses some of the factors involved and faced by users of different backgrounds. The social cognitive learning theory was discussed and used a lens of understanding how behavior, education and environment affect users of HIVST kits.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter entails the methodological approach of the research study and how different methodologies will be used to answer the research questions. It will include research design, study site, study population, inclusion/exclusion criteria, sample size, sampling procedure, data collection instruments, pilot/pretest data, data collection procedure, data analysis, organization of data, ethical considerations and summary of the chapter. This study will come up with sound scientific knowledge on challenges encountered by users of HIVST kits in Mbare, Harare.

3.2 Research Methodology

There are three main types of research approaches namely qualitative, quantitative and mixed methods. Nevertheless, this study will use the mixed approach in understanding challenges being faced by HIVST kit users. It is an approach to inquiry that combines or associates both qualitative and quantitative forms. The combined approach will provide an in-depth finding on the challenges.

3.3 Research Design

An exploratory qualitative research design will be employed to meet fully the objective of this study. The basis of using a qualitative research design is to obtain an in-depth understanding of experiences, meaning and interpretation of HIVST kit users and key informants and find way to improve the testing process through collection of a standard open ended questionnaire. The quantitative research design will be used to get a better understanding of the respondents' demographic information and cultural factors that may affect or influence the respondents in clearly understanding and competently conduct the HIVST procedure. The decision to use the mixed research

design in this study is informed by the researcher's need to understand different interpretations in a specific framework at a particular time.

3.4 Study Site

The study site will be Mbare poly clinic in Harare, Zimbabwe. Mbare has a total population of 62787 people aged 18 years and above (ZIMSTAT, 2020). Mbare catchment area include Matapi, National, Mbare market and Mbare industrial area.

3.5 Study Population

Target population is defined as the entire group of subjects to which the researcher wishes to generalise his or her findings Polit and Beck, (2004). In this research the target population are males and females aged 18 years and above attended at Mbare poly clinic for HTS. Based on the Harare province district population projection report (2012) by Zimbabwe National Statistical Agency, projecting an annual growth of 2%, the population of people above 18 years as of year 2020 is 62 787 which is 66.6% of the Mbare population.

3.6 Inclusion and Exclusion Criteria

3.6.1 Inclusion Criteria

This research study inclusion criterion will be based on the general population who are 18 years and above years and who are clients attending HTS services at Mbare poly clinic. The study does not discriminate on the bases of gender, race, color and ethnicity. The disabled, visually impaired, pregnant and breastfeeding mother can also participate in the study.

3.6.2 Exclusion Criteria

All individuals below the age of 18 years.

3.7 Sample Size

In order for the researcher to get a sample size for the study, the Raosoft sample calculator is used to calculate the sample at 90% degree of confidence, a margin error of 10% and a response distribution of 50%. The sample size shall be 68.

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

Where n = Sample size

N = Total population

e = Error tolerance

$$\begin{aligned} n &= \frac{62787}{(1 + 62787(0.10^2))} \\ &= 68 \end{aligned}$$

3.8 Sampling Procedure

In order to collect the richest data, the study will use purposive sampling. This a technique which allows the researcher to gather specific information from a particular subset of a population as well as being a cost effective sample selection method. Purposeful sampling is highly subjective in providing in-depth and detailed information about the phenomenon under investigation.

3.9 Data Collection Instruments

A survey questionnaire will be used to collect data.

3.10 Data Collection Procedure

A sample group will be allowed to participate in the research study after providing informed consent. Interviews with guided open ended questions are going to be used to gain in-depth responses including observations of the HIVST procedure.

3.10.1 Pretesting/Pilot Study

Prior to commencement of data collection, the researcher shall carry out pretesting in a project site not targeted by the study namely Chitungwiza central hospital. Data collected during the pilot testing will not be constituted into the final research data but for pre-pilot testing. Pretesting of research tools will allow adjustments to the data tools and instruments before final data collection is implemented.

3.11 Data Analysis

Data from the mentioned documents will be reviewed and evaluated. This will involve group classifying, coding the data and categorizing the responses into themes. Categorizing the data into themes will be done through analysis of interview scripts. The common themes are ideas and patterns of meaning that comes up through interviews conducted. Data coding will be done manually and entered into a word document. Then arrangement of data into themes will be guided by Gery and Bernard's Technique to Identify Themes. (Gery, W.R & Bernard, H. R., 2003) and Attride-Stirling's Thematic network analysis, (2001).

3.12 Ethical Considerations

The researchers will consider ethical considerations in each stage of the study to protect the participants' dignity and worthiness. Researchers will seek permission from Africa University and Africa University Research and Ethics Committee (AUREC) and senior personal of Mbare Poly Clinic that is the Matron and Administrator. The following principles of ethics will be adopted for this study namely, informed consent, voluntarism, confidentiality and anonymity, honesty, risk and benefits, and non-discriminatory participation

3.12.1 Informed Consent

Participants in the study will be informed about the purpose of the study. The purpose of the study is to find out challenges faced by users of HIV self-test kits. The data will be used to benefit all users of HIV self-test kits in future. The scientific results will be used by policy makers and HIVST kits manufacturers to improve HTS. The research might not benefit the participant directly during the period of participation.

3.12.2 Voluntarism

This research will ensure that all participants free from coercion in any way in order to participate in this study. Participants can withdraw from participation at any stage of the research study if they so wish, without any need for explanation and the decision will not affect their need for receiving any services from the health facility which the research is being conducted. The research questionnaire can be completed at their convenient time.

3.12.3 Confidentiality

To ensure ethical conduct during the research, the researcher will adhere and respect WHO's Safeguarding Policy and any other policies as guided by them. This will help to prevent any harm of participants during the data collection process. All completed

consent forms and research instruments will be kept in a safe place, free from access by the general populace to safeguard participant information. Researchers will treat each and every response with utmost confidentiality, for example no names will be required from participants to ensure anonymity of responses, and instead unique identification codes will be used during data collect, data analysis and dissemination of results.

3.12.4 Risks and Benefits

Participation in this research is anticipated to have no or very minimal risks associated. Participants will be informed that they will not receive any monetary value for participating in the study. It is common that during data collection processes, some respondents might react to the conversation with the researcher due to some emotive past experiences. The researcher will evoke case management processes and protocols to manage such cases including making appropriate referrals as and when necessary.

3.12.4 Non-discriminatory Participation

No participant will be excluded from participating on condition of their health, disability, socio-economic status among other vulnerability criteria.

3.13 Dissemination of Study Results

A report of the study results will be given to:

- i) Sister in Charge Mbare Poly Clinic
- ii) Nurses working at Mbare Poly Clinic
- iii) Harare City Council Department of Health
- iv) Africa University Department of Health Sciences
- v) Africa University Library

3.9 Summary of Chapter 3

The research design and population for this study was highlighted. The inclusion and exclusion criteria were addressed. The sample size was determined and the sampling method was established. The research instrument and data collection techniques were discussed. Data presentation and analysis methods were established. Dissemination of results and ethical considerations were highlighted.

CHAPTER 4: DATA PRESENTATION AND ANALYSIS

4.1 Introduction

The chapter highlights findings from the study, and the findings will be presented following sequence of the objectives starting with the demographic data of respondents to knowledge of HIV and HIV self-testing.

4.2 Data Presentation Process

The researcher used a quantitative approach in the data collection and analysis of demographic data. The data was entered and processed manually using excel package, which included age, gender, level of education, employment and religion. These factors were gathered to find whether they have relation or may affect the HIV self-testing procedure.

For qualitative data, the researcher took time to examine the data collected as to identify common themes which included ideas and patterns of meaning that have been repeated by respondents. Braun and Clarke (2006) defined thematic analysis as the method of identifying, analyzing, reporting and writing up patterns or themes within data. The researcher had to carefully interpret as the data is often subjective.

A six step thematic analysis process was used, namely familiarization, coding, generating themes, reviewing themes and lastly a write up. For the purposes of this study, the researcher repeatedly read and re-read the interview scripts for any information relating to factors and challenges affecting users of HIVST kits. Although the researcher manually identified the codes and common themes, coding of data was based on thematic analysis initially developed for psychology by Braun and Clarke. Findings in this study will be based on a deductive approach and presented under three main preconceived themes namely the level of understanding, level of knowledge of

respondents and how they cope with HIV results with or without pre-test and post-test counselling.

4.3 Presentation of Findings

4.3.1 Demographic background of Respondents

Table 1: Distribution of Respondents by Gender

Gender	Total Number	Percentage (%)
Males	12	18
Females	56	82
Total	68	100

Table 1 shows the distribution of respondents who took part in the study by gender. Of the 68 adults in the sample population who had an HIVST and answered the research questionnaire, 12 were men and 56 were women. The number of men accessing HIV testing services was lower than that of women, therefore showing gender disparity in accessing HTS.

Figure 3: Graphical Presentation of Respondents by Gender

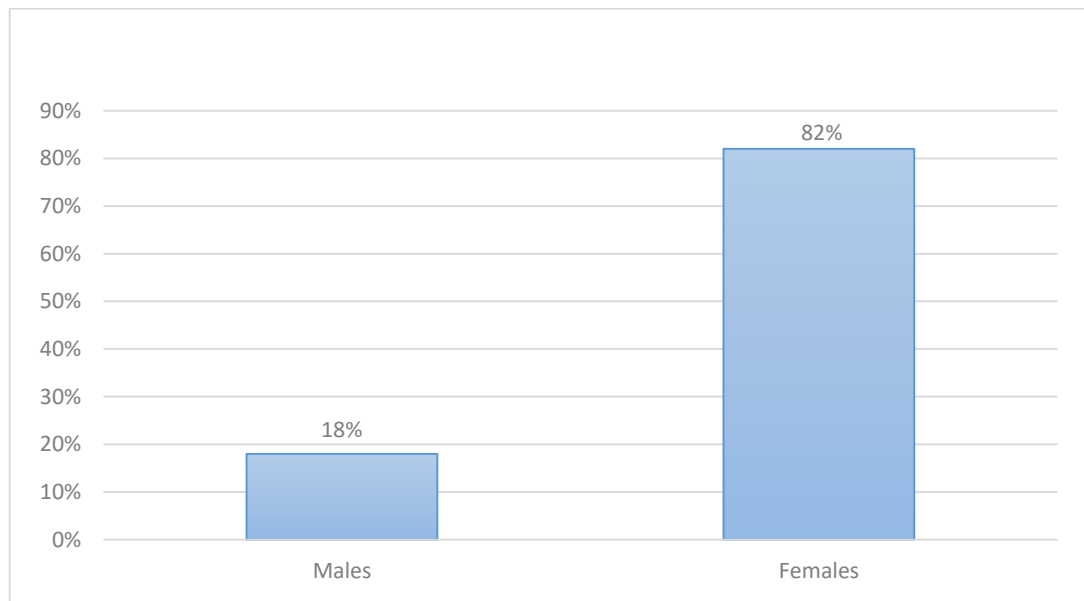


Figure 3 shows the graphical presentation of respondents by gender. Of the 68 respondents who took part in the study, 18% were males and 82% were females.

Figure 4: Distribution by Age of Respondents

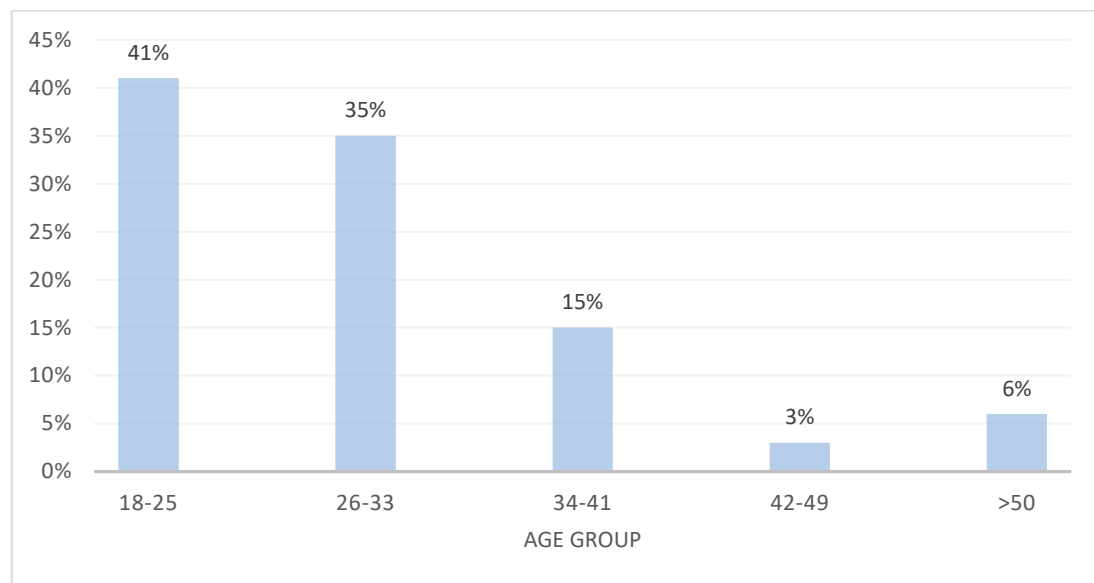
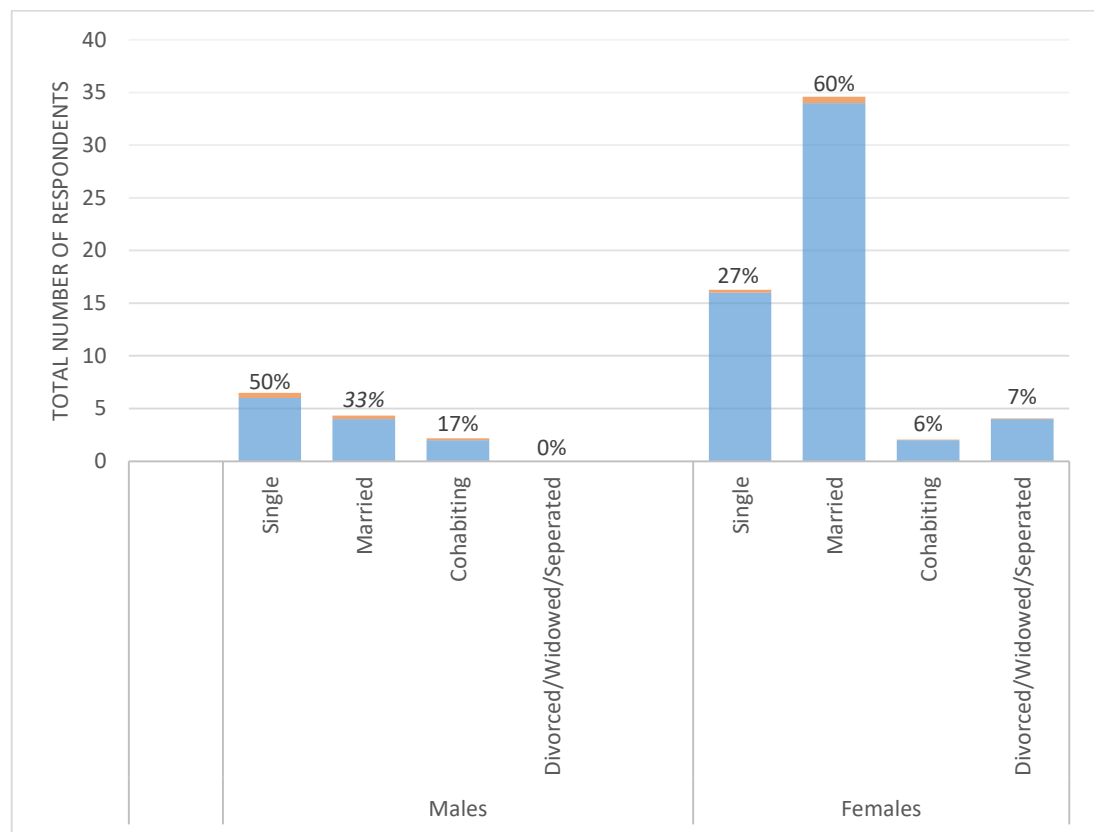


Figure 4 above represents the distribution of respondents by age group. Of the total sample population of respondents who used HIVST kits, 4 males and 24 females (41%) were within the age range of 18-25 years, which had the highest number of respondents accessing HTS. 4 males and 20 females (35%) were between 26-33 years and 0 males and 10 females (15%) were between the ages of 34-41 years, 0 males and 2 females were 3% of the 42-49 age group and 6% was represented by 2 males and 2 females above 50 years. The men and women interviewed ha a mean age of 30 years with the youngest being 18 years and oldest being 67 years.

Figure 5: Marital Status by Gender



The above figure 5 shows the distribution of respondents by their marital status and gender of people who had an HIVST and took the opportunity to answer the research questionnaire. 50% of males were single, 33% were married and 17% were cohabiting. In females, 27% were single, 60% were married, 6% were cohabiting and 7 were either divorced, widowed or separated.

Figure 6: Distribution of Respondents by Level of Education

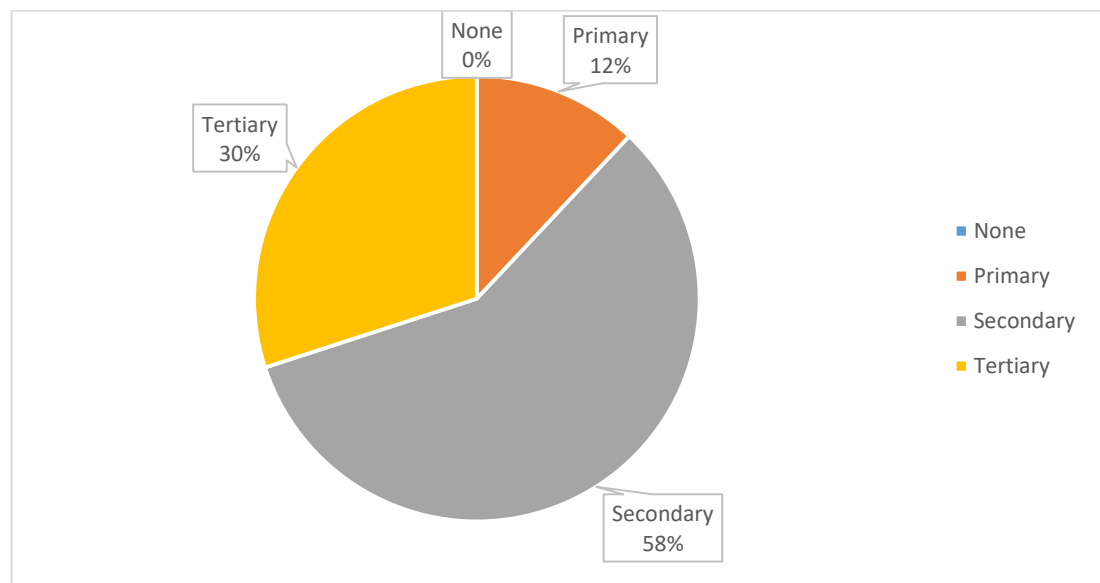


Figure 6 above is a pie chart representing the distribution of education levels among the respondents. 12% attended school up to primary level, 58% attended secondary education and 30% advanced to the tertiary level where they attained a diploma or degree. The illustration shows that all respondents have attended school either at primary, secondary or tertiary level. A greater percentage attended secondary followed by tertiary. The level of education has a great impact on how the users of the tests will be able to read and understand the instruction leaflet on HIVST and interpret their own HIV results.

Figure 7: Distribution of Employment by Gender

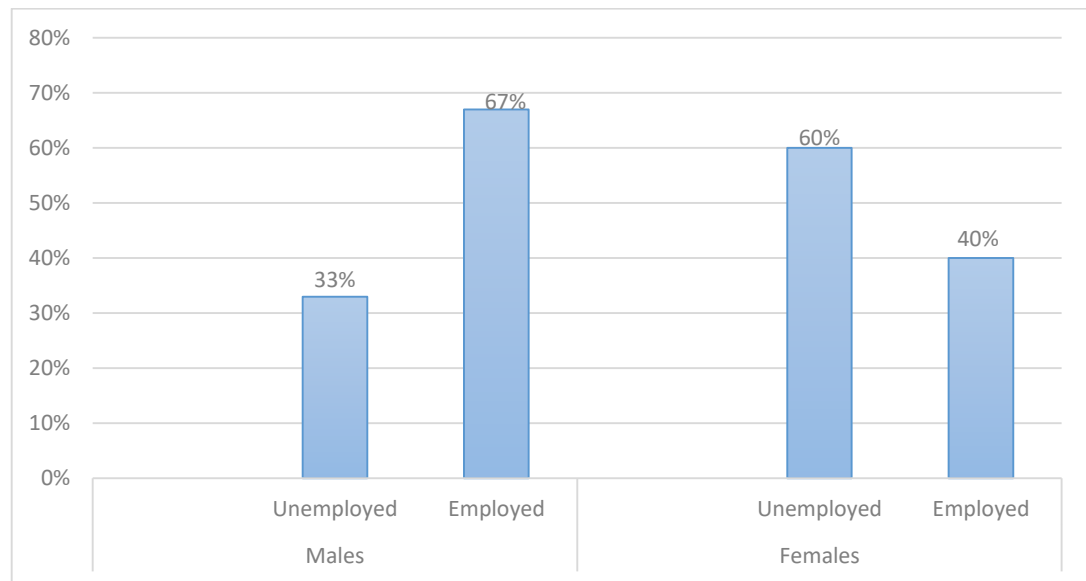


Figure 7 shows the respondents distribution of employment by gender. More men who came for HTS were employed (67%) than those unemployed (33%). In women, more were unemployed (60%) as most of them were house wives and 40% were employed. The respondents who were employed were drivers, accountants, mechanics, teachers and self-employed.

Figure 8: Distribution of Respondents by Religion

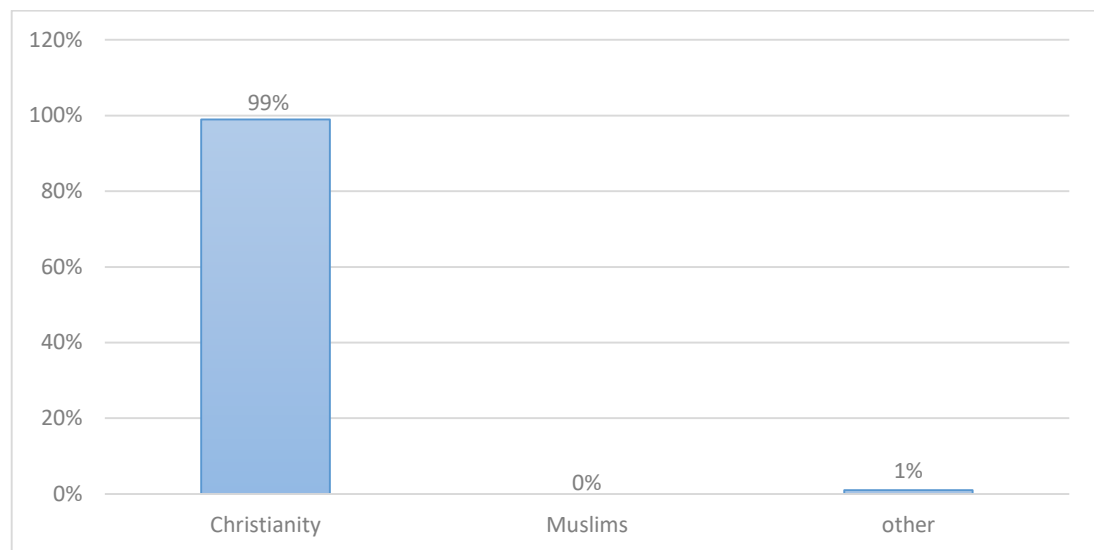


Figure 8 represents the distribution of respondents by their religion. 99% of the respondents are Christians, 0% Muslims and 1% being traditional.

4.3.2 Risk of HIV

Figure 9: Distribution of Respondents by Number of Sexual Partners

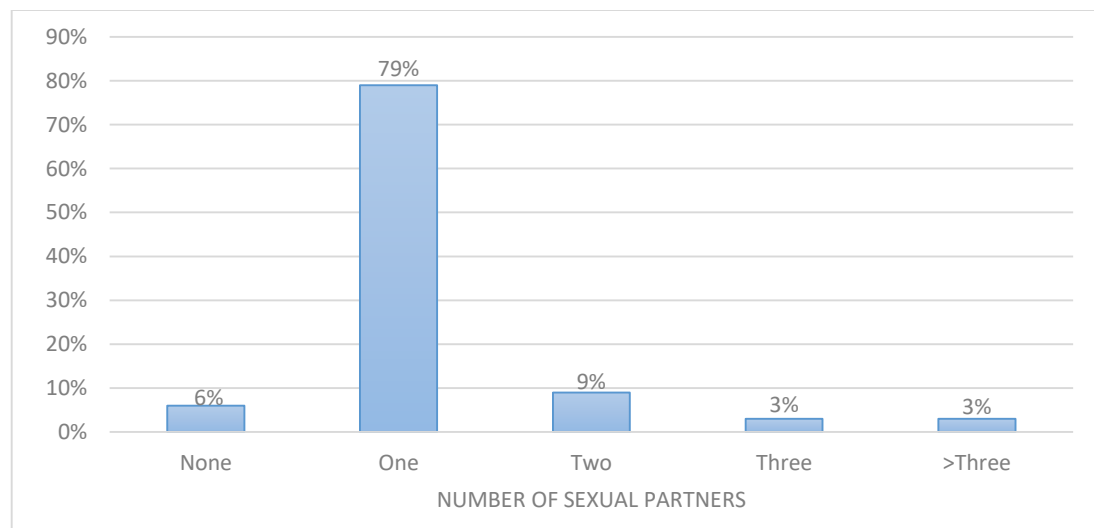


Figure 9 shows the respondents distribution of number of current sexual partners of both males and females. 79% of the total number of respondents' reported having only 1 sexual partner with 6% having no sexual partner.

Figure 10: Distribution of Respondents by Frequency of HIV Tests

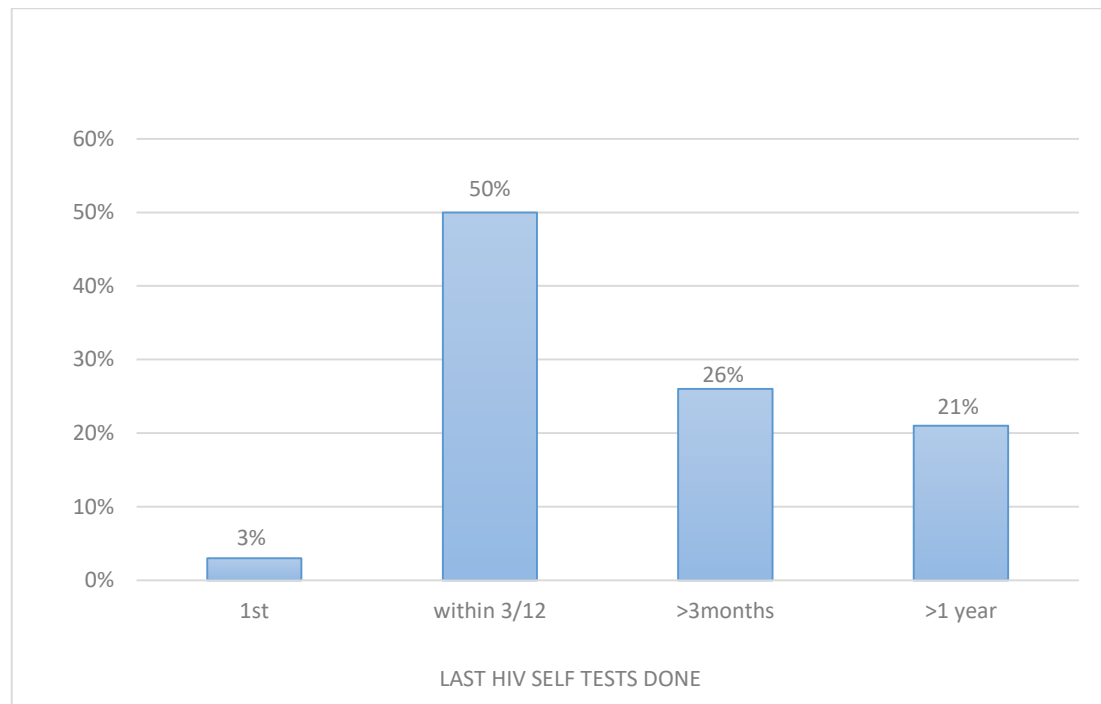


Figure 10 shows when last the respondent had an HIV test. Half of the respondents (50%) in the sample population report having the test within three months. 26% have received their test after 3 months of the last HIV test and 21% were having the current HIV test after 1 year. Only 3 % were having the test for the first time.

4.3.3 Knowledge of HIV and AIDS

Figure 11: General Knowledge of HIV

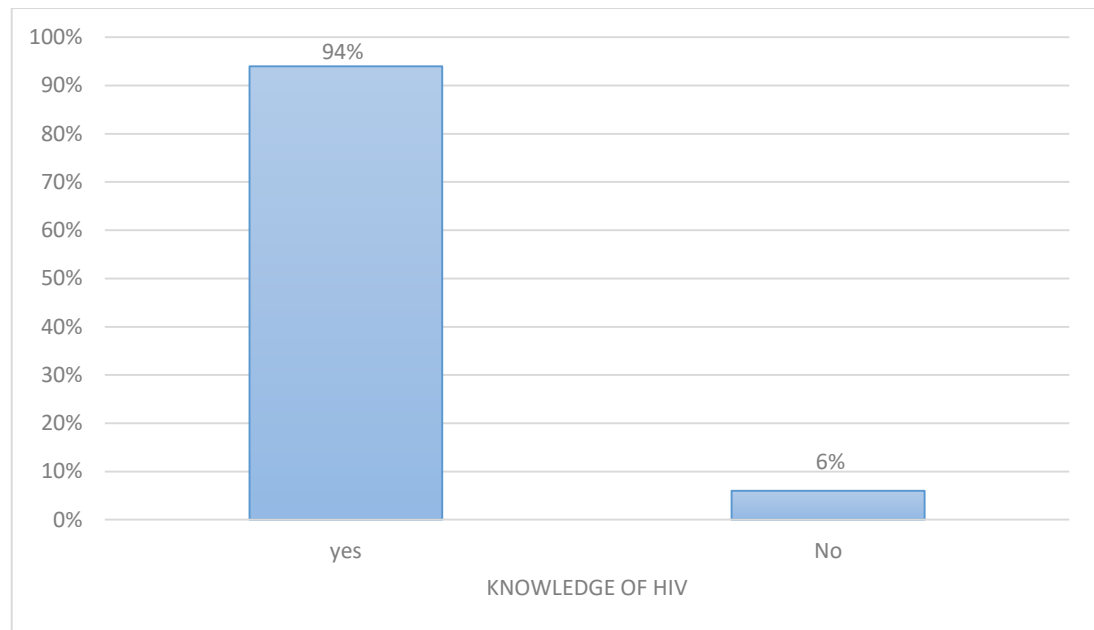


Figure 11 shows the respondents' knowledge of HIV of both men and women after the HIV test. 94% of respondents had the knowledge to define HIV and how the disease is spread against 6% who failed to give a definition of HIV and how it is spread. The “YES” and “NO” responses were based on the Attride-Stirling's thematic network analysis. Respondent gave different definitions of HIV. Some of the definitions which came out as responses were:

‘Human Immune Virus’

Another respondent said:

‘It is a virus that causes AIDS’

In all respondents provided there was the word ‘virus’ and ‘immunologic disease’, which meant that the respondents gave an insightful description of the causative pathogen.

Responses to a question ‘How is HIV spread?’ gave the researcher some insight on the respondents; perception on how HIV is spread.

Figure 12: Reading and Understanding Instructions

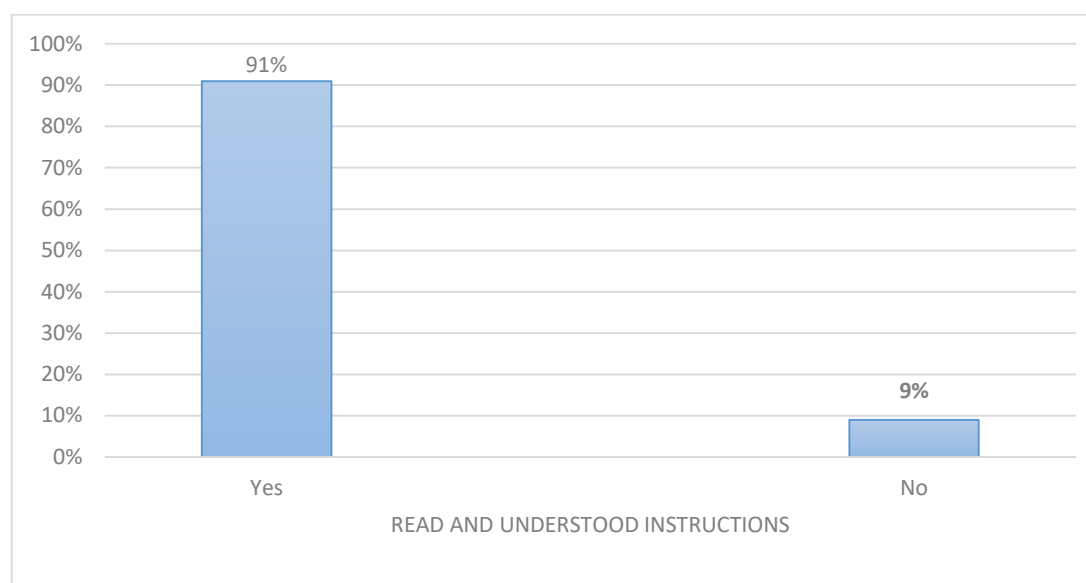


Figure 12 shows that 91% of respondents reported as having read and clearly understood the insert leaflet of instructions of how to use the OraQuick HIV self-test kit to give the correct test result, while 9% of respondents reported not reading or understanding the leaflet despite it having been written in English, Shona and Ndebele.

Figure 13: Distribution of Respondents who Received/did not Receive Pre and Posttest HIV Counseling

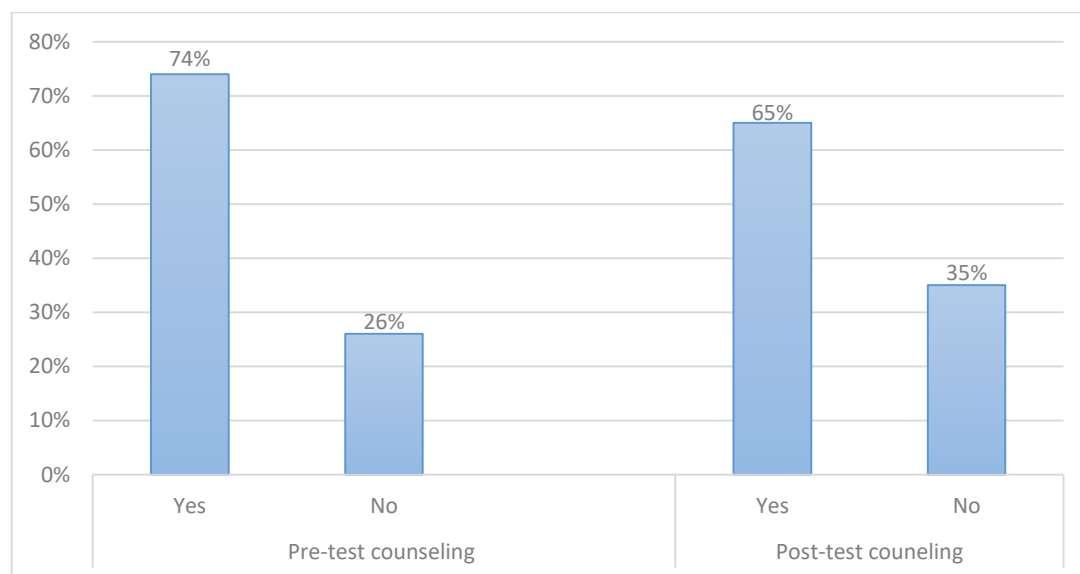


Figure 13 above shows the distribution of respondents who received pretest counselling and those who did not receive any posttest counseling during their HIVST. 74% of respondents' that had an HIVST had the opportunity to receive a pretest counseling session while 26% missed the opportunity of having one. As for posttest counseling, 65% received receive counseling and 35% did not receive counselling after the self-test.

Figure 14: Responses to Duration of HIV Self-Test

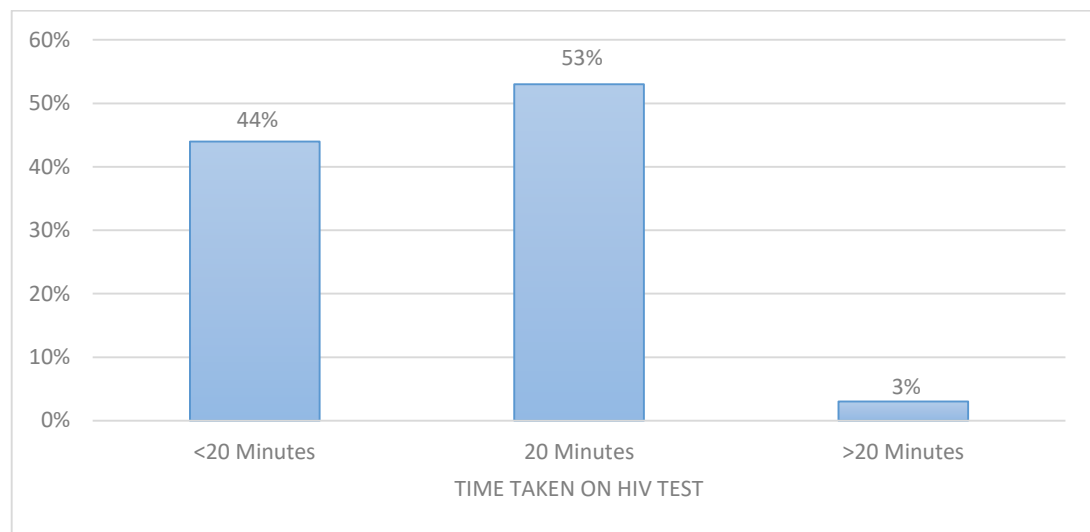


Figure 14 above shows the different times taken by respondents in conducting and reading their HIVST results. 44% of respondents took less than 20 minutes to perform the test and read results while 53% read their results in 20 minutes and 3% read their results after 20 minutes but in less than 40 minutes.

Figure 15: Challenges Faced in HIVST

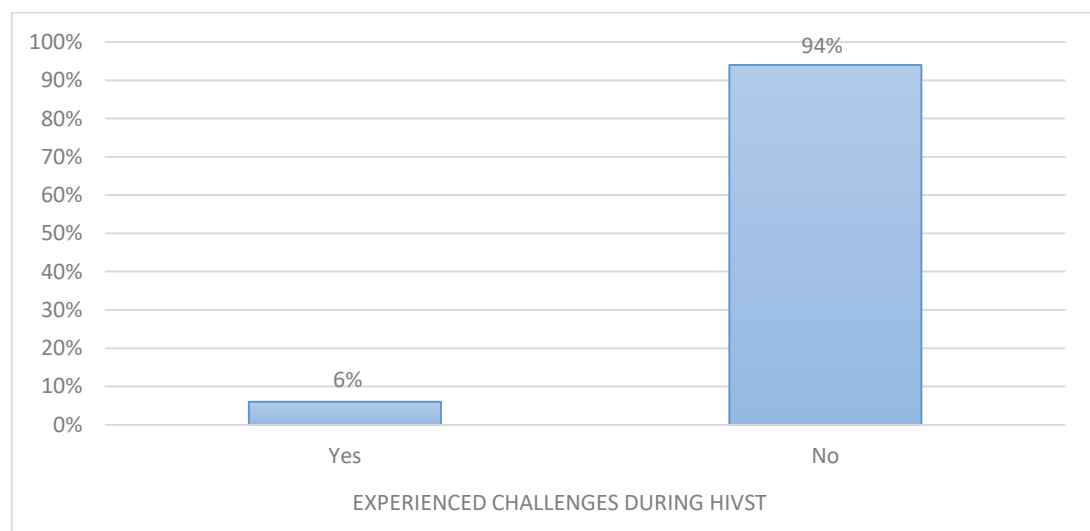


Figure 15 shows whether respondents faced any challenges during HIV self-testing or not. 94% reported having faced no challenges during testing while 6% reported having faced challenges.

Figure 16: Knowledge of Interpretation of HIVST Results

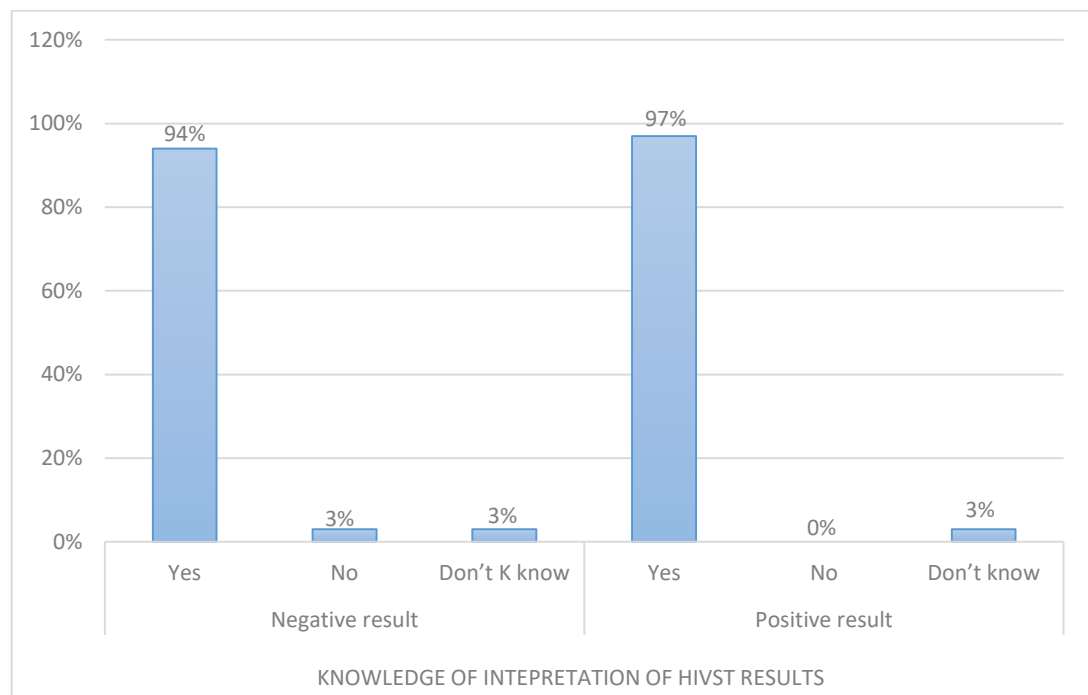


Figure 16 above shows knowledge of respondents on how to interpret a positive and negative result from the complete lines which emerge on the test device. 94% of respondents had knowledge of interpreting a negative result. 3% could not interpret the negative result while 3% were not sure. In interpretation a positive result, 97% had the knowledge and 3% were not sure.

Figure 17: Responses to Conclusiveness of HIVST Results

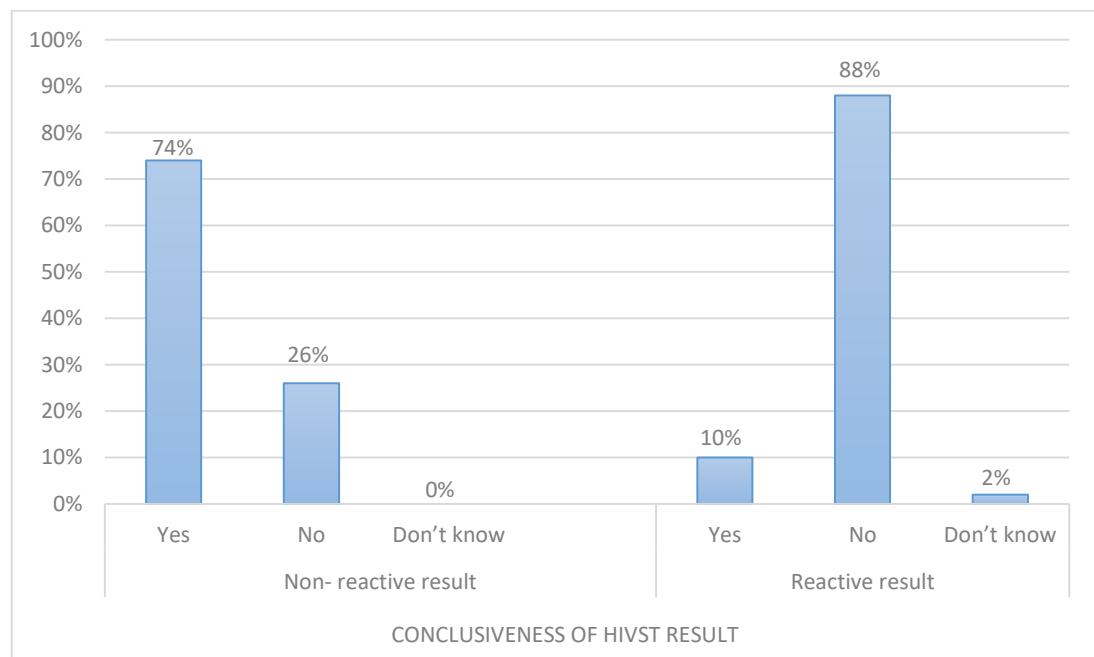


Figure 17 shows how respondents could tell that their negative or positive result are conclusive or can be considered to be a final result from the HIVST in relation to the MoHCC algorithm. 74% of respondents reported a non-reactive result as negative and final while 26% reported as being inconclusive, therefore requiring further tests. For the reactive result, 10% of respondents reported as being final, 88% reported as inconclusive therefore requiring further testing with a rapid HIV test kit for the final result while 2% did not know whether the result is considered final or not.

Figure 18: Distribution of Respondents who reported the Friendliness of HIVST

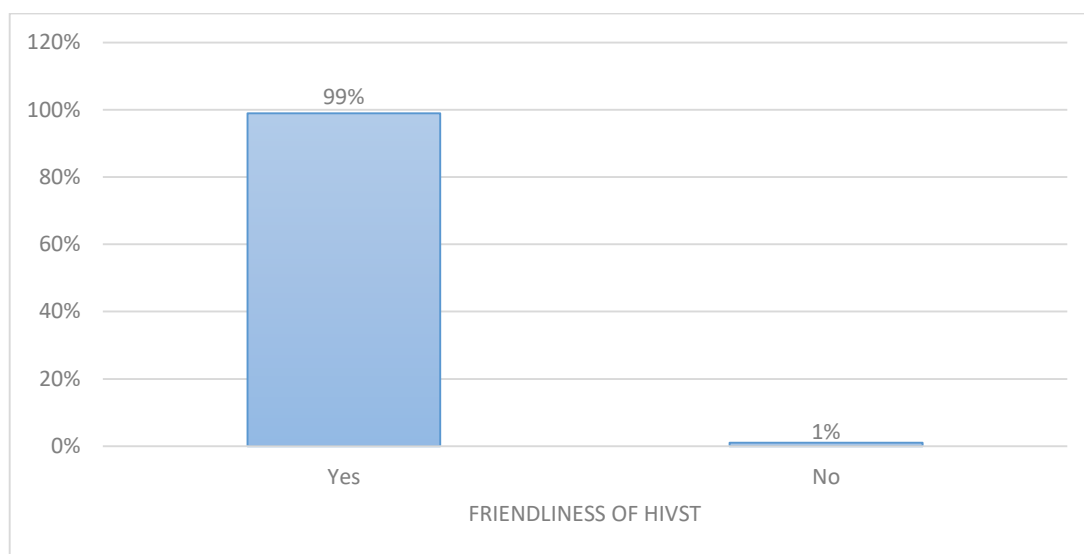


Figure 19 above illustrates the percentage of respondents who reported how the HIVST kit is either friendly or unfriendly to use. In this regard, 99% reported the kit as being friendly, while 1% reported as unfriendly.

Figure 19: Distribution of Respondents who shared their HIV Results

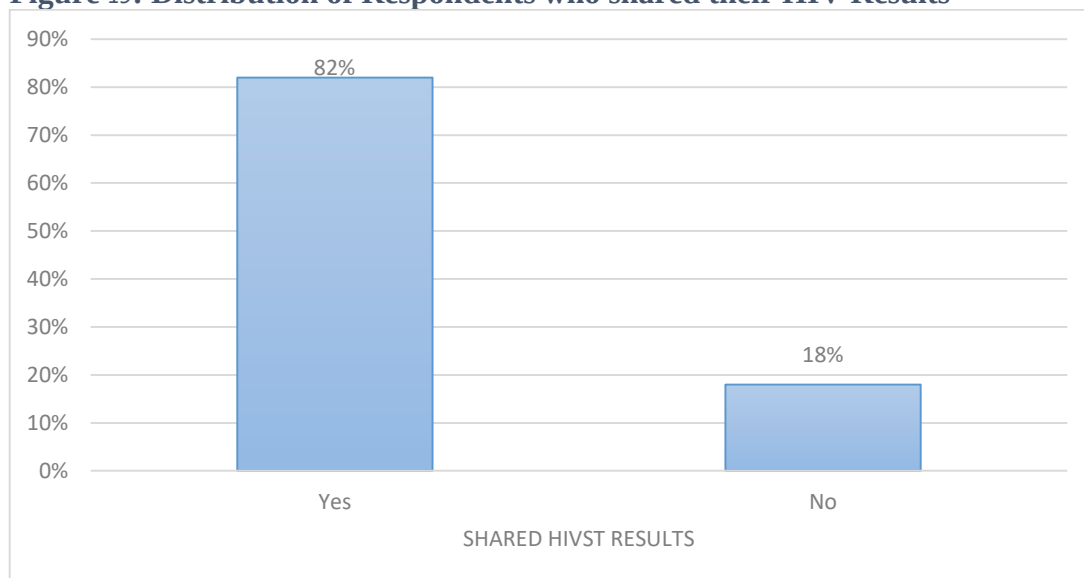


Figure 19 shows the distribution of respondents who either shared or decided not share their HIVST results due to various reasons. 82% of respondents shared their HIVST test results while 18% did not share their HIVST results.

Figure 20: Distribution of Respondents Conducting HIVST Alone, with Sexual Partner or HCW

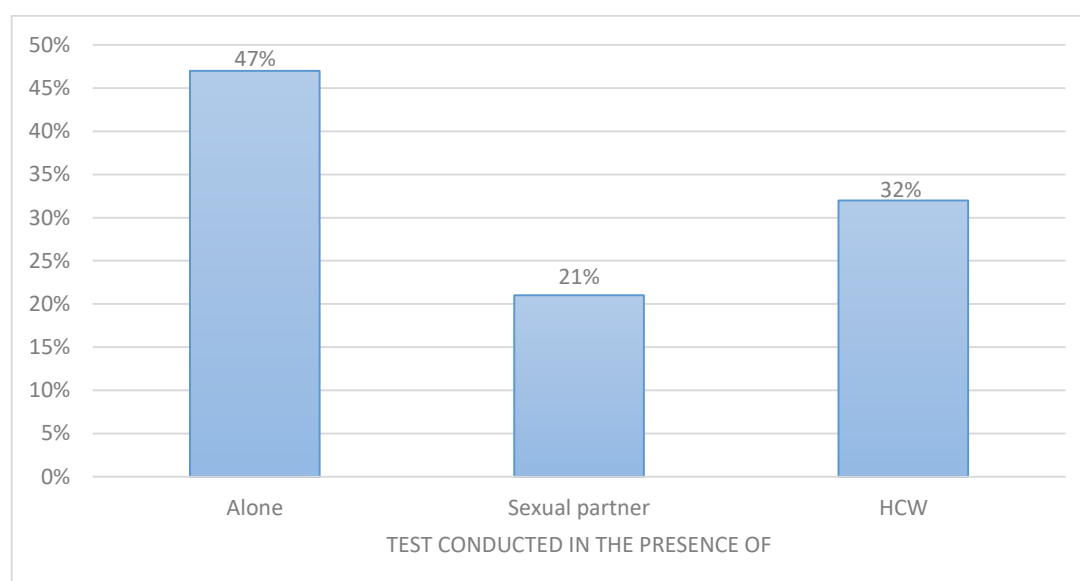


Figure 20 shows the distribution of respondents who conducted the HIVST either alone, with sexual partner or in the presence of a HCW. 47% of respondents conducted the HIVST alone, 21% conducted the test with their sexual partners and 32% conducted the test with the assistance of the HCW who are either nurses or primary care counselors.

4.4 Discussion of Findings

In this section, the researcher's findings will be discussed in light of the theoretical framework, social cognitive learning. The aim of the study was to describe the challenges faced by users of HIV self-test kits, with the kits being accessible at most health facilities for free by the government of Zimbabwe.

The findings of this study concurred with the ideas of DiCarlo et al. (2016) that the uptake of HIV testing among men is still very low with less knowledge about HIV prevention. Most respondents who took part in the study were between the ages of 18-33 years among both men and women. This is the age group which is sexually active and requires HIV testing more often. A greater percentage (about 80) of respondents reported having 1 current sexual partner of which 60% are married. Therefore, most respondents who are married have 1 sexual partner as compared to respondents who are single, divorced or separated. Having 1 sexual partner reduces the risk of HIV transmission for both men and women.

The study also looked at how often clients receive HIV testing in the community. The findings were that; half of the respondents were tested within a 3 months' period after the last test. According to the Ministry of Health and Child Care of Zimbabwe National HIV and testing algorithm, an individual who has tested HIV negative using the antibody HIV tests like the OraQuick HIVST, should receive the next HIV test after 3 months in view of the window period. In this regard the researcher found out that clients were either not fully aware or did not have knowledge of when to have their next HIV test or because the HIVST kits are easily accessible the distribution by HCW at health care centers and sexual partners who bring them home. This means that the test kits are subject to abuse as the HIV negative result will not change through sero-conversion within the 3 months' period. On the other hand, respondents who had

tested for HIV subsequently or tested themselves within 3 months had a better understanding of and knowledge of self-testing as they would have done it recently and again gained some experience in carrying out the test.

3% reported as having the HIVST for the first time, while 26% having the test after 3 months and 21% having the test after 1 year. Having the HIVST after 3 months is considered to be the correct thing to do according to the Zimbabwean MoHCC algorithm including having it done after 1 year as long as the client does not put themselves at risk of having HIV through having multiple sexual partners, not using condoms and having exposure from needle pricks and blood splashes to the mucosa as the major factors of seroconversion.

The majority of respondent had better general knowledge of HIV/AIDS as they were able to give the definition HIV and how the virus is spread through sexual intercourse with an infected partner with some pointed out mother to child transmission.

According to Figueroa, (2018) one's level of education influences the way users of the HIVST kits understand how they conduct and interpret their results. The higher the educational level is the easier in performing and interpretation of results. Every respondent who participated in the study has attended school at one time in their lives, making it easier for them to read and understand the instructions. This is evidenced by the report of more than 90% of respondents who managed to take time in reading and understanding the inert instruction leaflet which was written in English, Shona and Ndebele. About 90% went up to secondary and tertiary education, which again has a better chance of the testers to have clear understanding of the testing procedure. According to the Constitution of Zimbabwe, (2013) Zimbabwe has 16 official languages but English, Shona and Ndebele are the ones widely spoken, therefore have

been used for instructions in the HIVST leaflet. Despite the range of language choice, some respondents still reported that the font size remains too small for reading.

The correct procedure in conducting HIVST is, the tester swabs their upper and lower gums to collect a saliva sample, then dips the flat pad into a test tube with a diluent and leaves it there for 20 minutes. Result and then read between 20-40 minutes to get a correct result. 53% of respondents managed to read results within the stipulated time of between 20-40 minutes while 44% read their results in less than 20 minutes' way before the HIVST kit was ready to produce a correct result. The reading of results before the time was up is caused by the testers lack of knowledge in conducting the test correctly as they either did not understand instructions through own reading or they did not get adequate information during counselling or health education talk. The theory is being supported by the evidence of respondents who reported on having received and not received pretest and posttest counseling during the HIVST. 26% of respondents did not receive pretest counseling while 35% of the respondents did not receive posttest counseling. The study findings were in line with Dovel. K et al, (2020) that HIVST should comprise a 10-minute health talk on importance of HIV testing and 15 minutes of testing demonstration before the actual testing. This has proven to be effective in making sure that testers are free from making errors and are able to read result on time and correctly.

Knowledge of interpretation of results is very critical in this study. The majority of respondents (97%) reported having the knowledge of interpreting a negative HIVST result through visualizing I line next to the Control and with no line next to the Test and 97% had the knowledge to interpret a positive result through visualizing the 2 lines next to the Control and Test. The lines should be read in a well lit room and

best using natural light. 6% of respondents did not know the difference between a Control and Test line, which means that they could not read their result. This can lead to negative psychological effects on the clients when they read an incorrect result for example reading a positive result when in actual fact they are negative or vice versa. HIVST is an innovative strategy designed to increase the uptake and scaling up HIV testing. It is used as a screening test and not for diagnosis. In this study respondents were asked whether they have the knowledge of a negative and positive result being conclusive or not. According to the HIVST algorithm, a non-reactive or negative result is considered a final result while a reactive or positive result is not a final result but requires confirmation with a rapid HIV antigen test by a HCW. 74% reported that a negative result is final, while 88% reported that a positive result is a final result. This means that some respondents were still not aware of going to the health facility for a confirmation test after having a reactive result.

HIVST were conducted in the presence of sexual partners, HCW and some done by the testers alone. The researcher found out that all respondents who read their results before 20 minutes conducted the test procedure alone without any assistance or supervision while all respondents who managed to read their results between 20-40 minutes' period did it with the assistance of a HCW who assisted them in doing the correct procedure.

After an HIV test, it is best for testers to share their results significant other or close relative for psycho social support in dealing with their results. The findings showed that 82% reported sharing their results while 18% did not share their results. The importance of sharing of results should be done during the posttest counseling, that is if it as ever done. Respondents who did not share results did not again go through posttest counseling.

The findings on whether HIVST process is generally friendly showed that almost every respondent (99%) reported that the test was friendly to conduct with 94% reported as having faced no challenges. This is because the users' thoughts they were conducting the tests in the correct way and knowing that some were reading the tests before the duration of between 20-40 minutes.

4.5 Summary of Chapter 4

Chapter 4 has concentrated on the data presentation and discussions of the findings. The chapter highlighted that although HIVST kits have been reported as being friendly and easy to use, challenges are still being faced and noted. The next chapter gives a summary of major findings, conclusions and recommendations.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives the summary of the study, conclusion and recommendation. The summary highlights the main findings of the study. The conclusion sums up the answers to the statement of the problem and assumptions in chapter one.

5.2 Summary

Rolling out of HIVST kits by the Ministry of Health and Child Care in all health facilities has contributed immensely in mitigating the effects of HIV and AIDS. Considering that each and every individual is unique, understands and perceives what they learn differently, there is potential for the tester to wrongly interpret results.

The researcher assumed that individuals conducting HIVST are bound to make mistakes during HIV testing which may result in them being affected psychologically. This prompted the researcher to carry out a study on challenges faced by users of HIV self-test kits. The main objective of the study was to describe these challenges being faced by both men and women accessing and using the HIVST kit for HIV screening. To gain insight on the study, the researcher used a mixed method of research design in which qualitative and quantitative data collection tools complimented each other. Closed and open ended questions were used to get in-depth responses to answer the research question. Data was analyzed using tables and graphs for quantitative data. For qualitative analysis, Attride-Stirling's concept of thematic network approach was adopted.

5.3 Conclusion

While HIVST is a highly effective tool that can be used to increase the uptake of HIV testing in the general population, various challenges are still being faced. WHO,

(2007) recommends that all individuals who go through HIV testing should be well informed by receiving health education on HIV and receive pretest and post-test counseling. Considering that HIVST kits are easily accessible and uses saliva for specimen, some individuals end up testing themselves without going through counseling. The research findings suggest that users of HIVST kits lacked knowledge of when to go for the next HIV test. 50% of the respondents had a repeat HIVST within a 3 months' period instead of having the repeat HIV test after 3 months, in view of the window period.

The researcher found out that all respondents who conducted HIVST alone without the assistance from a HCW read their result in less than 20 minutes instead of reading and interpreting the results between 20 to 40 minutes, despite having read the instructions in the language they best understand. Reading and interpretation of results before 20 minutes will lead to wrong interpretation of results by the users.

The research finding suggest that respondents who did not share their HIV results had not received counseling, therefore did not appreciate the importance of sharing the results. Sharing of results to sexual partners and family members is important as they are the clients' pillars and support systems who will assist them in HIV risk reduction and provide psycho social support.

There was lack of knowledge from respondents on interpretation of results. 26% of respondents were not aware that a non-reactive HIVST result is considered to be a final result and 10% of the respondents did not know that a reactive HIVST result is not considered to be a final result until a repeat HIV test is done using HIV rapid test kits by a trained HCW. According to the OraQuick test leaflet, (2020) an HIV positive result requires retest and confirmation because previous studies showed that, the test

can give false positives as 7 out of 724 people not infected with HIV reported a positive test result.

Despite 99% of respondents reporting that HIVST is friendly and easy to use, they still faced challenges in performing the HIV test. When users of the HIVST conduct the procedure, they still think that they are doing the procedure correctly but in actual fact lacking knowledge of how much time is taken before reading the results and lacked knowledge of interpretation of results.

5.4 Recommendations

The study recommends strengthening of health education talks on HIV/AIDS so that clients have a clear and deep understanding on HIV issues and HIV self-tests are done. In addition to the health education talks, pre and posttest counseling should be done to all clients undergoing an HIV test so that they understand the reasons of conducting the test as well as knowing how to deal with their HIV results. As test kits are being distributed, clients should receive information on HIVST which they are able to again pass to their sexual partners when tests are done at home. Clients should be assisted in HIVST so that they conduct the test correctly.

It is therefore important for health facility management to effectively supervise HTS and distribution of HIVST kits so that test is conducted correctly with results being interpreted correctly.

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Appendix 1: Time Frame: Gantt chart

Activity	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Identification and approval of research topic						
Proposal writing						
Submission of proposal to AUREC						
Permission to undertake study						
Data collection						
Data entry and analysis						
Report writing						
Submission of dissertation						
Study report presentation						

Appendix 2: Budget for Conducting the Research Study

ITEM	UNIT OF MEASURE	QUANTITY	COST PER UNIT USD	TOTAL COST USD
AUREC Fees	Each	1	15	15
Counter Books	Each	2	2	4
Ball Points	Each	10	0.25	2.50
Transport	Trips	20	1	20
Typing Proposal and Research	Pages	300	0.10	30
Spiral Binding	Book	2	15	30
Data	Gig	30	30	30
Photocopying	Pages	500	10	10
Airtime	Each	1	5	5
Food	Meal	20	1	20
Bond Paper	Ream	1	5	5
Printing	Pages	200	5	5
Total Cost				176.5

Appendix 3: Letter for Permission to Conduct my Research at Mbare Poly Clinic

11796 Kubatana Avenue
Dzivarasekwa 2
Harare

The City Health Director
Rowan Martin Building
P. O Box 596
Harare

17 March 2022

Dear Sir / Madam

**REF: SEEKING PERMISSION TO CONDUCT RESEARCH AT MBARE
POLY CLINIC**

My name is Godwin Chawira and I have previously worked for ZimTECH at Mbare poly clinic as an OI nurse. I am currently studying for a Bachelor of Science Degree in Nursing with Africa University and attached at Chitungwiza central hospital for my management and administration attachment.

I am writing to request for permission to conduct research at Mbare poly clinic as outlined in my proposal. Attached is a copy of my research proposal and cover letter from Africa University.

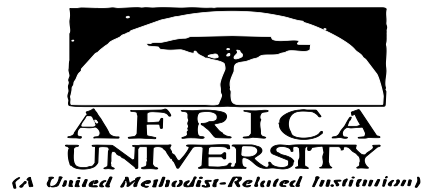
Yours faithfully



Godwin Chawira

Contact number: 0773 264 208/0719 264 208

Appendix 4: Approval Letter from Supervisor



“Investing in Africa’s Future”

COLLEGE OF HEALTH, AGRICULTURE AND NATURAL RESOURCES

14 March 2022

To AUREC Administrator

Dear Sir/Madam

Re: Permission to Submit to AUREC for Godwin Chawira 191030

Programme: BSc in Nursing

This letter serves to confirm that the above-mentioned student has satisfied all the requirements of the faculty in developing the dissertation proposal and is ready for assessment.

Your facilitation for review of the proposal is greatly appreciated.

Thank you



Dr. E. Mugomeri

Appendix 5: Letter for Data Collection



COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

P.O. BOX 1320, MUTARE, ZIMBABWE - OFF NYANGARODAD, OLD MUTARE, ZIMBABWE
TEL: (263 20) 80875 80026-61611-81618 - FAX: (263 20) 81125-63294 E-MAIL: devocham@afcu.edu.zw, chanakabon@shu.ac.zw, chanakabon@shu.ac.zw

TO: Whom it may concern
FROM: HOD Public Health & Nursing (DPHN)
DATE: 04 November 2021

RE: DATA COLLECTION/ FIELDWORK BY BSN STUDENTS FROM AFRICA UNIVERSITY

The Department of Public Health and Nursing confirms that Godwin CHAWIRA B. Number: 191030 is a student at Africa University studying Post Basic Bachelor in Nursing Sciences. The student intends to collect data, conduct fieldwork at your institution. The topic of the study is: CHALLENGES FACED BY USERS OF HIV SELF TEST KITS AT MBARE POLY CLINIC, HARARE

Kindly allow the student to collect data that she needs.

Best regards

Dr E. Mugomeri

HOD Department of Public Health and Nursing (DPHN)

(Signature)

Appendix 6: Approval Letter from Study Site



CITY OF HARARE

All correspondence to be addressed to the
DIRECTOR OF HEALTH SERVICES

Director of Health Services
DR PROSPER CHONZI
MBChB, MPH, MBA

Ref: _____

Via Ref: _____

DIRECTOR OF HEALTH SERVICES
Rowan Martin Building, Civic Centre,
Ponderafor Avenue, Off Rotten Row,
Harare, Zimbabwe.

P.O Box 596
Telephone: +263 (242) 753326
753330/1/2
Fax: +263 (242) 752093

22 March 2022

Godwin Chawira
Godwin Chawira
11796 Kubatana Avenue
Dzivarasekwa 2
Harare

3/7

Dear Sir,

RE: Application For permission to conduct Study at Mbare polyclinic for study titled "Challenges faced by users Of HIV Self Test Kits at Mbare poly Clinic Harare"

I refer to the above subject matter.

Permission has been granted to you to conduct the above mentioned study. The aim of the study is to describe challenges faced by users of HIV self-test kits at Mbare Polyclinic.

Please note that you will be expected to share your study findings with the Harare City Health Department through the Director's office.

Yours Faithfully

[Signature]
DIRECTOR OF HEALTH SERVICES
1c/1 1c

CITY OF HARARE
HEALTH DEPARTMENT
TEL: 024 275330/2

Harare to achieve a WORLD CLASS CITY STATUS by 2025

Appendix 7: Approval Letter from AUREC



AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE (AUREC)

P.O. Box 1320 Mutare, Zimbabwe, Off Nyanga Road, Old Mutare-Tel (+263-20) 60075/60026/61611 Fax: (+263 20) 61785 website: www.africau.edu

Ref: AU2516/22

25 March, 2022

GODWIN CHAWIRA
C/O CHANS
Africa University
Box 1320
MUTARE

RE: CHALLENGES FACED BY USERS OF HIV SELF TEST KITS AT MBARE POLY CLINIC, HARARE

Thank you for the above titled proposal that you submitted to the Africa University Research Ethics Committee for review. Please be advised that AUREC has reviewed and approved your application to conduct the above research.

The approval is based on the following.

- a) Research proposal
- b) Data collection instruments
- c) Informed consent guide
- **APPROVAL NUMBER** AUREC 2516/22
This number should be used on all correspondences, consent forms, and appropriate documents.
- **AUREC MEETING DATE** NA
- **APPROVAL DATE** March 25, 2022
- **EXPIRATION DATE** March 25, 2023
- **TYPE OF MEETING** Expedited
After the expiration date this research may only continue upon renewal. For purposes of renewal, a progress report on a standard AUREC form should be submitted a month before expiration date.
- **SERIOUS ADVERSE EVENTS** All serious problems having to do with subject safety must be reported to AUREC within 3 working days on standard AUREC form.
- **MODIFICATIONS** Prior AUREC approval is required before implementing any changes in the proposal (including changes in the consent documents)
- **TERMINATION OF STUDY** Upon termination of the study a report has to be submitted to AUREC.



Yours Faithfully

MARY CHINZOU –
ASSISTANT RESEARCH OFFICER: FOR CHAIRPERSON
AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE