

**THE ROLE OF MALE-FRIENDLY HEALTHCARE SERVICES IN  
ENCOURAGING HIV TESTING AMONG MEN IN NORTHERN  
TANZANIA**

**FREDERICK DOTTO MAGUHLA**

**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTERS OF  
ARTS IN MONITORING AND EVALUATION  
DEPARTMENT OF ECONOMICS AND COMMUNITY ECONOMIC  
DEVELOPMENT  
OF THE OPEN UNIVERSITY OF TANZANIA**

**2023**

**CERTIFICATION**

The undersigned certifies that she has read and here by recommends for acceptance by The Open University of Tanzania for dissertation entitled, **“The Role of Male-Friendly Healthcare Services in Encouraging HIV Testing among Men in Northern”** In partial fulfillment of the requirements for the award of Master of Arts in Monitoring and Evaluation.

.....

Harrieth G. Mtae

(Supervisor)

.....

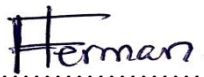
Date

**COPYRIGHT**

No part of this dissertation may be reproduced, stored in any retrieval system, or transmitted in any form by any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission of the author or The Open University of Tanzania in that behalf.

**DECLARATION**

I, **Frederick Dotto Maguhwa**, declare that the work presented in this dissertation is original. It has never been presented to any other University or Institution. Where other people's works have been used, references have been provided. It is in this regard that I declare this work as originally mine. It is hereby presented in partial fulfillment of the requirement for the Master of Arts in Monitoring and Evaluation.

A handwritten signature in dark ink, appearing to read "Herman", is written over a horizontal dotted line.

Signature

.....

Date

## **ACKNOWLEDGEMENT**

Would like to express my sincere gratitude to all those who have contributed to the completion of this dissertation. First and foremost, I would like to thank my supervisor Harrieth G. Mtae for her guidance and support throughout the research process. Their ability and insights have been invaluable in shaping this study and ensuring its quality. Would also like to extend my appreciation to the participants of this study. Without their willingness to share their experiences and perspectives, this research would not have been possible.

Grateful to my colleagues and friends who have supplied encouragement and support throughout the process of conducting this research. Their feedback and suggestions have been instrumental in refining my ideas and improving the quality of this dissertation. Gratitude to USAID Afya Yangu program for their generosity in making this study possible. Finally, I would like to acknowledge the support of my family, especially my wife. For their love and encouragement have sustained me through the ups and downs of this project, and I am deeply grateful for their unwavering support. Thank you all for your contributions to this dissertation.

## **ABSTRACT**

To assess the impact and effectiveness of male-friendly healthcare services in promoting HIV testing among men in Northern Tanzania. This was a cross sectional mixed method study using both quantitative and qualitative data collection methods. The study was conducted in the catchment area of Dodoma Urban, Ikungi District in Singida and Babati Urban. Quantitative data was collected through structured questions with a sample of 378 men. Simple random sampling was used to select list of respondents from the facilities which was purposively selected. Qualitative data was collected through an interview. SPSS was used to analyses Quantitative data and Qualitative data was analyzed. The findings revealed that, more than half of the respondents were aware of posters (79%) on HIV testing services, male champions (44%), and availability of male friendly package (86%). Also, majority of men (76%) have tested for HIV at male friendly health facilities within one years of project implementation. Reasons for not testing for HIV among men were belief that they are HIV negative (46%). Other reasons included fear of getting the testing results and their status being disclosed. Generally, respondents were aware of program components and many of them have been tested for HIV. Reasons for not testing for HIV among men were more of individual rather than structural reasons. Therefore, efforts to increase uptake for HIV testing should address both the individual and structural reasons that inhibits men from accessing HIV testing services. Emphasize the importance of a multifaceted approach to improve HIV testing rates among men in Northern Tanzania. Targeted awareness campaigns, male-friendly services, community engagement, and tailored interventions are key components of a comprehensive strategy to promote early detection and prevention of HIV, ultimately contributing to better healthcare outcomes in the region.

## TABLE OF CONTENTS

<b>CERTIFICATION .....</b>	<b>ii</b>
<b>COPYRIGHT .....</b>	<b>iii</b>
<b>DECLARATION.....</b>	<b>iv</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>v</b>
<b>ABSTRACT .....</b>	<b>vi</b>
<b>LIST OF TABLES .....</b>	<b>xi</b>
<b>LIST OF FIGURES .....</b>	<b>xii</b>
<b>LIST OF ABBREVIATIONS .....</b>	<b>xiii</b>
<b>CHAPTER ONE .....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 Background to the Study .....	1
1.2 Problem Statement .....	5
1.3 Objectives of the study .....	7
1.3.1 General Objective.....	7
1.3.2 Specific objectives.....	7
1.4 Research Questions .....	7
1.4.1 Main Research Question .....	7
1.4.2 Specific research questions .....	7
1.5 Significance of the Study .....	8
1.6 Scope of the Study.....	8
1.7 Limitation and Delimitation of the Study .....	9
1.8 Organization of the Dissertation .....	9
<b>CHAPTER TWO .....</b>	<b>10</b>

<b>LITERATURE REVIEW.....</b>	<b>10</b>
2.0 Overview .....	10
2.1 Definition of Key Concepts.....	10
2.1.1 Male friendly health services .....	10
2.1.2 HIV testing .....	11
2.1.3 Male corners .....	11
2.1.4 Male champions .....	11
2.2 Review of Theory .....	12
2.2.1 The Theory of Planned Behavior .....	12
2.3 Empirical literature review .....	13
2.3.1 Strategies of male friendly services that can effectively engage men in HIV Testing.....	13
2.3.2 The current utilization rate of HIV testing services among men .....	15
2.3.3 Barriers for men to seek HIV Testing .....	17
2.4 Policy Review .....	20
2.4.1 National HIV and AIDS Policy (2015) .....	20
2.4.2 National Health Policy (2017).....	21
2.4.3 National Adolescent Health and Development Strategy (2018-2022).....	21
2.4.4 National Guidelines for Gender-Based Violence (GBV) Management and Response (2011) .....	22
2.4.5 National Guidelines for Comprehensive Package of HIV Interventions for Key Populations (2017).....	22
2.4.6 National Family Planning Guidelines (2013).....	23

2.4.7	National Strategy for Non-Communicable Diseases (2019-2024) .....	23
2.5	Conceptual Framework .....	24
2.6	Research gap .....	25
<b>CHAPTER THREE .....</b>		<b>26</b>
<b>RESEARCH METHODOLOGY .....</b>		<b>26</b>
3.0	Overview .....	26
3.1	Description of the Study area .....	26
3.2	Research design.....	28
3.3	Study Population .....	29
3.4	Unit of Analysis .....	29
3.5	Sample Size .....	29
3.6	Sampling Techniques .....	30
3.7	Data collection method.....	31
3.8	Pilot testing of the data collection tool.....	31
3.9	Data Analysis .....	32
3.10	Validity and Reliability .....	32
3.11	Ethical consideration .....	33
<b>CHAPTER FOUR.....</b>		<b>35</b>
<b>FINDINGS AND DISCUSSIONS.....</b>		<b>35</b>
4.1	Overview .....	35
4.2.	Social -demographic characteristic of study participants.....	35
4.2.1	Age of the respondents .....	35
4.2.2.	Education Level.....	36
4.2.3	Marital Status .....	37

4.2.4	Occupation .....	38
4.3	Strategies of Male Friendly Services That Can Effectively Engage Men in HIV-Testing .....	39
4.3.1	Awareness on Strategies of Male Friendly Services That Can Effectively Engage Men in HIV-Testing .....	39
4.3.2	Association between awareness of male friendly service strategies and awareness of where HIV testing service are provided .....	41
4.4	Utilization Rate of HIV Testing Services Among Men .....	46
4.4.1	The current utilization rate of HIV testing services among men .....	46
4.4.2	Association between utilization of HIV testing services and awareness of male friendly service strategies .....	49
4.5	Barriers for men to seek HIV Testing .....	51
<b>CHAPTER FIVE.....</b>		<b>55</b>
<b>CONCLUSION AND RECOMMENDATIONS .....</b>		<b>55</b>
5.1	Introduction .....	55
5.2	Conclusion.....	55
5.2.1	Strategies of male friendly services that can effectively engage men in HIV Testing in Northern Tanzania.....	55
5.2.2	The utilization rate of HIV testing services among men in Northern Tanzania.....	56
5.2.3	Barrier for men to seek HIV Testing in Northern Tanzania .....	56
5.3	Recommendations .....	56
<b>REFERENCES.....</b>		<b>59</b>
<b>APPENDICES .....</b>		<b>65</b>

## LIST OF TABLES

Table 3.1:	Facilities with male friendly services with their population on catchment area (NBS,2022).....	28
Table 3.2	Sample size according to catchment areas: .....	30
Table 4.1:	Age of study participants.....	35
Table 4.2.	Education level of study participants .....	36
Table 4.3.	Marital status of study participants.....	38
Table 4.4.	Occupation status of study participants .....	39
Table 4.5:	Association between awareness of male friendly service strategies and awareness of where HIV testing service are provided .....	44
Table 4.6:	Have you tested for HIV within one year of project implementation .....	46
Table 4.7:	Association between age and status of HIV testing service .....	47
Table 4.8:	Association between awareness of male friendly service strategies and awareness of where HIV testing service are provided .....	51
Table 4.9:	Barriers for men to seek HIV Testing. ....	52

**LIST OF FIGURES**

Figure 2.1:	Conceptual framework on Male friendly services and HIV testing services. ....	24
Figure 3.1:	The Map showing areas.....	27
Figure 4.1:	Awareness of different components of male friendly health services as proposed in the project. ....	40

### LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal clinic
BP	Blood Pressure
FP	Family Planning
GBV	Gender based violence.
HIV	Human Immune Virus
HTC	HIV testing and counselling.
HTS	HIV testing services.
MFHS	Male friendly health services
PLWH	People living with HIV/AIDS
SSA	Sub-Saharan Africa
STI	Sexual Transmitted Infection
TB	Tuberculosis
UNAIDS	the Joint United Nations Program on HIV/AIDS
USAID	United States Agency for International Development
WHO	World Health Organization

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the Study**

According to UNAIDS (2019), an estimated 37.9 million people were living with HIV globally in 2018, with approximately 68% of them living in sub-Saharan Africa. In Tanzania, the prevalence of HIV among adults is estimated at 5%, with higher rates among females (6.5%) than males (3.5%). This corresponds to approximately 1.4 million people living with HIV in Tanzania (UNAIDS, 2019).

Seven percent of Tanzanian adults aged 15-49 are infected with HIV; prevalence among women is higher (8 percent) than among men (6 percent). The HIV epidemic shows strong regional variation. Regions with the highest HIV prevalence are Mbeya (14 percent), Iringa (13 percent) and Dar es Salaam (11 percent) Survey conducted by the Tanzania Ministry of Health, Community Development, Gender, Elderly, and Children (MoHCDGEC) and the National Bureau of Statistics (NBS) in 2016-2017

The Joint United Nations Program on HIV/AIDS (UNAIDS) has set targets known as the "95-95-95" goals, aimed at ending the HIV epidemic. These goals aim to achieve 95% of people living with HIV knowing their status, 95% of those diagnosed with HIV being linked to antiretroviral treatment (ART), and 95% of those linked to care and treatment achieving viral suppression by 2030 (UNAIDS, 2019).

HIV testing plays a crucial role in HIV care and management as it is the first step towards knowing one's HIV status and making decisions about starting ART. However, the recent UNAIDS report indicates that unlike women, most men and

boys in Sub-Saharan Africa are not aware of their HIV status. In Tanzania, the Tanzania HIV Indicator Survey 2016-2017 reported that only 45% of men living with HIV are aware of their HIV status (UNAIDS, 2019). Limited HIV testing among men can contribute to delayed diagnosis and an increased risk of HIV transmission to partners and family members. Furthermore, undiagnosed men who are unaware of their HIV status are at risk of dying from AIDS-related illnesses.

Studies have found various barriers to HIV testing among men, including fear of receiving a positive diagnosis, HIV-related stigma and discrimination, lack of privacy and confidentiality at healthcare facilities or testing clinics, and lengthy wait times for test results. In addition, the unavailability of male-friendly services and inconvenient HIV testing service hours that clash with men's work schedules have also been cited as reasons for low uptake of HIV testing services among men (Dovel et al., 2016; Hensen et al., 2015).

The limited uptake of HIV testing services among men concerns as it may impede the realization of the first HIV prevention, care, and treatment goal, which aims to ensure that 95% of all people living with HIV are aware of their HIV status by 2030 (UNAIDS, 2019).

Tanzania has made significant efforts over the past decade to increase HIV testing services through home-based, community, and provider-initiated testing. The country has implemented different initiatives and approaches to encourage the use of HIV testing services among men, including partner testing, which involves inviting male

partners of pregnant women for HIV testing when the pregnant woman is accessing antenatal care (ANC) services. Despite the expansion of HIV testing services, HIV testing uptake remains lower among men compared to women.

To address this issue, the Tanzanian government launched a national test and treat campaign in June 2018, with a focus on engaging men in HIV counseling, testing, and treatment. As part of this campaign, a male engagement catch-up plan was developed, outlining non-biomedical strategies to guide the implementation of interventions and activities aimed at accelerating HIV testing among adult males and adolescent boys (Ministry of Health, Community Development, Gender, Elderly and Children, 2018).

In supporting government's efforts to increase HIV testing among men, in 2018, the USAID Boresha Afya central and northern zone program embarked into implementation of an intervention known as "Male friendly health services" in 6 regions (Arusha, Dodoma, Kilimanjaro, Manyara, Singida and Tabora). The intervention aims to promote testing of HIV among men by focusing on health facility services improvement through creating an enabling environment for health service provision. Up to 2019, the USAID Boresha Afya central and northern zone with the support from the government established stand-alone centers to provide services for men in 30 public health facilities of Kilimanjaro, Arusha, Manyara, Singida, Dodoma and Tabora. (5 health facilities per region). The program has also trained more than 50 male volunteers (male champions) who sensitize men in the

community for HIV testing and refer them to the health facilities that are implementing male friendly health services intervention.

Furthermore, in between 2018 and 2021, the program helped mainstream male-friendly health services in 36 councils in North-Central Zone. The program reached 50,316 men in the North-Central Zone and 78,370 men in the Southern Zone with gender-transformative information and program-supported providers and partners delivered FP education and counseling to 22,737 men in the North-Central Zone and 16,502 in the Southern Zone. Further, in the North Central Zone, 37,751 men accessed HIV testing, of whom 1,466 tested positive and 1,463 enrolled in care; in the Southern Zone, 49,964 men accessed HIV testing, of whom 2,083 tested positive and 1,972 enrolled in care demonstrating a high uptake of care among men who test positively (Munisi *et al.*, 2021).

Additionally, the male friendly facilities provide HIV testing services for men on extended working hours such as during the evenings and during weekends to allow flexibility for men to access HIV testing services at their convenient time. Also, other services supported men (Male friendly package; that includes Tuberculosis (TB), Gender Based Violence (GBV), screening for sexual transmitted infection, Family Planning (FP) counselling, Blood Pressure (BP) check and advice) are also offered in addition to the male focus group discussion and HIV education sessions. The USAID Boresha Afya also supported these facilities through branding them with posters and signboards that write down availability of male friendly health services. To date the implementation has been ongoing for more than five years by another program

known as USAID Afya Yangu Northern from 2021 to 2026 with scale up from 30 facilities to 61 facilities.

By examining the role of male-friendly healthcare services, the study aimed on find strategies and interventions that can effectively engage men in HIV testing. It explores how healthcare services can be tailored to better accommodate men's preferences, such as providing convenient clinic hours, ensuring privacy and confidentiality, offering male-specific educational materials, and incorporating male-friendly communication and counseling approaches.

The study assessed the effectiveness of these interventions in encouraging men to seek HIV testing and find any barriers or facilitators to their success. Overall, USAID Afya Yangu Northern project implementation is relevant to the research topic as it addresses the specific challenges faced by men in accessing HIV testing services in Northern Tanzania. Furthermore, male friendly services play crucial role in encouraging HIV testing services among men. Some of the key issues include addressing stigma, providing convenient and accessible testing options, offering confidential and non-judgmental environments and tailoring services to meet the specific needs and preferences of men. These efforts can help create a supportive and welcoming atmosphere than encourages men to seek HIV testing services ( ).

## **1.2 Problem Statement**

HIV testing among men in Tanzania is still low despite several government efforts where only 45% of men living with HIV are aware of their HIV status a survey

conducted by the Tanzania Ministry of Health, Community Development, Gender, Elderly, and Children (MoHCDGEC) and the National Bureau of Statistics (NBS) in 2016-2017.

The USAID Afya Yangu Northern program supports government's efforts to increase HIV testing among men through implementation of male friendly health services. In the intervention, men have opportunity to access HIV testing services through male corners staffed by male health care providers and access HIV testing services after working hours. The intervention also includes posters on availability of male friendly health services in the facilities, male focus group discussion or sessions and provision of other health services for men apart from HIV testing. In the context of HIV prevention and treatment, men often face unique challenges that hinder their engagement with healthcare services, including HIV testing. In Northern Tanzania, the low uptake of HIV testing among men poses a significant barrier to effective HIV control efforts. The limited uptake of HIV testing among men in Northern Tanzania hampers the effectiveness of HIV prevention and treatment strategies. Existing healthcare services often fail to address the specific needs and preferences of men, resulting in low utilization rates. Consequently, there is a critical need to understand and implement male-friendly healthcare services to encourage HIV testing among men in the region. USAID annual report 2020. The current study therefore assesses male's awareness of the intervention, identify strategic and effectiveness of intervention.

### **1.3 Objectives of the study**

#### **1.3.1 General Objective**

The main objective of the study is to assess the role of male-friendly healthcare services in promoting HIV testing among men in Northern.

#### **1.3.2 Specific objectives**

1. To determine strategies of male friendly services that can effectively engage men in HIV testing in Northern Tanzania
2. To evaluate the current utilization rate of HIV testing services among men in Northern Tanzania.
3. To identify barriers for men to seek HIV testing among men in Northern Tanzania.

### **1.4 Research Questions**

#### **1.4.1 Main Research Question**

What is the role of male-friendly healthcare services in promoting HIV testing among men in Northern Tanzania?

#### **1.4.2 Specific research questions**

1. What are the strategies of male friendly services that effectively engage men in HIV testing services in Northern Tanzania?
2. What is the current utilization rate of HIV testing services among men in Northern Tanzania?
3. What are the barriers for men to seek HIV testing services among men in Northern Tanzania?

### **1.5 Significance of the Study**

Findings from this study will help to inform program implementers on the coverage of the intervention in Northern Tanzania and effectiveness of male-friendly healthcare services in promoting HIV testing among men in Northern. The findings of this study is significant to government and other stakeholders implementing HIV testing services such as funding agencies, international agencies, public health and regulatory authorities on how male friendly services approach can be used to encourage HIV testing services among men.

### **1.6 Scope of the Study**

The study was focused on the male-friendly health services intervention implemented by the USAID Afya Yangu program in increasing the uptake of HIV testing services among men in the randomly selected regions and councils of Dodoma (Dodoma Municipal), Manyara (Babati Council), and Singida (Ikungi District). The study examined the impact of the intervention on men's willingness to access HIV testing services, their knowledge and attitudes towards HIV testing, and their overall health-seeking behavior. The study used a mixed-methods approach, incorporating both qualitative and quantitative research methods, to collect data from male participants, health workers, and program implementers. The study's findings provided insights into the effectiveness of male-friendly healthcare services in promoting HIV testing among men and inform the development of future interventions aimed at improving men's access to healthcare services in Tanzania.

### **1.7 Limitation and Delimitation of the Study**

Limitations of the study that could affect its outcomes. One of it is the limited generalizability of the study's findings, as they may not be applicable to other regions in Tanzania or countries with different socio-cultural contexts. The study may also be susceptible to selection bias, as participants selected from the health facilities where the male-friendly health services intervention was implemented, which may limit the representativeness of the sample. Social desirability bias may also be a concern, as participants may over-report positive behaviors, such as HIV testing, due to perceived social expectations. Recall bias is another potential limitation, as participants may have difficulty accurately recalling past behaviors or experiences. Additionally, limited access to participants due to stigma and discrimination against men seeking healthcare services, especially for HIV testing, may pose a challenge to the study. Finally, the implementation of the male-friendly health services intervention may vary across health facilities and regions, which could impact the study's outcomes.

### **1.8 Organization of the Dissertation**

The remaining part of this study had the following: Chapter two of this contained the literature review. This involves the review of previous work done on the topic. Chapter three described the methodology, which is all the activities carried out by the researcher and the strategies employed to achieve the research objective. Chapter four presented findings and discussion of the findings of the dissertation. Chapter five contained conclusion and recommendations of the dissertation.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Overview**

This chapter presents works of literature, which are relevant to the study. It also presents the current theories and practices that are relevant to the study. Moreover, the chapter presents empirical studies and how such studies informed the current study.

#### **2.1 Definition of Key Concepts**

##### **2.1.1 Male friendly health services**

Healthcare services that are designed to address the unique needs and preferences of men and create an environment that is welcoming, non-judgmental, and non-threatening for men to seek healthcare services. These services are tailored to male-specific health concerns and can include targeted health education, gender-sensitive communication, and male-specific health programs. (Nwadiuko, 2021). The concept of male-friendly healthcare services refers to healthcare services that are tailored to meet the specific needs and preferences of men, including addressing barriers to healthcare seeking behavior and providing services that are culturally sensitive and gender-responsive. Male-friendly healthcare services aim to promote men's health and wellbeing by creating a welcoming and supportive environment where men feel comfortable seeking care and accessing health services (WHO, 2017).

According to WHO, male-friendly healthcare services are defined as "health services that are designed to specifically address the health needs of men, recognizing their

social, cultural, and gender-specific characteristics, and ensuring that men feel comfortable and confident seeking and receiving health care services" (World Health Organization, 2019, p. 5).

In the context of this study male friendly services are defined as the service that are provide to men only in some specified facilities. It also entails facility operation on extended working hours, male focus group discussion or sessions at the facility with provision of other services for men such as TB, FP counselling, BP check and advice.

### **2.1.2 HIV testing**

The process of determining whether an individual has been infected with the Human Immunodeficiency Virus (HIV). Testing can be done using various methods, including blood tests, and oral swabs. (CDC, 2022).

### **2.1.3 Male corners**

Male corners are stand-alone centers established within the facility premises in order to provide services for men (Baker, 2019). In the context of this study male corners are considered as place established or set to provide service to male only.

### **2.1.4 Male champions**

Male champion refers to men and boys who raised awareness in communities on norms and practices that hinder men's access and utilizations of health care services (Wahid, Hassan and Mwasaa, 2021). In the context of this study, male champion are

male volunteers who sensitize men in the community for HIV testing and refer them to the health facilities that are implementing male friendly health services intervention.

## **2.2 Review of Theory**

### **2.2.1 The Theory of Planned Behavior**

This study employed the Theory of Planned Behaviors (TPB) which was developed by Icek Ajzen in 1985 as an attempt to predict human behavior. TPB is a social cognitive model, which is an extension of the Theory of Reasoned Action (TRA). The model intends to predict and explain individuals' behaviors in relation to various beliefs (Ajzen, 1991). The TRA is composed of two constructs; attitude and subjective norms, considered as immediate determinants of behavior performance (Ajzen, 1985). TRA assumes that people are rational actors. Later, Ajzen and Madden proposed the TPB in order to also account for behaviors that were not under volitional control (Ajzen and Madden, 1986).

In this respect, another construct 'perceived behavior control' was added in the model. In the TPB, attitude, subjective norms and perceived behavior control are the core constructs on the same level of predicting behavior and assumed to combine multiplicatively. To increase the prediction power of the model, Ajzen recommended an addition of other constructs in the model after the core TPB constructs have been considered. In the same reasoning, this study added 'awareness' of HIV testing services, a construct derived from the Health Belief Model (HBM) due to engagement in risk behaviors among married individuals in Tanzania.

In the context of HIV testing, male-friendly healthcare services that offer services tailored to men's needs may help to increase their perceived benefits of HIV testing, such as early diagnosis and treatment, while also reducing perceived barriers, such as fear of stigma and discrimination. This may in turn increase their willingness to engage in HIV testing and ultimately improve their health outcomes.

### **2.3 Empirical literature review**

This Empirical literature review aims to identify and synthesize existing literature on strategies used to increase men's engagement in healthcare services, including preventive, diagnostic, and treatment services, to evaluate the effectiveness of these strategies in improving men's health outcomes, such as reducing morbidity and mortality rates, increasing access to care, and improving health behaviors and to identify gaps in the literature and provide recommendations for future research and policy development to improve male engagement in healthcare services.

#### **2.3.1 Strategies of male friendly services that can effectively engage men in HIV Testing**

Strategies to increase effectiveness and engage men in HIV Testing have been documented in various parts of the world. For instance, outreach programs targeting men in their workplaces or leisure spots, such as pubs and sports clubs, have been implemented (Courtenay, 2000). Additionally, the establishment of men's health centers in countries like Scotland, UK, and the Netherlands has proved effective in attracting men to seek health services, including HIV testing. These centers have

extended their operating hours into the evenings, making it more convenient for men to access healthcare services (Han, 2017).

In sub-Saharan African countries like Malawi, male-friendly clinics have been proven to provide integrated HIV, reproductive health, and non-communicable disease services during times that are more convenient for men. These clinics are exclusively run by male health providers and provide a male-friendly environment that encourages men to seek healthcare services, including HIV testing and treatment (Chikovore et al., 2018). To increase awareness of the services provided at male-friendly clinics, health education advice is provided during routine outpatient service delivery, and community sensitization and mobilization activities are conducted through local radio stations and community announcements (Chikovore et al., 2018). Similarly, in Lesotho, male-friendly health clinics have been developed to increase demand creation for comprehensive health services among HIV-infected men. These clinics provide an alternative service delivery model for adult males who may be less likely to be reached by provider-initiated and community-based HIV testing approaches that are widely used in Southern Africa (Phorano et al., 2020). The clinics also provide a male-friendly environment that encourages men to get tested for HIV and receive linkage to HIV care and treatment services.

In Tanzania, efforts to increase uptake of HIV testing services among men have been implemented in various health facilities across several regions, including Kilimanjaro, Arusha, Manyara, Singida, and Dodoma. The approach involves promoting testing among men by improving health facility services and creating an

enabling environment for health service provision. Male-friendly health services have been established within the facility premises, known as "male corners," which are staffed by male healthcare providers and open from morning to late hours during the evenings and on weekends to allow for flexibility in HIV testing service provision for men (Msovela et al., 2021). To increase awareness of these male-friendly health services, facilities are branded with posters and signboards, and male champions from the community are recruited as volunteers to sensitize men in the community about HIV testing and refer them to health facilities implementing male-friendly health service interventions.

The male friendly health services program has been implemented for a while now, but little is known on men's awareness of the existence of this intervention. Therefore this study is going to assess the impact and effectiveness on existence of male friendly health services particularly in the following major components of the intervention; facility working hours, male champions who sensitize men for HIV testing, HIV services provision by a male health care provider, male group discussion/sessions conducted at the facility, and provision of integrated services for men and posters and signboards which indicates availability of male friendly health services.

### **2.3.2 The current utilization rate of HIV testing services among men**

HIV testing is a critical aspect of HIV/AIDS control on a global scale and serves as an entry point for HIV care and management (World Health Organization, 2021). Increasing uptake for HIV testing is crucial in achieving the first goal of the Joint

United Nations Program on HIV/AIDS (UNAIDS) to have more people tested for HIV and ultimately reach the target of 95% of people living with HIV aware of their HIV status (UNAIDS, 2021).

Despite the increasing scale-up of stand-alone voluntary counseling and testing sites and the provision of provider-initiated counseling and testing services in health facilities in sub-Saharan Africa, the proportion of men testing for HIV and knowing their status is still low (Joint United Nations Program on HIV/AIDS [UNAIDS], 2019). In contrast, women's HIV counseling and testing has increased since 2004; in 23 out of 29 countries in sub-Saharan Africa, more women than men report having ever tested for HIV. The difference in HIV testing uptake between men and women might be partly due to the implementation of provider-initiated HIV testing and counseling in antenatal care (UNAIDS, 2019).

Efforts to achieve zero new HIV infections require increased uptake of HIV testing as a gateway to HIV prevention, treatment, and care (World Health Organization [WHO], 2017). As part of scaling up HIV testing services, literature shows that health facilities supplying HIV testing services increased in 37 countries in sub-Saharan Africa by 50% between 2007 and 2008 (UNAIDS, 2010). However, despite the wider provision of HIV testing services, the latest demographic patterns of HIV testing uptake in sub-Saharan Africa show that the median national uptake of HIV testing for men is 17.2 percent (UNAIDS, 2019).

In Tanzania, similar efforts to increase HIV testing have been employed; such efforts include community intervention, facility-based HIV testing's such as increased

provision of voluntary counselling and testing services, provider-initiated counselling and testing as well as index testing. Despite such efforts, still men are testing at low rate to significantly increased number of men who are unaware of their HIV status. The 2016 – 2017 Tanzania HIV Impact Survey shows that 55% of men living with HIV (MLWH) self-reported that they were unaware of their HIV status.

Generally, various global, regional, and local studies have shown poor use of HIV testing services among men. However, approaches such as development of male friendly clinics have shown positive changes in men's health seeking behavior particularly in HIV in different countries such as Malawi (Mphonda et al.,2014). Despite employing similar approach in Tanzania, it is not yet known as to what extent men use HIV testing services in the male friendly facility since its introduction. Therefore, this study will address this gap by assessing men's use of HIV testing (that is proportion of men who have tested for HIV) since the introduction of male friendly health services.

### **2.3.3 Barriers for men to seek HIV Testing.**

According to a study conducted in South Africa by Mfecane and Wittenberg (2017), men face various institutional barriers that prevent them from accessing HIV testing services. These barriers include inconvenient health facility locations, long waiting times, and limited operating hours that do not accommodate men's work schedules. Additionally, the study found that health service models tend to reinforce gender stereotypes that view health care as primarily a female concern, which can discourage men from seeking care.

It's important to note that this issue is not unique to the United States and can also be seen in other countries. For example, a study conducted in Nigeria by Ochonye, and colleagues (2020) found that low levels of trust in healthcare providers and institutions were major barriers to HIV testing and treatment among men who have sex with men (MSM). The study found factors such as stigma, discrimination, and breaches of confidentiality as contributing to low levels of trust in healthcare providers.

In a study conducted in rural Burkina Faso, Sarker, and colleagues (2015) found that perceived low health status was one of the motivating factors for men to undergo or not undergo HIV tests. The study found belief as a barrier to HIV testing, which was motivated by the behavior of men's sexual partners. Many men did not expect their wives to be at any risk of contracting HIV since they trusted them to be faithful. Additionally, the low-risk perception of HIV was linked to the low prevalence rate of HIV in the community. Similarly, a study conducted in Mali by Zachariah and colleagues (2007) found that knowing someone with HIV or who had died of AIDS created a perception of being at lower risk of HIV, which undermined the uptake of HIV testing.

Also, fear of testing positive and stigma inhibits men from accessing HIV testing services; this is proven in many countries of sub-Saharan Africa. In Tanzania, Uganda and South Africa, some men are reluctant to test due to the heightened risk of extramarital relationships and resultant fear of receiving a positive diagnosis. The fear of HIV positive results is associated with the perceived psychological burden of

living with HIV (Musheke *et al.*, 2013) and societal stigma from the health care providers and society perception on men infected by HIV (Sharma *et al.*, 2017).

According to research, institutional expressions of stigma in HIV testing can indeed create barriers for men accessing HIV testing services. For example, when health facilities focus more on women and children in their interventions, men may feel stigmatized when accessing HIV testing services through maternal and child health service (MCH) platforms. This can create perceptions of stigma and discourage men from seeking HIV testing services. Another institutional barrier to HIV testing services is long waiting times at the facility (Gumede *et al.*, 2020). In Zambia, for example, long waiting times for an HIV test result can deter clients from learning their HIV status. Similarly, in South Africa, proximity to clinics and availability of rapid testing were found to be positively associated with use of services, as they reduced the time spent in HIV testing and counseling centers (Gumede *et al.*, 2020).

Studies have found that fear of testing HIV positive is a major reason for poor use of HIV testing services among men in Tanzania. This fear is rooted in societal stigma and perceptions that HIV positive men are unable to provide for their families and become a burden to them. Men who perceive high HIV stigma in their network are less likely to have tested for HIV and are afraid to do so, especially if they perceive themselves to be at higher risk of acquiring HIV (Tibbles *et al.*, 2019). Lack of privacy and confidentiality among healthcare providers is also a concern for men accessing HIV services in their neighborhoods, as they fear that their results will be disclosed, leading to community stigma (Mhode *et al.*, 2016).

A qualitative study conducted in Tanzania indicated that men prefer HIV self-testing due to the privacy it affords. Institutional hindrances grounded in societal stigma and breach of confidentiality among healthcare providers deter men from accessing HIV testing services in hospitals and lead them to opt for HIV self-testing, which provides more privacy (Wambura *et al.*, 2019). Even though men perceive health facilities to be prioritizing women and children, approaches such as using invitation letters to invite male partners of pregnant women to test for HIV have been employed to welcome and involve men in HIV testing, but the effectiveness of this approach is not well documented. In addition to that lack of male friendly services and conflicting hours at the health facilities for men who are at work, reported as one among the reasons for poor utilization of HIV testing services among men (Converse *et al.*, 2019). Health services do not suit the needs of men sometimes because of conflicting hours of the facility operation which deters men who are working to access HIV services (UNAIDS, 2016). Also, men perceive health services as non-friendly because most health services are prioritized for women and children and sometime if they do access services, majority of health facilities in Tanzania are over stretched which discourage men to seek care due to long waiting time (Converse *et al.*, 2019).

## **2.4 Policy Review**

### **2.4.1 National HIV and AIDS Policy (2015)**

This policy outlines the government's commitment to addressing the HIV and AIDS epidemic in Tanzania. It emphasizes the importance of providing accessible and gender-responsive HIV prevention, care, and support services. It recognizes the need

for strategies that engage men and boys in HIV testing and prevention efforts. The overall goal of the National Policy “is to provide for a framework for leadership and coordination of the national multi-sectoral response to the HIV/AIDS epidemic. However, the policy doesn’t provide a specific approach to reach men who are far from health facilities.

#### **2.4.2 National Health Policy (2017)**

The National Health Policy focuses on improving the quality, accessibility, and equity of healthcare services in Tanzania. The overall objective of the health policy in Tanzania is to improve the health and well-being of all Tanzanians, with a focus on those most at risk, and to encourage the health system to be more responsive to the needs of the people. It includes provisions for the promotion of sexual and reproductive health services for men, which can encompass HIV testing and prevention.

#### **2.4.3 National Adolescent Health and Development Strategy (2018-2022)**

This strategy (2018-2022) aims to build on these efforts, through a comprehensive approach that equally addresses the demand and supply side, as well as critical enablers for adolescent health. In addition, this strategy also aims to ensure that there is continuous, active and meaningful engagement of adolescents. While primarily focused on adolescents, this strategy recognizes the importance of involving boys and young men in sexual and reproductive health education and services, including HIV prevention.

However, National Adolescent Health and Development Strategy didn't explain a specific to be used to reach adolescents who are not at schools and those who are living far away from the health facilities.

#### **2.4.4 National Guidelines for Gender-Based Violence (GBV) Management and Response (2011)**

These guidelines provide a framework for addressing gender-based violence, which can include violence against men. GBV can be a barrier to accessing healthcare services, and these guidelines aim to ensure that healthcare providers are trained to respond to GBV cases sensitively.

National Guidelines for Gender-Based Violence (GBV) Management and Response provides an opportunity to GBV victims to get HIV testing services and other services that are necessary to the victims of Gender-Based Violence. However, the guideline didn't say anything on how they can be reached for HIV testing services.

#### **2.4.5 National Guidelines for Comprehensive Package of HIV Interventions for Key Populations (2017)**

These guidelines provide a framework for delivering HIV prevention, care, and treatment services to key populations, including men who have sex with men (MSM) and other high-risk groups. The guidelines emphasize the importance of creating an enabling environment for key populations to access services, including non-discrimination and confidentiality.

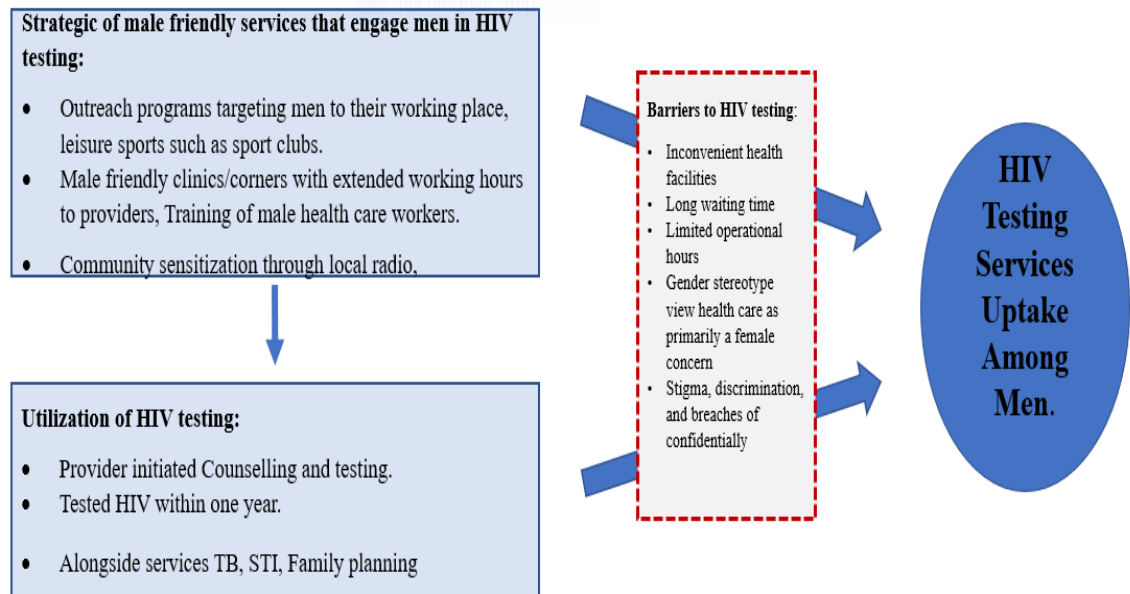
#### **2.4.6 National Family Planning Guidelines (2013)**

While not specific to HIV, these guidelines promote family planning services, including education and counseling for men and couples. They recognize the importance of involving men in family planning decisions and services. Opportunities brought include further widening the coverage of services, its potential contribution to health system research, and its use in areas other than health like women empowerment and poverty alleviation. Furthermore, national family planning guidelines are slow progressing and poorly integrating with health services at local levels including MIS.

#### **2.4.7 National Strategy for Non-Communicable Diseases (2019-2024)**

While primarily focused on non-communicable diseases, this strategy also emphasizes health promotion and prevention among men and boys, including strategies for engaging them in healthcare. Despite of having policies still the male services uptake is low in Tanzania, more over there is the need to update the policies to strengthening male friendly services uptake.

## 2.5 Conceptual Framework



**Figure 2.1: Conceptual framework on Male friendly services and HIV testing services.**

**Source:** Modified from USAID Afya Yangu– Northern program

Figure 2.1 shows the relationship between study variables. Dependent variable in this study is HIV testing services uptake among men, and independent variables includes strategies to engage men in HIV testing and utilization of HIV testing services. Furthermore, figure1 show the intervening variables that barrier to HIV testing services which lead to low uptake for HIV testing among men.

Strategies such as training of male health care worker to deliver HIV testing services to men, initiation of male champions for sensitization of their fellow men and refer them to the facility that provide male friendly health services, extension of working

hours and working during the weekend, facility branded with posters and signboards which shows availability of male friendly health services, male focus group discussion or sessions conducted at the facility and provision of other services for men alongside HIV testing such as TB, STI screening, FP counseling and measurement of blood pressure are expected to increase HIV testing uptake among men.

## **2.6 Research gap**

Based on the reviewed empirical studies on men engagement in health services, it was revealed that most studies examined components of the services, experience from the men and perspectives of health care providers on men in HIV testing services. For example, Fleming *et al.* (2016), explored men's experiences with HIV testing services by highlighting the importance of understanding men's experiences and perspectives in accessing HIV testing services. Ochonye *et al.* (2020) found that low levels of trust in healthcare providers and institutions were major barriers to HIV testing. Furthermore, little is known on the role of male friendly services approach to promote men in HIV testing services. Similarly, most of the reviewed studies have been conducted in developed countries in which we differ in cultural setting. Therefore, this gap provides the need for current study to be conducted.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.0 Overview

This chapter discusses all the activities carried out by the researcher to make this study a reality. The section shows the researcher strategy and study method adopted the population of the study and the research variables and measurement, the sampling design, method of data collection, and analysis among other activities adopted by the researcher during the study.

#### 3.1 Description of the Study area

The study was conducted in Dodoma, Manyara and Singida regions randomly selected, which are among the five regions supported by USAID Afya Yangu where intervention on male friendly health services is implemented but also the regions. It comprises of the following districts; **Dodoma** (Kondoa, Chemba, Kongwa, Mpwapwa , Chamwino, Bahi and Dodoma Urban) ,**Manyara** (Babati urban, Mbulu Urban, Babati District, Hanang District, Kiteto District, Mbulu District, and Simanjiro District) and **Singida**(Singida municipal, Singida District, Mkalama District ,Iramba District, Ikungi District, Manyoni District, and Itigi council) where by Dodoma urban, Ikungi District council and Babati Urban randomly selected involved in study because are the districts with high enrollment of men in HIV testing service among the districts implementing men friendly services in Northern zone.



**Figure 3.1: The Map showing areas**

The intervention on Male friendly health services is implemented in all council of supported regions. Dodoma Urban comprises of 373,440 males and 391,739 females, Ikungi District Council comprised of 205,429 males and 205,833 females, Babati urban comprised of 65,114 males and 64,458 females. A total of population of 643,983 males in 3 Councils (NBS, 2022). Dodoma Urban, Ikungi District council and Babati Urban have a total of 28 facilities, 17 facilities, and 7 facilities respectively supported by USAID Afya Yangu program whereby intervention of male friendly health services are in 2 facilities in Dodoma urban, 4 facilities in Ikungi

District council, and 1 facility in Babati urban. A total of 7 facilities as shown in Table 3.1.

**Table 3.1: Facilities with male friendly services with their population on catchment area (NBS,2022).**

Region	Council	Facility	Catchment Area	Men Population	Contribution (%)
Dodoma	Dodoma urban	Makole Health center	Makole	5,204	10%
		Dodoma Referral Hospital	Madukani	991	2%
Manyara	Babati urban	Manyara Referral Hospital	Bagara	18,984	36%
Singida	Ikungi DC	Ikungi health Centre	Ikungi	9,663	17%
		Ihanja Health center	Ihanja	6,248	12%
		Makiungu Council Designated Hospital	Makiungu	4,905	9%
		Sepuka Health Center	Sepuka	7,394	14%
TOTAL				53,389	100%

### 3.2 Research design

This was a cross sectional descriptive design employing both quantitative and qualitative approaches. The quantitative and qualitative approaches were used to strengthen and enrich the analysis and findings of this study.

### 3.3 Study Population

The study population included men aged 18 years and older living in the catchment area of supported facilities with male friendly services in Dodoma Urban, Ikungi District council, and Babati Council, who are approximated to 53, 839 men.

### 3.4 Unit of Analysis

The unit of analysis for this study was the individual man. Data collected and analyzed at the level of the individual man, and statistical tests and inferences was made based on individual-level data on awareness on different component of male friendly services, proportion of men tested for HIV and the reason for not utilizing HIV testing services.

### 3.5 Sample Size

Sample size was Three hundred and seventy-eight (378) men aged 18 years and above, who were interviewed for the study, which obtained using the formula: KB& SJ. Essential Medical Statistics, (2003) 2nd Edition which was distributed per catchment area of facilities based on percentage of contribution in population size.

$$n = (Nz^2pq) \div (d^2(N-1) + z^2pq)$$

Where:

n is the quantity estimated which is the smallest sample of the study

N is population size that is population of men at Ikungi, Babati and Dodoma urban randomly selected in catchment area with supported male friendly service facilities - 53,389 men

p is the proportion of men living with HIV (In Tanzania) aware of their HIV status is 0.45 (UNAIDS,2019)

q is  $1 - p$ , is  $1 - 0.45 = 0.55$

d is the margin error, which is 5% because p lies between 0.2 and 0.8 that is  $0.2 < P < 0.8$  (KB& SJ, (2003).

z is the standard normal deviate which is 1.96 set at a 95% confidence interval.

**Table 3.2 Sample size according to catchment areas:**

Facility	Catchment Area	Men Population	Contribution (%)	Sample size
Makole Health center	Makole	5,204	10%	37
Dodoma Referral Hospital	Madukani	991	2%	7
Manyara Referral Hospital	Bagara	18,984	36%	134
Ikungi health center	Ikungi	9,663	18%	68
Ihanja Health center	Ihanja	6,248	12%	44
Makiungu Council Designated Hospital	Makiungu	4,905	9%	35
Sepuka Health Center	Sepuka	7,394	14%	52
<b>Total</b>		<b>53,389</b>	<b>100%</b>	<b>378</b>

### 3.6 Sampling Techniques

Study participants were obtained in three stages, First, three region implementing male friendly services under USAID Afya Yangu were randomly selected out of 5 regions and 3 councils randomly selected which are Dodoma rural, Ikungi and Babati rural. Second, 7 facilities supported by USAID Afya yangu with male friendly services were included in the sample from each three councils randomly selected. Then, third listing of sample frame of household with male aged 18 years and above

who have lived in the catchment area at least one year and lastly one member within each household were randomly selected for interview. Return visits were scheduled for those selected members who were not present at the time of the first visit.

### **3.7 Data collection method**

Structured questions were used to collect data on participants' assess the impact and effectiveness of male friendly services in promoting HIV testing among men, strategic that can effectively engage men in HIV testing, to identify barriers and to evaluate the current utilization rate of HIV testing among men through community male volunteer, male focus group discussion/session at a health facility, facility operation on extended facility working hours/weekends, service provision by male health care providers only, and availability of a poster or signboards at the facility indicating availability of male friendly health services and facility data base.

Additionally, the structured questions inquired about information on participants' HIV testing behavior, time the services are provided, the sex of the health care provider, participation in a male focus group discussion or sessions at the facility, and other services supported men apart from HIV testing.

### **3.8 Pilot testing of the data collection tool**

The data collection tools were pilot tested in Singida Municipal at Sokoine Health center in the catchment area of a facility implementing male friendly health service to ensure they were culturally appropriate and able to capture the information required to answer the evaluation questions. This was done prior the actual data collection activities in Dodoma rural, Ikungi district and Babati rural, and it aimed to

familiarize the data collection team to the tool and to assess if the questions were correctly understood by the respondents to yield the required information.

### **3.9 Data Analysis**

Data analysis refers to the process of systematically applying statistical and/or reasonable techniques to explain and demonstrate, concentrate, and summarize, and evaluate data (Ary et al., 2010). In this study, data was analysed using both quantitative and qualitative techniques. Qualitative data analysed by means of content of analysis from interviews and reorganize it into meaningful shorter sentences. Quotation and story/narrative was used to present analysed data from qualitative data.

Quantitative data were entered into SPSS (Statistical Package for Social Sciences) for processing and tabulated into meaningful categories to form emerging issues of the study objectives. All three objectives were analyzed quantitatively using univariate and bivariate analysis. Basic frequencies used to describe the distribution of socio-demographic variables, effectiveness of different components of male friendly services and history of HIV testing at a male friendly facility as well as barriers for not utilizing HIV testing services. Chi-square test of association with 5% level of significance was used to test if there are relationships between study variables. The findings were presented in form of tables and graphs.

### **3.10 Validity and Reliability**

Validity in this study refers to the extent to which the review accurately and reliably answers the research question and produces valid conclusions. According to

Onwumere (2005), validity of data entails the elastic extent to which a measuring instrument on application performs designated function it was designed for. Reliability in this study refers to the consistency and reproducibility of the review process and findings. To ensure reliability, several steps can be taken. The review should clearly describe the methods used to select studies, extract data, and assess quality, and these methods should be reported in a transparent and reproducible. Multiple reviewers independently assessed the quality of the included studies to ensure that the assessments are consistent and reliable.

Furthermore, data extraction was done by multiple reviewers to ensure consistency and accuracy. The quality assessment of the included studies was conducted by multiple reviewers, and any discrepancies should be resolved through discussion and consensus. The statistical analysis will be conducted using proper methods, and the results should be reported transparently to allow for reproducibility.

### **3.11 Ethical consideration**

The study needs were considered, ethical issues conducted in a manner that is respectful of the rights and welfare of research participants. The review was conducted with integrity, accountability, and informed consent from research participants. This includes obtaining consent for data sharing and data use for research purposes. The review ensured that all data collected from the studies were kept confidential and that participant identities were protected. This was done by removing any personal identifiers, such as names or addresses, from the data.

The review considered the potential risks to research participants, particularly in cases where the studies involved sensitive or personal health information. Measures were taken to mitigate these risks. The review was conducted in an unbiased manner, and any potential conflicts of interest disclosed and addressed appropriately. By considering these ethical issues, the study ensured that the review is conducted in a manner that is respectful, transparent, and accountable, and that the findings and recommendations are based on sound ethical principles.

## CHAPTER FOUR

### FINDINGS AND DISCUSSIONS

#### 4.1 Overview

This chapter provides findings and discussions of the study on social demographic of participants, strategies of male friendly services that can effectively engage men in HIV Testing, current utilization rate of HIV testing services among men, and barriers for men to seek HIV Testing as stated in specific objective in this study.

#### 4.2. Social -demographic characteristic of study participants.

A total of 378 respondents were involved in the study. The social demographic characteristic such as age, education level, marital status and employment status of the respondents are presented in the next section.

##### 4.2.1 Age of the respondents

The social demographic characteristics of the study participants, categorized by age groups (18-24, 25-34, and above 35), provide valuable insights into the composition of the study population where by 18-24 were 91 (24%), 25-34 were 126 (33%) and above 35 were 161 (43%). These demographics can help inform the interpretation of the study's findings and allow for comparisons with the study. Here, the significance of these age groups in the context of HIV testing behavior and outcomes:

**Table 4.1: Age of study participants**

<b>Age category</b>	<b>Frequency</b>	<b>Percentage</b>
18-24	91	24%
25-34	126	33%
≥35	161	43%
<b>Total</b>	<b>378</b>	<b>100</b>

Young adults, especially those between 18 and 24 years, often represent a key target group for HIV prevention and testing efforts. This age group is typically characterized by greater sexual activity and experimentation, which can increase their vulnerability to HIV exposure (Chen et al., 2019). Literature suggests that young adults may have lower HIV testing rates due to a lack of awareness, stigma, and fear of potential positive results (Pellowski et al., 2013). They may also underestimate their risk of HIV infection, leading to delayed testing (Knussen et al., 2014). Interventions and campaigns tailored to young adults, emphasizing the importance of regular HIV testing and the availability of confidential and youth-friendly testing services, can be effective in increasing testing rates (Mavedzenge et al., 2013).

#### **4.2.2. Education Level**

The findings in Table 4.2 show that more than half of the respondents, 52% had primary education. Additionally, 34% of the participants had completed secondary education and very few 6% did not have any formal education.

**Table 4.2. Education level of study participants**

<b>Education level</b>	<b>Frequency</b>	<b>Percentage</b>
No education	21	6%
Incomplete primary education	3	1%
Primary education	196	52%
Incomplete secondary	10	3%
Secondary education	130	34%
Post-secondary education	18	5%
<b>Total</b>	<b>378</b>	<b>100</b>

Further analysis was conducted, to see the relationship between awareness and education level. Results show that a significant proportion 84% of respondents with formal education were aware of male-friendly services. This indicates that education may play a role in raising awareness about available healthcare services.

This data could be used to inform targeted interventions to reach underserved populations and improve healthcare equity. Studies have consistently shown that individuals with higher levels of education are more likely to undergo HIV testing. Education can increase awareness about the importance of HIV testing and may reduce stigma associated with the virus. Moreover, educated individuals often have better access to healthcare information and services, which can lead to increased testing rate (Sharma, *et al.*, 2015). People with lower levels of education may face various barriers to HIV testing, including limited access to healthcare facilities, lack of awareness about the importance of testing, and fear of discrimination. Targeted interventions and educational campaigns have been used to overcome these barriers and increase testing rates among less educated populations (Mahajan *et al.*, 2008).

#### **4.2.3 Marital Status**

The findings in Table 4.3 show majority 54% of the participants were either married, 40% of them were single. Furthermore, the findings revealed that 183(89%) married participants were aware of the availability of male friendly package when compared with other marital status. Marital status can influence HIV awareness, as individuals who are married or in long-term relationships may have a higher level of HIV awareness due to discussions and information sharing with their partners. However,

this can vary widely depending on factors such as cultural norms, education, and access to healthcare resources (Ezechi *et al.*, 2009).

**Table 4.3. Marital status of study participants**

<b>Marital status</b>	<b>Frequency</b>	<b>Percentage</b>
Married	206	54%
Single	150	40%
Co-habiting	12	3%
Divorced	4	1%
Separated	3	1%
Widower	3	1%
<b>Total</b>	<b>378</b>	<b>100</b>

Marital status can be a factor in HIV testing rates. For example, married individuals may be more likely to get tested for HIV as part of antenatal care during pregnancy or when planning to have children. Conversely, single individuals may get tested less frequently, but this can vary widely depending on factors like education, access to healthcare, and individual risk behaviors (Hensen, *et al.*, 2012). Marital status can impact the barriers individuals face in accessing HIV services. For example, individuals in abusive or controlling relationships may face barriers to seeking HIV testing or treatment independently. Conversely, married individuals may have more support in accessing healthcare services (Buller *et al.*, 2016).

#### **4.2.4 Occupation**

Table 4.4 shows that more than half of the respondents 58% were peasant farmers and 22% of the respondents were petty business traders. In the same vein, 15% of the respondents were not employed. Additionally, the findings revealed that majority 71%

of the peasant farmers were aware of male friendly services. Occupation of the respondents is important factor in HIV testing services. For example, individuals employed individual are more likely to get health services compared to unemployed one.

**Table 4.4. Occupation status of study participants**

<b>Occupation status</b>	<b>Frequency</b>	<b>Percentage</b>
Peasant farming	218	58%
Petty Business	82	22%
Employed – Government	15	4%
Employed – Private	7	2%
Unemployed	56	15%
<b>Total</b>	<b>378</b>	<b>100</b>

Study by Mahajan *et al.* (2008) found that employed respondents are more likely to test HIV testing and may reduce stigma associated with the testing services. Moreover, employed individuals often have better access to healthcare information and services, which can lead to increased testing rate (Sharma, *et al.*, 2015).

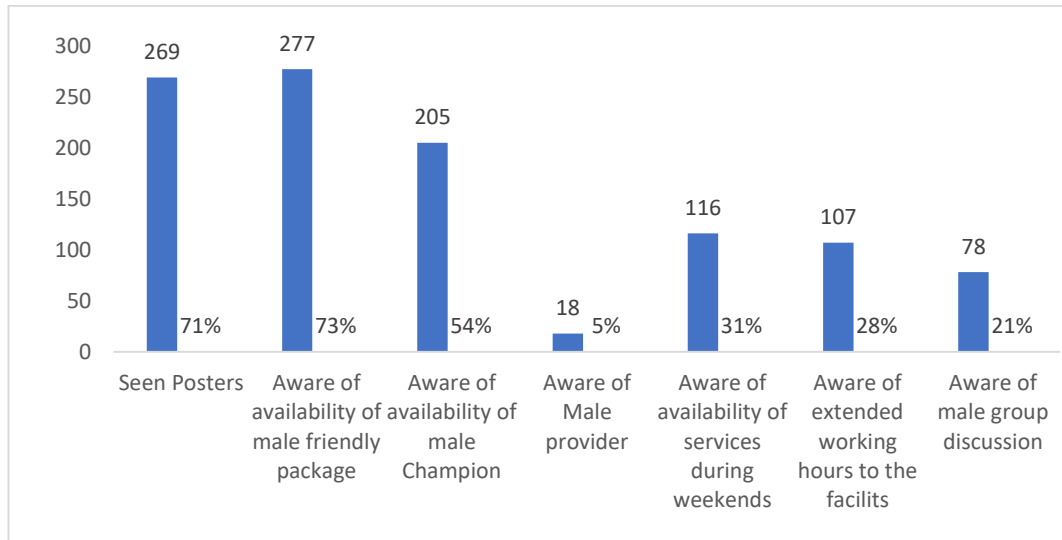
### **4.3 Strategies of Male Friendly Services That Can Effectively Engage Men in HIV-Testing**

In this section respondents were asked if they were aware about the strategies that are used in provision of male friendly services. There finding are presented in section 4.3.1 and 4.3.2 .

#### **4.3.1 Awareness on Strategies of Male Friendly Services That Can Effectively Engage Men in HIV-Testing**

Data obtained from this study has revealed that almost all respondents 369 (97.7%) were aware of where one can get HIV testing services. Strategies of male friendly

services that effectively engage men in HIV Testing which goes with awareness of different activities proposed in the project are summarized in figure 4.1



**Figure 4.1: Awareness of different components of male friendly health services as proposed in the project.**

The study shows that 277 (73%) participants were aware of the availability of male friendly package in their catchment areas. This indicate that majority of the respondents in the study area are aware of the male friendly services packages. Furthermore, the study determined the relationship between age of the respondents and awareness of male friendly packages. The findings revealed that awareness of availability of male friendly package increases with age varying from 24.1% among men under 25, men in age group 25-34 were 33.3% years to 42.6% among those age 35 years and above. This variation was statistically significant (chi square =19.44 and P=0.010).

Majority of respondents 71% had seen posters on HIV testing. Awareness of poster on HIV testing services increases with increasing age varying from 24.3% among

men under 25 years to 43.2% among those age 35 years and above. However, these variations were not statistically significant ( $P=0.37$  and  $\chi^2=4.34$ ). Findings also revealed that very few 5% respondents were aware of provision of HIV testing services by male providers at hospital this result is the same with the results of study done by Chen et al, (2019) that men are not aware that there is male champion who provide HIV testing service in their facilities. Additionally, the finding in Figure 4.1 show that 54% of the respondents are aware of the availability of male champion in provision of male friendly services in their catchment areas. Furthermore, respondents were asked if they are aware about availability of male friendly services during the weekends. Their response revealed that only 31% of the respondents are aware about the provision of male friendly services during the weekend days. The similar findings were found by Matovu *et al*, (2017) on their study that aimed to approaches of male friendly service provision.

Moreover, results in Figure 4.1 show that another strategy that is used to provide male friendly services is to provide service beyond the normal working hours (extended working hours). However, only 28% of the respondents aware that facilities have extended working hours to provides male friendly service. In addition to that only 21% of the respondents are aware that facilities conduct male group discussion on the male friendly packages.

#### **4.3.2 Association between awareness of male friendly service strategies and awareness of where HIV testing service are provided**

Chi square test of association was employed to test the significance of relationship between whether the respondents tested HIV at facility or not at facility. The findings

in Table 4.5 show that majority (78%) of the respondent who tested HIV at hospital seen posters as compared to those who didn't test at facility whereby half of the respondents seen posters that demonstrate availability of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 25.816, p = 0.000$ ).

Furthermore, majority (81%) of the respondent who tested HIV at facility they are aware of availability of male friendly packages as compared to those who didn't test at facility whereby 55% of the respondents are not aware of availability of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 32.648, p = 0.000$ ). Similarly, majority (68%) of the respondent who tested HIV at facility they are aware of availability of male champion on provision of male friendly services as compared to those who didn't test at facility whereby 93% of the respondents are availability of male champion on provision of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 100.163, p = 0.000$ ).

Furthermore, majority (93%) of the respondent who tested HIV at facility they are not aware of availability of male provider in provision of friendly services as compared to all (100%) those who didn't test at facility they were not aware of availability of male provider in provision of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 5.892, p = 0.015$ ). Similarly, majority (80%) of the respondent who tested HIV at facility they are not aware of availability of services during weekends on provision of male friendly

services as compared to 99% those who didn't test at facility were not aware of availability of services during weekends on provision of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 17.236, p = 0.000$ ).

Likewise, majority (62%) of the respondent who tested HIV at facility they are not aware of availability of aware of extended working hours to the facility in provision of friendly services as compared to (93%) those who didn't test at facility they were not aware of availability of extended working hours to the facility in provision of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 125.375, p = 0.000$ ). Similarly, majority 75%) of the respondent who tested HIV at facility they are not aware of availability of aware of male group discussion on provision of male friendly services as compared to 99% those who didn't test at facility were not aware of availability of aware of male group discussion on provision of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 14.932, p = 0.000$ ).

**Table 4.5: Association between awareness of male friendly service strategies and awareness of where HIV testing service are provided**

Awareness on male friendly strategies		HIV testing at the facility		P-Value	Chi-Square
		Yes	No		
Seen Posters	Yes	228(78)	43(50)	0.000	25.816
	No	64(22)	43(50)		
Aware of availability of male friendly package	Yes	236(81)	39(45)	0.000	32.648
	No	56(19)	47(55)		
Aware of availability of male Champion	Yes	199(68)	6(7)	0.000	100.163
	No	93(32)	80(93)		
Aware of Male provider	Yes	19(7)	0(0)	0.015	5.892
	No	273(93)	86(100)		
Aware of availability of services during weekends	Yes	57(20)	1(1)	0.000	17.236
	No	235(80)	85(99)		
Aware of extended working hours to the facility	Yes	110(38)	6(7)	0.000	125.375
	No	182(62)	80(93)		
Aware of male group discussion	Yes	73(25)	5(6)	0.000	14.932
	No	219(75)	81(94)		

However, the higher awareness on the existence of male friendly package was not specific to the intervention activities.

In interview participants also noted that there are no HIV specific sensitization activities for male in their community. The available education activities sensitize both male and female to go for HIV testing as one of the participants expressed.

*‘Usually, they educate everyone to go for HIV testing without focusing on a specific sex, they don’t choose may be women only.....they educate all of us.....’* (R4-Peasant farmer from Babati rural).

Male friendly services at Ikungi Health center requires that HIV services to men be provided by a male health care provider. However, this is not like what was reported by the respondents who expressed that HIV testing services at the facility are provided by both female and male health care workers.

*“...I think there are shift; you might find a male or female health care provider...”* (R41-Peasant farmer).

The male friendly intervention provides flexibility for men to access HIV testing services beyond working hours and on weekends; very few respondents prefer to access HIV testing services during weekends and beyond working hours (approximately 31% and 28% respectively). It is only 15% of the respondents who expressed preference to a male health care provider when accessing health services, among the reasons for preferring a male service provider was that the provider will be free to talk to them and in cases where the provider himself is infected, he can share his experience with them. One participant was explaining:

*“...I, personally prefer a male health provider because I am also a man...because if it happens he’s also infected, it’s going to be easy for him to tell me what he does to stay healthy, unlike a female health provider, she cannot tell me that my husband is doing this and this to stay...but a male health care provider can tell me what he does to stay healthy....”* (R13-Petty business trader).

Those who prefer a female health care provider urged that female health care providers normally speaks politely in a way that makes a patient feel relieved. One of the participants expressed it as follows:

*“...Prefer a female health care worker because males are a bit stubborn because everyone has a way of speaking with a patient.... a female provider speaks with you in a way that you feel relieved...”* (R110-Petty business trader).

#### 4.4 Utilization Rate of HIV Testing Services Among Men

This section describes rate of utilization of male friendly services and relationship between awareness of male friendly services strategies and the use of male friendly services such as HIV testing services.

##### 4.4.1 The current utilization rate of HIV testing services among men

Participants were asked if they had tested for HIV within one year of project implementation. The results in Table 4.6 show that majority of the participants 287 (76%) were tested for HIV within one year.

**Table 4.6: Have you tested for HIV within one year of project implementation**

S/N	Response	No. of Respondents	Percentage ( % )
1.	Yes	287	76%
2.	No	91	24%
	<b>Total</b>	<b>378</b>	<b>100%</b>

This finding indicate that majority of the men in the study area are aware about HIV testing services and they have been tested for HIV in the project implementation area.

Furthermore, researcher was interested to know the relationship between age of the participants and status of HIV testing services. Table 4.7 show that all men aged below 35 years old have tested for HIV in the period of one year. Moreover, among men aged 35 and above majority (56.5%) of the men didn't test for HIV in the period one year. This variation of HIV testing by age was statistically significant (chi. sq = 162.542,  $p = 0.000$ ).

**Table 4.7: Association between age and status of HIV testing service**

Awareness on male friendly strategies		Tested for HIV			P-Value	Chi-Square
		18-24	25-34	35+		
Tested for HIV	Yes	91(100)	126(100)	70(43.5)	0.000	161.542
	No	0(0)	0(0)	91(56.5)		
<b>Total</b>		<b>91(100)</b>	<b>126(100)</b>	<b>161(100)</b>		

This finding indicate that HIV testing service was lower among older men. Men's utilization rate of HIV testing services among men was relatively high among men with bellow 35 years in the facility that implements male friendly health services. The utilization of HIV testing among men were influenced by availability of male friendly package and male champion who sensitize men to test for HIV. These findings are similar with studies done in Malawi by Elizabeth Glaser Pediatric AIDS Foundation ,2018 where the uptake for HIV testing among men increased due to development of male friendly clinics which provides added services apart from HIV testing such as check-up for non-communicable diseases, TB and STI screening. However, it should be noted that the decision to test for HIV is influenced by several interrelated and interlinked factors. In a study conducted in Tanzania, men showed positive compliance to test when they were approached by their male peers because of the strategies and encouragement used by their peers (Conserve *et al.*, 2018).

Moreover, the male friendly health services program provides flexibility for men to access HIV testing services beyond working hours and on weekends. However, only a few respondents who took part in this study showed preference of accessing HIV

testing services on weekends and on extended working hours 31% and 28% respectively.

Similarly, very few respondents (5%) prefer a male health care provider when accessing health services. This implies that men's preferences in accessing HIV testing services are different from the project unlike studies reported in Malawi where men preferred weekends and evening hours as convenient time for them to access HIV testing services. The differences observed in these studies could be due to contextual factors. For example, majority of men who took part in the study were peasant farmers and could conveniently access HIV testing services any time wished. Though occupation of the study respondents for the study conducted in Malawi was not mentioned it could be possible that most of the respondents were employed and could not access HIV testing services during facility working hours. This suggests the need to ensure context specific informed interventions for improved up-take.

The age group of 25 to 34 years often includes individuals who are settling into more stable relationships and may have different HIV risk factors compared to younger age groups (Chen et al., 2019). Individuals in this age group may be more likely to test for HIV, particularly if they perceive themselves to be at higher risk due to sexual activity or other factors (Matovu et al., 2017). However, barriers such as fear of stigma and concerns about confidentiality can still influence testing behavior among adults in this age range (Musheke et al., 2013). Individuals above 35 years may have diverse experiences related to HIV testing. Some may have been exposed

to prevention campaigns in earlier years, while others may not have had access to such information (Musheke et al., 2013).

#### **4.4.2 Association between utilization of HIV testing services and awareness of male friendly service strategies**

Chi square test of association was employed to test the significance of relationship between utilization of HIV testing services and awareness of male friendly services. The findings in Table 4.8 show that majority (78%) of the respondent who tested HIV seen posters as compared to 51.6% of those who didn't test for HIV, whereby half of the respondents seen posters that demonstrate availability of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 23.729, p = 0.000$ ).

Additionally, majority (80.5%) of the respondent who tested for HIV they are aware of availability of male friendly packages as compared to those who didn't test for HIV whereby only 48.4% of the respondents are aware of availability of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 30.450, p = 0.000$ ). Similarly, majority (71.4%) of the respondent who tested for HIV they are aware of availability of male champion on provision of male friendly services as compared to those who didn't test for HIV whereby all (100%) of the respondents they are not aware of availability of male champion on provision of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 142.023, p = 0.000$ ).

Furthermore, majority (79.8%) of the respondent who tested for HIV they are not aware of availability of male provider in provision of friendly services as compared to all (100%) those who didn't test for HIV they were not aware of availability of male provider in provision of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 21.724, p = 0.000$ ). Similarly, majority (59.6%) of the respondent who tested for HIV they are not aware of availability of services during weekends on provision of male friendly services as compared to all (100%) those who didn't test at facility were not aware of availability of services during weekends on provision of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 172.435, p = 0.000$ ).

Likewise, majority (65%) of the respondent who tested for HIV they are not aware of availability of aware of extended working hours to the facility in provision of friendly services as compared to all (100%) those who didn't test for HIV they were not aware of availability of extended working hours to the facility in provision of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 125.375, p = 0.000$ ). Similarly, majority 72.8% of the respondent who tested for they are not aware of availability of aware of male group discussion on provision of male friendly services as compared to all (100%) those who didn't test for HIV were not aware of availability of aware of male group discussion on provision of male friendly services. Furthermore, these associations were statistically significant with ( $\chi^2 = 31.162, p = 0.000$ ).

**Table 4.8: Association between awareness of male friendly service strategies and awareness of where HIV testing service are provided**

Awareness on male friendly strategies		Tested for HIV		P-Value	Chi-Square
		Yes	No		
Seen Posters	Yes	224(78)	47(51.6)	0.000	23.729
	No	63(22)	44(48.4)		
Aware of availability of male friendly package	Yes	232(80.5)	44(48.4)	0.000	30.450
	No	55(19.5)	47(51.6)		
Aware of availability of male Champion	Yes	205(71.4)	0(0)	0.000	142.023
	No	82(28.6)	91(100)		
Aware of Male provider	Yes	58(20.2)	0(0)	0.015	21.723
	No	229(79.8)	91(100)		
Aware of availability of services during weekends	Yes	116(40.4)	0(0)	0.000	172.435
	No	171(59.6)	91(100)		
Aware of extended working hours to the facility	Yes	110(35)	0(0)	0.000	125.375
	No	187(65)	91(100)		
Aware of male group discussion	Yes	78(27.2)	0(0)	0.000	31.162
	No	209(72.8)	91(100)		

Findings in Table 4.8 indicate that majority of the men are aware about male friendly service availability in their areas. However, they are not aware on the strategies that are used in provision of male friendly services. This finding is similar with the study by Sharma, *et al.* (2015) on awareness of male friendly services which found that men preferred services at extended hours and weekends but they were not aware if the service is provided at weekends and extended hours.

#### **4.5 Barriers for men to seek HIV Testing**

Third objective of the study was to determine barriers for men to seek HIV testing services. The study revealed that 91 (24%) of the study participants had not tested for

HIV at the time of this study was conducted. Reasons for not testing was summarized in Table 4.9. The findings revealed that nearly half of them, 46% did not test for HIV because they perceived negative HIV status. Furthermore, 23% said it was not important for them to know their HIV status. Also, 21% of the participants revealed that low perceived risk to HIV infection was among of the barriers to seek HIV testing services while only 10% of the participants revealed that there is no privacy in facility.

**Table 4.9: Barriers for men to seek HIV Testing.**

<b>Barriers for men to seek HIV Testing</b>	<b>Number of not testing</b>	<b>Percentage</b>
Perceived negative HIV status	42	46%
I do not think it is important to know my HIV status	21	23%
Low perceived risk to HIV infection	19	21%
No privacy in facility	9	10%
<b>Total</b>	<b>91</b>	<b>100%</b>

The findings in Table 4.9 are supported by narration from the respondents on the reason why men don't seek HIV testing services. During interview, the perceived negative HIV status was linked with poor health seeking behavior of men, whereby it was noted that some men do not test for HIV unless they experience symptoms of a disease, one of the respondents when explaining this said:

*"...Majority of men do not go to the hospital unless they fall sick and when they test, they realize they are already infected...added real man do not sick"* (R178-Petty business trader)

Low perceived risk to HIV infection was explained by respondents that some men perceive themselves at a lower risk of HIV infection because of the belief that their

usual or earlier sexual practice was safer. One respondent when was explaining this detailed that:

*“...I sometime say, what should I test for...you know, you should test for HIV if you engage in risk sexual behavior but for myself, I don’t engage in such practices, I have my wife at home...”* (R98-Peasant farmer)

Other barriers for HIV testing services were noted that the fear of the negative consequences associated with testing for HIV such as fear of living with the HIV positive status, fear of death, fear of starting treatment and societal misconceptions about HIV and living with HIV. One of the respondents detailed that.

*“...Let’s say it’s because of fear of what will happen next if I test...a person has a lot of questions in mind, what if I am positive...how will I live...because some have perception that when they are found positive then that’s the end of life...may be how will the society perceive me...”* (R216-Petty business trader)

Some respondents also noted that men fear the actual HIV testing that is why they send their partners to test or use their partners’ HIV status as theirs.

Respondents had mixed opinions on confidentiality of health care providers during the interviews; some reported that there is confidentiality among health care providers, and some reported otherwise. Concerns that some health care providers breach patient’s information were raised. One of the respondents noted there is no confidentiality among health care providers, that is why he does not access HIV testing services at facilities. He detailed that:

*“...The challenges are the confidentiality of information, I had a neighbor who was working at the laboratory there at the hospital, he was placed there for field practice two years back, when he comes from the hospital she uses to talks saying that person has tested, his health status is this and this, so I said to myself if I go there for HIV testing then she will tell other people about it, that’s why I decided to test in private hospital...”* (R67-Petty business trader)

The reasons reported in the study for barrier of HIV testing services among men were more of individual rather than structural reasons. It is seen that majority of men have not tested HIV because of the belief that they are HIV negative, and the beliefs that getting an HIV test is of no importance. The influence of individual factors to HIV testing has also been reported in other settings in addition to societal and structural reasons that interrelate and influence one another (Musheke *et al.*, 2013) Therefore, strategies for improving uptake of HIV testing services should as well consider addressing the individual factors that inhibit men from accessing the services.

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents conclusions and recommendations of the study findings. Furthermore, conclusion of the study was presented according to research objectives. Finally, the study recommended for actions to be taken by government and other stakeholder implementing HIV testing services.

#### **5.2 Conclusion**

Conclusion of the study was made based of the specific objectives which are strategies of male friendly services that can effectively engage men in HIV Testing, utilization of HIV testing services and barriers for men to seek HIV testing services.

##### **5.2.1 Strategies of male friendly services that can effectively engage men in HIV Testing in Northern Tanzania**

In conclusion, the study demonstrates that the intervention of male-friendly health services has had a positive impact on raising awareness about HIV testing services among men. Strategies such as the male-friendly package, posters, male providers, and male champions have contributed to increased knowledge about where to get tested for HIV. These findings suggest the importance of targeted awareness campaigns and tailored services to engage men effectively in HIV testing, ultimately improving their access to healthcare services and promoting early detection and prevention of HIV.

### **5.2.2 The utilization rate of HIV testing services among men in Northern Tanzania**

The study indicates that HIV testing rates among men in the surveyed population improved within one year of project implementation. Factors such as age, marital status, testing location, awareness of male-friendly services, and the involvement of male champions played significant roles in influencing testing behavior. To further enhance HIV testing rates among men, interventions should consider these factors and prioritize strategies that make testing services more accessible, private, and male-friendly.

### **5.2.3 Barrier for men to seek HIV Testing in Northern Tanzania**

The study underscores the need for targeted interventions to overcome the identified barriers to HIV testing among men. These interventions should include comprehensive education and awareness campaigns to dispel misconceptions, emphasize the importance of early diagnosis and treatment, and ensure that healthcare facilities maintain strict confidentiality. Tailored strategies for different age groups and communities can help address the unique challenges faced by men in seeking HIV testing, ultimately improving HIV prevention and care outcomes.

## **5.3 Recommendations**

Based on the findings from the study regarding male-friendly services, utilization rates of HIV testing services among men, and barriers to HIV testing in Northern Tanzania, here are recommendations:

- **Targeted Awareness Campaigns:** Develop and implement targeted awareness campaigns that highlight the benefits of HIV testing, address misconceptions, and emphasize the importance of early detection and treatment. These campaigns should consider the age and cultural diversity of the population.
- **Male-Friendly Services:** Continue to invest in male-friendly services, such as the male-friendly package, posters, male providers, and male champions. These components have shown promise in increasing awareness and knowledge about HIV testing services among men. Expand these services to reach a wider audience.
- **Community Engagement:** Engage local communities and leaders in HIV testing awareness and promotion efforts. Community-based outreach programs and peer educators can play a crucial role in encouraging men to get tested.
- **Privacy and Confidentiality:** Address concerns related to privacy and confidentiality in healthcare facilities. Ensure that healthcare providers strictly adhere to confidentiality protocols to build trust among men seeking testing services.
- **Tailored Interventions:** Recognize the varying barriers and preferences among different age groups and communities. Tailor interventions to address the unique challenges faced by men in seeking HIV testing. For example, focus on dispelling misconceptions among younger men and promoting the importance of regular testing among older men.
- **Couple Testing Promotion:** Promote couple testing as a norm to reduce stigma and encourage mutual support in HIV prevention and care. Highlight

the benefits of knowing both partners' HIV status in making informed decisions about family planning and safe sexual practices.

- **Mobile Testing Units:** Expand the use of mobile testing units to reach areas with limited access to healthcare facilities. This can make testing more convenient and accessible for men in rural and remote regions.
- **Continual Monitoring and Evaluation:** Maintain a system for continual monitoring and evaluation of HIV testing rates, awareness campaigns, and the effectiveness of male-friendly services. Use data to inform adjustments and improvements in strategies.
- **Training and Sensitization:** Continue to train healthcare providers to be culturally competent and sensitive to men's needs. Sensitize them to the importance of confidentiality and non-judgmental counseling.
- **Partnerships:** Collaborate with local organizations, NGOs, and government agencies to pool resources and expertise in the fight against HIV. Building strong partnerships can enhance the reach and impact of HIV testing initiatives.

In summary, the recommendations emphasize the importance of a multifaceted approach to improve HIV testing rates among men in Northern Tanzania. Targeted awareness campaigns, male-friendly services, community engagement, and tailored interventions are key components of a comprehensive strategy to promote early detection and prevention of HIV, ultimately contributing to better healthcare outcomes in the region.

## REFERENCES

- AIHW (Australian Institute of Health and Welfare) 2011. The health of Australia's males. Cat. no. PHE 141. Canberra: AIHW.
- Baker, P. (2019). Who Self-Cares Wins: A global perspective on men and self-care. London: Global Action on Men's Health.
- Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Prentice-Hall, Inc.
- Buller, A. M., Hearn, L. E., Price, M. A., & McCallister, C. J. (2016). Point-of-care HIV testing in an urban sexually transmitted infection clinic in Seattle: Lessons learned and impact on patient flow. *Sexually Transmitted Diseases*, 43(4), 215-218
- Chikovore, J., Gillespie, N., McGrath, N., Orne-Gliemann, J., Zuma, T., & Menken, J. (2018). Men, masculinity, and engagement with treatment as prevention in KwaZulu-Natal, South Africa. *AIDS Care*, 30(sup3), 21-29.
- Conserve DF, Alemu D, Yamanis T, Maman S, Kajula L. "He Told Me to Check My Health": A Qualitative Exploration of Social Network Influence on Men's HIV Testing Behavior and HIV Self-Testing Willingness in Tanzania. *Am J Mens Health*. 2018;12(5):1185–96.
- Dovel, K., Yeatman, S., Watkins, S., & Poulin, M. (2016). Men's heightened risk of AIDS-related death: the legacy of gendered HIV testing and treatment strategies. *AIDS*, 30(3), 415-418.
- Ezechi, O. C., Gab-Okafor, C. V., Onwujekwe, D. I., Adu, R. A., Amadi, E., & Herbertson, E. (2009). Intimate partner violence and correlates in pregnant HIV positive Nigerians. *Archives of Gynecology and Obstetrics*, 280(5), 745-752.

- Fekede,T.(2010). Qualitative research in social science: Reflection on ontological, epistemological, and methodological perspectives. *Ethiopian journal of Education & sciences*,6(1).97-106.
- Fleming PJ, Barrington C, Pearce LD, Lerebours L, Donastorg Y, Brito MO, & Martinez NG (2016). Exploring men's experiences with HIV testing services in Santo Domingo, Dominican Republic: a qualitative study. *BMC Health Services Research*, 16(1), 513. doi: 10.1186/s12913-016-1733-3
- Gumede, L. K., Simbayi, L. C., & Zuma, K. (2020). Barriers to Accessing HIV Testing Services for Black African Men in South Africa. *International Journal of Environmental Research and Public Health*, 17(22), 8525. <https://doi.org/10.3390/ijerph17228525>
- Hensen, B., Baggaley, R., Wong, V. J., Grabbe, K. L., Shaffer, N., & Lo, Y. R. (2012). Universal voluntary HIV testing in antenatal care settings: a review of the contribution of provider-initiated testing & counselling. *Tropical Medicine & International Health*, 17(1), 59-70.
- Hensen, B., Lewis, J. J., Schaap, A., Tembo, M., Mutale, W., Weiss, H. A., ... & Ayles, H. (2015). Factors associated with HIV-testing and acceptance of an offer of home-based testing by men in rural Zambia. *AIDS and Behavior*, 19(3), 492-504.
- Joint United Nations Programme on HIV/AIDS. (2019). UNAIDS data 2019. Retrieved from [https://www.unaids.org/sites/default/files/media\\_asset/2019-UNAIDS-data\\_en.pdf](https://www.unaids.org/sites/default/files/media_asset/2019-UNAIDS-data_en.pdf)
- Kiselica, M. S. (2003). Transforming psychotherapy in order to succeed with boys: Male friendly practices. *Journal of Clinical Psychology: In Session*, 59, 1225-1236.

- Mahajan, A. P., Sayles, J. N., Patel, V. A., Remien, R. H., Sawires, S. R., Ortiz, D. J., ... & Coates, T. J. (2008). Stigma in the HIV/AIDS epidemic: a review of the literature and recommendations for the way forward. *AIDS* (London, England), 22(Suppl 2).
- Mfecane, S., & Wittenberg, E. (2017). Beyond access: Barriers to HIV testing for young South African men. *Journal of Social Aspects of HIV/AIDS Research Alliance*, 14(1), 55-64. doi: 10.1080/17290376.2017.1287058
- Mhode M, Nyamhanga T. Experiences and Impact of Stigma and Discrimination among People on Antiretroviral Therapy in Dar es Salaam: A Qualitative Perspective. 2016.
- Ministry of Health, Community Development, Gender, Elderly and Children. (2018). Male Engagement Catch-up Plan for Accelerating HIV Testing among Adult Males and Adolescent Boys in Tanzania. Retrieved from <https://phia.icap.columbia.edu/wp-content/uploads/2019/03/Male-Engagement-Catch-Up-Plan.pdf>
- Mphonda SM, Rosenberg NE, Kamanga E, Mofolo I, Mwale G, Boa E, et al. Assessment of peer-based and structural strategies for increasing male participation in an antenatal setting in Lilongwe, Malawi. *Afr J Reprod Health*. 2014;18(2):97–104.
- Mshana, G. H., Wambura, M., Mwanyika-Sando, M., & Mlunde, L. B. (2013). Male attitudes towards HIV testing and knowledge of PMTCT services in Mbeya Region, Tanzania. *Tanzania Journal of Health Research*, 15(3), 1-8.
- Msovela, J., Nyongole, O., Ezekiel, M. J., Mwampagatwa, I., Msuya, S. E., & Mahande, M. J. (2021). Effectiveness of Male-friendly Health Services

- Intervention in Promoting HIV Testing among Men in Tanzania: A Cluster Randomized Controlled Trial. *Journal of Sexually Transmitted Diseases*, 2021, 1-10.
- Munisi, G., Mbele, S., Ngoye, E., Kahwa, J., Mfugale, L., and Agarwal, A. (2021). The Importance of Male Engagement and Male-Friendly Services for Improving Uptake of Health Services: EngenderHealth's Experience through the USAID Boresha Afya Programs in Tanzania. Washington, DC: EngenderHealth.
- Musheke M, Ntalasha H, Gari S, Mckenzie O, Bond V, Martin-hilber A, et al. A systematic review of qualitative findings on factors enabling and deterring uptake of HIV testing in Sub-Saharan Africa. *BMC Public Health [Internet]*. 2013;13(1):1. Available from: BMC Public Health
- NBS. (2018). Tanzania Impact Survey (THIS) 2016-2017: Preliminary Report. Dar es Salaam, Tanzania: MoHCDGEC and NBS.
- Ochonye, B., Agbonifo, C., & Okoror, T. (2020). "They are treating us like lepers": Stigma, discrimination and HIV testing among men who have sex with men in Nigeria. *BMC Public Health*, 20(1), 1-11. doi: 10.1186/s12889-020-09717
- Phorano, O., Kuo, C., Tsai, A. C., Chiang, L. F., Palanee-Phillips, T., Kose, Z., ... & Darbes, L. A. (2020). "It is better to die than to disclose...": HIV stigma as a barrier to early engagement in HIV care among HIV-positive men in Lesotho. *Journal of the International AIDS Society*, 23(6), e25532.
- Rosenstock, I. M. (1974). Historical origins of the Health Belief Model. *Health Education Monographs*, 2(4), 328-335.

- Sarker, M., Milkowski, A., Slinger, T., Gondos, A., Sanon, M., & Kouyate, B. (2015). The role of HIV-related stigma in utilization of skilled childbirth services in rural Kenya: A prospective mixed-methods study. *PloS One*, 10(6), e0129086. doi: 10.1371/journal.pone.0129086
- Sharma M, Barnabas R V., Celum C. Community-based strategies to strengthen men's engagement in the HIV care cascade in sub-Saharan Africa. *PLoS Med*. 2017;14(4):1–13.
- Sharma, M., Ying, R., Tarr, G., & Barnabas, R. (2015). Systematic review and meta-analysis of community and facility-based HIV testing to address linkage to care gaps in sub-Saharan Africa. *Nature*, 528(7580), S77-S85.
- Solutions P, Was W, Problem THE PEPFAR SOLUTIONS Addressing the Blind Spot in Achieving Epidemic Control in Malawi: Implementing “male - friendly” HIV services to increase access and uptake IMPLEMENTING PARTNER : Elizabeth Glaser Pediatric AIDS Foundation. 2018;(December 2017):1–7.
- Tibbels NJ, Hendrickson ZM, Naugle DA, Dosso A, Van Lith L, Mallalieu EC, et al. Men's perceptions of HIV care engagement at the facility- and provider-levels: Experiences in Cote d'Ivoire. *PLoS One*. 2019;14(3):1–12.
- UNAIDS. (2010). UNAIDS Outlook Report 2010. Retrieved from [https://www.unaids.org/sites/default/files/media\\_asset/20101123\\_outlook\\_report\\_2010\\_en\\_0.pdf](https://www.unaids.org/sites/default/files/media_asset/20101123_outlook_report_2010_en_0.pdf).
- UNAIDS. (2019). Global HIV & AIDS statistics—2019 fact sheet. Retrieved from <https://www.unaids.org/en/resources/fact-sheet>

UNAIDS. (2021). Global AIDS strategy 2021-2026. Retrieved from [https://www.unaids.org/sites/default/files/media\\_asset/Global-AIDS-strategy-2021-2026\\_en.pdf](https://www.unaids.org/sites/default/files/media_asset/Global-AIDS-strategy-2021-2026_en.pdf).

Wambura, G., Mwanga, J. R., Mwamwenda, T. S., Mbunda, T. E., Ezechi, O. C., & Ezekiel, M. J. (2019). Perceived facilitators and barriers to utilization of HIV self-testing among men in Dar es Salaam, Tanzania: a qualitative study. *BMC Public Health*, 19(1), 1-10. <https://doi.org/10.1186/s12889-019-6833-3>

Was W, Problem THE, Is W, Solution THE. Male Friendly Clinics in Lesotho: Demand Creation Targeting HIV-Infected Men to Access Comprehensive Health Services. 2017.

World Health Organization. (2017). Consolidated guidelines on HIV testing services. Retrieved from <https://apps.who.int/iris/bitstream/handle/10665/255896/9789241511575-eng.pdf;jsessionid=2125FE020F45F5C6D37C6FA5C707D753?sequence=1>

World Health Organization. (2021). HIV testing services. Retrieved from <https://www.who.int/teams/global-hiv-hepatitis-and-stis-programmes/prevention/hiv-testing-services>.

Zachariah, R., Spielmann, M., Harries, A. D., Gomani, P., Graham, S. M., & Bakali, E. (2007). Passive HIV case finding and tuberculosis preventive therapy in a rural district of Malawi: A feasible and cost-effective intervention. *Bulletin of the World Health Organization*, 85(4), 329-337. doi: 10.2471/BLT.06.032599

## APPENDICES

### Appendix 1

#### **Informed Consent – English version**

**ID NO.**.....

Dear Participant,

Greetings! Want to thank you for taking the time to meet with me today.

Name is **Frederick Maguhwa** a student of Master of arts in Monitoring and Evaluation at Open University of Tanzania. Conducting a study on the role of male-friendly healthcare services in encouraging HIV testing among men in northern Tanzania.

**Purpose of the Study:** The purpose of the interview is to collect information on awareness and utilization of male friendly health services specific to HIV Testing. You are kindly asked to participate in this study because we believe that you have information that may be important to the study.

**Methods of the study:** As part of the study, interview and structured questions will be done within the estimated time of 35 – 45 minutes.

**Procedure of the study:** Information is provided for you to decide whether you wish to participate in the present study. You should be aware that you are free to decide not to participate or to withdraw at any time without affecting your relationship with a researcher.

Do not hesitate to ask any questions about the study either before participating or during the time that you are participating. Would be happy to share our findings with you after the research is completed. However, your name will not be associated with the research findings in any way, and your identity as a participant will be known only to the researchers. This is to ensure your confidentiality as my informant.

**The expected benefits:** There are no direct benefits for your participation. However, information you provide will help the program to improve accessibility of HIV services in facilities implementing male friendly health services in your community. No harm is expected because of participation in the study, and you can ask the interviewer questions any time during the study.

Whom to contact in case of any question or query concerning this study, please contact the principal investigator Frederick Maguhwa from Open University of Tanzania; Mobile number 0714136371 or my supervisor Dr. Harrieth Mtae Mobile number 0713426964.

I.....have read the contents of this form and understood it, my questions have been adequately answered, I agree to participate in this study.

Please sign your consent with full knowledge of the nature and purpose of the procedures.

A copy of this consent form will be given to you to keep.

Signature                      of                      Participant.....

Date.....

Researcher's    Signature.....

Date.....

## **Appendix 2**

### **Translation into Swahili**

#### **Kiambatanisho I: Fomu ya ridhaa**

**Namba ya Utambulisho.....**

#### **Utambulisho**

Habari, naitwa Frederick Maguhwa, ni mwanafunzi wa shahada ya uzamili ya sanaa ya ufuatiliaji na tathimini katika chuo kikuu huria cha Tanzania. Utafiti huu unaangalia umuhimu wa huduma rafiki za afya katika kuwaimiza wanaume kupima maambukizi ya virusi vya Ukimwi katika mikoa ya kaskazini mwa Tanzania.

#### **Madhumuni ya Utafiti**

Dhumuni la mahojiano haya katika utafiti huu ni kukusanya taarifa juu ya ufahamu na utumiaji wa huduma rafiki za afya kwa wanaume hususani katika upimaji wa VVU. Unaombwa kushiriki katika Utafiti huu kwa sababu tunaamini uzoefu wako na taarifa zako ni muhimu katika utafiti huu.

#### **Mbinu za Utafiti**

Kama sehemu ya utafiti huu tutafanya mahojiano ya kina, mhojaji atanakili kwa kinasa sauti majibu yako. Utahojiwa kwa takribani dakika 35 hadi 45 kwenye eneo binafsi.

#### **Taratibu za utafiti**

Ushiriki wako kwenye utafiti huu ni wa hiari hii inamaanisha kuwa hutakiwi kushiriki ikiwa hutaki kufanya hivyo. Waweza kukataa kujibu swali lolote ambalo hujisikii kulijibu na waweza kusitisha mahojiano wakati wowote. Taarifa utakazotoa ni siri na zitatumika kwa ajili ya utafiti pekee. Wanaohusika na utafiti huu ndiyo

wanaweza kuzipata taarifa hizi. Jina lako halitaaandikwa kwenye fomu hii na halitahusishwa na taarifa, namba za siri zitatumika kutambulisha taarifa ulizotoa.

**Faida:** Hakuna faida za moja kwa moja utakazopata kwa ushiriki ila taarifa utakazotoa zitasaidia mradi katika kipindi hiki cha utekelezaji wake. Hakuna hatari zozote zinazoweza kukupata kwa kushiriki kwenye utafiti huu. Waweza kumwuliza mhojaji maswali wakati wote wa utafiti.

**Mawasiliano:** Kama utahitaji ufafanuzi zaidi juu ya utafiti huu usisite kuwasiliana na mtafiti mkuu Frederick Maguhwa, mwanafunzi wa shahada ya uzamili ya sanaa ya ufuatiliaji na tathimini katika chuo kikuu huria cha Tanzania, namba ya kiganjani 0714136371 au Msimamizi wake Dr. Harrieth Mtae namba ya kiganjani 0713426964.

Mimi..... Nimesoma/nimesikia na kuelewa madhumuni ya utafiti huu na maswali yangu yamejibiwa ipasavyo. Hivyo nimeridhia kwa hiari yangu kushiriki.

Unaweza ukapewa nakala ya fomu hii kama utapenda.

Saini ya Mshiriki..... tarehe.....

Saini ya Mtafiti.....tarehe.....

### **Appendix 3**

#### **Structured questions for men**

Region.....

District .....

Ward .....

Street.....

#### **SECTION A: SOCIAL DEMOGRAPHICS**

**1. What is your age? .....**

**2. What is your education level?**

- a) No education
- b) Incomplete Primary education
- c) Primary education
- d) Incomplete Secondary education
- e) 7Secondary education
- f) 8. Post-secondary education

**3. What is your Current marital status?**

- ☐ Married
- ☐ Single
- ☐ Co-habiting
- ☐ Divorced/
- ☐ Separated
- ☐ Widower

**4. What is your current employment?**

- ☐ Peasant farming

- Petty business
- Employed – Government
- Employed – Private
- Unemployed
- Others (Specify).....

**SECTION B: AWARENESS OF MEN ON THE EXISTENCE OF MALE FRIENDLY HEALTH SERVICES**

3. Where do you access health services?

- Hospital
- Health Centre
- Traditional healers
- Other (Specify).....

4. Do men in this area discuss HIV/AIDS related issues?

- Yes
- No

5. Have you ever discussed issues related to HIV with your fellow men?

- Yes
- No

6. During discussions with other men, have you ever talked about HIV testing?

- Yes
- No
- I don't remember.

7. Are you aware of where HIV testing services are provided in your area?

- ☐ Yes
- ☐ No.....

8. Where do you get information on HIV testing services that are provided in your area?

- ☐ Friends
- ☐ Spouse/Partner
- ☐ Poster or Signboard
- ☐ Health care provider

9. Have you participated in such discussions which were conducted at health facilities or community level?

- ☐ Yes
- ☐ No.....

10. What were the topics discussed?

- ☐ HIV testing and prevention.
- ☐ Family planning
- ☐ Gender based violence.
- ☐ Other (Specify).....

11. Who facilitated the discussion?

- ☐ Health care provider
- ☐ Male volunteer from the community
- ☐ Other (Specify).....

12. Have you ever heard about community male volunteer in your area?

- ☐ Yes

- ☐ No

13. Have you come across a community male volunteer, or approached by one?

- ☐ Yes
- ☐ No

14. Have you seen any posters or signboards which indicates availability of HIV testing services for men in this area?

- ☐ Yes
- ☐ No
- ☐ I don't remember.

15. During discussions with other men, have you heard any of them participating in a male group discussion conducted at the health facility?

- ☐ Yes
- ☐ No
- ☐ I don't remember.

16. Which day of the week is convenient for you to go for health care services?

- ☐ On weekends (Saturdays and Sundays)
- ☐ On Mondays to Fridays
- ☐ Any day
- ☐ Other (Specify).....

17. What time of the day is most convenient for you to go for health care services?

- ☐ In the morning
- ☐ Afternoon
- ☐ In the evening

- Any time
- Other (Specify).....

18. Does Health facilities operate on weekends for HIV testing services?

- Yes
- No
- I don't know.

19. Does Health facilities work on extended hours to allow men to access HIV testing services?

- Yes
- No
- I don't know.

20. During discussions with other men, have you heard any of them received other services along HIV testing?

- Yes
- No
- I don't remember.

21. Apart from HIV testing, are there other services offered for men at health facilities?

- Yes
- No.....
- I don't know.....

22. What services are offered for men apart from HIV testing services at Health facilities?

- FP Counselling

- BP check and advice
- STI screening
- Tuberculosis
- Gender based violence.
- Other (Specify).....

23. What is the sex of the health care provider responsible for HIV testing services for men in the hospital?

- Male
- Female
- Both male and female
- I don't know.

### **SECTION C: HIV TESTING FOR MEN**

24. Have you gone for a medical checkup in the past 3 month?

- Yes
- No..... (If No go to 26.)

25. What prompted you to go for a medical checkup?

- Long illness
- Wanted to know health status.
- It was outreach for medical checkup in my area.
- Escorted my partner for ANC.
- Community male volunteer
- Other (Specify).....

26. Has any of your friends tested for HIV?

- ☐ Yes
- ☐ No
- ☐ I don't know.

27. Have you ever tested for HIV in the past 3 months?

- ☐ Yes..... (Specify facility you access HIV testing service and if not on catchment area go to Q 28)
- ☐ No

28. Why did you access HIV testing services elsewhere and not at .....?

- ☐ No privacy and confidentiality at the hospital
- ☐ Unfavorable facility operation hours
- ☐ Health care providers are not friendly.
- ☐ The facility environment is not friendly.
- ☐ Not aware if such services are offered at the hospital.
- ☐ Distance to the facility
- ☐ Other (Specify).....

#### **SECTION D: REASONS WHY SOME MEN DO NOT GO FOR HIV TESTING SERVICES**

29. Does perceived risk to HIV affect men's HIV testing behavior?

- ☐ Yes
- ☐ No
- ☐ I don't know.

30. Can stigma prevents some men in your area not to test for HIV?

- ☐ Yes
- ☐ No
- ☐ I don't know.

31. Can lack of confidentiality one among the reason for men in your area not to test for HIV?

- ☐ Yes
- ☐ No
- ☐ I don't know.

32. Can health facilities operating hours affect HIV testing behavior of men in your area?

- ☐ Yes
- ☐ No
- ☐ I don't know.

33. Which sex of a health care provider are you comfortable being serviced by?

- ☐ Male health care provider
- ☐ Female health care provider
- ☐ Both Male and Female health care provider

34. Can the sex of a health care provider prevents men in this area to test for HIV?

- ☐ Yes
- ☐ No
- ☐ I don't know.

35. Are health services or interventions in your area prioritized for women and children only?

- ☐ Yes
- ☐ No
- ☐ I don't know.

36. Do you think, prioritization of health services for women and children only affects HIV testing in men?

- ☐ Yes
- ☐ No
- ☐ I don't know.

37. Do you think health care providers keep client's information confidential?

- ☐ Yes
- ☐ No
- ☐ I don't know.

38. Has the health status of any of your friends being disclosed by a health care provider?

- ☐ Yes
- ☐ No

39. What are your own reasons for not testing for HIV? (NOT APPLICABLE (IF HE HAS TESTED FOR HIV)

- ☐ Fear of testing positive
- ☐ Perceived negative HIV status.
- ☐ Low perceived risk to HIV infection
- ☐ I do not think it is important to know my HIV status.

- Stigma and discrimination
- Unfriendly health care providers
- Long waiting time to obtain an HIV test.
- Lack of confidentiality among health care providers
- Partner's HIV status is negative, so I trust I am negative too.
- Other (Specify).....

40. What do you think should be done to increase HIV testing among men?

- i. ....
- ii. ....
- iii. ....
- iv. ....
- v. ....
- vi. ....