EXPLORATION OF YOUNG PEOPLE'S HIV SELF-TESTING AND LINKAGE TO CARE EXPERIENCES AT NDIRANDE HEALTH CENTRE IN BLANTYRE CITY, MALAWI

BY

CHISOMO MALANGO KUMWENDA

(Bachelor of Science in Nursing and Midwifery)

A Thesis Submitted in Partial Fulfilment of the Requirements of Master of Science Degree in Reproductive Health

26th MARCH, 2025.

CERTIFICATE OF APPROVAL

The undersigned approve that this dissertation represents the student's own work and has been submitted with our approval.

Signature ___________________________ Date ________________________

Maria Chikalipo, PhD (Senior Lecturer)

Main Supervisor

Signature___________________________ Date ___________________________

Lily Kumbani, PhD (Associate Profesor)

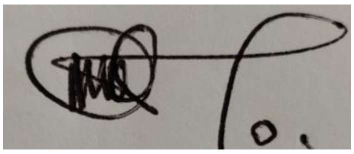
Second Supervisor

DECLARATION

I, **Chisomo Malango Kumwenda,** declare that this thesis is my own original work, which has never been submitted for any other award at the University of Malawi or any other university. All sources of information that I have used or quoted in this thesis have been acknowledged and added to the list of references.

Chisomo Malango Kumwenda

Full Name



Signature

26th March, 2025

Date

DEDICATION

I dedicate this thesis to my beloved daughter Michelle Kumwenda, who has always been my greatest inspiration. I began this journey while you were still a tiny baby, and your laughter and curiosity fueled my determination every step of the way. This work is dedicated to you with the hope that you will always pursue your dreams with the same passion and resilience that you have instilled in me. May you grow to know that, with hard work and dedication, anything is possible. I love you endlessly.

ACKNOWLEDGEMENTS

I would like to give thanks and praise to God Almighty for the gift of life, good health, wisdom, guidance, protection, and grace given to me during my years of study.

My heartfelt gratitude goes to Dr. Maria Chikalipo and Dr. Lily Kumbani, my research supervisors, not forgetting Professor Ellen Chirwa for their support, guidance, generosity, comments, and suggestions that led to the completion of this study.

I am also indebted to my family, especially my daughter Michelle Kumwenda, who has always been my greatest motivation for this study. I am also thankful to my parents, Mr. and Mrs. Malango, and my brothers and sisters for their understanding, support, and patience during my study.

I would also like to thank the management of the Blantyre District Health Office for allowing me to conduct my study in their health facility. My sincere thanks also go to all the study participants, without whose support and cooperation this work would not have been possible.

LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
AYA	Adolescents and Young Adults
COMREC	College of Medicine Research and Ethics Committee
FGDs	Focus Group Discussions
HBM	Health Belief Model
HIV	Human Immunodeficiency Virus
HIVST	HIV Self-Testing
HTS	HIV Testing Services
IDI	In-Depth Interviews
MMAT	Mixed Methods Appraisal Tool
MSM	Men who have sex with men
PEPFAR	President's Emergency Plan for AIDS Relief
PLHIV LTFU	People living with HIV who have been lost to follow-up
PrEP	Pre-Exposure Prophylaxis
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analysis
PWID	People who inject drugs
SEM	Social-Ecological Model
SW	Sex Workers
SSA	Sub-Saharan Africa
STI	Sexually Transmitted Infections
UNAIDS	Joint United Nations Programme on AIDS

URPC	University Research Publication Committee
USA	United States of America
US	United States
VMMC	Voluntary Male Medical Circumcision
WHO	World Health Organization

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABSTRACT

Understanding the experiences of recipients of HIV self-testing (HIVST) can significantly enhance its uptake by young people. However, few studies have focused on young people's perspectives, particularly those of Malawi. This study aimed to explore the experiences of young people related to HIVST and its linkage to care at the Ndirande Health Centre in Blantyre City, Malawi, in order to improve testing rates, linkage to care, and treatment outcomes.This study used a qualitative research approach. Young people aged 18-24, who received HIVST, regardless of their HIV status, were purposively sampled from the Ndirande Health Centre. In terms of sample size, 15 were purposively selected for in-depth interviews (IDIs), while 18 participants, 15 of whom participated in the IDIs, were purposively selected to participate in three focus group discussions (FGDs). Data from both IDIs and FGDs were analyzed using thematic analysis, where patterns and themes were identified, coded, and interpreted to capture insights into young people's experiences with HIVST. The findings of the study were organized into four key themes that emerged from the data: Motivating Factors for HIVST Engagement, Perspectives on HIVST Process and Linkage to Care, Support Needs During and After HIVST, and Facilitators and Barriers to HIVST and Linkage to Care. The study revealed that media influence, health worker recommendations, peer pressure, educational input, and personal curiosity were significant factors that influenced young people's intention to engage in HIVST. While many respondents appreciated the convenience and autonomy of HIVST, the process and linkage to care were emotionally taxing, with fear of an HIV-positive result, stigma, and discrimination. Support needs during and after HIVST and linkage to care were also highlighted as being important. These include emotional support, practical guidance, reassurance from health workers, and support from family and friends.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

There has been significant success in HIV testing, prevention, and care through coordinated international initiatives such as the expansion of HIV self-testing (HIVST). Globally, up to 90% of people living with HIV (PLHIV) are aware of their status, connected to care, and receiving treatment (United Nations Programme on HIV/AIDS, 2020). Globally, untreated HIV remains a significant concern, with 23% of people living with HIV not receiving antiretroviral (ARV) by 2023 (WHO, 2024). Although the number of new HIV infections has decreased by 39% since 2010, 1.3 million new cases are still recorded by 2023 (WHO, 2024). HIVST implementation has played a role in this decline and is expected to have a significant impact on the delivery of HIV testing services (HTS).

HIVST has gained recognition worldwide as an effective approach to improve testing coverage worldwide (Sharma, Barnabas & Celum, 2017; Masters, et al., 2016). Previous studies have demonstrated high acceptance rates of HIVST among various populations, including older adolescents, young adults, health workers, and couples (Ngoc, et al., 2023; Vara, Buhulula, Mohammed, & Njau, 2020; Njau, et al., 2020; FHI360/LINKAGES Nepal, 2018). Studies have indicated that the majority of the respondents who successfully completed the self-test expressed a desire to use it in the future and reported willingness to recommend it to others.

The experience of an individual with HIVST significantly influences the uptake of testing and the linkage to care (Lapsley, 2020). Positive experiences, such as convenience, privacy, and autonomy in conducting the test, contribute to higher acceptance rates among various populations, including adolescents and young adults (AYA) (Kelvin, et al., 2019; Sharma, Ying, Tarr & Barnabas, 2015).

Conversely, negative experiences such as anxiety or uncertainty upon receiving a positive self-test result may hinder prompt linkage to care (Kelvin, et al., 2019). Addressing these concerns through counselling, community support, and accessible healthcare services can enhance HIVST uptake and linkage with care. Therefore, knowledge of the experience of recipients of HIVST is important to improve the uptake of HIVST. However, in Malawi, there is limited empirical understanding of the experiences of people who have done HIVST and their subsequent linkage to care, particularly among young people (Hlongwa, et al., 2023).

1.2 Background to the Study

Malawi's youth constitute approximately 51% of the total population (National Statistical Office, 2019). With an estimated 33,000 new HIV infections annually, a significant proportion of those affected are young people, underscoring the urgent need for effective HIV testing, prevention, and treatment strategies (UNAIDS, 2020). However, conventional HIV testing methods face numerous challenges, particularly among youth, who often encounter barriers such as stigma, lack of confidentiality, and logistical difficulties in accessing healthcare facilities (Choko, et al., 2019). These challenges have contributed to lower testing rates and delays in treatment initiation, thereby exacerbating the spread of HIV.

The WHO recognized these limitations and, in 2016, recommended the adoption of HIV self-testing (HIVST) as a strategy to improve testing accessibility, especially in hard-to-reach populations, including youth, sex workers, and adult men in high-HIV burden settings (WHO, 2019). HIVST offers several advantages over conventional testing, including the ability to test privately, which addresses stigma and confidentiality concerns that often deter young people from seeking traditional testing services. Moreover, the convenience of self-testing allows individuals to test at the time and place of their choice, thereby reducing the logistical barriers associated with clinic-based testing.

Despite these benefits, some concerns remain regarding the accuracy and reliability of self-testing kits, absence of immediate professional support, and potential for misuse (WHO, 2019). However, these challenges are outweighed by the increased testing rates and earlier detection of HIV facilitated by HIVST, making it a valuable tool in the fight against HIV.

The linkage to care following HIVST is a critical component in managing HIV infection and improving health outcomes. The United States Centers for Disease Control and Prevention (2019) defined linkage to HIV care as the process of receiving a confirmed HIV test at a healthcare facility or designated community setting and, if positive, initiating antiretroviral therapy (ART) within a month. For those who test negative, linkage involves connecting them to preventive services, such as Voluntary Medical Male Circumcision (VMMC) and condom programs. Effective linkage to care ensures that individuals who test positive through HIVST are promptly connected to necessary treatment services, reducing the risk of further transmission and improving overall health outcomes. It also supports those who test negative by reinforcing preventive measures to maintain HIV-negative status.

However, the effectiveness of HIVST and the subsequent linkage to care can be influenced by the user's experience with the self-testing process. For instance, Mokgatle and Madiba (2017) and Spyrelis et al. (2017) identified issues such as lower test sensitivity, unclear instructions, and the lack of supervision as barriers that can hinder accuracy and follow-up care after HIVST. Similarly, Sircar and Maleche (2022) highlighted users' concerns regarding the availability of pre- and post-test counselling and the potential psychological risks associated with receiving a positive result. Furthermore, Muwanguzi et al. (2022) focused on workplace-based HIVST, noting the need for innovative interventions to support regular follow-up and open communication to enhance the linkage to care. These studies collectively illustrate the importance of addressing these challenges to optimize the benefits of HIVST.

HIVST was formally introduced in Malawi in 2016, and the service is provided to hard-to-reach populations, including young people, in both private and public facilities to increase the uptake of HIV testing and HIV treatment (Choko, et al., 2019). Few studies have focused on pregnant women and the general population with limited information on the perspectives, challenges, and facilitators of HIVST and linkage to care following HIVST, especially among young people (Hlongwa, et al., 2023). Therefore, this study aimed to explore the experiences of young people in Malawi and the potential benefits of HIVST in increasing testing rates and reducing the burden of HIV infections.

1.2 Problem Statement

Despite the potential of HIVST to improve testing rates, linkage to care, and HIV treatment outcomes (UNAIDS 2020), its prevalence in Malawi remains low. Only 14.2% of adolescents aged 16-19 years and 18.2% of young adults aged 20-24 years engage in HIVST (Indravudh et al., 2021). There is a particular concern about the low rates of linkage to healthcare services following HIVST. Blantyre City faces significant challenges in addressing HIV infection among adolescents and young adults. The HIV prevalence is 18.2%, which is higher than the national prevalence of 8.9%. Nearly 50% of HIV cases among adolescents and young adults remain undiagnosed (Malawi Population Health Impact Assessment, 2020). Harrison et al. (2022) observed that while young people show interest in HIVST, there are concerns about potential negative consequences and challenges in effectively linking them to care after an HIV self-test result. Therefore, knowledge of the experiences of recipients of HIVST has the potential to facilitate the uptake of HIVST and to link them to treatment and care. Nevertheless, studies on the perspectives and experiences of HIVST and linkage to care among young people, particularly in Malawi, are inadequate (Johnson, et al., 2020; Indravudh, et al., 2020), hence the need for this study in order to understand young people’s experience of HIVST and its linkage to care.

1.3 Rationale of the Study/Justification of the Study

The findings of this study will inform HIVST practice by providing insights into the experiences, challenges, and support needs of young people with HIVST and linkage to care, enabling the development of tailored interventions and strategies to improve engagement, accessibility, and effectiveness of services for this population.

The study findings will contribute to policymaking by revealing the specific barriers, facilitators, and gaps in HIVST and the linkage to care among adolescents and young adults in Malawi, guiding the formulation of evidence-based policies that address the unique needs and challenges faced by this population.

The findings of this study will also contribute to educational efforts aimed at raising the awareness and understanding of HIVST among young people, healthcare providers, and educators. By disseminating knowledge about the challenges and successes of HIVST, this study will support the development of educational programs that empower young people to make informed decisions about their health. Additionally, it will enhance the training of health care professionals, ensuring that they are equipped with the knowledge and skills needed to support young people effectively through the HIVST process and linkage to care.

The findings will also add to the existing research on HIVST and linkage to care among young people, enriching the evidence base and providing a basis for future research endeavors to further explore, validate, and expand upon the identified themes, factors, and experiences in different contexts and populations.

1.4 Conceptual Framework

The Social Ecological Model (SEM) explains that individuals' behavior is influenced by interactions between individuals and their environments. It includes individual, interpersonal, organizational, institutional, community, and policy levels. Figure 1 represents SEM model adapted from McLeroy, Steckler, and Bibeau (eds.) (1988).

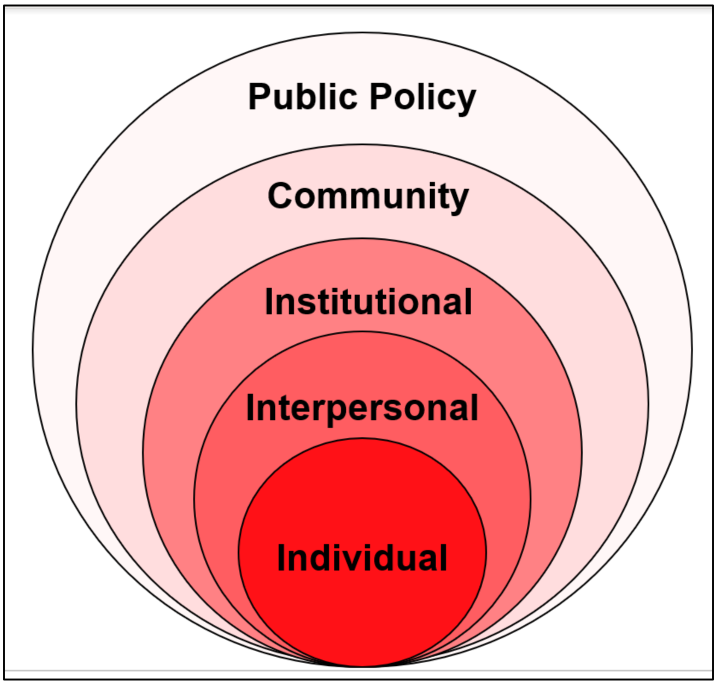


Figure 1: Social-Ecological Model

Source: McLeroy, Steckler & Bibeau (1988)

The study used SEM, focusing on the individual, community, and institutional (healthcare system) levels. At the individual level, the study explored various elements, including beliefs and attitudes towards HIVST and linkage to care, perceived susceptibility and severity of HIV infection, knowledge of HIV and testing, emotional responses, self-efficacy, stigma, and other individual characteristics. The community level encompasses aspects of the interpersonal level, focusing on family and peer influences.

It considered broader social factors, such as community norms and beliefs about HIVST and healthcare services, social support networks, community-based HIV programs, availability and accessibility of HIVST resources, and community advocacy and awareness efforts. The institutional level was modified to include components of public policy levels, as policies and regulations directly impact individuals' experiences and behaviors. This consolidation is supported by the fact that the institutions responsible for service delivery also implement and enforce policies related to HIV and HIV-related issues. The study explored elements such as healthcare infrastructure, quality of care, training and capacity building, cost of services, integration of services, HIVST policies and guidelines, equity and access, legal and regulatory frameworks, awareness campaigns and health education, and healthcare funding and resource allocation. This study aimed to analyze these constituent elements together rather than separately. Therefore, the modified SEM has three levels: individual, community, and institutional.

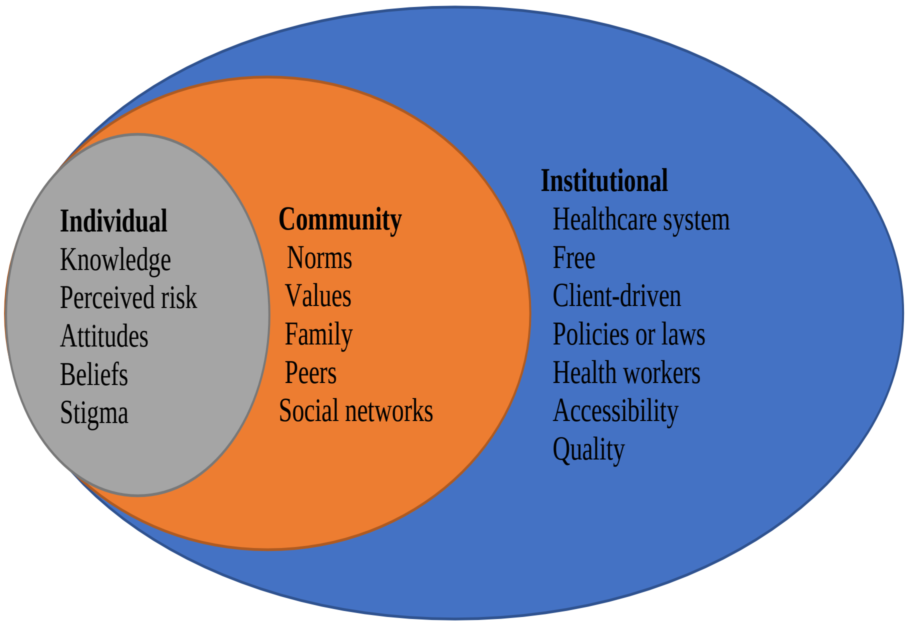


Figure 2: Modified Social-Ecological Model

1.5 Broad Objective

To explore experiences of young people on HIV self-testing and linkage to care at Ndirande Health Centre in Blantyre City, Malawi.

1.6 Specific Objectives

a. To explore factors influencing young people's decision to engage in HIVST.

b. To assess the views of young people on the process of HIVST and linkage to care.

c. To describe the support needs of young people during and after HIVST and linkage to care.

d. To investigate barriers and facilitators to HIVST and linkage to care among young people.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This literature review comprises both qualitative and quantitative studies published less than 10 years ago, as studies are likely to provide information related to users' experiences of HIVST and linkage to care, particularly among adolescents and young adults in sub-Saharan African countries. The following databases were used to implement a comprehensive electronic search strategy: PubMed, Europe PMC, Willey Online Library, Springer, Frontiers, and Google Scholar. The study created keywords and phrases to find relevant articles related to the experiences of young people regarding HIVST and linkage to care. Keywords related to young people include adolescents, young adults, youth, young people, and teenagers. Keywords related to HIV self-testing included HIV self-testing, HIVST, HIV self-testing, home-based HIV testing, self-test kits, and rapid HIV testing. Keywords related to linkage to care included linkage to care, care-seeking behavior, HIV care engagement, HIV care outcomes, HIV care experiences, and HIV care utilization. Finally, using Boolean operators, the study also used search strings, including adolescents and HIV testing and linkage to care, young adults and HIVST and care-seeking behavior, and youth, self-testing, and HIV care experiences. The literature review is organized according to the study objectives: 2.2 factors influencing young people's decision to engage in HIVST, 2.3 views of young people on the process of HIVST and linkage to care, 2.4 support needs of young people during and after HIVST and linkage to care, and 2.5 barriers and facilitators that influence the successful linkage to care.

2.2 Definitions of Key Terms

2.2.1 HIV Self-Testing

HIVST refers to the process in which an individual collects their own specimen (such as oral fluid or blood), performs an HIV test, and interprets the result privately (Ngure, et al., 2020). This approach empowers individuals to know their HIV status discreetly and conveniently.

2.2.2 Young People

This term typically refers to individuals between the ages of 15 and 24 according to UNAIDS (2020). Young people often face unique social, behavioral, and health challenges that influence their engagement with health services, including HIV testing. This study included young people aged 18 years and above.

2.2.3 Linkage to Care

Linkage to care involves connecting HIV-positive individuals to healthcare services for further testing, treatment, and support (Spyrelis, et al., 2017). Effective linkage is critical for initiating ARV and improving health outcomes.

2.2.4 Support Needs

Support needs refer to the emotional, informational, and logistical assistance required by individuals during and after critical health decisions (Motgatle & Madiba, 2019). For young people engaging in HIVST, this may include counselling, guidance on test interpretation, and help in accessing healthcare services.

2.2.5 Barriers

Barriers are factors that hinder or prevent individuals from accessing or using health services, such as HIV testing and care (Indravudh, Choko, and Corbett, 2018). These can be structural (e.g., distance to clinics), social (e.g., stigma), or personal (e.g., fear of results).

2.2.6 Facilitators

Facilitators are factors that enable or encourage individuals to engage with health services, including accessible testing kits, supportive social environments, or confidential counseling services (Indravudh, Choko, and Corbett, 2018).

2.2.7 Assisted HIV Self-Testing

Assisted HIVST involves support from a trained provider or peer during the self-testing process (Rujumba, et al., 2021). Support may include instructions on using the test kit, interpreting results, and providing immediate counselling or referral to care, if needed.

2.2.8 Unassisted HIV Self-Testing

Unassisted HIVST is conducted independently by an individual, without direct assistance from a healthcare provider (Rujumba, et al., 2021). The user relies on the test kit's instructions for the use and interpretation of the results, often with remote support options available if required.

2.3 Factors influencing young people's decision to engage in HIVST

Studies have highlighted various factors influencing young people's decision-making processes regarding HIV self-testing (HIVST). A study by Choko et al. (2019) in Malawi found that peer influence played a significant role in encouraging young people to opt for HIVST. People who have undergone HIVST often share their experiences, reduce their anxiety, and promote the idea that HIVST is a manageable and private way to know one's status. Additionally, the availability and accessibility of self-testing kits in local pharmacies and health centers have been identified as key facilitators, as they allow young people to discreetly obtain kits without facing the stigma often associated with traditional HIV testing services (Ngure et al., 2020).

Furthermore, a study by Sibanda et al. (2022) in Zimbabwe corroborated these findings, showing that peer influence is crucial in normalizing HIVST among youth, thereby increasing uptake. The study emphasized that youths who received positive reinforcement from their peers were more likely to engage in HIVST.

Media exposure also plays a crucial role in shaping young people's attitudes toward HIVST. For instance, in Kenya, a study by Ngure et al. (2020) revealed that televised campaigns and social media platforms significantly increased awareness and acceptance of HIVST among the youth. These platforms provide information on the benefits of early diagnosis and the privacy afforded by self-testing, making HIVST an attractive option for young individuals who are concerned about confidentiality. Moreover, educational programs in schools and universities have been effective in informing young people about HIVST, thereby influencing their decisions to engage in the process (Musheke et al., 2021).

Finally, personal health concerns and experiences with unprotected sexual activity are major determinants of the decision-making process. According to a study conducted by Musheke et al. (2021) in Zambia, young individuals who perceive themselves to be at risk of HIV infection due to past sexual behavior are more likely to choose HIVST. The desire to take control of their health and make informed decisions about their sexual and reproductive health is a strong motivator. The study also stressed that the sense of autonomy and empowerment associated with self-testing, where individuals can perform the test in their own time and space, significantly contributes to their decision to opt for HIVST. In another study by Ritchwood et al. (2019), young people with a history of sexually transmitted infections (STIs) showed a higher inclination towards HIVST, driven by a heightened awareness of their vulnerability to HIV infection.

2.4 Views of young people on the process of HIVST and linkage to care

Studies have consistently highlighted the importance of positive interactions with healthcare providers in shaping young people's attitudes toward HIVST. For instance, Rujumba et al. (2021) found that empathetic and supportive interactions with health workers significantly reduced anxiety and promoted a sense of security during self-testing. Similarly, Hector et al. (2018) revealed that young people who experienced positive interactions with healthcare providers were more likely to engage in follow-up care, emphasizing the crucial role of healthcare professionals in facilitating the linkage to care. These studies suggest that fostering a supportive and non-judgmental environment is essential for encouraging young people to participate in HIVST and subsequent care. However, despite these positive experiences, many young people find the process emotionally taxing, as noted in the research by Spyrelis et al. (2017), where the anticipation of test results often leads to heightened stress and anxiety, particularly in the absence of adequate emotional support.

The emotionally taxing nature of HIVST and its linkage to the care process is compounded by the complex and demanding process young people often face. Nicholas et al. (2020) described how the intricacies of navigating self-testing procedures and understanding subsequent steps for care can overwhelm young individuals, leading to confusion and potential disengagement from the care continuum. This complexity is further exacerbated by privacy concerns, as highlighted by Hlongwa et al. (2020), who found that many young people were worried about the confidentiality of their test results, deterring them from seeking testing and care in settings where privacy could not be guaranteed. Mokgatle and Madiba (2017) echoed these findings, noting that the fear of unintentional disclosure of HIV status due to inadequate privacy protection was a significant barrier to HIVST uptake.

These studies underscore the need for clear and accessible instructions and robust privacy measures to address the complex and demanding process of HIVST and ensure that young people feel secure and supported throughout the testing and care continuum. In addition to these challenges, the experience of HIVST can also be marked by a desire for independence and autonomy, juxtaposed with the often-intimidating experience of testing and potential stigma. Chipungu et al. (2017) observed that many young people valued the independent nature of the HIVST process as it allowed them to take control of their health without the need for direct interaction with healthcare providers, thus offering a sense of empowerment. However, this independence also resulted in significant challenges, particularly when the process was perceived as intimidating. Aizobu et al. (2023) discussed how the intimidating experience of using self-test kits, particularly without sufficient guidance, could deter young people from completing tests or seeking follow-up care. This sentiment was echoed in the study by Shapiro et al. (2020), who found that the fear of a positive result and the associated social stigma often led to the avoidance of self-testing. These findings highlight the delicate balance between promoting autonomy in HIVST and ensuring that young people are adequately supported to navigate the intimidating experience of testing and linkage to care, thereby facilitating better health outcomes.

2.5 Support needs of young people during and after HIVST and linkage to care

The support needs of young people during and after HIVST and their linkage to care are diverse and multifaceted. Emotional support is paramount, particularly for those who test positive for HIV infection. A study by Madiba and Mokgatle (2019) in South Africa highlighted the importance of counselling services before and after the HIVST process. Young people often experience anxiety and fear when considering the implications of their test results, and access to counselling helps them cope with these emotions.

The study underscores that having a trusted health professional or counsellor available to provide guidance can make a significant difference in whether a young person seeks further care after self-testing. Complementing this, a study by Setswe and Mnisi (2022) in Botswana found that mobile counselling services, delivered through phone calls or messaging apps, are effective in providing immediate emotional support to young people following HIVST, helping to reduce anxiety, and encouraging timely linkage to care.

Family and peer support also play critical roles in the link to care after HIVST. According to a study by Katz et al. (2021) in Tanzania, young people who receive encouragement and support from their families are more likely to follow through with necessary medical appointments and treatment after a positive HIVST result. The study found that those with a strong support system were more motivated to take the necessary steps to manage their health, as they felt less isolated and more empowered to face the challenges of living with HIV. Peer support, particularly from friends who have had similar experiences, is also vital in reducing the stigma and fear associated with seeking care. Additionally, a study by Orne-Gliemann et al. (2022) in Ethiopia emphasized that peer networks, especially those formed in educational institutions, provide a safe space for young people to discuss their HIVST experiences and support each other in navigating the health system.

Furthermore, accessibility of healthcare services is a critical factor in ensuring that young people receive the support they need after HIVST. A study by Ortblad et al. (2020) in Uganda examined the importance of integrating HIVST services with existing healthcare infrastructure to facilitate seamless linkage to care. This study found that when young people have easy access to follow-up care, including confirmatory testing and treatment, they are more likely to engage with the healthcare system. Additionally, mobile health services and community outreach programs have been effective in reaching young people who may be hesitant to visit traditional healthcare facilities because of stigma or logistical challenges.

These programs provide a supportive environment in which young people can receive care without fear of judgment. Moreover, a study by Joseph et al. (2023) in Ghana highlighted the role of community health workers in bridging the gap between self-testing and linkage to care, demonstrating that proactive follow-ups by health workers significantly increased the rate of young people accessing treatment post-HIVST.

2.6 Barriers and facilitators that influence successful linkage to care

Randomised control trials (RCT) conducted by Indravudh, Choko, and Corbett (2018) and Dovel et al. (2020) revealed that implementing facility-based HIVST increased testing rates among adult outpatients by 200% compared with standard provider-initiated testing and counselling (PITC). The study also highlighted that this approach is cost-effective when integrated into routine healthcare settings by effectively utilizing the existing health infrastructure. Additionally, Mphande et al. (2021) conducted in-depth interviews with 57 adult outpatients who had used HIVST. This study aimed to explore the barriers and facilitators that influence their preferences for facility-based HIVST. This study revealed that HIVST facilities had facilitators, including increased motivation to test due to seeing others test, immediate support from health professionals, and easy access to additional HIV services in the health facility. In terms of barriers, the study found that the strategy was associated with fear of judgement from others and unwanted status disclosure due to a lack of privacy. Assessing the barriers and facilitators of community-based HIVST, studies by Nichols et al. (2020), Njau et al. (2019), and Johnson et al. (2020) differed slightly from the findings of Li (2024). These studies identified facilitators for community HIVST, such as increased privacy, perceived independence and confidentiality of self-test results, perceived convenience, and little time needed to test, as well as drawbacks, including travel time and cost, fear of unwanted disclosure, and long clinic wait times.

These studies have provided a comprehensive understanding of the determinants of interpersonal and institutional factors in the uptake of HIVST. They also used a qualitative research design with a sample size of at least 20, which increased the validity and reliability of the study findings. Nevertheless, these studies did not demonstrate any demographic variations in the respondents' experiences and challenges. This study explored factors affecting the use of HIVST in Malawi, considering both individual and community contexts. The findings revealed that people with different backgrounds, such as varying personal characteristics, cultural norms, and values, reacted differently to HIVST use, even when they were offered the same testing conditions or support. This suggests that personal and cultural factors play a significant role in shaping people's acceptance and experience of HIVST.

Early HIV infection diagnosis ensures that individuals with HIV begin treatment as soon as possible after diagnosis to enhance health outcomes, increase life expectancy, and reduce secondary transmission. Therefore, Hlongwa et al. (2023) synthesized qualitative and quantitative studies in sub-Saharan Africa (SSA) to analyze the main determinants of linkage to care after receiving a reactive HIVST result among men. The outcomes of the review indicated that financial costs related to travelling, potentially long waiting hours at the clinics, stigma, discrimination, and privacy concerns negatively affected the linkage to care. Several studies have supported these findings. Limited financial ability, particularly travel costs, hinders men from obtaining confirmatory HIV testing or initiating antiretroviral therapy (ARV) (Korte et al., 2020; Choko et al., 2019; Chipungu et al., 2017). Additionally, concerns about the implications of a positive result contribute to avoidance of follow-up care. These concerns include potential changes in relationships, employment, and social support networks (Aizobu et al., 2023). A study conducted by Muwanguzi, Nasuuna, Namimbi, Osingada, and Ngabirano (2021) in Uganda recommended that incentives could be used to improve men's rates of linkage to care after a reactive HIVST result.

While these studies have established determinants of successful linkage to care among men in Africa, they have not explored barriers and enablers that affect successful linkage to care among young people, including adolescents and young adults in Malawi. Furthermore, these studies have established health facility-related barriers and facilitators for linkages to care. However, the extent to which factors at the individual and community levels influence successful linkage to care remains unknown, particularly among AYA in Malawi.

Wilson et al. (2021) analyzed community-based HIVST services for AYA in an urban settlement in Kenya. It was found that respondents from bars, clubs, and pharmacies preferred unassisted testing and peer distributors compared to respondents from homes. However, a study by Hector et al. (2018) found that the majority of AYA (80%) preferred assisted HIVST compared to standard finger-prick testing. While 20% expressed that it would be good to do HIVST at home, 76% preferred to do HIVST at the health center for reasons including increased security, privacy, and the presence of a counsellor. Similarly, a qualitative study conducted between April and December 2017 in Uganda by Rujumba et al. (2021) showed that pregnant women and their male partners mentioned that HIVST enabled them to know their status quicker, was cost- and time-saving compared to health-facility-based HIV testing, improved confidentiality, and reduced stigma for those who tested positive. The study also indicated that the respondents expressed a general fear that HIVST would lead to harm to themselves and others in case one found positive, including suicide, violence among couples, deliberate transmission of HIV, and limited linkage to care due to lack of counselling (Rujumba, et al., 2021). These studies are advantageous in that they adopt both qualitative and quantitative approaches. However, these studies did not yield significant or generalizable data because of the limited sample size. Additionally, they focused on pregnant women and adults.

It was highlighted that the interviews undertaken by Rujumba et al. (2021) and Hector et al. (2018) were implemented in an unconducive environment that posed concerns related to the privacy and confidentiality of study respondents. This may have had a negative effect on the validity and reliability of the results. Finally, there is a scarcity of empirical data on the preferences of AYA between community-based HIVST and health facility-based HIVST in Malawi.

In sub-Saharan Africa, there is a gender disparity in the acceptability of HIVST, where acceptability rates indicate a gendered pattern of men benefitting more than women. A randomised cross-sectional study in KwaZulu-Natal, South Africa carried out by Harichund, Moshabela, Kunene, and Karim (2019) revealed that men preferred HIVST because of its convenience and efficiency, whereas women favoured HIVST because of its ability to ensure autonomy and empowerment. The study further showed that lack of counselling and managing a positive self-test result, as well as linkage to care, were the main factors that hindered the successful utilization of HIVST. Nevertheless, an earlier cross-sectional community usability study conducted in Cape Town, South Africa, found that HIVST had high acceptability among AYA because they were able to correctly complete the test and correctly read and interpreted the HIVST result, while the minority of the respondents who experienced user errors, such as failure to use an HIV rapid self-testing device, rated acceptability and usability lowly (Smith, Wallace & Bekker, 2016). No significant empirical literature has been documented to demonstrate the perspectives and challenges that AYA faced during the uptake and utilization of HIVST in Malawi.

2.7 Chapter Summary and Research Gap

The study revealed several factors influencing young people's engagement in HIVST, including peer influence (Choko et al., 2019), media exposure (Ngure et al., 2020), and personal health concerns (Musheke et al., 2021), which aligns with the previous literature. Positive interactions with healthcare providers (Rujumba et al., 2021) and clear guidance (Aizobu et al., 2023) were identified as crucial for facilitating HIVST and linkage to care; however, barriers such as stigma, fear, and privacy concerns (Hlongwa et al., 2020) remain significant challenges. The literature highlights the effectiveness of media campaigns and digital platforms (Ngure et al., 2020; Olaniran et al., 2023) in promoting HIVST; however, research on youth-specific strategies in rural and resource-limited settings remains limited. Methodologically, previous studies, such as those by Hector et al. (2018) and Nicholas et al. (2020), relied primarily on quantitative surveys, lacking an in-depth exploration of personal experiences and emotional factors during HIVST. Few studies have explored the influence of cultural beliefs and family support on HIVST uptake among African youth (Katz et al., 2021). In conclusion, while there is a growing body of literature on HIVST and its linkage to care among adolescents and young adults, there is still a research gap regarding the qualitative exploration of these experiences, specifically in the context of Malawi. Few qualitative studies have focused on understanding the unique perspectives, challenges, and facilitators that influence HIVST uptake and subsequent care engagement among this population in Malawi. Therefore, a comprehensive study that specifically examines the qualitative evidence from Malawian adolescents and young people is needed to bridge this gap in knowledge.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section outlines the approaches and methods used in this study. The methodology section includes the type of research study, study location, study population, study period, sample size, data collection, data management and analysis, and ethical considerations.

3.2 Research Design

This study aimed to explore and understand the subjective experiences and perceptions of young people regarding HIVST and its linkage to care. A qualitative exploratory descriptive design was employed, allowing for an in-depth examination of the participants' lived experiences and decision-making processes (Colorafi & Evans, 2020). This design was appropriate because it facilitated the collection of rich, detailed data about a specific population, namely, young people with direct experiences of HIVST. The design was selected to accommodate flexibility in exploring the diverse social, emotional, and health-related contexts that influence HIVST uptake and care linkage decisions.

3.3 Study Site

The study was conducted at the Ndirande Health Centre located in Blantyre, Malawi. The Ndirande Health Centre operates within the Blantyre District Health Office and is categorized as an urban health facility. The catchment area of the facility is approximately 143,187 (Malawi National Statistical Office, 2020). It offers a range of services, including integrated maternal and child health services, HIV and AIDS, and free outpatient department services.

The Ndirande Health Centre was chosen because it is located in an urban area of Blantyre City, which has the highest HIV prevalence of 18.2%, which is higher than the national prevalence of 8.9%. The health centre employs a total of 79 healthcare providers, of which six are specifically involved in HIV-related issues (Kaunda, Umali, Chirwa, & Nyondo-Mipando, 2021). The HIV services provided at the Ndirande Health Centre include HIV counselling and testing, antiretroviral therapy (ART) provision, prevention of mother-to-child transmission (PMTCT) services, and care for opportunistic infections. The facility conducts various types of HIV screening, including provider-initiated testing and counselling (PITC), voluntary counselling and testing (VCT), and HIVST. According to the Ndirande Health Center's facility registers (2023), the facility screened 11,173 clients for HIV, with 5,623 adults and 3,282 young individuals.

The target population consisted of all young people who utilized HIVST at Ndirande Health Centre in Blantyre aged 18 to 24 years who had been engaged in HIVST and had experience with linkage to care services.

3.5 Sampling strategy

Two rapid appraisal methods were used to collect data: in-depth interviews that assessed individual experiences and focus group discussions that explored collective experiences and perspectives of HIVST. We initially planned to collect data from 15 participants through in-depth interviews (IDIs). However, data saturation was reached with the 10^{th} participant, and two additional participants were interviewed to validate the findings, making a total of 12 participants for the in-depth interviews. Subsequently, six additional participants were recruited for focus group discussions (FGDs), resulting in a total sample size of 18 participants.

Three focus groups were generated from these 18 participants, each comprising six participants. This approach ensured a comprehensive exploration of young people's experiences with HIVST and their linkages to care.

A purposive sampling strategy was used to select the study participants. Purposive sampling is a non-probability sampling technique that allows researchers to select respondents who possess specific characteristics or experiences relevant to the research objectives (Shaheen, Pradhan, & Ranajee, 2019). This sampling strategy is particularly suitable for qualitative studies aimed at gaining in-depth insights into the lived experiences and perspectives of specific populations.

3.6 Inclusion and Exclusion Criteria

Inclusion criteria included:

- Respondents fell within the specified age range of young people, typically between 18 to 24 years of age.
- Respondents engaged in HIVST at least once
  to ensure they had direct experience with the self-testing process.
- The study included both HIV-positive individuals who underwent HIVST and sought linkage to care, and HIV-negative individuals who underwent self-testing and sought confirmatory testing or further prevention services.
- Respondents were willing to share their experiences related to HIVST and linkage to care in order to provide valuable insights for the study.
- Respondents who were from within the catchment area of Ndirande health centre.

Exclusion criteria included:

- Individuals who never underwent HIVST or have no knowledge of the process.

- Respondents who were unable to provide informed consent, such as individuals with cognitive impairments, were asked to ensure ethical research practices.
- Individuals/young people who have gone through rapid diagnostic HIV screening.

3.7 Recruitment of Study Respondents

Recruitment was conducted at the Ndirande Health Centre with the assistance of healthcare providers, who identified potential respondents based on predefined inclusion criteria. The respondents were approached individually by health care providers and researchers at the health center. They were informed of the study's purpose, procedures, and ethical considerations, including confidentiality and voluntary participation.

During the recruitment process, respondents were selected to reflect a wide range of demographic characteristics to ensure a comprehensive understanding of the target population's experiences. Young people aged 18 years to 24 years were recruited regardless of their marital status and educational level. Participants were also not allowed to disclose their HIV status to avoid stigma, which would have affected the participants’ responses. This diverse recruitment strategy facilitated the collection of rich and varied data, enhancing the study's ability to provide a comprehensive understanding of the target population's experiences with HIV self-testing and linkage to care.

3.8 Data Collection

The IDI and FGD guidelines were formulated based on the research objectives, literature review, and SEM. Both guides were semi-structured and contained a section to capture the demographic characteristics of the respondents, which helped contextualize their experiences. Additionally, the guides included questions related to respondents' experiences with HIVST, their motivations for self-testing, sources of self-test kits, the process of self-testing, and their emotional responses to the test results.

The guides also explored respondents' actions and experiences following HIVST results, including whether they sought confirmatory testing, linkage to care, or preventive services based on their test results. These guides prompted factors that facilitated or hindered respondents' decisions to seek linkage to care, such as stigma, social support, knowledge of available services, and healthcare accessibility. The guides were translated from English into Chichewa by the researcher. To ensure that the tools retained their original meaning, translation was followed by a back-translation process. Pre-testing of the data collection tools was conducted prior to the main data collection. A small sample of respondents, comprising three individuals, was selected for pretesting. Pre-testing was conducted at the Limbe Health Centre, as it had similar characteristics to the main study site. Pre-testing strengthens the quality and validity of the data collected during the main study (Hilton, 2017) and resolves any confusion or contradictions that may be encountered during the main data collection process.

Following pre-testing, several changes were made (See Appendix J) to the data collection tools to improve their effectiveness. Some questions were rephrased for clarity to ensure that respondents fully understood them. Additionally, the sequence of certain questions was adjusted to create a more logical flow during interviews and discussions. Feedback from the pre-testing respondents indicated that these adjustments would help elicit more detailed and relevant responses during the main data collection.

Both IDIs and FGDs were conducted in a private place at a time convenient for the study respondents after they had received the services. The IDIs and FGDs required approximately 40 and 60 minutes respectively. Respondents for FGDs were those who participated in in-depth interviews with an additional three who came later but showed similar characteristics. Conducting FGDs after participating in IDIs enabled respondents to clarify or expand on concepts that might have been ambiguous or misunderstood.

Three FGDs were conducted, each with six respondents. Records were used to obtain information from both IDIs and FGDs. Member checking was performed at the end of each IDI and FGD to validate the accuracy and credibility of the collected information.

After five days of data collection, the researcher was involved in data checking and transcription. This approach provides valuable learning opportunities and ensures that the findings are thoroughly vetted. Data validation and triangulation were performed to enhance the trustworthiness of this research. Triangulating data collection methods allowed for the cross-verification of findings from multiple sources, providing a more comprehensive and credible understanding of the research topic (Bans-Akutey & Tiimub, 2021). This method also mitigated biases, strengthened the conclusions, and increased the generalizability of the findings, enabling the identification of potential biases or divergent views in the analysis and interpretation of the study results.

3.9 Data Management

Data storage is a critical aspect for ensuring the security and organization of the collected data. All relevant data, including audio recordings of interviews or focus groups, transcriptions, and interview notes, were securely stored in a locked cupboard and on a password-protected computer that was accessible only to the researcher.

3.10 Data Analysis

Transcriptions were created from audio recordings to facilitate data analysis. Data collection was conducted in Chichewa, and the audio recordings were first transcribed into Chichewa before being translated into English. This bilingual transcription process ensured that the spoken language data were accurately captured in their original context and made accessible for analysis in English.

Thematic content analysis was used to analyze the data. Vaismoradi and Snelgrove (2019) defined thematic content analysis as a qualitative research method used to identify, analyze, and interpret patterns or themes within textual data.

The data analysis process commenced with the researcher becoming familiar with the data by repeatedly reading transcriptions and field notes. This thorough reading enabled a comprehensive grasp of the content and helped in identifying recurring patterns, concepts, and ideas present in the data after familiarization with the data and coding was initiated. According to Dawadi (2020), coding is a key process in thematic content analysis, involving the systematic categorization of data segments into meaningful units known as codes. These codes represent the main ideas or concepts inherent in the data. For analysis, a code frame may be developed, which is an organized and hierarchical code structure. This deductive approach guided the initial coding process and was based on existing theories, literature, or research questions related to HIVST and its linkage to care. The deductive coding process utilizes the developed code frame to assign preexisting codes to relevant data segments (Dawadi, 2020). This process helped structure and organize the data according to the predetermined framework.

In addition to deductive coding, the analysis allowed for inductive coding. Inductive coding enables the emergence of new codes from the data during the analysis process, and captures unexpected themes or concepts that were not initially covered by the code frame (Vaismoradi& Snelgrove, 2019). This approach kept the analysis open to new ideas and allowed for the adaptation of the code frame, if required. Following coding, data synthesis occurred, involving the review and comparison of coded segments to identify connections and relationships between different codes and themes. The researcher examined how the themes intersected and influenced each other, allowing for a comprehensive understanding of the complexities of the respondents' experiences.

3.11 Trustworthiness of the Data

This study employed the following strategies to ensure the trustworthiness of the data: The study ensured credibility by using method triangulation, incorporating both IDIs and FGDs to cross-verify findings and provide a well-rounded understanding of the participants' experiences. Additionally, member checking was conducted at the end of each IDI and FGD, where participants reviewed and confirmed their responses to ensure accurate representation of their perspectives. Prolonged engagement with the participants and iterative questioning further enhanced the credibility of the findings.

To enhance transferability, the study provided a detailed description of the research context, participant characteristics, and data collection process, allowing future researchers to assess the applicability of the findings in other settings. The sample was purposefully selected to include diverse experiences to ensure that the insights captured were relevant and meaningful beyond the specific study population. This study ensured dependability through consistent documentation of the research process, including data collection procedures, coding strategies, and analytical decisions. A peer review process was employed in which an independent researcher reviewed the data analysis process to ensure consistency and accuracy. Additionally, the research team maintained an audit trail detailing all methodological choices and changes made during the study.

To establish confirmability, triangulation of data sources and methods was used to minimize researcher bias. Reflexivity was maintained through the use of a research journal where the researcher documented personal reflections, potential biases, and decision-making processes throughout the study.

The data collection tools were translated and back-translated to maintain accuracy in Chichewa, addressing any discrepancies before the data collection. Secure storage of data on a password-protected computer and on a locked cupboard ensures data integrity and prevents unauthorized access or tampering.

3.12 Ethical Considerations

Ethical clearance was obtained from the Kamuzu University of Health Sciences (KUHES) Research Ethics Committee. Informed consent was obtained from all respondents (Appendix G and H). The purpose, methods, procedures, potential risks, benefits, and confidentiality measures of the study were explained to each participant in their local language. The researcher explained to the participants that if they did not wish to participate or felt comfortable in the study at any stage, they were free to withdraw from the study at any time. It was also explained to the participants that their anonymity would be guaranteed and that the data to be collected would not be used for any purpose other than the research. The respondents were assigned pseudonyms or identifiers to protect their identities. All data collected, including audio recordings, transcripts, and field notes, were securely stored and accessible only to authorized third parties, such as supervisors. The researcher planned to offer emotional and psychological support to respondents through professional counselling services before, during, and after the interviews. Respondents were informed about the availability of support and encouraged to seek assistance, if needed. However, the respondents did not encounter any psychological harm or problems that needed psychological support.

3.13 Chapter Conclusion

This chapter describes the methodological aspects that were used to conduct the study. This study employed a qualitative research approach with a focus on an exploratory research design. Eighteen respondents were recruited using a purposive sampling strategy, the study recruited 18 respondents. Data were gathered using the IDIs and FGDs. Data analysis was performed using thematic content analysis. Finally, ethical considerations were considered. Different issues were addressed using principles including informed consent, confidentiality, privacy and dignity, and research ethics approval. All of these aspects helped ensure the integrity, validity, and reliability of the study process and findings.

CHAPTER FOUR

PRESENTATION OF THE FINDINGS

4.1 Introduction

This chapter presents the findings of the data collected on young people's experiences and perspectives regarding HIVST and their linkage to care. It begins with an overview of the demographic characteristics of the respondents, followed by a presentation of the themes and sub-themes transcribed in the study findings.

4.2 Study Findings

4.2.1 Demographic Information

The study findings showed that the majority were male (n=10), and most of them were young adults aged 21-24 years (n=12). At the level of education, a good number of respondents had secondary education at the time of this study (n=9), and least of them attended tertiary education (n=3). Most participants were unmarried (n= 12). The least number of participants were HIV-positive (n=7), but half of them sought care (n=4).

4.2.2 Motivating Factors for HIVST Engagement

4.2.2.1 Media Influence

Media influence was one of the factors that influenced young people's intention to seek HIVST. Most respondents stated that they had heard about HIVST in radio and television programs. This triggered an interest in testing.

> *I saw a television advertisement about self-testing which sparked my interest in knowing more about it. That's how I decided to take the test.*

- IDI III.

I first encountered the program talking about knowing your status on the radio. It was that session that motivated me and triggered my interest and take initiative to get my self-tested for the first time in my life.

- IDI VI

4.2.2.2 Recommendation

A personal recommendation from a health worker was found to influence some respondents to engage in HIVST. One of the respondents shared that he first heard about HIVST from a friend who was working as a nurse. As a professional in the same field, the respondent trusted his friend.

My friend who works as a nurse recommended HIV self-testing to me. He said it was a convenient way to know my status without going to the clinic.

- IDI IV.

4.2.2.3 Peer Pressure

The study found that peer influence played a significant role in influencing young people's decisions to engage in HIVST. Many respondents concurred that peer encouragement and the desire to belong to a social group can motivate young people to engage in health-seeking behaviors that they might not have considered otherwise.

Many of my friends had already done the self-test, and they encouraged me to do it too. I didn't want to feel left out, so I decided to try it.

- IDI V.

There was this other time at school when people from Malawi Blood Transfusion used to come and collect blood from students and they could bring some drinks to those that were taking part in blood donation. At that time I had no idea of my HIV status but I wanted to donate more blood so that I should receive a T-shirt just as what my friends wanted. Hence, I got tested for HIV after I tested myself with the use of (ORAQUICK) and start donating blood so that I attain the potential and get the t-shirt just as all of my friends wanted.

- IDI VIII.

4.2.2.4 Knowledge

Knowledge has been observed as another element that sparks young people's interest in HIVST. Most respondents argued that they had heard about HIVST during classes and youth clubs that focused on HIV prevention and treatment awareness.

I first heard about HIV self-testing during my biology class. The teacher mentioned it as one of the modern ways of knowing our status, which sparked my interest. After the class, I did some research and found out more about how HIV self-testing works. I was intrigued by the convenience and privacy it offered.

- IDI II.

As a member of a youth club, I get my chance to learn more about HIV self-testing here at the hospital from the health personnel that share with us a lot of experiences. And I heard about HIV self-testing from one doctor who usually like to join us during these youth club days at the health facility.

- IDI IX.

4.2.2.5 Perceived Risk

Perceived risk was also identified as one of the key factors influencing young people's decision to engage in self-testing. Perceived risk regarding their status is a common sentiment among young people.

> *I had been involved in multiple unprotected sexual activities. So, I was a bit afraid that I may be staying infected. So, I was curious to know my status. I felt it was necessary to take control of my health and take the test. It was a personal decision driven by a desire to know the truth about my health status. I also wanted to ensure the safety of my sexual partners. The test seemed like the first step towards responsible behaviour.*
>
> - IDI VIII.

4.2.3 Perspectives on HIVST Process and Linkage to Care

This section provides respondents' responses on their experiences and perspectives during the process of HIVST and their linkage to care.

4.2.3.1 Convenience and Independence

Many respondents in the FGDs stated that one of the perspectives towards the process of HIVST and linkage to care is that HIVST is convenient and allows for greater autonomy. It was reported that they did not find the process inconvenient or interfering with their daily activities. It also allowed them to exercise independence during the process, unlike conventional HIV testing, in which young people are not in charge of any process. According to one male respondent:

I found HIV self-testing to be incredibly convenient. Being able to test myself at home gave me a sense of control over my health. I didn't have to worry about scheduling appointments or waiting in long queues at the clinic. It was a simple and private process that I could do on my own time.

- FGD I

4.2.3.2 Intimidating Experience

Some respondents in the FGDs were of the view that HIVST and the linkage to the care process were intimidating due to fear of a positive result, especially when one had multiple sexual partners. It has been argued that when one is aware of their sexual behavior, it determines how they perceive and approach HIVST. During FGD, one female respondent expressed that her experience was intimidating because of her previous sexual behavior.

I was hesitant to take the HIV self-test because I was afraid of getting a positive result. The thought of living with HIV was scary and overwhelming. I kept putting it off because I didn't know how I would cope if the result was positive. It took me a while to gather the courage to finally take the test.

- FGD II.

4.2.3.3 Complex and Demanding Process

Although the HIVST process has simple testing kits, the majority of the respondents claimed that the process is complex and demanding in terms of knowledge that one should have before taking the test. Many expressed that the process of HIVST and its linkage to care constantly requires clear instructions and support throughout the process. Many found it difficult to use the kits because they were not aware of how to use them.

At times the HIV self-testing kit contains simple and straight forward instructions on a paper in it but still it comes challenging to use more especially to those that are illiterate and they cannot read and understand the procedure. As such, there is need for support to such illiterate people to use the testing kit as recommended.

IDI V.

Clear instructions are essential for HIV self-testing. I was confused about how to use the test kit properly and had to seek help online. It would be helpful to have more detailed instructions or even a video guide. Support during the testing process is also crucial, especially for first-time testers like myself.

FGD III.

However, some respondents who had prior knowledge of its usage expressed that they did not face any difficulties during the process and called it an easy process that everyone could follow.

I happened to get to know this HIV self-testing from a colleague of mine at school as he used to have some in his closet. This other time he once tested himself as a demonstration and since then I know how it works. Which makes it easier for me to use the tool on my own effectively without compromising anything during the procedure.

- IDI XI.

4.2.3.4 Privacy Concerns

Many respondents agreed that HIVST allowed them to maintain their privacy throughout the process. It was said that it was up to the desire of the person taking the test to tell others what they were doing. However, when it came to linkage to care, most respondents stated that they had no option but to let others know since they needed their support or interventions. They reported that the linkage to care can be hindered by fear of stigma.

I was reluctant to seek care after testing positive because of the stigma associated with HIV. I was afraid of how others would treat me if they found out about my status. The fear of being judged and discriminated against made it challenging to take the next steps in seeking care.

- IDI I.

4.2.3.5 Emotionally Taxing Process

The respondents had different perspectives towards HIVST after conducting the tests. While some stated that the process gave them peace of mind, the majority opined that the process was emotionally taxing without adequate support. When one was about to see the outcome of the test, many participants experienced stress and anxiety.

The process of HIV self-testing and linkage to care was emotionally draining. I felt overwhelmed and anxious about the results. Having someone to talk to and support me through the process would have made it much easier. It's important to have emotional support during such a challenging time.

- FGD III.

4.2.3.6 Positive Interactions

The last major perspective of respondents towards HIVST and linkage to care was that positive interactions with health workers can significantly improve their experience. It was reported that one could have a nice or bad experience during HIVST and linkage to the care process, depending on the nature of communication and information sharing during the process. When one has effective and open communication with health workers, linkage to care could be a welcome experience.

My experience with the health workers during the linkage to care process was positive. They were empathetic and understanding, which made me feel more comfortable. Their professionalism and support made a difficult situation more manageable. Positive interactions with health workers are crucial for ensuring a smooth and supportive experience.

- FGD II.

4.2.4 The Support Needs During and After HIVST

4.2.4.1 Health Worker Support

The support needs of young people during and after HIV self-testing and linkage to care are diverse, reflecting the multifaceted nature of their experiences. According to the perspectives of some young people during FGD, health worker support has emerged as a crucial aspect, with respondents seeking confirmation of their results and receiving counselling and advice on staying healthy.

After taking the test, I sought support from a health worker to confirm my result. They provided counselling and advice on how to stay healthy

- FGD III.

4.2.4.2 Friend and Family Support

Friend and family support also played a significant role in HIV self-testing and was linked to the care process. Respondents reported sharing their test results with friends and family who offered understanding, encouragement, and assurance of ongoing support. This social support network is instrumental in providing emotional reassurance and practical assistance, such as accompanying individuals to health facilities.

I told my close friend about taking the self-test, and they were very supportive. They encouraged me and offered to accompany me to the health facility.

- IDI IX.

My friends helped me get the self-test kit and provided guidance on how to use it. Their practical support made the process easier.

- IDI VI.

Emotional support from friends and family has been mentioned as a critical factor in coping with the emotional impact of testing. The respondents expressed gratitude for the listening ear and reassurance provided by their support networks.

I needed emotional support after taking the test, and my family was there for me. They listened to my concerns and reassured me.

- FGD II.

4.2.4.3 Counselling

Counselling was identified as a valuable resource for coping with anxiety and understanding post-test care. Most respondents emphasized the importance of receiving information on resources available for people living with HIV, including support groups and counselling services.

I was afraid of what the results might be. It was a scary thought. I sought counselling from a health worker before and after taking the test. It helped me cope with the anxiety.

- IDI IV.

4.2.4.4 Follow-Up Care

Follow-up care has emerged as an essential component of testing. Most respondents highlighted the importance of ongoing monitoring and support from health workers.

> *After taking the test, I followed up with a health worker for additional tests and care. They monitored my health and provided support.*
>
> - IDI VII.

> *I asked a health worker about resources available for people living with HIV. They provided information on support groups and counselling services.*
>
> - FGD III.

4.2.5 Facilitators to HIVST and Linkage to Care

4.2.5.1 Individual Facilitators

i. Confidentiality

Confidentiality was identified as the first key facilitator of HIV self-testing, as highlighted by several respondents. Most respondents' endorsement of privacy afforded by self-testing underscores its importance in encouraging individuals to undergo testing. The ability to test in private, free from the fear of judgment or disclosure, motivates young people to take control of their health without external pressures.

> *I found self-testing convenient because it was confidential. I didn't have to worry about others knowing my status. The privacy of self-testing allowed me to take the test in my own time and space, which significantly reduced my anxiety. Without the pressure of disclosing my intentions or results to anyone. This confidentiality aspect removed the fear of judgment and stigma that often comes with visiting a clinic.*- FGD II.

ii. Convenience

The convenience of self-testing emerged as another significant facilitator of HIVST and its linkage to care. The ability to test at home, a time that suited most young people's schedules, made the process more accessible and less intimidating. By offering self-testing kits that can be used at home, individuals like Female Respondent IV overcame barriers such as transportation costs, time constraints, and concerns about privacy.

> *Self-testing was convenient for me. I could do it at home at a time that suited me.*
>
> \- IDI III.
>
> *I wanted to take control of my health and know my status without depending on anyone else. Self-testing seemed like the best option for me. It empowered me to take action at my own pace and in my own space, which was incredibly liberating. I didn't have to rely on a healthcare provider's schedule or deal with the anxiety of visiting a clinic. This independence was important to me because it allowed me to handle my health matters discreetly and confidently.*
>
> \- FGD I.

4.2.5.2 Community Facilitators

i. Support System

It was established that a supportive support system is another important facilitator to take an HIV test and seek linkage to care. It has been reported that support from friends and family provides emotional reassurance and practical assistance, making the testing process less daunting. The support system reminded young people of the importance of knowing their HIV status and seeking appropriate care if needed.

I sought care immediately after getting my results because my family supported me. Their encouragement helped me seek care promptly. Knowing they were there for me gave me the strength to face my diagnosis head-on. They offered practical support, like giving me money for transport. My family's unwavering support also reminded me that I wasn't alone in this journey, which motivated me to take the necessary steps for my health. Their involvement in my care process reinforced the importance of having a strong support network during such challenging times.

- IDI IV.

Another male respondent added that:

Having a support system in place was crucial in managing the emotional and psychological aspects of HIV self-testing and seeking care. It made a difference in my journey to wellness. With friends and family by my side, I felt less isolated and more empowered to confront my health challenges. Their constant presence and encouragement helped me stay positive and motivated, even when the process felt overwhelming. They provided a listening ear and a shoulder to lean on, which was invaluable during moments of fear and uncertainty.

- IDI IX.

4.2.5.3 Institutional Facilitators

i. Knowledge and Information

Most respondents in the FGD group agreed that the knowledge and information provided by healthcare workers motivated them to seek care for HIV. When young people understand their condition better, including the benefits of seeking care and adhering to treatment, they are more likely to take proactive steps to manage their health.

They stated that healthcare workers took time to educate them about HIV, the treatment options, and the importance of regular care. This education empowered them to make informed decisions about their health and helped reduce the fear and uncertainty surrounding HIV. From her perspective, one of the respondents claimed that

> *The health workers provided me with valuable information about HIV and treatment options. Their knowledge helped me understand my condition better. They explained the importance of early treatment and how it could significantly improve my health outcomes. I learned about different antiretroviral therapies available and how they work to control the virus. This information alleviated a lot of my fears and uncertainties about living with HIV. Additionally, they informed me about the support services and resources available, which gave me a sense of hope and reassurance. Understanding the importance of adherence to treatment and regular medical check-ups made me more committed to managing my health proactively.*
>
> - FGD I.

ii. Empathy

It has been reported that empathy shown by healthcare providers is important for encouraging individuals to seek care for HIV. When healthcare providers demonstrated empathy, young people felt understood, cared for, and supported, which helped alleviate fear and anxiety surrounding HIV testing and treatment. Empathy involves actively listening to patients, validating their feelings, and showing compassion for their own experiences.

> *The positive attitude of the health workers encouraged me to continue seeking care. Their warmth and kindness made me feel valued and respected, which boosted my confidence in the healthcare system. Each visit was met with genuine concern and encouragement, making the process of seeking care less intimidating.*

Their supportive demeanour helped alleviate my fears and anxieties, fostering a sense of trust and security. Knowing that I had healthcare providers who truly cared about my well-being motivated me to adhere to my treatment plan and regularly attend follow-up appointments. Their positive reinforcement played a significant role in my commitment to maintaining my health and staying on track with my care.

- FGD II.

This was supported by one of the male respondents' views that:

The empathy shown by the healthcare workers made me feel cared for. Their genuine concern for my well-being was evident, which provided a sense of comfort during a stressful time. They took the time to listen to my worries and answer my questions patiently, which helped alleviate my anxiety. This compassionate approach made the experience less daunting and more manageable. I felt understood and supported, which was crucial for my emotional well-being. The healthcare workers' empathy created a safe space where I could openly discuss my fears and receive the reassurance I needed. Knowing they truly cared about my health made the whole process of seeking care much more bearable and even uplifting. This level of care reinforced my trust in the healthcare system and motivated me to stay committed to my treatment plan."

- FGD III.

iii. Accessibility

The accessibility of self-test kits at health facilities has been highlighted as a facilitator of HIV testing. Most respondents stated that easy access to kits eliminated barriers related to availability and encouraged more people to be tested. By making self-test kits readily available at health facilities, young people can access them conveniently during routine visits or when seeking other health services.

The availability of self-test kits at health facilities and pharmacy shops made it easier for me to access them. Knowing that I could easily obtain a kit without extensive searching or waiting was incredibly reassuring. This accessibility removed significant barriers to testing, such as the need to schedule appointments or travel long distances to specialised centres. Being able to get a kit from nearby pharmacies or health centres meant I could take control of my health more promptly. The convenience of finding these kits readily available encouraged me to take the test sooner rather than later. It also reduced the stigma associated with going to a clinic specifically for HIV testing, as I could integrate the purchase into my regular errands. This easy access eliminated many of the logistical and emotional hurdles that might otherwise have delayed or deterred me from knowing my status.

- IDI V.

Accessibility to healthcare facilities was also identified as another facilitator for promoting care-seeking behavior for HIV. Most young people argue that when healthcare facilities are easily accessible, they are more likely to seek care, as they can do so without facing significant barriers, such as long travel distances or transportation costs.

The health facility was easily accessible. Its location was near my home, reducing the time and cost associated with travel. This ease of access meant I didn't have to take significant time off work or arrange for complicated transportation. Knowing that the facility was close by and easy to reach provided a sense of security and encouragement to pursue timely medical care. Accessibility removes barriers that often prevent people from getting the help they need. For individuals with busy schedules or limited mobility, having a nearby health facility ensures that they can receive prompt attention.

- FGD I.

iv. Professionalism of Health Workers

One respondent reported that the professionalism of healthcare workers encouraged her to seek care for HIV. According to the respondents, she was treated with respect and dignity, felt valued, and was more likely to engage in care. Professionalism also includes providing accurate information, maintaining confidentiality, and adhering to ethical standards. Two respondents agreed that

> *The professionalism of the healthcare providers encouraged me to seek care. They treated me with respect and dignity which made me feel comfortable discussing my concerns. His openness and transparency were appreciated.*
>
> - FGD III.
>
> *The trust and confidence I had in health workers were crucial in motivating me to continue seeking care. Their professionalism and expertise reassured me that I was receiving the best possible treatment and care. This trust was built over time through their consistent support and guidance, which made me feel valued as a patient. Knowing that I could rely on them for accurate information and compassionate care gave me the confidence to actively participate in my treatment*
>
> - IDI V.

4.2.6 Barriers to HIVST and Linkage to Care

4.2.6.1. Individual Barriers

i. Fear of Stigma

The study revealed that fear of stigma was the first factor hindering some respondents from seeking care for HIV. The stigma surrounding HIV/AIDS remains a pervasive issue, leading many individuals to delay testing and treatment due to fear of discrimination and judgment.

I was hesitant to take the test because of privacy concerns. I didn't want others to judge me that I have been having unprotected sex. The fear of being perceived as irresponsible or promiscuous was a significant barrier for me. I was worried about the potential stigma and discrimination I might face if my status became known. This fear of judgment made me hesitant to seek testing and care.

- FGD III.

I was worried about others might think if they find out I was taking the test. There's still a lot of stigmas around HIV. I was concerned about being judged or treated differently if my test result was positive. The fear of stigma and discrimination made me hesitant to take the test. I was also worried about the impact a positive result could have on my relationships and social life….

- FGD II.

ii. Lack of Information

Some respondents in the FGD group stated that they failed to seek care for HIV prevention and treatment due to a lack of information. Many young people may not be aware of where to go for self-testing or treatment or they may lack information about the importance of seeking care early.

I delayed seeking care because I didn't know where to go or who to talk to after the test. I felt lost and unsure about the next steps in managing my health. The lack of information about available services and resources for people living with HIV made me hesitant to seek care. I was also concerned about the quality of care I would receive and whether the healthcare providers would understand my needs. This uncertainty and lack of knowledge contributed to my delay in seeking care.

- IDI VII.

iii. Fear of Discrimination

It was also found that another barrier to seeking linkage to care services was fear of discrimination. Most respondents claimed that discrimination had a profound effect on their willingness to access healthcare services, leading to delays in testing and treatment.

> *I was afraid of being discriminated against if I tested positive. This fear made me hesitant to seek care. I was happy when I found out that I tested negative. I didn't bother visiting the facility again. The discrimination associated with HIV/AIDS was a significant barrier for me, creating anxiety about potential judgment and discrimination from others. The thought of facing negative perceptions if my status were positive made it difficult to even consider seeking further care. The relief of a negative test result was immense, as it meant avoiding the anticipated stigma and discrimination. However, it also meant I missed out on additional support and counselling that could have been beneficial.*
>
> - FGD I.

> *I know the kind of family members and friends I have. They cannot allow me to rest because I'll receive too many questions. This affected me even the time to go and see the doctor after the self-test. The constant probing and curiosity from my family and friends created a sense of pressure and anxiety. I would be bombarded with questions if they found out about my testing, I felt overwhelmed and stressed. This scrutiny made it difficult for me to find the courage and peace of mind to seek further medical care. The fear of their reactions and the potential judgment influenced my decision to delay visiting the doctor, even though I knew it was necessary.*
>
> - FGD II.

4.2.6.2 Community Barriers

i. Cultural Beliefs

The study also established that cultural beliefs were an important impediment discouraging most respondents from seeking a linkage to care. In many cultures, misconceptions may be associated with HIV/AIDS, leading to reluctance among individuals to seek testing and care. It was reported that:

> *Cultural beliefs still exist in my community about HIV/AIDS, so I was afraid of being rejected by family if they found out about my HIV status. This influenced me to go a bit late to seek care. Some people believe that HIV/AIDS is a punishment for immoral behaviour, which can lead to shame and social ostracism for those who are diagnosed.*
>
> - IDI X.
>
> *The fear of such rejection and judgment from my family and community weighed heavily on me, making it difficult to muster the courage to seek care promptly. I was constantly worried about the potential backlash and the possibility of being alienated by those I love and depend on for support. This fear delayed my decision to seek medical attention, even though I knew that early intervention was crucial for my health.*
>
> - FGD III.

ii. Lack of Support

Some respondents mentioned that a lack of support was a significant barrier to seeking care for HIV. Without a support system in place, the individual felt isolated and unsure where to turn for help. Some respondents argued the following:

I didn't have a support system in place, which made it difficult for me to seek care. I felt alone in dealing with my status. Without friends or family to provide emotional or practical support, the journey to seeking care became overwhelmingly daunting. Every step felt heavier, and the fear of facing this challenge alone made it even harder to take action. The absence of encouragement and reassurance left me feeling isolated, intensifying my anxiety about the diagnosis and the stigma that might come with it.

- IDI X.

4.2.6.3. Institutional Barriers

i. Negative Attitudes of Healthcare Workers

One respondent stated that negative experiences with healthcare workers significantly impacted individuals' reluctance to seek care for HIV. When healthcare providers are judgmental or insensitive, they may feel discouraged and reluctant to return for further care. He noted that:

I had a negative experience with a health worker who was judgmental. Their judgmental behaviour was disgusting and made me reluctant to proceed with linkage to care. The interaction left me feeling ashamed and unwelcome, which is the opposite of what I needed during such a vulnerable time. Instead of offering support and understanding, the health worker's attitude made me feel even more isolated and stigmatised.

- IDI IV.

4.3 Summary of the Findings

The following table provides a summary of the key themes, sub-themes, and exceptions from the study.

Table 1: Summary of Study Findings

THEMES	SUB-THEMES	EXCEPTS
Motivating Factors for HIVST Engagement	Media influence Recommendation Peer pressure Knowledge Perceived risk	My friend who works as a nurse recommended HIV self-testing to me. He said it was a convenient way to know my status without going to the clinic. - IDI IV. Many of my friends had already done the self-test, and they encouraged me to do it too. I didn't want to feel left out, so I decided to try it. - IDI V.
Perspectives on HIVST Process and Linkage to Care	Convenience and independence Intimidating experience Complex and demanding process Privacy concerns Emotionally taxing process Positive interactions	The process of HIV self-testing and linkage to care was emotionally draining. I felt overwhelmed and anxious about the results. Having someone to talk to and support me through the process would have made it much easier. It's important to have emotional support during such a challenging time. - FGD III. I was hesitant to take the HIV self-test because I was afraid of getting a positive result. The thought of living with HIV was scary and overwhelming. I kept putting it off because I didn't know how I would cope if the result was positive. It took me a while to gather the courage to finally take the test. - FGD II.
Support Needs During and After HIVST and Linkage to Care	Health worker support Friends and family support Counselling Follow-up care	After taking the test, I sought support from a health worker to confirm my result. They provided counselling and advice on how to stay healthy - FGD III. I told my close friend about taking the self-test, and they were very supportive. They encouraged me and offered to accompany me to the health facility. - IDI IX.
Facilitators to HIVST and Linkage to Care	Individual Facilitators - Confidentiality - Convenience Community Facilitators - Support system Institutional Facilitators - Knowledge and information - Empathy - Accessibility - Professionalism from health workers	I found self-testing convenient because it was confidential. I didn't have to worry about others knowing my status. The privacy of self-testing allowed me to take the test in my own time and space, which significantly reduced my anxiety. I sought care immediately after getting my results because my family supported me.
Barriers to HIVST and Linkage to Care	Individual Barriers - Fear of stigma - Lack of information - Fear of discrimination Community Barriers - Cultural beliefs - Lack of support Institutional Barriers - Negative attitudes of health workers	I was hesitant to take the test because of privacy concerns. I didn't want others to judge me that I have been having unprotected sex. - FGD III. Cultural beliefs still exist in my community about HIV/AIDS, so I was afraid of being rejected by family if they found out about my HIV status. This influenced me to go a bit late to seek care. - IDI X.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the findings of this study in relation to existing literature. Conclusions and recommendations based on the findings of the study are presented in this chapter as well**.**

5.2 Discussion

5.2.1 Motivating Factors for HIVST Engagement

Media influence, such as television advertisements, has emerged as a significant factor influencing young people's decision to engage in self-testing. The study emphasized that media campaigns play a significant role as an individual factor in raising awareness and sparking interest in HIV self-testing among young people. Such campaigns can serve as valuable tools for promoting HIVST and linkage to care among young people. The study findings are similar to those of previous studies that have highlighted the effectiveness of media campaigns in promoting health-related behaviors. Smith et al. (2018) found that media campaigns on HIV testing led to increased awareness and uptake of testing services among young people. Similarly, a study by Johnson et al. (2019) observed that the media promotes HIV prevention strategies among youth. This implies that using various media channels can help young people access information about self-testing. Media exposure also plays a crucial role in shaping young people's attitudes toward HIVST. For instance, in Kenya, a study by Ngure et al. (2020) revealed that televised campaigns and social media platforms significantly increased awareness and acceptance of HIVST among youth, but the research revealed that married respondents were less influenced by media campaigns due to a stronger reliance on spousal communication.

A more recent study in Nigeria by Olaniran et al. (2023) expounded that media, such as digital platforms, including WhatsApp and Instagram, have become powerful tools for reaching young audiences with tailored messages about HIVST, further enhancing the acceptance and uptake of HIVST. Similarly, unmarried respondents, particularly those living independently, relied more heavily on the media for information, making them more susceptible to media influence. Media campaigns are an essential tool for reaching young people effectively, as they align with the media consumption habits prevalent in this demographic. However, it is vital to ensure that these campaigns are culturally sensitive and specifically tailored to the diverse needs and contexts of young people to maximize their impact (Mohan, 2007). Another study showed that educational campaigns in schools and universities have been effective in informing young people about HIVST, thereby influencing their decisions to engage in the process (Musheke et al., 2021). In line with this, educational campaigns are vital to the decision that youth make in relation to HIVST.

The individual-level factors identified in the study, such as perceived risk, peer pressure, and knowledge, align with the SEM's focus on personal knowledge, attitudes, and behaviors. Educational lessons increase awareness and knowledge, which, in turn, motivates individuals to consider self-testing. Peer pressure and curiosity further drive decisions to engage in self-testing. This is consistent with the Socio-Ecological Model (SEM), which stipulates the role of personal and interpersonal factors in health behaviors. However, the study also highlights a significant barrier—fear of stigma—which is not always explicitly addressed at the socio-ecological model's individual level. This suggests that, while the model captures key motivators, it could benefit from a more explicit inclusion of fear-based barriers to provide a comprehensive understanding. I believe that the Socio-Ecological Model (SEM) could be further strengthened by explicitly incorporating fear-based barriers, which are significant yet often underrepresented at the individual level.

This adjustment could provide a more nuanced and comprehensive understanding of factors that motivate or deter young people from engaging in self-testing. Building on this observation, integrating fear-based barriers into the individual level of SEM could improve its practical application in health interventions. By acknowledging and addressing fears related to stigma, discrimination, and the emotional burden of positive results, health programs can design more empathetic and supportive strategies. For instance, interventions could include counselling services, peer support groups, and confidential follow-up care pathways to help individuals overcome psychological barriers. Such enhancements would make SEM more responsive to the real-world challenges faced by young people in adopting self-testing practices.

Similarly, a qualitative study conducted by Mason et al. (2022) on factors that promote uptake of HIV self-testing among young people in Nigeria revealed beliefs and values about HIV and HIVST by young people in Nigeria. This study found that young people had positive perceptions of HIV and HIVST. The study also found that young people have a variety of positive attitudes towards HIVST. The highly convenient and discreet nature of HIVST, as well as the reduced potential of experiencing stress due to long travel times, meant that providing HIVST would potentially increase access to HIV testing services among individuals who may have limited access to health facilities.

Health worker recommendations were another institutional factor influencing young people's decision to engage in self-testing. It was discovered that recommendations from healthcare providers built trust and confidence in the testing process. This finding implies that trusted interpersonal networks can promote health-seeking behaviors among young people. These recommendations not only provide valuable information but also serve as a form of social support, encouraging individuals to take proactive steps towards their health. This finding aligns with that of a study by Brown et al. (2017), which demonstrated that recommendations significantly increase HIV testing uptake among young people.

Thus, healthcare providers hold a unique and powerful position to influence health behaviors, especially among young people. Their recommendations not only build trust but also offer a critical form of social support that can significantly enhance the uptake of health services, such as HIV self-testing.

Peer pressure also played a role in influences young people's decisions to engage in self-testing. It has been widely documented as a determinant of health behaviors among young people. Previous studies have shown that peer support can positively influence HIV testing uptake and other health-related behaviors. Similarly, White et al. (2016) found that peer support significantly increased HIV testing uptake among young people. Thus, peer-led interventions can promote self-testing and other health behaviors among young people. When comparing male and female respondents, differences were noted in the impact of peer pressure on HIV self-testing decisions. Female respondents experienced greater peer pressure because of societal expectations and norms regarding sexual health and responsibility. In contrast, male respondents were less influenced by peer pressure, prioritizing personal autonomy and privacy in their health decisions. From my perspective, the role of peer pressure in health behavior is complex and multifaceted, but it undeniably plays a pivotal role in shaping young people's decisions, including those related to HIV self-testing. Harnessing peer influence through structured, peer-led interventions could, therefore, be a highly effective strategy for promoting healthier behaviors among youth.

Educational influence, such as learning about HIV testing and counselling in a biology class, was another factor that influenced young people's decisions to engage in self-testing. Education plays a critical role in increasing awareness and knowledge of HIV-testing options. Similarly, Green et al. (2018) found that educational interventions led to a significant increase in HIV testing among adolescents. Integrating HIV education into school curricula can increase the awareness and uptake of HIVST among young people.

Among married and unmarried respondents, educational influence on HIV self-testing decisions varied significantly. Married respondents placed greater value on the health information received from trusted sources, such as healthcare providers, rather than educational settings. Unmarried respondents, particularly younger individuals still in school, were likely to be more influenced by formal education in HIV testing. I believe that educational interventions, particularly those integrated into school curricula, are crucial for increasing awareness and knowledge about HIV self-testing among young people. This education not only informs but also empowers students to make informed decisions regarding their health, potentially leading to higher rates of HIV testing and better health outcomes.

The last factor that influenced young people's decisions to engage in HIVST was perceived risk. Perceived risk is a powerful motivator for behavior change as it drives individuals to seek information and take action. Black et al. (2019) confirmed that the perceived risk of HIV is a significant predictor of testing uptake among young people. This clearly indicates that curiosity influences young people's uptake of HIVST. Thus, perceived risk is a powerful motivator for behavior change, particularly among young people, who are naturally inclined to explore and learn. By leveraging this perceived risk through targeted messaging and accessible resources, we can potentially increase the uptake of HIV self-testing among this demographic group.

5.2.2 Perspectives on HIVST Process and Linkage to Care

The study identified convenience and autonomy, which are individual factors of SEM, as important elements that contribute to the positive experience of the process of HIVST and linkage to care. Many young people found the process incredibly convenient and empowering. This is consistent with the findings of the studies by Lapsley (2020) and Ritchwood et al. (2019), which revealed that convenience and autonomy were perceived as positive elements that encouraged individuals to test for HIV.

However, the study also uncovered challenges, with many respondents expressing fear and intimidation, particularly regarding potential positive results. This fear of a positive result was a significant barrier, echoing previous findings that fear can deter individuals from testing and seeking care (Lapsley, 2020). I find it encouraging that the elements of convenience and autonomy are recognized as positive aspects of the HIV self-testing process. These factors are crucial in making the testing process more appealing and accessible to young people, who often prioritize ease and independence in their health-related decisions.

Another perspective towards the process of HIVST and its linkage to care was seen in terms of the need for clear instructions and support during the testing process, which is a policy and institutional factor identified during the study. Some respondents reported confusion about using test kits and lack of available support. This echoes the outcome of Wilson et al. ’s (2021) study that HIVST and linkage to care are needed for user-friendly testing procedures and accessible support services. The confusion reported by some respondents about using test kits underscores the need for clearer instructions and more accessible support services. Ensuring that young people have the necessary resources and support to navigate the self-testing process is crucial for improving the outcomes. Fear of stigma was another prominent theme, hindering the linkage to care for those who tested positive. Variations between HIV-positive and HIV-negative respondents in terms of stigma as a barrier are notable. HIV-positive respondents had a heightened fear of stigma, both from their community and from healthcare providers, due to past experiences of discrimination. HIV-negative respondents, while still concerned about stigma, were more focused on the fear of a positive result and potential social implications. In my opinion, fear of stigma remains one of the most significant challenges in promoting HIV self-testing and its linkage to care. It is essential to develop strategies that not only provide practical support but also address deeply ingrained societal attitudes that contribute to this fear.

The study findings indicated that many respondents experienced emotional tolerance during the testing process, with many respondents describing it as emotionally draining. Nevertheless, positive interactions with health workers improved the testing experience. Respondents who had positive experiences with health workers during the linkage to the care process reported feeling more comfortable and supported. These findings are related to studies by Rujumba et al. (2021) and Hector et al. (2018), which showed that health workers play significant roles in providing empathetic and supportive care during the process of HIVST and linkage to care. The emotional toll of HIV self-testing highlights the need for more empathetic and supportive interactions between health workers and young people. Such interactions can make a substantial difference in the overall testing experience, helping mitigate the stress and anxiety associated with the process. Similarly, a study conducted by Obiezu et al. (2021) emphasized that the majority of those who previously tested for HIV described their past testing experiences and the attitudes of healthcare workers as another important deterrent from testing at the hospital, and thus the preference for wanting to use the oral HIVST kit. Some people cited a lack of compassion between the tester and the patient, as well as a concern for test result manipulation at health institutions, as key factors in their preferences for HIV self-testing methods. For those who had never been tested, the most frequently cited reason for choosing oral-based HIVST was the issue of cross-infection related to the multiple use of disposable needles while using blood-based HIV testing at traditional testing venues.

Friend and family support, which are both interpersonal and community factors in the SEM, have been unveiled as support needs of young people during the process of HIVST and linkage to care. This study found that social support networks are vital in alleviating the stress associated with self-testing and ensuring follow-up care. Friends and family provide emotional encouragement and practical assistance, which helps young people address the uncertainty and fear associated with HIVST.

The study findings are similar to those of Harklerode et al. (2019), which corroborates the finding that social support is needed during the linkage to care. According to this study, this support can mitigate feelings of isolation and stigma, encouraging timely and appropriate medical follow-up. The study also established the profound impact of family understanding and reassurance on an individual's willingness to seek care. When family members provide unconditional support, they reduce their fear of stigma and rejection, which are significant barriers to seeking care. Similarly, Harklerode et al. (2019) found that familial support greatly improves adherence to care and treatment regimens. Female and male respondents differed in their use of friends and family as support systems during HIV self-testing and their linkage to care. Female respondents place a higher value on family support, especially in societies where women are more strongly connected to family structures. Male respondents, on the other hand, depended more on peer support, placing higher value on friends' discretion and understanding than on family engagement. In my opinion, friends and family play an important role in HIV self-testing and connection to the care process. Their emotional and practical support is vital for helping young people navigate the challenges and uncertainties of self-testing.

The study also found that counselling support from health workers was another need among young people. It was revealed that counselling provided a safe space for individuals to express their fears and concerns, receive emotional support, and gain a clearer understanding of their health status and the next steps. This implies that the therapeutic relationship between the counsellor and individual can significantly reduce anxiety and promote a sense of security and readiness to engage in care. A study conducted by Aizobu et al. (2023) supports the effectiveness of counselling in improving mental health outcomes and linkage to care. The study also revealed that emotional support helps individuals process their diagnosis and begin their journey toward acceptance and management of their condition.

The stigma associated with HIV can be overwhelming, and without adequate emotional support, individuals might struggle to engage in healthcare services. The findings of this study are also comparable to those of Spyrelis et al. (2017) and Mokgatle and Madiba (2017), who found that emotional support from peers and professionals could significantly improve the psychological well-being of people newly diagnosed with HIV, allowing for better engagement with healthcare services. Counselling support from health providers is critical in resolving young people's fears and concerns about HIV self-testing process. Effective counselling can provide emotional support and clarity that young people require, helping them participate in care.

Practical support was also highlighted as a necessity for young people during and after HIVST and as a link to care. Practical support such as clear instructions and assistance during the self-testing process is essential to ensure that young people correctly perform the test and interpret the results. This support can significantly reduce anxiety and improve overall self-testing experience. The study demonstrated that there is a need for clear and accessible instructions and assistance in the self-testing process. Practical support from knowledgeable peers can empower individuals to correctly perform the test and interpret the results, thereby reducing errors and the associated anxiety. This finding is supported by research by Nicholas et al. (2020), which revealed the importance of practical guidance in the successful implementation of HIVST and linkage to care initiatives among young people. The importance of support systems varied between the HIV-positive and HIV-negative respondents. HIV-positive respondents emphasized the need for ongoing emotional and practical support from family and friends to manage their condition. Conversely, HIV-negative respondents focused more on the reassurance and encouragement provided by their support systems during the initial HIV self-testing process.

For HIV-negative respondents, support primarily functioned as a way to mitigate anxiety and provided motivation to engage in self-testing, while HIV-positive respondents required more sustained support that extended beyond the testing phase into care and treatment.

Finally, the study identified information about available resources, services, and support systems as important needs among young people. Most respondents argued that health workers provided comprehensive information about treatment options and support services. It was therefore opined that knowledge of available resources and services empowers individuals to make informed decisions about their health and encourages engagement with care. In a study by Hlongwa et al. (2020), well-informed individuals were more likely to adhere to treatment regimens and participate in ongoing care, emphasizing the need for thorough and accessible information from healthcare providers. I believe that Providing comprehensive information about available services, resources, and support systems is critical for empowering young people to make informed decisions about their health. Knowledge is a powerful tool for encouraging engagement in care and improving health outcomes.

5.2.3 The support needs of young people during and after HIVST and linkage to care

This study found that confidentiality was a key facilitator, as individuals could test in private without fear of judgment or disclosure. This aligns with previous studies, such as Hlongwa et al. (2023), which looked at the role of confidentiality in motivating individuals to take control of their health. The ability to maintain privacy during testing encourages more people to seek testing and care, especially among young people who may be concerned about stigma and discrimination. Self-testing is perceived as empowering, allowing individuals to control their health. This finding resonates with the concept of self-efficacy, which is the belief in one's ability to perform a specific task successfully. Similarly, Muwanguzi et al. (2021) revealed that self-efficacy can be a significant factor in encouraging individuals to seek care after a reactive HIV self-test.

The confidentiality provided by HIV self-testing is a key factor in encouraging young people to take control of their health. The ability to test in private without fear of judgment is a significant motivator that should be emphasized in health promotion strategies.

The convenience and accessibility of self-testing, which allows individuals to test at home at a time that suits them, is another significant facilitator. Similar findings were reported by Chipungu et al. (2017) and Shapiro et al. (2020), who found that HIVST accessibility reduced barriers related to transportation costs and time constraints among men in Zambia and South Africa. The convenience of self-testing can overcome traditional barriers to testing and care, making it a valuable approach, particularly for young people. The convenience and accessibility of HIV self-testing are vital in overcoming traditional barriers to testing and care, particularly for young people. These factors make self-testing a valuable approach that can be tailored to fit the needs and lifestyles of young people and serve as a support for youth.

Support systems, particularly those involving family and friends, have emerged as crucial community facilitators for self-testing and seeking linkage to care among young people. The findings of this study show the importance of these relationships in providing emotional reassurance and practical assistance. Participants reported sharing their test results with friends and family members, who offered understanding, encouragement, and assurance of ongoing support. This aligns with previous studies, such as Layer et al. (2014), who found that social support from family, friends, or support groups positively influenced engagement throughout the HIV continuum of care in Tanzania. The support system plays a significant role in addressing emotional and psychological barriers, ultimately encouraging individuals to seek prompt care. Another study by Choko et al. (2019) supported the findings of the study by revealing that social support is relevant in encouraging individuals to seek care after receiving a reactive HIV self-test result.

This means that the support system not only provides emotional reassurance, but also offers practical assistance, such as accompanying individuals to health facilities, thereby overcoming logistical barriers to care. Support systems, particularly those involving family and friends, are crucial in encouraging young people to seek care after self-testing. These relationships provide emotional reassurance and practical assistance needed to navigate the healthcare process.

The study highlighted several institutional facilitators that influence self-testing and linkages to care among young people. Knowledge and information provided by health workers helped individuals better understand their condition and encouraged them to take proactive steps to manage their health. Based on the findings of Hlongwa et al. (2023), well-informed individuals are more likely to seek care and adhere to treatment. Empathy, as shown by healthcare providers, was another important support need identified in this study. Participants mentioned that when healthcare providers demonstrated empathy, they felt understood, cared for, and supported, which alleviated the fear and anxiety surrounding testing and treatment. A study by Layer et al. (2014) concluded that empathy from healthcare providers positively influences engagement in the HIV continuum of care in Tanzania. In terms of variations between married and unmarried respondents, the influence of healthcare providers as facilitators of HIV self-testing and linkages to care appeared to differ. Married respondents cited their healthcare providers as a critical source of guidance, sometimes in conjunction with spouses' support. Unmarried respondents, particularly those with limited social support, relied more heavily on healthcare providers for both information and emotional support, making the role of the provider even more central to their decision-making processes. The knowledge and empathy provided by healthcare providers are critical in supporting young people during and after the self-testing process. These institutional facilitators can make a significant difference on whether young people choose to engage in care.

Thus, compassionate care can play a significant role in encouraging individuals to seek care and to remain engaged in treatment. These findings are similar to those of Setswe and Mnisi (2022) in Botswana. The researchers found that mobile counselling services, delivered through phone calls or messaging apps, are effective in providing immediate emotional support to young people following HIVST, helping to reduce anxiety, and encouraging timely linkage to care.

The accessibility of self-test kits at health facilities has been highlighted as a facilitator of HIV testing. Most respondents stated that easy access to kits eliminated barriers related to availability and encouraged more people to be tested. By making self-test kits readily available at health facilities, young people can access them conveniently during routine visits or when seeking other health services. This implies that young people were able to access the self-test kits. This is consistent with the findings of Choko et al. (2019), who found that simple access to self-test kits improved the chance of persons obtaining confirmatory testing and commencing ART in Zambia. According to this study, improved access to testing services can help overcome availability constraints and encourage more people to be tested. The availability of self-testing kits in health facilities and pharmacies is an important factor in encouraging HIV self-testing. Making these kits more widely available can help overcome availability constraints and encourage more young people to be tested.

In a systematic review conducted by Zeleke et al. (2024), 13 of the 17 papers with quantitative data reported on the acceptability of HIVST, using willingness or preference to self-test as an acceptance rate, either during the study or in the future, when HIVST becomes available to youth. Various measurement methods have been used for this purpose. Most studies have defined acceptability as participants' anticipated willingness or actual acceptance of self-testing, demand to screen for HIV, choice of HIVST as a testing option, consent and usage of self-test kits, and ranking of their preference for self-testing devices.

Nine of the 13 publications regarded acceptability as the primary goal of investigation. In two articles, acceptability was measured as a composite score from three items in a 5-point Likert scale which rated the participants' preference for self-testing, putting off self-testing, and the likelihood of telling others about HIVST and from 8 items in a "yes" and "no" response options.

The professionalism of health workers, including treating individuals with respect and dignity, was identified as the last facilitator. Professionalism helped build trust and confidence in healthcare providers, encouraging individuals to engage in care. This finding is supported by research by Layer et al. (2014), who found that negative experiences with healthcare workers, including judgmental or insensitive behavior, significantly impacted individuals' reluctance to seek care. Healthcare workers' professionalism, including treating individuals with respect and dignity, is essential in building trust and confidence in healthcare services. Positive patient-provider relationships are crucial for improving engagement in care and improving treatment outcomes.

The Socio-Ecological Model (SEM) integration of individual, community, and institutional elements provides a comprehensive framework for understanding the facilitators and barriers to HIV self-testing and linkage to care. The findings align with the model by identifying facilitators at each level: individual motivation, community support, and institutional quality. Institutional factors such as the professionalism and empathy of health workers play a critical role in supporting young people during and after self-testing. The Socio-Ecological Model (SEM) institutional level focuses on the influence of organizations and systems. This is in line with the findings of the study that health worker support is essential for an effective linkage to care. Positive interactions with healthcare providers, clear information, and emotional support were found to be significant facilitators. This finding supports the model's emphasis on institutional quality and accessibility.

5.2.4 Barriers and facilitators to HIVST and linkage to care among young people

However, barriers such as fear of stigma, lack of information, and negative health worker attitudes highlight areas in which the model can be improved. The model adequately captures multi-level influences but could benefit from a more explicit focus on addressing stigma and discrimination across all levels. Although the Socio-Ecological Model is effective in framing the discussion, it requires adaptation to fully encompass the specific barriers identified in the study. While the Socio-Ecological Model provides a comprehensive framework, it can be further improved by incorporating a more explicit focus on stigma and discrimination at all levels. This adaptation would help fully capture the barriers that young people face in engaging with HIV self-testing and linkage to care.

Fear of stigma was observed to be a significant barrier to HIV self-testing and linkage to care among young people in the study. Concerns about others' judgments demonstrate how pervasive societal attitudes and misconceptions about HIV can deter individuals from seeking necessary care. The fear of being judged for potentially having unprotected sex or being HIV-positive can lead to delays in testing and treatment. This finding is consistent with that of Hlongwa et al. (2023), who noted that stigma and discrimination were major obstacles to linkage to care in sub-Saharan Africa. Similarly, Layer et al. (2014) found that stigma and discrimination negatively affect engagement in the HIV continuum of care. Addressing the fear of stigma is crucial for promoting HIV self-testing and linkage to care among young people. Developing strategies that directly confront these fears and provide support can help reduce the impact of stigma on health-seeking behaviors. These findings are similar to those of a study conducted by Liu et al. (2016), who emphasized that a common reason for not seeking HIV care after diagnosis was participants' perceptions of discriminatory attitudes from healthcare providers.

The participants complained about the unprofessionalism of some healthcare workers during their conversations. Negative expressions from health workers heightened their anger and anxiety and decreased their motivation to use HIV-care services.

The lack of information was another barrier identified in this study. This lack of knowledge about available services and the importance of timely care can prevent young people from accessing necessary follow-up care after an HIV self-test. This finding is supported by Hlongwa et al. (2023), who identified that inadequate information about HIV care services can impede the linkage to care. Korte et al. (2020) observed that comprehensive information and education are crucial for improving health outcomes. The provision of clear, accessible information about HIV testing, treatment options, and locations of care facilities is essential for overcoming this barrier. Lack of information about available services and the importance of timely care are significant barriers that need to be addressed through better education and communication strategies. Providing clear, accessible information is essential to ensure that young people are aware of, and can access, the care they need.

Another barrier identified in this study was the fear of discrimination. This fear of being ostracized or treated unfairly because of an HIV diagnosis can significantly deter individuals from engaging in necessary health services. The study findings resonate with those of Aizobu et al. (2023), who found that concerns about the implications of a positive HIV result, including changes in relationships and social support networks, contribute to avoidance of follow-up care. Additionally, Layer et al. (2014) identified disrespectful treatment by service providers as a barrier to care engagement. The fear of discrimination is a powerful deterrent that must be addressed to encourage young people to engage in HIV self-testing and follow-up care. Efforts to reduce discrimination and provide a more supportive environment are crucial to improving health outcomes.

Furthermore, Mphande et al. (2021) conducted in-depth interviews with 57 adult outpatients who utilized HIVST to explore barriers and facilitators to outpatients' preference for facility HIVST. This study revealed that HIVST facilities had new facilitators, including increased motivation to test due to seeing others test, immediate support from health professionals, and easy access to additional HIV services in health facilities. In terms of barriers, the study found that the strategy was associated with fear of judgement from others and unwanted status disclosure due to a lack of privacy.

Cultural beliefs and practices have emerged as significant community barriers to HIV self-testing and linkage to care among young people. These beliefs can create an environment of fear and shame, which deters individuals from seeking timely testing and care. This finding aligns with that of Layer et al. (2014), who found that cultural stigma around HIV significantly affected individuals' willingness to engage in the HIV care continuum. Harklerode et al. (2019) also observed that cultural barriers, including alternative health systems, can impede the linkage to care. Cultural beliefs and practices are significant barriers that must be considered when promoting HIV self-testing and linkage to care among young people. Tailoring interventions to address these cultural factors is essential to ensure their effectiveness.

The absence of a supportive family network was another critical community barrier identified in this study. This lack of support can lead to delays in seeking care or complete avoidance of health services. Muwanguzi et al. (2021) confirmed the results of their study in that it revealed that incentives and support systems can significantly improve linkage to care after an HIV self-test. Layer et al. (2014) further emphasized the importance of social support, noting that support from family, friends, or community groups positively influences engagement in HIV care. The absence of a supportive family network can have a profound impact on young people's decision to seek care after self-testing. Therefore, strengthening community and social support systems is crucial in encouraging timely and appropriate health-seeking behaviors.

The negative attitudes of healthcare workers significantly hindered self-testing and the linkage to care among young people. Negative interactions, characterized by judgmental or insensitive behavior, can reinforce fear of stigma and discrimination, making the healthcare environment feel unsafe and unwelcoming. This finding resonates with that of Layer et al. (2014), who noted that disrespectful treatment from service providers negatively impacted engagement in HIV care. Furthermore, Hlongwa et al. (2023) highlighted that stigma and discrimination from healthcare providers are significant barriers to linkage to care. Negative attitudes among healthcare workers are a serious barrier to HIV self-testing and are linked to care among young people. Comprehensive training programs that emphasize empathy, professionalism, and non-judgmental care are essential for addressing this issue. These findings contradict a study conducted by Li et al. (2024), which outlines the observed barriers and facilitators of receiving HIV services when mapped to each level of the Socio-Ecological Model (SEM). Of the 20 publications, 18 highlighted impediments and facilitators on an individual basis. For example, education and socioeconomic status (SES). Four aspects were suggested at the social level: interpersonal dynamics and social support. Eleven elements were listed at the community level, including outreach and service delivery, and six at the structural level, including health insurance policies and legal precarity. Seventy percent of the publications focused only on hurdles, whereas 30% identified both challenges and facilitators in accessing HIV services.

5.3 Conclusions

5.3.1 Motivating Factors for HIVST Engagement

This study revealed several factors that influence young people's decisions to engage in HIVST. Media influence played a significant role, with respondents citing television advertisements as key motivators. Recommendations from health workers, particularly those perceived as trustworthy and knowledgeable, also encourage HIVST.

Peer pressure and educational influence were notable factors: many respondents were motivated by their classmates' experiences and lessons learned in biology classes. Additionally, perceived risk, especially after multiple unprotected sexual activities, drives some young people to self-test.

5.3.2 Perspectives of Young People on the Process of HIVST and Linkage to Care

Young people have mixed perspectives on the process of HIVST and its linkage to care. Many young people found HIVST convenient and appreciated the autonomy it provided. However, the process was also perceived as intimidating because of the fear of a positive result. Respondents reported a need for clear instructions and support during the testing process to alleviate anxiety. Fear of stigma and discrimination was a significant concern, which potentially hindered the linkage to care. It was also found that the process was emotionally taxing, particularly without adequate support. Nevertheless, positive interactions with health workers significantly improved their experience. These findings are consistent with previous studies that revealed that user-friendly self-testing kits, supportive environments, and the role of health worker attitudes influence users' experiences towards the process of HIVST and linkage to care.

5.3.3 The Support Needs of Young People During and After HIVST and Linkage to Care

The study identified the critical support needs of young people during and after HIVST and their linkage to care. Health worker support was paramount, with respondents seeking confirmation of results, counselling, and advice on staying healthy. Friends and family support were equally important, providing emotional reassurance and practical assistance, such as accompanying individuals to health facilities. Counselling services were essential for coping with anxiety and understanding post-test care. Follow-up care, including ongoing monitoring and support from health workers, is also highlighted.

These findings imply that support systems, including professional counselling and family involvement, enhance the effectiveness of HIVST and care linkages.

5.3.4 The Facilitators and Barriers to HIVST and Linkage Among Young People

The study identified several facilitators and barriers to HIV self-testing and links to care. Confidentiality, self-efficacy, and convenience were significant facilitators, allowing young people to test discreetly and independently. However, barriers such as fear of stigma, lack of information, and fear of discrimination significantly hinder the process. Cultural beliefs and a lack of family support emerged as community barriers, while the negative attitudes of health workers were identified as institutional barriers. These findings demonstrate the complex interplay of individual, community, and institutional factors in health behaviors.

5.4 Contributions of the Study to the Reproductive Health

The study has made the following unique contributions to the reproductive health:

- This study contributes to reproductive health by identifying key motivators, such as media influence, peer pressure, and health worker recommendations for HIV self-testing. This information provides valuable insights for designing targeted interventions to encourage safer sexual practices and early HIV detection among the youth.
- This study highlights the emotional toll of HIVST, including fear of a positive result and stigma. Understanding these barriers will help reproductive health programs develop better support strategies for young individuals undergoing HIV testing.
- The findings show that family, friends, and health worker support are crucial during and after HIVST. This emphasizes the importance of integrating social networks into reproductive health services to improve care-seeking behaviors.

- This study demonstrates that educational lessons play a pivotal role in motivating young people to engage in HIV testing. This underscores the need to strengthen reproductive health education to promote informed decision-making about sexual health.
- The study revealed factors such as confidentiality and convenience as facilitators, while stigma and health worker attitudes acted as barriers. These findings will help reproductive health services address institutional and community challenges in improving healthcare access.
- The findings of this study provide a foundation for creating youth-friendly health interventions to cater to the unique needs of young people. This includes designing services that prioritize autonomy, confidentiality, and empathetic health-worker interactions.

6.3 Recommendations for Policy Making

According to the findings of the study, the following recommendations are made:

- Implementation of the Youth-Centric Media Campaigns to Promote HIVST. This study revealed that media influence and peer pressure are significant motivators for young people to engage in HIVST. Therefore, targeted media campaigns that appeal to young people are necessary. These campaigns should highlight the convenience and privacy of HIVST, addressing fear of stigma and misconceptions about HIV/AIDS.
- Incorporating HIVST promotion into routine health consultation. These findings emphasize the need for health workers to be proactive in encouraging HIVST, as many young people value guidance from trusted health professionals. Training healthcare workers to recommend HIVST during regular health consultations, particularly in youth-focused health services, can increase the testing rates.

This should include clear explanations of how HIVST works, its benefits, and the importance of follow-up care, making it easier for young people to make informed decisions regarding testing.

- Development of Clear Youth-Friendly Instructional Materials for HIVST. The study highlighted that young people often struggle with understanding how to use HIVST kits because of a lack of clear guidance. To address this, it is recommended that easy-to-understand instructional materials are developed. These materials should include visual aids, step-by-step guides, and video tutorials that are accessible through digital platforms. This will empower young people to perform the test correctly and confidently interpret their results, thereby reducing the fear of error.
- Establishing Helplines and Digital Support Platforms for HIVST Users. Young people in the study expressed the need for emotional support during the HIVST process, especially after receiving results. To address this, helplines and online support platforms should be established where users can access real-time guidance and counselling. This immediate support can help mitigate the anxiety associated with testing and ensure that young people have access to accurate information and emotional reassurance throughout the process.
- Expanding Pretest and Posttest Counselling Services. This study revealed that counselling support was essential for young people, particularly in managing the emotional impact of HIVST results. To meet this need, there should be an increase in the availability of pre- and post-test counselling services. This expansion will ensure that young people can receive the psychological support necessary for coping with both positive and negative results, facilitating a better linkage to care.
- Regular Training for Health Workers on Empathy and Non-Discriminatory Practices.

- The study identified fear of discrimination and negative attitudes from healthcare workers as significant barriers to young people seeking follow-up care after HIVST. To address this, health workers should undergo regular training in non-discriminatory practices, empathy, and positive patient interactions. Creating a more supportive and welcoming environment within healthcare settings will encourage young people to engage in care and seek necessary treatment without fear of judgment or stigma.

6.4 Recommendations for Further Research

Based on the findings of this study, the following areas of research can be explored.

- Investigate how targeted social media campaigns influence young people's decisions to engage in HIVST. This study analyzed the effectiveness of various social media platforms and message types in reaching and motivating young people.
- Examine user experience with different types of HIVST kits, focusing on ease of use, clarity of instructions, and overall satisfaction. This study could help improve the design and distribution of self-testing kits.
- Investigate the psychological effects of HIV self-testing on young people, including their anxiety levels before and after testing, and how these affect their willingness to seek linkage to care.
- Analyze the effectiveness of various support services (helplines, online platforms, and in-person counselling) provided during and after self-testing. This study identified the most effective support methods for young people.

6.5 Strengths of the Study

- This study included participants with varied backgrounds and experiences, thus enriching the findings. This diversity helped to identify a broader range of facilitators and barriers to HIVST.
- These findings provide actionable recommendations for policy and practice. These suggestions have addressed gaps in education, support systems, and healthcare service delivery.
- The study specifically highlighted the unique experiences and challenges faced by young people with HIVST. This focus has contributed to the development of youth-centric solutions for improving testing and care services.

6.6 Limitations of the Study

- This study focused on a relatively small sample size, which may limit the generalizability of the findings. Larger studies across different regions will provide broader insights.
- Given the sensitive nature of HIV testing and linkage to care, participants may hesitate to share their personal experiences deeply. This could have limited the depth of the information obtained.
- FGDs may have been influenced by the dominant voices within the group. This could have limited the diversity of the perspectives shared during the discussions.
- However, these findings may not be generalizable to other regions or populations. This study focused on a specific group of young people, which may not capture variations in experiences elsewhere.

- Despite efforts to maintain objectivity, the presence and demeanor of the interviewer may have influenced the participant responses. This could have affected the authenticity of the data collected.

6.7 Conclusion

The findings of this study have significant implications for both public health policy and implementation of HIVST programs, particularly for young people. The results highlighted that HIVST served as a vital tool in increasing HIV testing rates, especially among populations that were reluctant to engage with traditional health facilities because of stigma, inconvenience, and fear of discrimination. The convenience and autonomy offered by HIVST empowers young people to take control of their health; however, the barriers uncovered in this study suggest that a supportive ecosystem is critical for the success of HIVST initiatives.

One of the major implications of this study is the need for targeted educational intervention. This study found that factors such as media influence, peer pressure, and curiosity were significant motivators for young people to engage in HIVST. This finding suggests that public health campaigns could leverage these motivations by using youth-friendly media platforms to promote HIVST and address the fears surrounding it, particularly the fear of stigma and testing positive. Providing accurate and accessible information about HIVST procedures and the importance of linkage to care could bridge knowledge gaps that hinder the effective use of HIVST.

Moreover, the findings underscore the importance of creating supportive environments that facilitate both self-testing and subsequent care-seeking behaviors. Young people expressed a clear need for emotional support during the HIVST process, particularly from families and health workers. This suggests that efforts to promote HIVST must focus on fostering supportive networks within communities and families.

Training healthcare workers to offer non-judgmental, empathetic care is essential for alleviating the fear of discrimination and ensuring that young people feel comfortable seeking care after testing. Policies that mandate such training can play a key role in making HIVST more approachable and increasing the likelihood of linkage to care.

Finally, the study emphasized the need for systemic changes at the institutional level to ensure that HIVST is accessible, affordable, and accompanied by clear, user-friendly instructions. Health facilities must not only provide easy access to self-test kits, but also ensure that individuals are equipped with the resources and knowledge to navigate the testing process confidently. Institutionalizing follow-up care and making it a seamless part of HIVST experience is crucial for improving health outcomes.

While HIVST present a promising strategy to expand HIV testing, the effectiveness of this approach is contingent on addressing the multifaceted barriers identified in this study. By enhancing educational efforts, fostering supportive environments, and ensuring health system readiness, public health policies can create a sustainable ecosystem that encourages HIVST and supports individuals in accessing the care they need. The implications of these findings extend beyond testing rates, pointing towards a more holistic approach to HIV prevention and care that is youth-centered and culturally sensitive.

REFERENCES

Aizobu, D., Wada, Y. H., Anyanti, J., Omoregie, G., Adesina, B., Malaba, S., ... Idogho, O. (2023, April 27). Enablers and barriers to effective HIV self-testing in the private sector among sexually active youths in Nigeria: A qualitative study using journal map methodology. *PLoS OneE, 18*(4), e0285003. https://doi.org/10.1371/journal.pone.0285003.

Bans-Akutey, A., & Tiimub, B. (2021, August). Triangulation in research. *Academic Letters, 3392*, 1–6.

Chipungu, J., Bosomprah, S., Zanolini, A., Thimurthy, H., & Chilengi, R. (2017). Understanding linkage to care with HIV self-test approach in Lusaka, Zambia: A mixed method approach. *PLoS One, 12*(11), e0187998. https://doi.org/10.1371/journal.pone.0187998.

Colorafi, K. J., & Evans, B. (2016). Qualitative descriptive methods in health science research. *HERD: Health Environments Research & Design Journal, 9*(4), 16–25. https://doi.org/10.1177/1937586715614171.

Dawadi, S. (2020). Thematic analysis approach: A step-by-step guide for ELT research practitioners. *Journal of NELTA, 1*(1), 71. https://doi.org/10.3126/nelta.v25i1-2.49731.

Doyle, L., McCabe, C., Keogh, B., Brady, A., & McCann, M. (2020). An overview of the qualitative descriptive design within nursing research. *Journal of Research in Nursing, 25*(5), 443–455. https://doi.org/10.1177/1744987119880234.

Dovel, K., Shaba, F., Offorjebe, O. A., Balakasi, K., Nyirenda, K., Phiri, K., ... Hoffman, R. M. (2020, February). Effect of facility-based HIV self-testing on uptake of testing among outpatients in Malawi: A cluster-randomised trial. *The Lancet Global Health, 8*, e276-e287. Retrieved from http://www.thelancet.com/lancetgh.

FHI360/LINKAGES Nepal. (2018). *Report of exploring the uptake and acceptability of HIV self-testing for men who have sex with men, male sex workers, and transgender people in Nepal*. Kathmandu, Nepal: FHI360/LINKAGES.

Harichund, C., Karim, Q. A., Kunene, P., & Simelane, M. (2019). HIV self-testing as part of a differentiated HIV testing approach: Exploring urban and rural adult experiences from

KwaZulu-Natal, South Africa using a cross-over study design. *BMC Public Health, 19*, 53. https://doi.org/10.1186/s12889-018-6366-9.

Harrison, L., Kumwenda, M., Nyirenda, L., et al. (2022). "You have a self-testing method that preserves privacy, so how come you cannot give us treatment that does too?" Exploring the reasoning among young people about linkage to prevention, care, and treatment after HIV self-testing in Southern Malawi. *BMC Infectious Diseases*, *22(Suppl 1)*, 395. https://doi.org/10.1186/s12879-022-07231-7.

Hector, et al. (2018). Acceptability and performance of a directly assisted oral HIV self-testing intervention in adolescents in rural Mozambique. *PLoS One, 13*(4), 1-11. doi:10.1371/journal.pone.019539.

Hilton, L. G. (2017). Crowdsourcing qualitative thematic analysis. *American Journal of Evaluation, 40*(4), 575–589. https://doi.org/10.1177/1098214019836674.

Hlongwa, M., Hlongwana, K., & Makhunga, S. (2023). Linkage to HIV care following HIV self-testing among men: Systematic review of quantitative and qualitative studies from six countries in sub-Saharan Africa. *AIDS and Behavior, 27*(651-666). https://doi.org/10.1007/s10461-022-03800-8.

Hlongwa, M., Mashamba-Thompson, T., Makhunga, S., & Hlongwana, K. (2020). Barriers to HIV testing uptake among men in sub-Saharan Africa: A scoping review. *African Journal of AIDS Research, 19*(1), 13-23. https://doi.org/10.2989/16085906.2020.1725071.

Indravudh, P. P., Chilongosi, R., Nzawa, R., Neuman, M., Kumwenda, M. K., Nyirenda, R., . . . Corbett, E. L. (2020). Effect of door-to-door distribution of HIV self-testing kits on hiv testing and antiretroviral therapy initiation: A Cluster randomised trial in Malawi. *BMC Global Health, 6,* e004269. doi:10.1136/bmjgh-2020-004269

Johnson, C., Neuman, M., Mcpherson, P., Choko, A., Quinn, C., Wong, V. J., . . . Corbett, E. L. (2020). Use and awareness of and willingness to self-test for HIV: An analysis of cross-sectional population-based surveys in Malawi and Zimbabwe. *BMC Public Health, 20*(779), 1-13. doi:10.1186/s12889-020-08855-7.

Joseph, D. L., Wall, K. M., Naidoo, N., Naidoo, D., Xaba, G., Serao, C., ... Bekker, L. G. (2022). HIV testing and linkage to ART following secondary distribution of HIV self-test kits to male partners of women living with HIV: A pilot randomized control trial in Mpumalanga, South Africa. *Journal of the International AIDS Society*, *25*(6), e25937.

Kaunda W, Umali T, Chirwa M. E, Nyondo-Mipando A. L. (2021). Assessing facilitators and barriers to referral of children under the age of five years at Ndirande Health Centre in Blantyre, Malawi. *Global Pediatric Health, 8*. Doi:10.1177/2333794X211051815.

Kelvin, E. A., George, G., Mwai, E., Kinyanjui, S., Romo, M. L., Odhiambo, J. O., ... Mantell, J. E. (2019). A randomized controlled trial to increase HIV testing demand among female sex workers in Kenya through announcing the availability of HIV self-testing via text message. *AIDS and Behavior, 23*(1), 116-125. https://doi.org/10.1007/s10461-018-2248-5.

Korte, J. E., Kisa, R., Vrana-Diaz, C. J., ... Mavodza, C. (2020). HIV oral self-testing for male partners of women attending antenatal care in Central Uganda: Uptake of testing and linkage to care in a randomized trial. *Journal of Acquired Immune Deficiency Syndromes, 84*(3), 271-279. https://doi.org/10.1097/QAI.0000000000002341.

Lapsley, R. (2020). *Experiences, perceptions, and suggestions for future use of HIV self-testing through community distribution channels among adolescents and young adults in Nairobi, Kenya*. Unpullished masters dissertation, University of Washington, Department of Global Health.

Li K, Thaweesee N, Kimmel A, Dorward E, Dam A (2024). Barriers and facilitators to utilizing HIV prevention and treatment services among migrant youth globally: A scoping review. *PLoS Glob Public Health 4*(2): e0002851. https://doi.org/ 10.1371/journal.pgph.0002851.

Malawi National Statistical Office. (2019). *Malawi - Fifth integrated household survey 2019–2020.* Zomba: Malawi National Statistical Office. doi:https://microdata.worldbank.org/index.php/catalog/381.

Malawi National Statistical Office. (2020). *Malawi population-based HIV Impact Assessment (2020-2021). (2020). Population-based HIV surveys*. https://doi.org/10.1186/s12879-022-07231-7.

Masters, S. H., Agot, K., Obonyo, B., Napierala Mavedzenge, S., Maman, S., &Thirumurthy, H. (2016). Promoting partner testing and couples testing through secondary distribution of HIV self-tests: Randomised clinical trial. *PLoS Medicine, 13*(e1002166). DOI????

Mavodza CV, Mackworth-Young CRS, Bandason T, Dauya E, Chikwari CD, Tembo M, Apollo T, Ncube G, Kranzer K, Ferrand RA, Bernays S. (2021). When healthcare providers are supportive, 'I'd rather not test alone': Exploring uptake and acceptability of HIV self-testing for youth in Zimbabwe - A mixed method study. *Journal of the International AIDS Society*, S24(9), e25815. doi: 10.1002/jia2.25815. PMID: 34569710; PMCID: PMC8474521.

McLeroy KR, Bibeau D, Steckler A, Glanz K. (1988). An ecological perspective on health promotion programs. *Health Education Quartely. Winter;15*(4), 351-77. Doi: 10.1177/109019818801500401. PMID: 3068205.

Mokgatle, M. M., & Madiba, S. (2017). High acceptability of HIV self-testing among technical vocational education and training college students in Gauteng and North West Province: What are the implications for the scale up in South Africa? *PLoS One, 12*(1), e0169765. doi:10.1371/journal.pone.0169765.

Musheke, M., et al. (2021). A systematic review of qualitative findings on factors enabling and deterring uptake of HIV testing in sub-Saharan Africa. *BMC Public Health, 13*(1), 1–16.

Muwanguzi, P. A., Nelson, L. E., Ngabirano, T. D., et al. (2022). Linkage to care and treatment among men with reactive HIV self-tests after workplace-based testing in Uganda: A qualitative study. *Frontiers in Public Health, 10*, 650719. https://doi.org/10.3389/fpubh.2022.650719.

Ngoc, B. V., Majam, M., Green, K., Tran, T., Hung, M. T., Que, A. L., ... Le Duy, C. H. (2023). Acceptability, feasibility, and accuracy of blood-based HIV self-testing: A cross-sectional study in Ho Chi Minh City, Vietnam. *PLoS Global Public Health, 3*(2), e0001438. https://doi.org/10.1371/journal.pgph.0001438.

Ngure, K., Ortblad, K. F., Mogere, P., Bardon, A. R., Thomas, K. K., Mangale, D., ... Baeten, J. M. (2022). Efficiency of 6-month PrEP dispensing with HIV self-testing in Kenya: An open-label, randomized, non-inferiority, implementation trial. *The Lancet HIV, 9*(7), e464-e473. https://doi.org/10.1016/S2352-3018(22)00126-6.

Nichols, B. E., Offorjebe, O. A., Cele, R., Shaba, F., Balakasi, K., Chivwara, M., . . . Dovel, K. (2020). Economic evaluation of facility based HIV self-testing among adult outpatients in Malawi. *Journal of the International AIDS Society, 23*(9), e25612. doi:10.1002/jia2.25612.

Njau, B., Lisasi, E., Damian, D. J., & Tumushime, M. (2020). Feasibility of an HIV self-testing intervention: A formative qualitative study among individuals, community leaders, and HIV testing experts in northern Tanzania. *BMC Public Health, 20*, 490. https://doi.org/10.1186/s12889-020-08651-3.

Obiezu-Umeh, C., Gbajabiamila, T., Ezechi, O. Nwaozuru, U., Ong, J. J., Idigbe, I., ... & Iwelunmor, J. (2021). Young people's preferences for HIV self-testing services in Nigeria: A qualitative analysis. *BMC Public Health 21*, 67 https://doi.org/10.1186/s12889-020-10072-1.

Ortblad, K. F., Kibuuka Musoke, D., Ngabirano, T., ... Barnabas, R. V. (2017). Direct provision versus facility collection of HIV self-tests among female sex workers in Uganda: A cluster-randomized controlled health systems trial. *PLoS Medicine, 14*(11), e1002458. https://doi.org/10.1371/journal.pmed.1002458.

Ritchwood, T. D., Selin, A., Pettifor, A., Lippman, S. A., Gilmore, H., Kimaru, L., ... & Kahn, K. (2019).. (2019). HIV self-testing: South African young adults' recommendations for ease of use, test kit contents, accessibility, and supportive resources. *BMC Public Health, 19*(1), 1-10. Doi::10.1186/s12889-019-6402-4.

Shaheen, M., Pradhan, S., &Ranajee, R. (2019). Sampling in qualitative research. In *Qualitative Techniques for Workplace Data Analysis* (pp. 25-51). IGI Global. doi:10.4018/978-1-5225-5366-3.ch002.

Shapiro, A. E., van Heerden, A., Krows, M., Sausi, K., Sithole, N., Schaafsma, T. T., Koole, O., van Rooyen, H., Celum, C. L., & Barnabas, R. V. (2020). An implementation study of oral and blood-based HIV self-testing and linkage to care among men in rural and peri-urban KwaZulu-Natal, South Africa. *Journal of the International AIDS Society, 23(Suppl 2),* e25514. https://doi.org/10.1002/jia2.25514.

Sharma, M., Barnabas, R. V., &Celum, C. (2017). Community-based strategies to strengthen men's engagement in the HIV Care Cascade in Sub-Saharan Africa. *PLoS Medicine, 14*(e1002262).

Sibanda, E. L., Neuman, M., Tumushime, M., et al. (2021). Community-based HIV self-testing: A cluster-randomised trial of supply-side financial incentives and time-trend analysis of linkage to antiretroviral therapy in Zimbabwe. *BMJ Global Health*, *6*, e003866. https://doi.org/10.1136/bmjgh-2020-003866.

Sircar, N. R., & Maeche, A. A. (2022). Perspectives on HIV self-testing among key and affected populations in Kenya. *African Health Sciences*, *22*(2), 37–45.

Smith, P., Wallace, M., & Bekker, L. G. (2016). Adolescents' experience of a rapid HIV self-testing device in youth-friendly clinic settings in Cape Town, South Africa: A cross-sectional community-based usability study. *Journal of the International AIDS Society, 19*(1), 21111. https://doi.org/10.7448/IAS.19.1.21111

Spyrelis, A., Abdulla, S., Frade, S., Meyer, T., Mhazo, M., Taruberekera, N., ... & Billy, S. (2017). Are women more likely to self-test? A short report from an acceptability study of the HIV self-testing kit in South Africa. *AIDS Care*, *29*(3), 339-343.. doi:10.1080/09540121.2016.1234687.

UNAIDS. (2020, September 30). *UNAIDS country overview: Malawi.* Retrieved from UNAIDS Web Site: https://www.unaids.org/en/regionscountries/countries/malawi

U.S. Centers for Disease Control and Prevention (2019). *Understanding the HIV care continuum*. Atlanta: U.S. Centers for Disease Control and Prevention; 2019.

Vaismoradi, M., & Snelgrove, S. (2019). Theme in qualitative content analysis and thematic analysis. *Forum Qualitative Sozialforschung*, *20*(3), 23. https://doi.org/10.17169/fqs-20.3.3376.

Vara, P. A., Buhulula, L. S., & Mohammed, F. A. (2020). Level of knowledge, acceptability, and willingness to use oral fluid HIV self-testing among medical students in Kilimanjaro Region, Tanzania: A descriptive cross-sectional study. *AIDS Research and Therapy*, *17*, 56. https://doi.org/10.1186/s12981-020-00311-1.

WHO. (2024). *Global HIV statistics 2024.* Retrieved from https://cdn.who.int/media/docs/default-source/hq-hiv-hepatitis-and-stis-library/j0482-who-ias-hiv-statistics_aw-1_final_ys.pdf.

WHO. (2019). *Consolidated guidelines on HIV testing services*. Geneva: WHO.

Wilson, K. S., Mugo, C., Katz, D. A., Manyeki, V., Mungwala, C., & Otiso, L. (2021). High acceptance and completion of HIV self-testing among diverse populations of young people in Kenya using a community-based distribution strategy. *AIDS and Behavior, 26*(3), 964–974.

APPENDICES

Appendix A: In-Depth Interviews

1. (a) Can you tell me about your knowledge and understanding of HIV self-testing?

(b) Have you ever heard of or considered using an HIV self-test?

(c) Why and why not?

2. Describe your experience with HIV self-testing.

(a) What prompted you to complete the test?

(b) How did you feel before, during, or after the test?

(c) Can you share any specific challenges or concerns encountered during self-testing?

(d) What were your expectations or hopes regarding outcomes of the HIV self-test?

(e) How did you feel when you received test results?

(d) Did the result influence your perception of HIV or affect your behaviour in any way?

3. Reflect your experience of linking to care after receiving a positive HIV self-test result.

(a) Which facilitators or barriers were encountered during this process?

(b) How do you navigate through these challenges?

(c) Do you seek support from health workers, friends, or family members?

(d) If yes, what kind of support did you receive?

4. (a) Can you discuss any social or cultural factors that influenced your decision to seek or delay linkage to care?

(b) Were there any stigmas or misconceptions associated with HIV that affected your willingness to access health care services?

5. (a) Tell us about any experiences you had with healthcare providers or healthcare facilities during the linkage to care process.

(b) Did you face any challenges or receive support?

(c) How did healthcare providers' attitudes or behaviors impact your decision to continue or discontinue care?

6. (a) Reflect on the emotional and psychological aspects of your HIV self-testing and linkage to care experiences.

(b) How do these experiences affect self-perception, relationships, and overall well-being?

7. (a) Share any recommendations or suggestions you have for improving the HIV self-testing and linkage to care process for adolescents and young adults in Malawi.

(b) What can be done to address the challenges you face and to ensure better support and outcomes for individuals in similar situations?

8. (a) Is there anything else you would like to share about your HIV self-testing and linkage to care experiences?

(b) Do you believe any additional thoughts or insights are important for us to understand?

Appendix B: Kufunsa Mwakuya

1 (a) Tandiuzani za kudziwa ndi kumvesetsa kwanu pa nkhani ya kudzipima HIV?

(b) Kodi munamva ndi kuganizirapo nkhani yokhudza kudzipima nokha HIV?

(c) N'chifukwa ninji?

2 Fotokozani mbiri yanu pa kudzipima HIV.

(a) Chidakuchititsani kuti mudzipime nokha ndi chani?

(b) Mudamva bwanji musanadzipime, mukudzipima komanso mutadzipima?

(c) Tafotokozani mavuto kapena zothodwetsa zina zomwe mudakumana nazo pa Nthawi yakudzipima nokha.

(d) Mudali kuyembekeza zotani pa zotsatira za kudzipimanokha?

(e) Mudamva bwanji mutalandira zotsatira za magazi anu.

(f) Kodi zotsatirazi zidasinthe m'mene mumayionera HIV kapena zidakhudza Kakhalidwe kanu mu njira iliyonse.

3. Onetserani mbiri yanu yopeza chithandizo mutapezeka ndi kachilombo ka HIV.

a). Ndi okuthandizirani ati komanso mavuto anji omwe mudakumana nawo mu nthawiyi?

b). Munathana nawo bwanji mavutowo?

c). Kodi munapeza thandizo kuchokera kwa ogwira ntchito za umoyo, amnzanu kapena akubanja?

d). Ngati yankho ndi "eya," ndithandizo lanji mudalandira?

4. a). Takambani zifukwa za chikhalidwe zomwe zidakuchititsani / zidakhudza chisankho chanu chofuna kapena kuchedwetsa kupeza chisamalirochi.

b). Kodi padali tsankho kapena manong'onong'o ena alionse okhudza HIV omwe adakhudza khumbo lanu lofuna kupeza chithandizo cha za umoyo?

5. a). Tiuzeni mbiri ya yomwe mudathandizidwira ndi ogwira ntchito a zaumoyo kapena malo

Othandiza nkhani za umoyo.

b). Kodi mudakumana ndi mavuto? Kapena mudalandira thandizo lotani?

c). Kodi machitidwe kapena makhalidwe aogwira ntchito za umoyo adakhudza bwanji chisankho chanu chopitiliza kapena kuleka chithandizo?

6. a). Perekani chithunzithunzi cha kamvedwe komanso kaganizidwe kanu pa kudzipima kwanu ndi kulumikizanso kumbali ya chithandizo chomwe munaladira.

b). Kodi zimenezi zidakhudza bwanji kaonedwe kanu ka zinthu,maubale anu ndi anthu komanso umoyo wanu.

7. a). Perekani maganizo anu ammene njira yodzipima HIV ndikupeza

Chithandizo pakati pa achisodzera ndi achinyamata a ku Malawi zingapitire patsogolo.

b). Kodi pachitike chani pofuna kukonza mavuto omwe mudakumana nawo ndikuthandiza

kupereka thandizo loyenera komanso zotsatira kwa anthu okhudzidwa ndi mavuto

omwewa?

8. a). Pali china chomwe mukufuna kuyankhula chokhudza kudzipima HIV ndikupeza

chithandizo?

b). Maganizo ndi kauniuni yemwe mukukhulupirira ndi zofunikira kuti timvesetse kapena ngati pali zoonjezera?

Appendix C: Interview Guide For Focus Group Discussions

Introduction:

(a) I will start by welcoming the participating and introducing myself as the moderator or facilitator. Then I will ask each participant to briefly introduce themselves.

(b) I will begin with a general question to create a comfortable atmosphere. For instance, "What comes to your mind when you think about HIV self-testing and seeking healthcare for HIV?"

Experiences with HIV Self-Testing

(a) Knowledge and awareness

(1) Exploring respondents' understanding of HIV self-testing.

(2) Asking about their knowledge of the availability and benefits of self-testing and whether they have ever considered or used an HIV self-test.

(b) Decision-making process

(1) Discussing factors that influenced their decision to engage in HIV self-testing.

(2) Probing their motivations, concerns, and any external influences (e.g., friends, family, healthcare providers) on their decisions.

(c) Emotional Aspects

(1) Inquiring about their emotions before, during, and after taking the HIV self-test.

(2) Asking how they felt while waiting for the results and how it affected their mental well-being.

(d) Challenges Faced

(1) Exploring any challenges encountered during the HIV self-testing process.

(2) Ask respondents to share difficulties related to accessing the test, understanding the instructions, and interpreting the results.

(3) Discussing any emotional or social challenges faced during this process.

Linkage to Care

(a) Seeking healthcare

(1) Exploring respondents' experiences in seeking healthcare after receiving positive HIV self-test results.

(2) Asking about their perceptions of HIV care services and their initial reactions to the results.

(3) Probing about any hesitations or concerns they may have in seeking further care.

(b) Facilitators and Barriers

(1) Discussing the facilitators and barriers encountered during the process of linkage to care.

(2) Encourage respondents to share positive experiences and any supportive factors they encounter, as well as challenges faced, such as stigma, fear, or practical barriers.

(c) Healthcare Provider Interactions

(1) Inquiring about respondents' experiences with healthcare providers when seeking care.

(2) Asking about their interactions, the support received, and the extent to which healthcare providers' attitudes and behaviors influenced their willingness to continue with care.

(d) Social and Cultural Influences

(1) Exploring the influence of social and cultural factors on respondents' decisions to provide care.

(2) Discuss any stigmatization or discrimination experienced, as well as the role of family, friends, partners, or community in supporting or discouraging linkage to care.

(e) Impact on the Well-Being

(1) Discussing the emotional and psychological impact of the linkage to care process.

(2) Asking respondents how seeking care affects their self-perceptions, relationships, and overall well-being.

Closing

(a) Recommendations

(1) Asking respondents to provide recommendations for improving HIV self-testing and linkage to care experiences for adolescents and young adults in Malawi.

(2) Encouraging them to suggest strategies to address challenges and enhance support during the process.

(b) Final Thoughts

(1) Allowing respondents to share any additional thoughts, insights, or personal experiences is important for understanding the topic.

(c) Appreciation and Closing

(1) Thanking the respondents for their time and valuable contributions.

(2) Expressing my appreciation for their openness and willingness to share their experiences.

Appendix D: Muuni Wa Mafunso Kwa Magulu A Zokambirana

Chiyambi:

a). Ndidzayamba kulandira atenga mbali komanso kudzifotokoza mwachidule ngati m'khalapakati. Kenako ndidzapempha mtenga mbali aliyense kuti adzifotokoze yekha mwachidule.

b). Ndidzayamba ndi funso la kalambula bwalo kuti ndidzabweretse chimasuko, mwachitsanzo, "mumaganiza bwanji mukamva za kudzipima nokha HIV ndikufufuza chithandizo cha za umoyo pa nkhaniya HIV?

Mbiriya kudzipima magazi nokha

a). Chidziwitso ndi chizindikiro

1. Kupeza kumvesetsa kwa atenga mbali pa nkhani yokhudza kudzipima HIV.

2. Kufunsa chidziwitso chawo pa kapezekedwe ndi ubwino wakudzipima magazi, komanso

Ngati adaganizapo kapena adagwiritsapo ntchito njira yodzipima HIV.

b). Kupanga chiganizo

1. Kukambirana za zifukwa zomwe zidawapangitsa kuti apange chiganizo chodzipima HIV.

2. Kufunsa za zolimbikitsa, zodandaulitsa komanso zokopa zina (zitsanzo; amnzawo, banja,

Opereka thandizo la zaumoyo) pa ganizolawo.

c). Kamvedwe kawo

1. Kufunsa mmene amkamvera asanadzipime, akudzipima komanso atadzipima okha HIV.

2. Kufunsa mmene amkamvera akudikira zotsatira ndi mmene zidakhudza kaganizidwe kawo.

d). Mavuto omwe adakumana nawo

1. Kufufuza mavuto omwe adakumana nawo mu ndondomeko yakudzipima okha magazi.

2. Kufunsa atengambali kuti afotokoze mavuto okhudza kupeza njira yodzipima HIV, kumvetsa malangizo, kapena kutanthauzira zotsatira.

3. Kukambirana za mavuto ena a m'kaganizidwe kapena kakhalidwe omwe adakumana nawo

Ndi njirayi.

Kupeza chithandizo cha zaumoyo

a). Kufuna chithandizo

1. Kufufuza zomwe atengambali adakumana nazo pa kufufuza chithandizo cha zaumoyo

Atamaliza kuziyeza

2. Kufufuza kaonedwe kawo ka njira za chisamaliro chokhudza HIV komanso machitidwe awo pa zotsatira.

3. Kufunsa mavuto ena okhudza kufuna kupitiriza chithandizo.

b). Athandizi komanso mavuto

1. Kukambirana za athandizi ndi mavuto ena mkati mwa kupeza chithandizo.

2. Kulimbikitsa atengambali kunena zabwino ndi zinthu zina zothandiza zomwe adakumana

nazo, komanso mavuto ena omwe adakumana nawo, monga kusalidwa, mantha kapena

mavuto a kachitidwe ka zinthu.

c). Kulumikizana/Kugawana ndi a zaumoyo

1. Kufufuza m'mene atengambali adakhalira ndi a zaumoyo pofuna chithandizo.

2. Kufunsa m'mene am'kakhalira ,chithandizo chomwe adalandira komanso mulingo wa

Chikhalidwe komanso zochita za a zaumoyo kuti zidakhudza bwanji kufuna kwawo kupitiriza kufuna chithandizo.

d). Zifukwa za chikhalidwe

1. Kufufuza kuti zifukwa za chikhalidwe zingakhudze bwanji ziganizo za atengambali pa

Kulumikizidwa kwawo kuchithandizo.

2. Kukambirana kusalana komwe adakumana nako komanso udindo wabanja, abwenzi a

Pafupi komanso adera pothandizira kapena kusalimbikitsa kupeza thandizo.

e). Zotsatira pa umoyo wa munthu

1. Kukambirana zotsatira pa kamvedwe ndi kaganizidwe za kupeza njira zopezera chithandizo.

2. Kufunsa atengambali m'mene kufuna thandizo kudakhudzira momwe amadzionera, ma ubwenzi komanso umoyo wawo.

Kumaliza

a). Maganizo okonza

1. Kufunsa atenga mbali kupereka maganizo okonza PA kulimbikitsa kudzipima HIV komanso kupeza chithandizo kwa achisodzera ndi achinyamata.

2. Kulimbikitsa kupereka njira zothanira ndi mavuto komanso kulimbikitsa chithandizo m'kati mwanjirayi.

b). Maganizo omaliza

1. Kulola atengambali kupereka maganizo owonjezera, luntha kapena zomwe adaona zimene akuganiza kuti n'zofunikira pa nkhaniyi.

c). Kuthokoza komanso kumaliza

1. Kuthokoza atengambali pa nthawi yawo ndi kudzipereka kwawo.

2. Kuonetsera kuthokoza kwanga pa kumasuka ndi chidwi chawo pofotokoza zomwe adaona.

Appendix E: Informed Consent For Adolescents And Young Adults Not Less Than 18 Years

KAMUZU UNIVERSITY OF HEALTH SCIENCES

Research Topic: Exploration of Adolescents and Young Adults' HIV Self-Testing and Linkage Experiences at Ndirande Health Centre in Blantyre City, Malawi.

Principal Investigator: Chisomo Malango

Research Supervisors: Dr. Maria Chikalipo

Dr. Lily Kumbani

Part 1: Introduction

My name is Chisomo Malango Kumwenda, and I am a student at Kamuzu University of Health Sciences pursuing a Master of Science degree in Reproductive Health. I am currently conducting research on the exploration of young people's HIV self-testing and linkage experiences at Ndirande Health Centre in Blantyre City. You will be invited to participate in a research study that aims to explore the experiences of young people regarding HIV self-testing and linkage to care. Before you make a decision about participation, we would like to provide you with important information about the study, its purpose, procedures, potential risks and benefits, confidentiality, and your rights as a participant.

Purpose of the Study

The purpose of this research study was to gain a deeper understanding of the experiences of young people in relation to HIV self-testing and linkage to care in Malawi. By exploring these experiences, we aimed to identify factors that may facilitate or hinder the uptake of HIV self-testing and subsequent access to care services. The findings of this study will contribute to the development of strategies and interventions to improve HIV testing and linkage to care among young individuals in Malawi.

Study Procedures

If you agree to participate, you will be invited to participate in face-to-face interviews or focus group discussions. These discussions will be conducted in a private and confidential setting, allowing you to freely express your thoughts, experiences, and perspectives related to HIV self-testing and the linkage to care. Interviews or focus group discussions will be audio-recorded to ensure accurate data collection, and the recordings will be securely stored and accessible only to the research team.

Voluntary Participation and Withdrawal

Participation in the study is voluntary. You have the right to refuse to participate without providing any reason. If you choose to participate, you can withdraw your consent and discontinue your involvement at any time during the study, without facing any negative consequences or impacting your relationship with the researchers or institutions involved.

Confidentiality

Your privacy and confidentiality will be strictly protected throughout the study. Any information provided will be treated as confidential and will be accessed only by the research team. Your name and personal identification information will be replaced with a unique code to ensure anonymity. Data collected during the study will be stored securely and used for research purposes only. Reports or publications resulting from this study did not include any personally identifiable information.

Potential Risks and Benefits

Participation in this study may involve discussing personal experiences and emotions related to HIV self-testing and linkage to care. It is possible that these discussions evoke emotional responses. However, we will create a supportive and non-judgmental environment during interviews and focus group discussions. There are no direct benefits guaranteed from participating in this study; however, your insights and experiences may contribute to improving HIV testing and care services for young individuals in Malawi.

Contact Information

If you have any questions, concerns, or require further information about this study, please feel free to contact the principal investigator, Chisomo Malango Kumwenda, at +265 881133469. If you have any concerns about your rights as a research participant, you can contact the KUHES Research Committee.

Part 2: Certificate of Consent

Statement of Consent: By signing this informed consent form, you acknowledge that you have read and understood the information provided, had the opportunity to ask questions, and voluntarily agreed to participate in the research study. You understand that your participation is entirely voluntary and that you can withdraw at any time without facing negative consequences. Your signature confirms your consent for the researchers to use the data collected for research purposes.

_________________________	_______________________
Signature/Thumbprint of Participant	Date (DD/MM/YYYY)
___________________________	_______________________
Signature of Investigator	Date (DD/MM/YYYY

Appendix F: Gawo 2: Kutsimikiza Kuvomereza Kutenga Nawo Mbali

KALATA YOPEMPHA CHILOLEZO CHOTENGA MBALI PA KAFUKUFUKU KWA ACHINYAMATA OSACHEPERA ZAKA KHUMI, ZISANU NDI ZITATU (18)

SUKULU YA UKACHENJEDE YA KAMUZU UNIVERSITY OF HEALTH SCIENCES

Mutu wakafukufuku: Kufufuza njira yodzipima kachilombo ka HIV pakati pa achinyamata ndikupeza thandizo la zaumoyo pa chipatala chaching'ono cha Ndirande mu mzinda wa Blantyre, ku Malawi.

Wofufuza: Chisomo Malango Kumwenda

Woyang'anira kufufuza: Dr. Maria Chikalipo

Dr. Lily Kumbani

Gawo 1: Mawu oyamba

Dzina Langa ndine Chisomo Malango, wophunzira wapa sukulu yaukachenjede ya Kamuzu University of Health Sciences yemwe akuphunzira maphunziro a pamwamba a za umoyo (Master of Science in Reproductive Health). Ndikupanga kafukufuku pa mutu wokuti, "Kufufuza njira yodzipima HIV pakati pa achinyamata osachepera zaka khumi, zisanu ndi zitatu (18) komanso zomwe amakumana nazo pa chipatala chaching'ono cha Ndirande mu m'zindawa Blantyre, ku Malawi. Mukupemphedwa kutenga nawo mbali pa kafukufuku wofuna kufufuza zomwe achinyamata amakumana nazo akamadzipima okha kachilombo ka HIV komanso kupeza chithandizo cha zaumoyo. Musanapange chiganizo chotenga nawo mbali, tafuna kuti mudziwe zinthu zofunikira kwambiri mu kafukufukuyu, cholingachake, ndondomeko, zovuta ndi zipindulo, chinsinsi komanso maufulu anu ngati mtengambali.

Cholinga cha kafukufuku

Cholinga cha kafukufukuyu ndi kupeza kumvesetsa kwakuya pa zomwe achinyamata amakumana nazo zokhudza kudzipima okha magazi ndikupeza chithandizo ku Malawi. Pakuona izi, tikufuna kuzindikira zinthu zomwe zimalimbikitsa kapena kutchinga njira yodzipima HIV komanso kupeza chithandizo cha zaumoyo. Zotsatira za kafukufukuyu zithandiza pa kapangidwe ka njira komanso kulowererapo pofuna kupititsa patsogolo njira yakudzipima kachilombo ka HIV komanso kupeza chithandizo cha zaumoyo pakati PA achinyamata muno m'Malawi.

Ndondomeko za kafukufuku

Mukavomera kutenga nawo mbali mufunsidwanso kutenganawogawo pa njirayo kufunsani mafunso panokha kapena pagulu la zokambirana. Zokambiranazi ndi za chinsinsi, kukulolani kuti mupereke maganizo, zomwe mudaziona ndikaonedwekanu pa nkhani yodzipima nokha HIV komanso kupeza thandizo. Mafunsowa kapena zokambiranazi zidzatepedwa pofuna kusunga bwino zoyankhula zanu ndipo maganizowa adzasungidwa motetezeka ndikupezeka ndi okhawo omwe akuyendetsa kafukufukuyu.

Kutenga nawo gawo mwaufulu ndi kusiya kutenga mbali

Simukukakamizidwa kutenga nawo mbali. Muli ndi ufulu okana kutenga gawo posaperekanso chifukwa. Palibe vuto lililonse kapena udani pakati pa inu ndiwofufuza mutasankha kusatenga nawo mbali kapena kusiya kumene m'katikati mwa kafukufukuyu.

Chinsinsi

Chinsinsi chanu chidzasungidwa mu kafukufukuyu. Chidzabisidwa ndipo chidzaziwika ndi okhawo akuyendetsa kafukufukuyu. Dzina lanu ndi chilichonse chokudzindikiritsani chidzabisidwa ndinambala pofuna kukubisani. Mfundo zopezeka m'kafukufukuyu zidzasungidwa mosamalitsa ndipo zidzagwiritsidwa ntchito pa zolinga za kafukufukuyu basi. Ma uthenga kapena zolembedwa chifukwa cha kafukufukuyu sizidzakhudza munthu aliyense.

Nkhawa kapena phindu

Kutenga mbali mu kafukufukuyu kutha kukhudza kukambirana za umoyo wanu komanso mmene mumamvera mokhudzana ndi nkhaniyodzipima HIV ndikupeza chisamaliro cha zaumoyo. N'zotheka kuti zokambiranazi zitha kubweretsa kuonetsera mmene mumamvera. P. lomwe mudzapezpotengana wombali mu kafukufukuyu, komabe mudzathandizira kulimbikitsa kuyezetsa magazi komanso kupeza chithandizo cha zaumoyo pakati pa achinyamata.

Kulumikizana

Ngati pali mafunso, madandaulo kapena kufunikira kodziwa zambiri, imbirani wofufuza, a Chisomo Malango Kumwenda pa +265 881 133 469. Ngati mukuona kuti maufulu anu adaphwanyidwa pamene mudali kutengana wogawo pa kafukufukuyu, imbani thenifolo kukomiti yoona za kafukufuku ya sukulu yaukachenjede ya Kamuzu University of Health Sciences.

Gawo 2: Chilolezo

Mawu a chilolezo: Pakusayinira pamapeto a tsamba la chilolezoli, mukutsimikiza kuti mwawerenga komanso mwamvesetsa zolembedwa, mudali ndi kuthekera kufunsa mafunso ndipo mwavomera kutenga nawo mbali. Mukuyeneranso kumvetsetsa kuti kutenga nawo mbaliku simudzapeza nako malipiro ndipo mukuchita izi modzipereka. Muli ndiufulu wosiya kutengana wombali nthawi iliyonse popanda chovuta. Siginechala yanundi chitsimikizo choti anthu ofufuza atha kugwiritsa ntchito zomwe mwayankhula pa kafukufukuyu.

Siginechala/chala cha mtengambali. Tsiku (DD/MM/YYYY)

Siginechalayawofufuza. Tsiku (DD/MM/YYYY)

Appendix G: Letter Asking For Permission To Carry Out Research

The research Committee

Blantyre District Health Office

P/Bag 66

Blantyre

Chisomo Malango

Kamuzu University of Health Science

P/Bag

Blantyre 3.

25th September, 2023

Dear Committee Chairperson,

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT NDIRANDE HEALTH CENTRE

I am writing to formally request permission to conduct a research study titled "Exploration of Young People's Experiences of HIV Self-Testing and Linkage to Care" at the Ndirande Health Centre in Blantyre. The aim of this study was to gain a deeper understanding of the experiences and perspectives of adolescents and young adults in relation to HIV self-testing and the subsequent linkage to care services.

The research study will be conducted as a partial fulfilment of my postgraduate study requirements. The proposed study will involve conducting interviews and focus group discussions with eligible respondents who seek HIV testing and linkage to care services at the Ndirande Health Center.

The anticipated duration of the study is one month. I plan to commence data collection on 1stOctober, 2023, and complete it by 31st October, 2023. The collected data will be used for research purposes only and will be handled confidentially and securely.

I kindly request your permission to conduct the study at the Ndirande Health Center. I assure you that utmost care will be taken to minimize any disruptions to the regular operations of the health centre. I will closely adhere to all policies, procedures, and guidelines of the health centre and strictly follow the ethical principles in conducting the research.

I am aware that the smooth implementation of this study requires collaboration and support from health centre staff. I would greatly appreciate your assistance in facilitating access to potential respondents and ensuring that the necessary arrangements are made to accommodate research activities within the health centre's schedule.

If you have any questions or require further information regarding the study, please do not hesitate to contact me on +265 881133469 or zoemalango93@gmail.com. I am also open to discussing any additional requirements or concerns that you may have.

Thank you for your consideration of our manuscript. I look forward to your favorable response, and I hope that this research study will contribute valuable insights into the field of HIV self-testing and linkage to care.

Sincerely,

Chisomo Malango Kumwenda

Appendix G: Changes Made In The In-Depth Interviews Guiding Questions After Pilot Study

1. Question on Knowledge and Understanding of HIV Self-Testing

- Old Version: (a) Can you tell me about your knowledge and understanding of HIV self-testing?
- New Version: (a) Can you describe what you know about HIV self-testing and how you first learned about it?

Change: The new version specifies "how you first learned about it" to prompt respondents to share the source of their knowledge, providing more detailed insights into information dissemination.

2. Question on Emotional Response to Test Results

- Old Version: (e) How did you feel when you received the test results?
- New Version: (e) Can you describe your emotions when you received the test results, and how did those feelings evolve in the days following the test?

Change: The new version adds "and how those feelings evolved in the days following the test," aiming to capture the emotional trajectory over time, rather than just the immediate reaction.

3. Question on Barriers to Linking to Care

- Old Version: (a) What were the facilitators or barriers encountered during this process?
- New Version: (a) What specific barriers did you encounter when trying to link to care and what, if anything, made it easier for you to overcome these challenges?

Change: The new version focuses more on "specific barriers" and explicitly asks about factors that help overcome these challenges, providing a clearer distinction between obstacles and facilitators.

4. Question on Social and Cultural Influences

- Old Version: (a) Can you discuss any social or cultural factors that influence your decision to seek or delay linkage with care?
- New Version: (a) How do social or cultural beliefs and practices in your community influence your decision to seek or delay care after receiving a positive test result?

Change: The new version specifies "beliefs and practices in your community," ensuring that the question captures a broader context of social and cultural influences rather than personal factors alone.

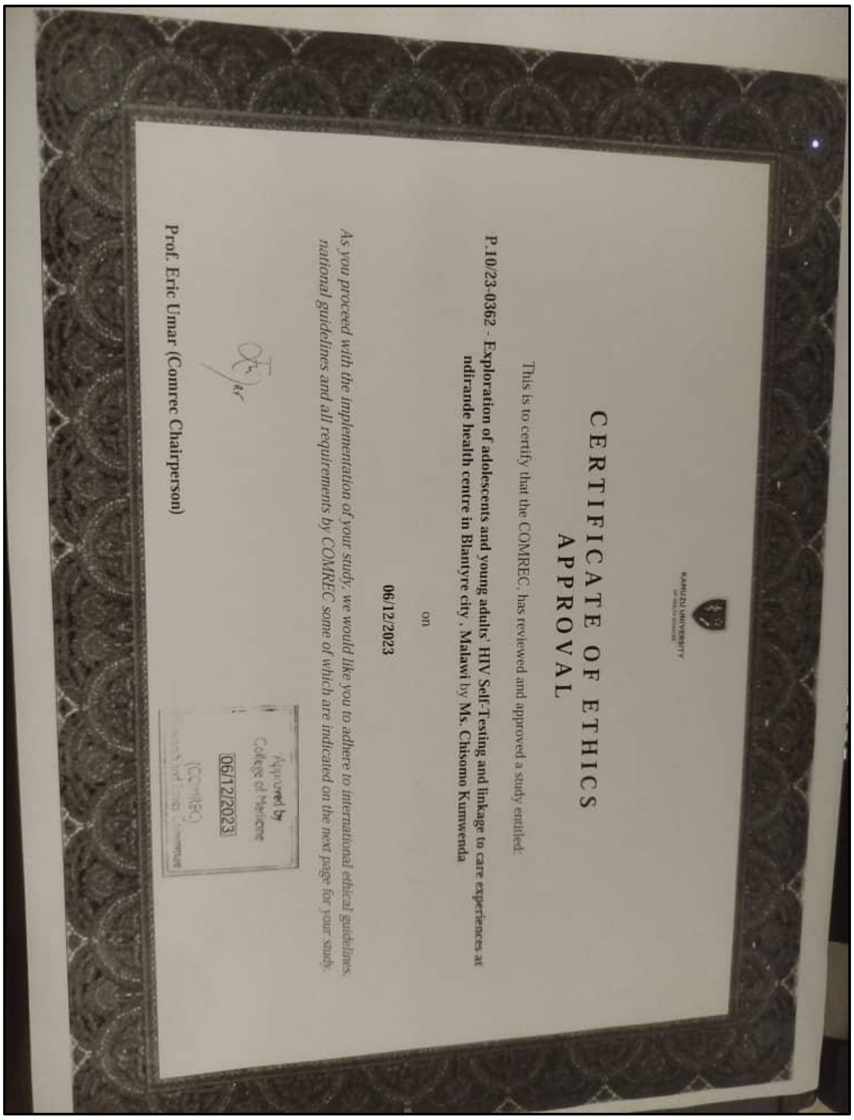
5. Question on Support Systems

- Old Version: (c) Did you seek support from health workers, friends, or family members?
- New Version: (c) Did you reach out for support from health workers, friends, or family members? If so, what motivated you to seek support, and how did it impact your experience?

Change: The new version adds "what motivated you to seek support," aiming to explore the reasons behind seeking help, which could reveal more about the decision-making process and perceived value of different support systems.

These changes were implemented to ensure that the questions elicited more detailed and nuanced responses, providing deeper insights into the experiences of young people with HIV self-testing and the linkage to care in Malawi.

Appendix H: COMREC Approval



CERTIFICATE OF ETHICS APPROVAL

This is to certify that the COMREC, has reviewed and approved a study entitled:

P.10/23-0362 - Exploration of adolescents and young adults' HIV Self-Testing and linkage to care experiences at ndirande health centre in Blantyre city , Malawi by **Ms. Chisomo Kumwenda**

on

06/12/2023

As you proceed with the implementation of your study, we would like you to adhere to international ethical guidelines, national guidelines and all requirements by COMREC some of which are indicated on the next page for your study.

Approved by
College of Medicine
06/12/2023
(COMREC)

Prof. Eric Umar (Comrec Chairperson)

Appendix I: Coding Tree