

**BARRIERS TOWARDS UTILIZATION OF HIV-RELATED SERVICES  
AMONG INJECTING DRUG USERS IN URBAN-WEST REGION,  
ZANZIBAR**

**By**

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**A Dissertation Submitted in (Partial) Fulfillment of the Requirements for  
the Degree of Master of Public Health of  
Muhimbili University of Health and Allied Sciences**

**Muhimbili University of Health and Allied Sciences  
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**CERTIFICATION**

The undersigned certifies that he has read and hereby recommends for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled *Barriers towards Utilization of HIV-Related Services among Injecting Drug Users (IDUs) in Urban-West Region, Zanzibar*, in (Partial) fulfillment of the requirements for the degree of Master of Public Health of Muhimbili University of Health and Allied Sciences.

.....

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Date:.....

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## **DEDICATION**

This work is dedicated to my son Mikidadi and my daughters Mirfat and Muzdalifah.

## **ABSTRACT**

**Background:** Injection drug use is a growing social and public health concern in Tanzania and Zanzibar in particular due to its implications in HIV/AIDS transmission. Studies conducted in Tanzania Mainland and Zanzibar estimated a high prevalence of HIV among injecting drug users (IDUs) than that of the general population. Despite this, utilization of HIV-related services by IDUs is low and constrained by some challenges in the form of individual, social and structural barriers.

**Objective:** To describe the barriers in utilization of HIV-related services among injecting drug users in Zanzibar Urban-West region.

**Methodology:** A descriptive cross-sectional study was conducted in June 2014 among IDUs residing in urban-west region, Zanzibar through time-location sampling. A study sample of 100 IDUs was obtained using a time-location sampling method. Data were collected on socio-demographic characteristics, awareness and utilization of services in place and barriers in relation to utilization of HIV-related services. The analysis of data was mostly of descriptive type, and SPSS software version 16 was used for data management.

**Results:** A total of 100 IDUs (93 men; 7 women) participated in the study. Age ranged from 20 to 56 years with a mean of  $34.5 \pm 7.9$  years. Three quarters of participants were from urban district, 48% divorced and majority attained primary or secondary education. Three mostly mentioned barriers for utilization of HIV test were fear of being found HIV positive (52.7%), fear of being stigmatized (34.5%) and lack of time (12.7%). Misconception that screening was done for someone who is sick was the most cited barrier on utilizing TB and hepatitis services (55.7% vs. 28.0%, respectively). Lack of laboratory test for TB and hepatitis at VCT and unavailability of drugs for opportunistic infections were some of the structural barriers for utilizing the services. More than two-fifth (43% of the participants were apparently able to mention three services available and 25% could not mention a single service. Services mostly known to the study participants and which can be utilized were HIV testing and supply of condoms and ARVs. Diagnosis and treatment of conditions like TB and hepatitis are least known. Meanwhile, 93.5% of the respondents reported having experienced stigma and

discrimination from the community at some stage, with 73.9% of them mentioning family members and 13% mentioning health care providers as for the behavior.

**Conclusions:** The findings suggest that awareness and utilization of HIV-related services among IDUs in Zanzibar are low. IDUs are challenged more with personal barriers than structural barriers in relation to utilization of HIV-related services.

**Recommendations:** Ministry of Health Zanzibar and its collaborating partners shall increase the awareness on the health services available to IDUs. Community needs to be educated about the relationship between HIV and injection of drugs so as to end the existing stigma and discrimination.

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## **LIST OF ABBREVIATIONS**

AIDS:	Acquired Immunodeficiency Syndrome
ART:	Antiretroviral Therapy
CDC:	Center for Disease Control
CSW:	Commercial Sex Worker
CTC:	Care and Treatment Center
FSW:	Female Sex Worker
HBV:	Hepatitis B Virus
HCT:	HIV Counseling and Testing
HCV:	Hepatitis C Virus
HIV:	Human Immunodeficiency Virus
ICOHRTA:	International Clinical Operational Health Research in Tanzania
IDUs:	Injecting Drug Users
IEC:	Information, Education, Communication
MAT:	Medication-Assisted Therapy
MSM:	Men Sex with Men
MUHAS:	Muhimbili University of Health and Allied Sciences
PEPFAR:	The U.S. President's Emergency Plan for AIDS Relief

RTI: Reproductive Track Infection

SPSS: Statistical Package for Social Sciences

SSA: Sub-Saharan Africa

STIs: Sexual Transmitted Infections

TACAIDS: Tanzania Commission for AIDS

UNAIDS: Joint United Nations Programme on HIV/AIDS

UNODC: United Nations Office on Drug Crime

VCT: Voluntary Counseling and Testing

VOA: Voice of America

ZACP: Zanzibar AIDS Control Programme

ZAYEDESA: Zanzibar Youth Education Development Environment Support Association

## DEFINITION OF KEY TERMS

**Injection drug use:** pattern of using psychoactive substance that enters in the body through the use of syringe and a needle on the skin (usually intravenous, but also intramuscular or subcutaneous). Persons who injected drugs only for prescribed medical purposes should not be coded as injectors.

**Flash-blood:** is a syringe-full of blood drawn back immediately after initial injection that is passed to a companion to inject

**Key populations:** groups within community whereby vulnerability and high risk converge.

**Most at risk populations:** populations which are most likely to be exposed to HIV and most likely to become affected. Depending on the context, these populations include drug users, sex workers, men who have sex with men, transgender people, and prisoners.

**Shehias:** the lowest government administrative authorities at community level.

## CHAPTER ONE: INTRODUCTION

### 1.1. Background

An estimated 35.3million people worldwide were living with HIV/AIDS by 2012, around 2.3 million became newly infected with HIV (87% were adults), and 1.6million people dying from AIDS-related causes (UNAIDS 2013). In 2012, 71% (25million) of the world population living with HIV found in SSA and estimated that about half of the new HIV infections occurring in this region. In Tanzania, HIV/AIDS remains as one of the major public health problems though the trends showed a slight decline of HIV prevalence among adults age 15-49 from 6 percent in 2007-08 to 5 percent in 2011-12. Surveys conducted in the country showed HIV prevalence in Tanzania mainland is higher than in Zanzibar (5.3% versus <1%). The prevalence in both sides of the country continues to be predominantly among women (6 percent) than men (4 percent) (TACAIDS 2013). In Zanzibar, adult women aged 15-49years are more infected too with HIV than men, the proportion is respectively 1.1% compared with 0.9%, but among young people 15-24years is reverse, i.e. men have more infection 1.1% then women 0.1% (TACAIDS 2013).

Behaviors and conditions that put individuals at greater risk of contracting HIV include; having unprotected anal and vaginal sex; having another STIs; sharing contaminated injecting equipment; receiving unsafe injections, blood transfusion, medical procedures that involve unsterile cutting or piercing and experiencing accidental needle stick injuries, including among health workers. However, sexual transmission is by far the most common mode of transmission globally. In Sub-Saharan Africa the practices of inserting herbs or other substances into vagina by some women to facilitate dry and tight sex have been said to increase the transmission probability of HIV (Morison, 2001). Also, gender inequalities and



some of the cultural practices are among the factors associated with HIV/AIDS transmission in Africa.

Drug Injection is one method of drug use which is currently becoming a major social and health problem which existing worldwide, affecting mostly youth. Globally it was estimated that 16 million people were injecting drugs (Mathers et al., 2008). The largest numbers of Injecting drug users found in China, USA and Russia and the most affected population is aged 15-64, but the data on the extent of injection drug use for Africa, Middle East and Latin America was absent (Mathers et al., 2008). In sub-Saharan Africa injection drug use began to increase in the late 1990's. The actual figure of IDUs in East Africa is unknown due to the limited surveys done for this sub-population. It is reported that around 18,000 – 30,000 IDUs available in Kenya (Nieburg & Carty, 2011) and at least 25,000 IDUs live in Tanzania (Mbatia 2011; Needle & Zhao 2010). Heroin injection emerged in Dar es Salaam, Tanzania, in the late 1990s. The Tanzanian government acknowledges that injection drug use is a well-established problem across many cities in the country (Ratliff et al., 2013). Prior to 1980s no hard drugs use reported in Zanzibar, but globalization and socio-economic transformation have resulted into drug importation and use in the islands mainly in urban areas. Though statistics on actual number of IDUs do not exist, a survey conducted in 2005 estimated 39% of drug users in Zanzibar were IDUs (Dahoma et al., 2006).

Injection drug use is becoming an increasingly important mode of HIV transmission globally. Studies have revealed that there is association between injection drug use and HIV infection among IDUs due to their frequently engaging in high-risk sexual and injecting behaviors that have significant contribution to the HIV/AIDS spread (Beyrer et al., 2010; Dahoma et al., 2006), and the risks extend beyond the individual to those of networks of drug users and to a wider social context. According to WHO (2013), on average, one out of every ten new HIV infections is caused by injecting drug use. The tendency to have multiple partners, share needles, engage in 'flash-blood' practices, and have unprotected sex place drug users at high risk of HIV infection.

For long time HIV prevention, treatment and care for injecting drug users in Tanzania has not been a focus of government and/ or donor attention. According to the UNODC, HIV rates among intravenous drug users in Zanzibar are thought to be 20 to 30 times that of the rest of the population ([www.voanews.com](http://www.voanews.com)). Based on this situation, HIV prevention, treatment and care services that target IDUs are crucial to be implemented in Zanzibar.

In 2001, UNAIDS, WHO and UNODC recommended a comprehensive package of interventions for HIV prevention, care and treatment for IDUs (UNAIDS/WHO/UNICEF, 2011). These are:

- (1) Needle and syringe programs;
- (2) medication-assisted therapy and other drug dependency treatment;
- (3) HIV testing and counseling;
- (4) Anti-retroviral therapy;
- (5) Prevention and treatment of STIs;
- (6) Condom promotion for people who inject drugs and their sexual partners;
- (7) Targeting information, education and communication programs;
- (8) Prevention, diagnosis and treatment of TB and
- (9) Diagnosis and treatment of and vaccination for viral hepatitis.

It is clear that IDUs are at higher risk of getting HIV infection but they continue to face a number of barriers, thus impairing their ability and willingness to seek life-saving prevention, treatment, care and support. The barriers documented include social and institutional rejection, criminalization of their practices, traveling distance, cost, time barrier on the side of

health facility. Problems of being unaware of the existing services, stigma, and discrimination have also impeded utilization of HIV health services. In addition, services often lack personnel with expertise in the unique health and psychological needs of these populations; they are poorly educated about addiction and regard IDUs as troublesome or non-compliant patients. Therefore, removing the barriers that prevent IDUs from utilizing HIV services is essential to providing appropriate HIV prevention, care, treatment and support.

In 2011, Tanzania became the first country in SSA to initiate harm reduction programs for IDUs with assistance of PEPFAR. Zanzibar government on the other hand, recognized the presence of these populations in its community and its potential in HIV epidemic so it has established some of the interventions in collaboration with NGOs since 2007. Some of the interventions include increasing access to VCT (Unguja and Pemba), HIV care and treatment, TB and hepatitis virus diagnosis, care and treatment, mobile outreach through youth led dramas, training of healthcare workers on the management of HIV/STI and community education and media campaign on behavioral change. Currently the HIV counseling and testing are provided in public health facilities as well as at private and NGOs centers.

## **1.2. Statement of the Problem**

HIV prevalence among people who are injecting drugs substantially remains a public health challenge. HIV prevalence of 16% in this group in Zanzibar is higher than in the general population which is <1%. Between January 2009 and March 2011, 698 IDUs received HIV testing and counseling services in Zanzibar. Eighty-seven (12.46%) were HIV positive and 64 enrolled in care and treatment (Ratliff, et al 2013). Despite the existing efforts of increasing HIV services coverage done by NGOs, private as well as government some barriers existing to the IDUs in utilizing the services and a high degree of stigma and discrimination against these populations is also apparent in Zanzibar. Utilization of HIV services among injecting

drug users (IDUs) is not as routine or frequent as is recommended for members of high-risk. Thus, high rates of preventable HIV infection among IDUs are a consequence of suboptimal access to HIV prevention and care, no voluntary uptake of HIV services and high drop-out from CTC groups. For example, for the period of Jan-Mar 2014, four IDUs were enrolled at ZAYEDESA CTC and until Sept, 2014, two remained (personal communication with clinical advisor of ICAP-Zanzibar). The low access and utilization of HIV services has been reported as caused by few services available for key at-risk populations including IDUs, even this group represents most of HIV-positive population.

Maximizing the benefits of HIV services to this group is crucial for the decline of new HIV infection. Various studies have been conducted on IDUs that addressed issues about HIV prevalence and injecting drug use, behavioral and biological factors, co-infections of STI/RTI, blood-borne diseases facing IDUs and the like. This study focused on examining the barriers that injecting drug users faced in utilizing HIV-related services in Zanzibar. HIV services of interest included prevention services (availability of condoms, bleach kits and new syringes/needle), HIV testing, care and treatment (ARV provision), TB and hepatitis diagnosis.

The study provided information on whether the existing HIV programmes and services were user friendly and easily utilized by this group.

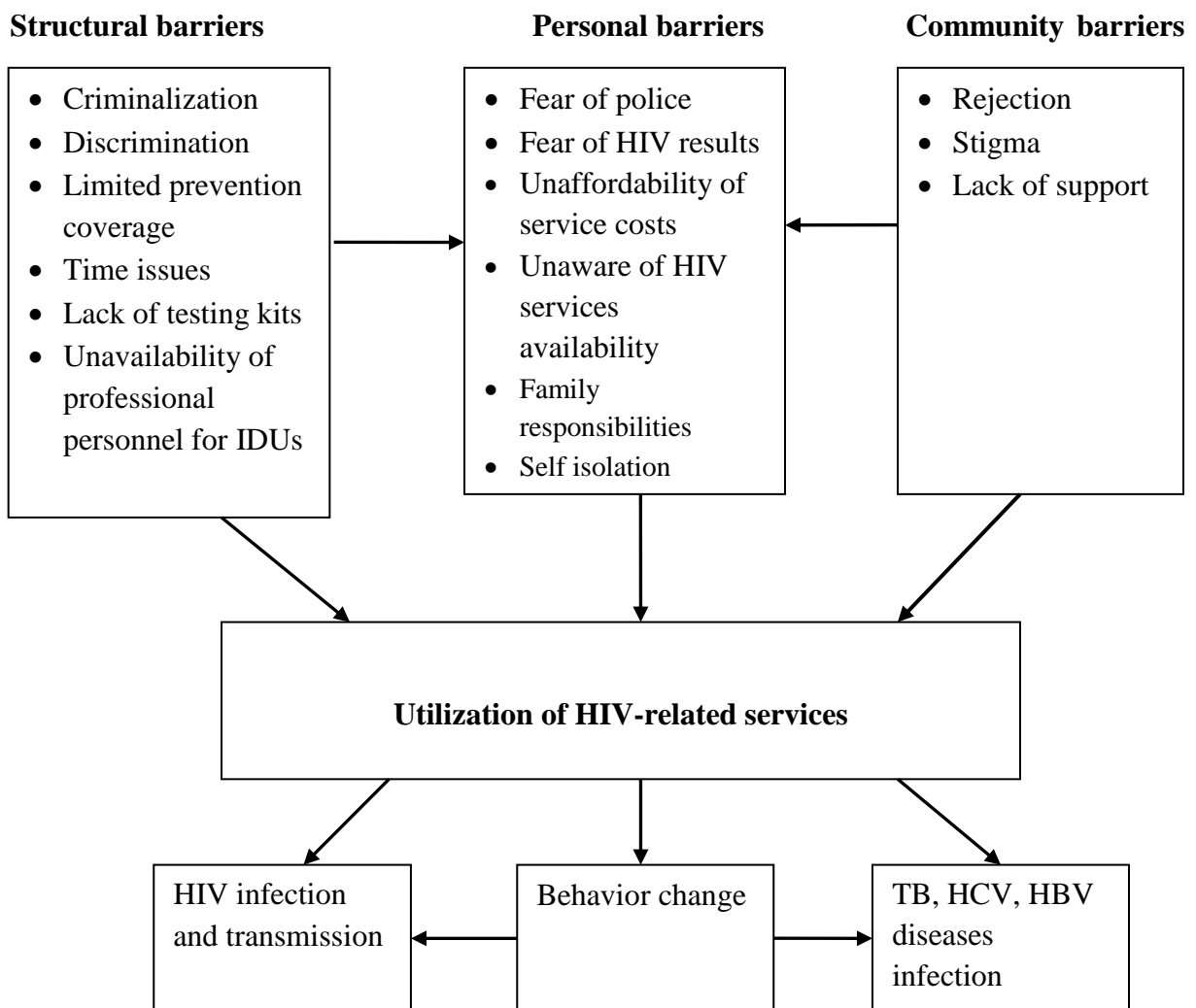
### **1.3. Conceptual Framework**

Adequate utilization of HIV-related services among injecting drug users may reduce the probability of getting HIV infection, TB as well as hepatitis virus not only to themselves but also their sexual partners and other people in their network. Those HIV services include prevention services, treatment, and care and support that in one way or another have effects to either presence or absent of these diseases. However, in many countries several barriers are existing towards utilization of these services. The barriers reported vary from personal, community, to structural barriers. Personal barriers are those related to individual him/herself;

community barriers have to do with social/family members and structural barriers refers to the conditions or events which occur/exist under circumstances where care is provided and those related to legal or policy issues (Figure 1).

The existence of structural and community barriers aggravate the personal barriers due the fact that IDUs feel not secure, hence reluctant to utilize services.

**Figure 1: Conceptual framework illustrating inter-relationships between barriers and utilization of HIV-related services among IDUs**



#### **1.4. Rationale of the Study**

The need to address HIV services utilization among IDUs has been highly underscored. Many studies on HIV focused on the general population and information about key populations and HIV including IDUs is still limited. IDUs are less likely to utilize the services than other people though they have increased risk for HIV to themselves and general population. IDUs also have increased risk for other blood-borne infections, such as hepatitis C virus (HCV). Few surveys have focused on problems lead to low utilization of HIV service, thus, there is a need to obtain information on the barriers related to HIV services utilization that injecting drug users facing.

The usefulness of this study is on various ways. This study will add more knowledge to the existing literature on HIV services and IDUs, the study findings will be used as a base to further research on this area. The study has some policy implications as well. It provides information that may help ministries and HIV stakeholders on development of appropriate policy that recognize the health rights of IDUs. The findings in this study will also inform the need of appropriate designing of HIV interventions and prevention strategies that consider IDUs needs.

#### **1.5. Research Questions**

This study sought to respond to the following questions;

1. What is the level of awareness on HIV-related services among IDUs?
2. What is the level of HIV services utilization?
3. What are the barriers facing IDUs in utilizing HIV-related services?

## **1.6. Study Objectives**

### **1.6.1. Broad Objective**

To describe the barriers in utilization of HIV-related services among injecting drug users in Zanzibar Urban-West region.

### **1.6.2. Specific Objectives**

1. To assess the awareness level on HIV-related services available for injecting drug users.
2. To estimate the proportion of IDUs utilizing HIV-related services.
3. To determine personal barriers on utilization of HIV-related services.
4. To determine structural barriers that IDUs face towards utilization of HIV-related services.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1. Socio-demographic characteristics of IDUs**

Injection drug use in most countries characterized by male, youth at mean age of 30, unemployed/doing petty trade, unmarried and less educated and for women, considering selling sex as their occupation (Dahoma et al., 2006; Williams et al., 2009; Chakrapani, 2012). A 2005 drug use study in Zanzibar reported that the proportion of IDUs were 40% among male compared to 27% among women (Dahoma et al., 2006). Williams et al., (2009) interviewed 219 female IDUs in Dar es Salaam and 80% reported trading sex for money, 44% had earned income by working at a full or part-time job. Also it reported that injecting drug use is urban dominant.

### **2.2. Prevalence of HIV among injecting drug users**

While the overall growth of new HIV infections has slowed in most regions of the world, infections attributed to injection drug use have been expanding worldwide. Worldwide 3.0 million IDUs were estimated to be living with HIV infection in 2008 and the majority of those were in Eastern Europe and Central Asia (Mathers et al., 2008). In many countries HIV prevalence rate among IDUs remains higher than the general population. In China, the national HIV prevalence in 2010 among IDUs was 9.08% (Zhang et al., 2013), it is 8% in USA (CDC, 2013), in Nepal it is 28% among female IDUs (Ghimire et al., 2013) and estimated HIV prevalence among this population is >15% in India (Chakrapani, 2012). Similar findings of increasing IDUs and HIV rates also noted in Vietnam, Ukraine, Thailand, Malaysia etc where HIV prevalence rates are around 1%.

In sub-Saharan Africa, data available showed the similar pattern of high HIV prevalence among IDUs; 47% of people in Mauritius who inject drugs tested HIV positive, 11% in



Ghana and the rate range between 15% - 29% in South Africa (UNAIDS/WHO/UNICEF, 2011); and in Kenya prevalence of HIV among IDUs was 36% with four percent of new HIV infections linked to IDU (Nieburg & Carty, 2011). Studies conducted in Tanzania between 2005 and 2006 estimated an HIV prevalence of 25% and 42% among IDUs in Zanzibar and Dar es Salaam respectively (ZACP, 2007; Williams et al., 2009). Subsequent studies conducted between 2007 and 2010 found an HIV prevalence among injecting drug users of approximately 16% in Zanzibar and 35% in Dar es Salaam (Broz et al. 2010; Ratliff et al. 2013). It is reported that in Tanzania, HIV infection is more than five times than HIV infection among drug users who do not use injections. Though Zanzibar is among the countries with lowest HIV prevalence in Africa, HIV prevalence is high among key populations and the transmission found to occur mainly among IDUs, FSWs and MSMs. A 2007 survey on IDUs in Zanzibar found about half of people enrolled in ART programs were IDUs. Although most of IDUs are men, HIV infections is higher among women IDUs (Nieburg & Carty, 2011; Messner & Kazantseva, 2013), this is caused by double risk behavior women experienced, i.e. IDU and sex worker or unprotected sex practices. However, the relationship between HIV prevalence among IDUs and other socio-demographic characteristics does not found.

### **2.3. Awareness of HIV services among injecting drug users**

Having the correct information about HIV services is one way of raising the awareness on the HIV services exist for IDUs. Thus the reason why UNAIDS recommended the use of IEC programs in IDUs interventions. Most of literature reviewed, discussed awareness on the basis of general drug users and not specifically for IDUs. Studies about awareness of HIV-related services among IDUs in Africa and Tanzania are limited. A study done in South India indicated that the key populations injecting drug users have knowledge on VCT but not aware of other HIV services (Beattie et al., 2012). On the contrary, awareness on HIV status and vulnerability and blood-borne diseases was much more reported. According to Beckerleg (2005), there is limited awareness of dangers of HIV infection from sharing injection

equipments among Kenyan IDUs (Beckerleg et al., 2005). A study on the HIV spread among different groups in Russia, found that quarter of the IDUs tested HIV positive did not know they were HIV positive (Girchenko et al., 2012).

#### **2.4. HIV services utilization among Injecting Drug Users**

Researches on HIV-related health services utilization of drug users are small than the literature on consequences of drug abuse. According to UNAIDS 2011 report on HIV/AIDS, data reveal continued inequity in access to VCT, ART and support among people who inject drugs in low, middle and high income countries. The proportions of IDUs who received HIV counseling and testing in 2010 is limited: the global overall reported median percentage was 23% (UNAIDS/WHO/UNICEF, 2011). This highlights for necessities to scale-up accessibility to the important services for HIV prevention, treatment, care and support. Statistics from IDUs surveyed in Northeast India (2010) documented one-fourth (25%; n=97/388 - 58 men and 39 women) ever been tested for HBV, 22% (n=87/388; 60 men and 27 women) ever tested for HCV and about one-fifth (22%; n=86/388) of the participants reported having been tested for TB (Chakrapani 2012).

Level of accessibility and utilization of HIV services in sub-Saharan African countries in general and Tanzania in particular is less known due to limited available information. Injecting drug users continue to have unmet needs of HIV-related services not only in low income countries but even in developed countries. Data available from reviewed literatures showed low utilization of HIV care and treatment among IDUs, whilst HIV testing is the most service reported to be utilized. In the United States, it is estimated that only 15% of drug users are engaged in drug treatment at any given time (Needle et al., 2011). A review of barriers that IDUs face done by Wolfe, 2010 in five countries (China, Vietnam, Russia, Ukraine and Malaysia) showed that only 25% of HIV infected IDUs received ART. In central

Asia, it estimated that access to ART ranged from 1% among IDUs in Uzbekistan to a high of 5 per 100 IDUs in Tajikistan (Mathers et al., 2008).

During the regional workshop on HIV and drug use in 2011, it was indicated that that only 4% of injecting drug users living with HIV are on HIV treatment. In Tanzania, one-fourth of the IDUs tested positive had never accessed any HIV care and treatment services (Mbwambo, 2010). The percentages did not correlate with HIV prevalence rate among IDUs and has implications on mortality and burden of diseases among IDUs population. Whilst the number of injecting drug users accessing HIV services is low, situation is bad for women IDUs. For instance, Muhimbili MAT clinic enrolled only 12 women out of 189 clients by June 2011 (Needle et al., 2011). Additionally, about 40% of IDUs reported to be initiated into Mauritius's methadone program and having a retention rate of above 95%.

## **2.5. Personal barriers on utilization of HIV services**

Unlike other population groups, key populations including IDUs face various barriers that hinder the accessibility and utilization of HIV-related services. A study carried out in Northeast India identified that majority of IDUs face barriers to access services, both while getting into the service for the first time as well as when continuing to use those services. Also it was revealed that IDUs are often marginalized and are subject to stigma and discrimination (Chakrapani, 2012; Nieburg & Carty 2011). In accessing risk reduction services of needle and syringe the surveyed IDUs in India revealed the three top barriers to use the services; Fear of being identified by others as drug user (67%; n=157), fear of being arrested by police (60%; n=140), and travel distance to follow the services (41%; n=95) (Chakrapani, 2012). Predominantly, women have more fear of being identified than men, plus family obligations of taking care of children and/or others in the family act as barrier in utilizing the services.

Furthermore, financial barriers including the inability to afford cost of drugs, screening and treatment services and lack of knowledge about where to get services also recognized as individual barriers IDUs face (Chakrapani, 2012). Cost to laboratory test, physician care and treatment drugs are substantially mentioned as barriers for drug-dependence IDUs in China, Vietnam, Ukraine, Russia and Malaysia (Wolfe et al., 2010). Fear of a positive result that followed with stigma, fear of reactions from family and community members and stigmatization has been documented as among the barriers toward HIV testing. Because injecting drug users can be incarcerated, they make efforts to remain as anonymous and invisible as possible; and they are often harassed by law enforcement when they attempt to use services; these reactions hinder the access of HIV-related services (Needle & Zhao 2010).

## **2.6. Structural barriers on utilization of HIV services**

In many countries responses to drug users documented to be punitive, including police crackdowns, harassment of drug users and outreach workers, detention, and long-term incarceration in harsh settings that compound health risks. Those law enforcement actions pose a threat to HIV services utilization due to the fact that IDUs keep on hiding to avoid harassment. Limited resources for preventive and treatment services often makes drug addiction and HIV even harder to address (Beyrer et al., 2010; Chakrapani, 2012). Consequently lack of adequate clean syringes motivates IDUs to share needles. Accordingly, structural barriers to accessing HIV services experienced by IDUs found in India are discriminatory attitudes and behaviors by VCT staff (especially at government healthcare services), poor physical facilities, long waiting times, lack of available treatment, the need to give bribes to receive care, travel cost and time (long distance to health facility) (Beattie et al., 2012). Fear of police has also reported as structural barriers that cause the decreasing access and use of HIV services as found in China, Ukraine and Vietnam (Beyrer et al., 2010). Criminalization and stigmatization of injection drug use keeps individual's drug users hidden and discourage population-based surveys needed to better characterize these groups (Nieburg & Carty, 2011). Thus the data gap for this group keeps on existing.

Another findings suggested that health-care providers regard drug dependence as an issue of morality rather than a medical disorder, that health systems impose conditions on IDUs seeking treatment that are difficult to meet. Wolfe, (2010) mentioned the use of police registries and harassment of HIV-positive IDUs, detention of IDUs, and harassment of physicians who prescribe opioids are among the structural barriers to the provision of HIV services to IDU noted in his review of effectiveness and coverage of ART in low and middle-income countries. The report from reviewed burden of HIV among IDUs in 14 countries (low and middle-income) observed the most frequently reported barriers to introducing or scaling up MAT are restrictive legislation, restrictive entry criteria, policies of registering drug users as a condition for services, police harassment, stigma and discrimination, and lack of knowledge among policymakers about drug users, drug use, and the compelling evidence for supporting medication-assisted therapy and other core interventions (Needle & Zhao, 2010).

## **CHAPTER THREE: METHODOLOGY**

### **3.1 Study Area**

The study was conducted at five different gathering sites of drug users in Urban-West Region, Zanzibar. Zanzibar comprises of two sister main Islands of Unguja and Pemba. Administratively there are five regions in Zanzibar of which three are in Unguja and two in Pemba. Each region has two districts, which are subdivided into constituencies which are further subdivided into Shehias. Urban-West region is divided into two districts; i.e. Urban and West Districts. The total population of urban-west region according to 2012 census is now approaching 600,000 people, of whom 310,088 are females and 283,590 are males, and accounts for 46% of the total Zanzibar population. This is the commercial region with demographic heterogeneity, high socioeconomic development and almost all government ministries and programs centered here. This region was selected because is mostly affected by drug use among youth than the rest; it is the center of drug trafficking and supply hence acquiring drugs is relatively easier than in other regions. The actual number of injecting drug users (IDUs) in this region is unknown, however a 2005 HIV-substance abuse survey identified 82% (n=415/508) of participants were from urban-west region.

### **3.2 Study Design**

This was a descriptive cross-sectional study design that employed respondent driven sampling methodology to collect data from the study participants. The study aimed at collecting information once and there were no follow up of a participant; that is a descriptive cross sectional design was chosen.

### **3.3 Study Population**

The study population was IDUs who were found in Urban-West region, Zanzibar during data collection period. However, information on structural barriers was obtained from health facilities that provide services to injecting drug users as well.

#### **3.3.1 Inclusion criteria**

The eligibility criteria for participant to be recruited in the study included;

1. Age of 15 years and above; regarding the potential of the study problem, many studies involved participants of age from 15 years without obtaining parent's consent. Demanding the parent's consent may disclose the behavior of the participant and bring discomfort to him/her. Therefore, if it was happened to get participants of age below 18 years, they could give their own consent for the study participation.
2. Injecting drugs for at least past 3 months.
3. Residing in Zanzibar for at least the past 3 months
4. Able to provide informed consent

#### **3.3.2 Exclusion criteria**

A person who met the inclusion criteria was excluded in the study if one was found to be intoxicated at the time of recruitment for interview.

#### **3.3.3 Health facilities**

Health facilities that provide VCT and CTC services to drug users or implementing special intervention for IDUs were another source of information.

### 3.4 Sample Size

The minimum sample size  $n$ , for IDUs was determined using the formula for estimating a single proportion; that is

$$n = \frac{z^2 p (100-p)}{\varepsilon^2}$$

where:

$z$  = critical value corresponding to 95% confidence level (= 1.96);

$p$  = estimated proportion of IDUs who utilize HIV-related services (estimated at 50%);

$\varepsilon$  = margin of error on  $p$  (= 10%);

$$n = \frac{(1.96)^2 \times 50(100-50)}{10^2} \approx 96$$

Thus a sample size of 100 people was taken.

### 3.5 Sampling

Time-location sampling (TLS) was used to recruit IDUs in this study after the non-feasibility of applying the intended technique of respondent driven sampling (RDS). In particular, it proved difficult for IDUs to follow the interviewer at interviewing station requiring the principal investigator to spend a lot of money to convince drug users. TLS also referred to as time-space sampling (TSS), venue-based sampling is used for sampling hard-to-reach population, for whom it is difficult to construct a sampling frame of the individual members of the population. TLS is a probability-based strategy for recruiting members of a target population congregating at specific locations and times. TLS has been used extensively around the world in public health projects with populations at high risk for HIV infection (Semaan, 2010).



Recruitment of study participants was initiated by interviewing key informants on the characteristics of the study population. Secondly research team identified the range of venue-day-time units for members of the target population which form the sampling frame. Peer-educators who were former drug users helped to identify injecting drug users and their gathering places, known as “*vijiwe*”. Needle piercings marks, visible scars, swelling hands and legs are some of the identities observed to distinguish injecting drug users from non IDUs. The number and proportion of persons who belongs to target population from each venue was then estimated to determine the eligibility of the venue for sampling. Lastly, five venues selected out of ten listed to attain the sample size desired; the selection based on high attendance/availability and accessibility o f IDUs and the venue. Thus, 4 places in urban district and 1 place in west district were visited.

### **3.6 Health facilities sampling**

Eight health facilities were known and identified as providing services related to HIV (i.e. prevention, care and treatment, and support) to the general population in urban-west region and all of them were included for observation.

### **3.7 Data collection techniques and tools**

A face-to-face interview was conducted by trained interviewers with eligible IDUs using a Kiswahili semi-structured interview schedule (appendix IV). Time for data collection was changed from day-to-day depending on the location visited and the interview only captured those who were visible at that location. Data for describing structural barriers were obtained through observation at health facilities using a checklist.

### **3.8 Variables**

#### **3.8.1 Dependent variable**

1. Utilization of HIV-related services

#### **3.8.2 Independent variables**

1. Socio-demographic characteristics: age, marital status, sex, district of residence, level of education, occupation and living pattern.
2. Awareness of availability of HIV services.
3. Community barriers.
4. Personal barriers.
5. Structural barriers in the form of availability of staff, prevention kits, testing kits, and drugs for opportunistic infections and time.

### **3.9 Research Assistants**

Two men who are former drug users and now peer-educators and outreach workers were hired as research assistants for the purpose of collecting data. The selection is men biased due to the nature of study population being male dominated. They were trained for one day to be acquainted with study objectives, research questions and how to conduct interview so as to get relevant information. Principal investigator coordinated day to day overall activities for data collection and ensures quality and consistency of data collected from the field. During the field work research assistants went together with the principal investigator for interview.

### **3.10 Validity and Reliability**

A data collection instrument's reliability refers to consistency. It is the stability of measures administered at different times to the same individuals or using the same standard providing the same results.

In order to ensure reliability of the instrument in this study, a pilot study was conducted. This involved testing the actual tool on a sample of 10 IDUs from a sober house. Thus enabled to ensure that the tool collected the desired data and the questions were clear. Moreover, most of the questions designed in closed-ended format which ensure the same coding/recording of the responses for all participants over time.

Validity of an instrument is the extent to which an instrument measures what it is supposed to measure and performs as it is designed to perform. In this study the aspect of validity was considered by administering the instrument in Kiswahili, the language that was familiar and well understood by all study participants. A pilot study also used to check the validity of the instrument. The instrument has clear directions and it was easy to score, the questionnaires were straight and were not long. Some of the questions in the tool developed based on findings from previous studies similar to this and the literature reviewed. In the measurement process errors were largely reduced. To test the validity of the instrument, a copy of the questionnaire was submitted to the study supervisor to examine whether the number and type of items in the questionnaire accurately measure what the study wanted to know (content validity).

### **3.11 Data processing and analysis**

At the end of each day, the research team went through the filled-in data collection forms checking for completeness, accuracy and consistency.

Data entry was done on each day after the field work. SPSS software version 16 was used for data entry, cleaning and analysis, with the principal investigator being in-charge and

responsible for the whole process of data management. Most of the analyses were of descriptive type. Frequency distribution describing the findings according to the study objectives was presented and the distribution of study population by socio-demographic variables presented as well. Cross-tabulation between history of uptake of HIV-related service and place of residence, age was produced. Bivariate analysis was conducted to explore the association between HIV service utilization and other variables. Chi square test was employed to test for statistical significance of the findings when P-value is  $<0.05$ . Moreover, results were presented in graphs and chart.

### **3.12 Pre-testing**

The pre-test was done in two sober houses located at Fuoni and Mpendae - West district involving 10 IDUs who recovered not more than 6 months. Adjustment was made according to the results of the pre-test. Some of the questions or responses were rephrased or coded for clear understanding, hence to ensure appropriate responses were obtained. For instance on the demographic profile, it was necessary to modify the question of living pattern to merge parents, guardian and family to be in one category. Most of the rephrasing was done on Swahili translation.

### **3.13 Ethical consideration**

Ethical clearance to conduct this research was sought and received from Muhimbili University of Health and Allied Sciences, Research and Publications Committee.

Anonymity was assured by not recording names of the respondents on the questionnaires apart from the serial number that were given to each questionnaire. Informed written consent was sought from participants prior to interview. All study participants were informed on their rights to participate or refuse to participate in the

study even in the middle of interview or not to answer any question and no action against their decision will be taken, as per research ethics requirement. No harmful procedure was inflicted to participants. Only participants who were able to provide informed consent were recruited and it was understood that refuse to consent is participant's right, so no coercion was applied in recruiting study participants.

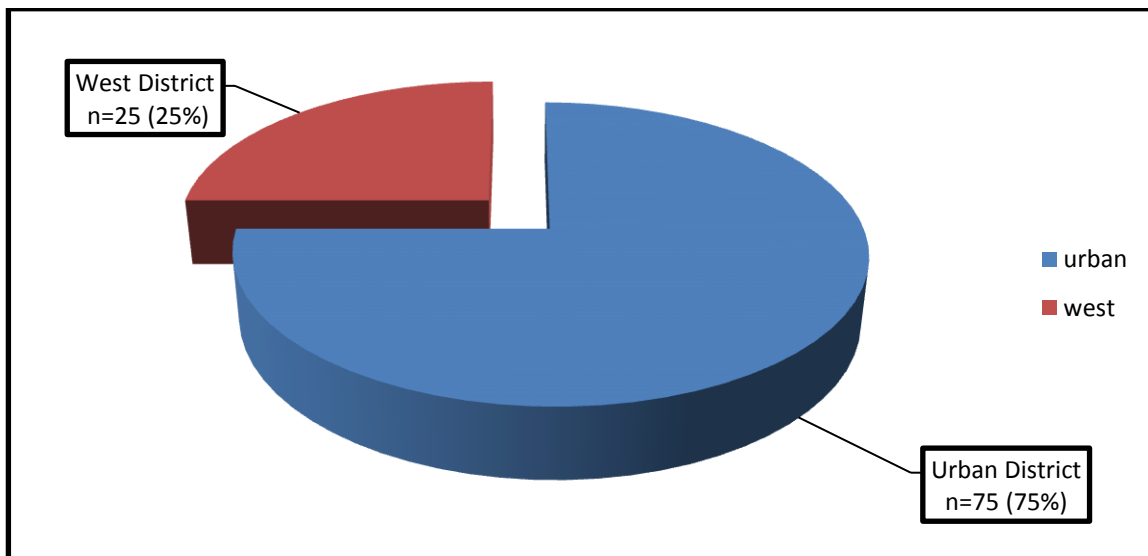
### **3.14 Study limitations**

1. Identifying the location where IDUs gathered was not easy, because injection drug users were rejected by cocktail drug users hence they are hidden in most of the time, so enrollment of the study participants was non smooth. However, active involvement of former drug users helped to recruit sufficient number of study participants.
2. Selection of venues "*Vijiwe*" to recruit study participants was a challenge and only venues known with large number of IDUs were selected hence this can be regarded as selection bias.
3. Recruitment of gathering venues applied could have contributed to uneven distribution of study participants by area of residence.
4. Time-location sampling excluded people who do not attend any venue; therefore findings were limited to more visible and active members of the target population.
5. The scope of the study was limited by available time thus small sample size of this hidden population was determined and the observation part of the study did not reach the number expected as well.
6. The sampling technique of respondent-driven sampling (RDS) that was proposed earlier was found not to be feasible for recruiting the study subjects as its application would turn out to be too expensive to afford in terms of time and money. Thus a time-location sampling strategy was adopted, instead.

## CHAPTER FOUR: RESULTS

### 4.0 Socio-demographic characteristics of study participants

A total of 100 IDUs comprising 93 men and 7 women participated in the study. Likewise, due to time constraint, only 4 health facilities observed instead of 8 as previously planned. Three quarters of the study participants were from Urban district and the rest were from West district (Figure 2). Age ranged from 20 years to 56 years, with a mean of  $34.5 \pm 7.9$  years (mean  $\pm$  standard deviation) and median of 33.5 years. Findings on other socio-demographic attributes are presented in Table 1.



**Figure 2: Place of residence (n=100)**

**Table 1: Socio-demographic characteristics of study participants by sex**

Characteristics	Male		Female		Total	
	n (93)	%	n (7)	%	n (100)	%
<b>Age*</b>						
<30	21	23.1	4	57.1	25	25.5
30-39	46	50.5	3	42.9	49	50.0
40-49	18	29.8	0	0.0	18	18.4
≥50	6	6.6	0	0.0	6	6.1
<b>Education level**</b>						
Primary	49	53.3	3	42.9	52	52.5
Secondary O'level	40	43.5	4	57.1	44	44.4
Secondary A'level	2	2.2	0	0.0	2	2.0
College/University	1	1.1	0	0.0	1	1.0
<b>Marital Status**</b>						
Married	14	15.2	0	0.0	14	14.1
Single	34	37.0	1	14.3	35	35.4
Divorced	41	44.6	6	85.7	47	47.5
Cohabiting	3	3.3	0	0.0	3	3.0
<b>Occupation</b>						
No occupation	12	12.9	5	71.4	17	17.0
Fishing	6	6.5	0	0.0	6	6.0
Business/self employment	29	31.2	0	0.0	29	29.0
Marker †	11	11.8	0	0.0	11	11.0
Porter	12	12.9	0	0.0	12	12.0
CSW	0	0.0	2	28.6	2	2.0
Casual labor	12	12.9	0	0.0	12	12.0
Other §	11	11.8	0	0.0	11	11.0
<b>Living pattern</b>						
Parents/family	73	78.5	1	14.3	74	74.0
Alone	14	15.1	2	28.6	16	16.0
Non family member	6	6.5	4	57.1	10	10.0

**Notes:**

\* Age was not recorded in 2 male participants.

\*\* missing information in 1 male participant per attribute.

† Marker job include all job kinds of technician/vocational (e.g. welder, electrician, mason, painting, motor vehicle mechanic, shoe repairer).

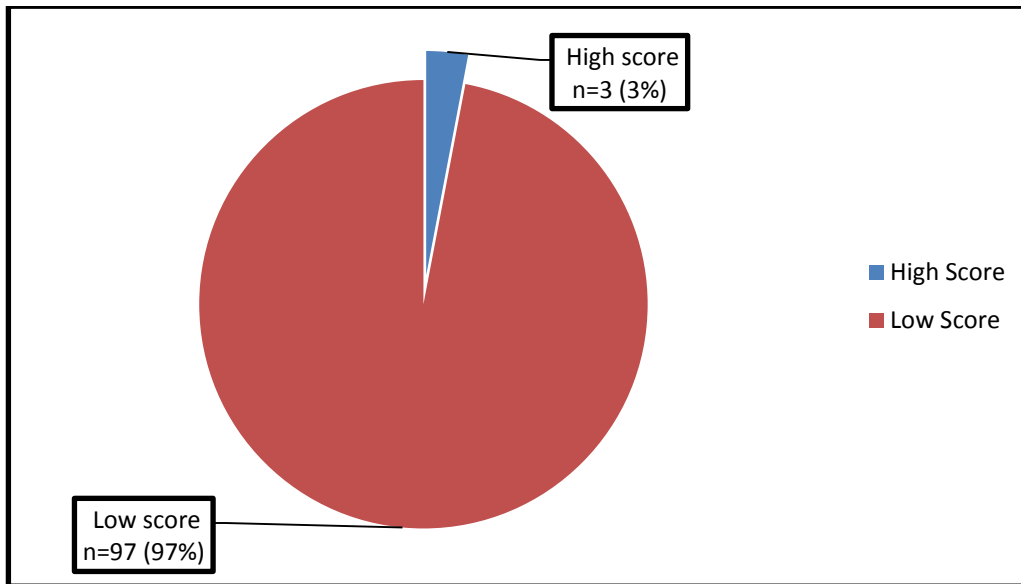
§ Other includes artist, tour guide, farmer, bottle collector, waste collector, robbery.

About three quarters of the study participants are aged below 40 years; while more than 80% are not living in marital relations (i.e. they are either single or divorced). About half of the IDUs have acquired at least secondary education. Majority (74%) of the respondents lives with their families or parents, but a substantial minority stay on their own. Self-employment, including having petty business, is reportedly the most common type of occupation among the study participants, but 17% of the respondents have no particular occupation. Of interest is the fact that two of the female respondents reported being sex workers.

#### **4.1 Awareness of HIV-related services**

Generally, most of participants (81) said they knew that there are HIV-related services available for Injecting drug users in Zanzibar. For the purpose of measuring level of awareness on HIV services, participants were asked to mention the types of HIV services that can be provided. Currently about eight services related to HIV prevention, treatment and care are available for drug users (including injecting users) in different VCT and CTC centers in Zanzibar. If a respondent mentioned five services and above ( $\geq 5$ ) he would be scored as having high level of awareness, and mentioning four correct type of service or less than that ( $\leq 4$ , including zero) fell in the category of low level of awareness. Using this criterion, only 3 (3%) of participants had high level of awareness, and the rest (97=97%) had a low level of awareness of availability of HIV related services to IDUs (Figure 3). Out of 100 participants interviewed, one quarter (25%) of participants were not able to mention any of the services; the last number of services known were five services (i.e. none of the participant mentioned more than five services); while majority of them (43%) knew three services; 17% knew two services; one service mentioned by 9% and 3% of participant mentioned four services and five services as well.





**Figure 3: Level of awareness on availability of HIV services for IDUs (n=100)**

Meanwhile, HIV counseling and testing services, provision of ARVs and condoms were the most common types of services to IDUs known, although, as shown in Table 2, a few study participants could also mention screening or diagnoses of STIs, hepatitis and TB as other services that are provided for IDUs.

**Table 2: Reported type of HIV services**

Service	Count	%
Counseling and testing	71	94.7
ARV provision	55	73.3
Hepatitis management	5	6.7
STI management	3	4.0
Condoms distribution	47	62.7
Bleach kits	7	9.3
Health education	7	9.3
TB management	5	6.7

*Note: Percentages are based on 75 respondents in multiple responses*

In addition, more than four-fifth (87%; n=85/98) of participants were aware of where one can go for HIV testing. Table 3 displays awareness score by socio-demographic characteristics. None of the interviewed women scored high awareness and only 3.2% (3/93) of men found to be highly aware. On the contrary, all women participants (7=100%) had low awareness and 96.8% of men did so. Only participants of age group 40–49 (17%) had scored high awareness level, while other age groups the score was zero. No great difference was seen between urban district and west district in awareness score (it was 96% vs. 100%), as well as between primary and O’level education (96.2% vs. 97.7%, respectively) (Table 3 illustrates more).

**Table 3: Awareness by socio-demographic characteristics**

Variable	Awareness level		Total	P-value*
	High score	Low score		
<b>Sex</b>				
Male	3 (3.2%)	90 (96.8%)	93	1.00
Female	0 (0.0%)	7 (100%)	7	
<b>Age</b>				
<30	0 (0.0%)	25 (1000%)	25	0.15
30-39	0 (0.0%)	49 (1000%)	49	
40-49	3 (16.7%)	15 (83.3%)	18	
≥50	0 (0.0%)	6 (100%)	6	
<b>Residence</b>				
Urban district	3 (4.0%)	72 (96.0%)	75	0.57
West district	0 (0.0%)	25 (100%)	25	
<b>Education level</b>				
Primary	2 (3.8%)	50 (96.2%)	52	1.00
O' level	1 (2.3%)	43 (97.7%)	44	
A' level	0 (0.0%)	2 (100%)	2	
College/university	0 (0.0%)	1 (100%)	1	
<b>Living pattern</b>				
Parents/family	2 (2.7%)	72 (97.3%)	74	0.59
Alone	1 (12.5%)	15 (93.8%)	16	
Non family member	0 (0.0%)	10 (100%)	10	

*Note: \* Fisher's Exact Test used*

The results in Table 3 indicate that there is no statistical significant association between socio-demographic variables (sex, age, place of residence, education level, and living pattern) and awareness level score.

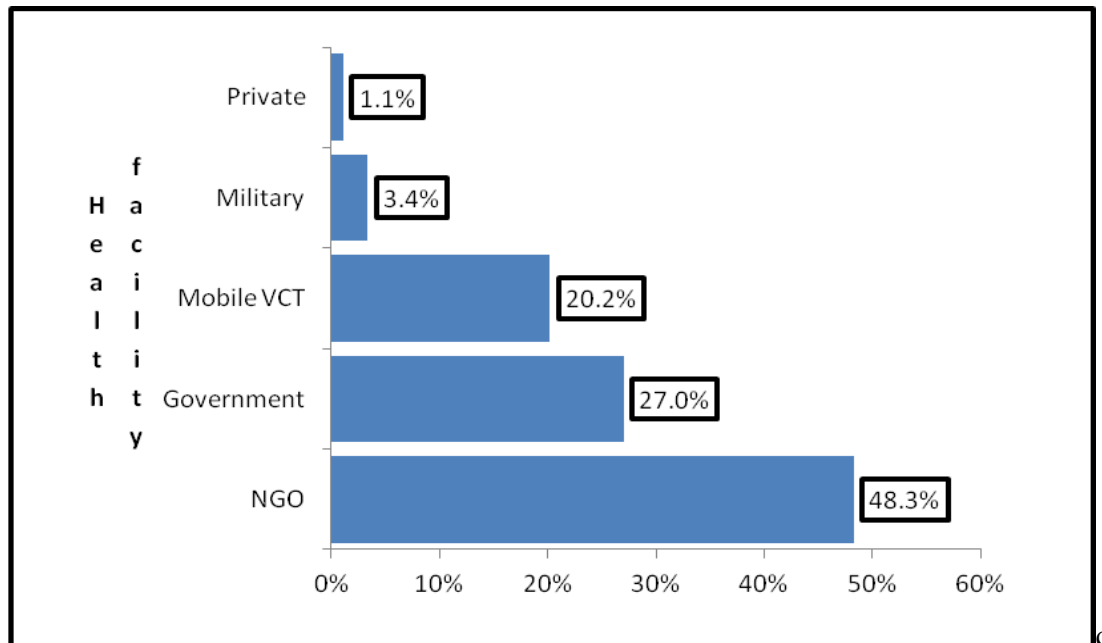
#### 4.2 Utilization of HIV-related services

During the study period, utilization of three main services was assessed i.e. HIV testing, TB screening and hepatitis diagnosis. The results from 100 study participants showed that 10 participants never utilize any of the three services, while nearly half (48%) utilize only one of the services and very few (14%) reported to utilize all three services (Table 4).

**Table 4 Total services utilization**

<b>Service utilized</b>	<b>Frequency</b>	<b>%</b>
0	10	10.0
1	48	48.0
2	28	28.0
3	14	14.0
Total	100	

Findings on utilization of HIV-related services by selected socio-demographic variables are presented in Table 5 and description of places preferred for HIV testing, as reported by the study participants, is in Figure 4. Proportion of respondents who did HIV test since began using drugs was generally high (90%) and nearly all of them (98%) did the test voluntarily. VCT centers owned by NGOs were leading in providing HIV test to drug users particularly IDUs. It was found that about half ( $43/89 \approx 48\%$ ) of participants tested for HIV at NGO centers, followed by government facilities (27%) and at mobile VCT (20.2%) as depicted in Figure 4.



**Figure 4 Health facilities preferred for HIV test (n=89)**

Utilization of health services for screening/diagnosis of other conditions, specifically TB and hepatitis was found to be relatively low compared to HIV testing. Overall, responses from IDUs who responded to the question on whether they had ever screened for any of the two conditions revealed that just over one-third (34/98=34.7%) had screened for TB and 22.4% (22/98) had undertaken hepatitis screening.

The utilization of these services according to location revealed that there was a relatively lower utilization in west district than in urban district. About one quarter (24%) of west district participants do not utilize HIV counseling and testing services compared to only 5.3% of urban district who did not use the services; this difference is statistically significant ( $P=0.01$ , according to Fisher's exact test). Utilization of health services in terms of screening for TB infection was slightly higher in urban district (39.7%) than in the west district (20.0%) but this difference is not statistically significant ( $P=0.07$ ). Likewise, screening/diagnosis of hepatitis did not differ between urban district (23.3%) and west district (20.0%).

Table 5 again indicates that the proportion of individuals tested for HIV increased as age of participant increased but the association is not statistically significant ( $P=0.46$ , Fisher's exact test used). About 84.0% (21/25) tested for HIV in age group 20-29, 88.9% (16/18) in 40-49 and it was 100% (6 participants) in age above 50 years. Not surprisingly, low utilization of TB and hepatitis appeared in different age groups. More than three-quarters (76 percent) of participants in age 20 to 29 never utilize TB services compared to only one-third (33.3 percent) in age above 50 years but the difference is not statistically significant ( $P=0.21$ , according to Fisher's exact test). There is also no significant statistical difference ( $P=0.97$ , according to Fisher's exact test) on screening for hepatitis across age groups. The least proportion of participants did hepatitis screening was (17%) in age group above 50 years, while the most is 25% in age 30-39.

In addition, the findings on the utilization of the services by living patterns showed that IDUs who were living with parents/family were two times higher not likely to test for HIV than those living alone (12.2% and 6.2%, respectively), however, there is no statistical evidence of significant difference ( $P=0.63$ , according to Fisher's exact test). About 30% of participants who were living with non family member screened for hepatitis compared to 21% of those living in parents/family's house, but this difference not statistically difference ( $P=0.78$ , as Fisher's exact test revealed) (Table 5).

**Table 5: Utilization of HIV-related services by selected socio-demographic variables**

Variables		Health Services					
		HCT		TB		Hepatitis	
		Yes	No	Yes	No	Yes	No
<b>Age group</b>	20-29	21 (84.0%)	4 (16.0%)	6 (24.0%)	19 (76.0%)	5 (20.0%)	20 (80.0%)
	30-39	46 (93.9%)	3 (6.1%)	19 (39.6%)	29 (60.4%)	12 (25.0%)	36 (75.0%)
	40-49	16 (88.9%)	2 (11.1%)	5 (29.4%)	12 (70.6%)	4 (23.5%)	13 (76.5%)
	≥50	6 (100%)	0	4 (66.7%)	2 (33.3%)	1 (16.7%)	5 (83.3%)
		<b>P = 0.46*</b>		<b>P = 0.21*</b>		<b>P = 0.97*</b>	
<b>Residence</b>	Urban district	71 (94.7%)	4 (5.3%)	29 (39.7%)	44 (60.3%)	17 (23.3%)	56 (76.7%)
	West district	19 (76.0%)	6 (24.0%)	5 (20.0%)	20 (80.0%)	5 (20.0%)	20 (80.0%)
		<b>P = 0.01*</b>		<b>P = 0.07</b>		<b>P = 0.73</b>	
<b>Living patterns</b>	Parents/family	65 (87.8%)	9 (12.2%)	25 (34.7%)	47 (65.3%)	15 (20.8%)	57 (79.2%)
	Alone	15 (93.8%)	1 (6.2%)	7 (43.8%)	9 (56.2%)	4 (25.0%)	12 (75.0%)
	Non family member	10 (100%)	0	2 (20.0%)	8 (80.0%)	3 (30.0%)	7 (70.0%)
		<b>P = 0.63*</b>		<b>P=0.50*</b>		<b>P=0.78*</b>	

*Note: \* Fisher's Exact Test used*

Apart from utilizing health facility for screening, prevention, care and treatment, participants also asked whether they ever visited the facility for counseling only. The marital status difference in seeking counseling is substantial however is not statistically significant ( $P=0.08$ ). The willingness to visit health facility for counseling was 71.4% among married compared with above one-third (35.3%) for single participants. The visits for counseling was less happened in age below 30 years (36%), in contrast, in the age 50 and above it was higher, with two-third (66.7%) sought counseling at health facility, though this difference is not statistically significant ( $P=0.39$ ). On the other hand, no large difference was seen between participants who were living alone and those living with their parents/family on decision to visit health facility to seek counseling only (Table 6 gives more picture).



**Table 6: History of seeking for counseling services by socio-demographic characteristics**

Variable	Ever gone to a health facility for counseling only		Total	P-value
	Yes	No		
<b>Age</b>				
<30	9 (36.0%)	16 (64.0%)	25	0.39*
30-39	24 (50.0%)	24 (50.0%)	48	
40-49	10 (58.8%)	7 (41.2%)	17	
≥50	4 (66.7%)	2 (33.3%)	6	
<b>Residence</b>				
Urban district	38 (52.1%)	35 (47.9%)	73	0.29
West district	10 (40.0%)	15 (60.0%)	25	
<b>Education</b>				
Primary	23 (44.2%)	29 (55.8%)	52	0.20*
Secondary 'O' level	25 (58.1%)	18 (41.9%)	43	
Secondary 'A' level	0 (0.0%)	1 (100%)	1	
College/University	0 (0.0%)	1 (100%)	1	
<b>Marital Status</b>				
Married	10 (71.4%)	4 (28.6%)	14	0.08*
Single	12 (35.3%)	22 (64.7%)	34	
Divorced	25 (54.3%)	21 (45.7%)	46	
Cohabiting	1 (33.3%)	2 (66.7%)	3	
<b>Living pattern</b>				
Parents/family	37 (51.4%)	35 (48.6%)	72	0.45*
Alone	8 (50.0%)	8 (50.0%)	16	
Non family member	3 (30.0%)	7 (70.0%)	10	

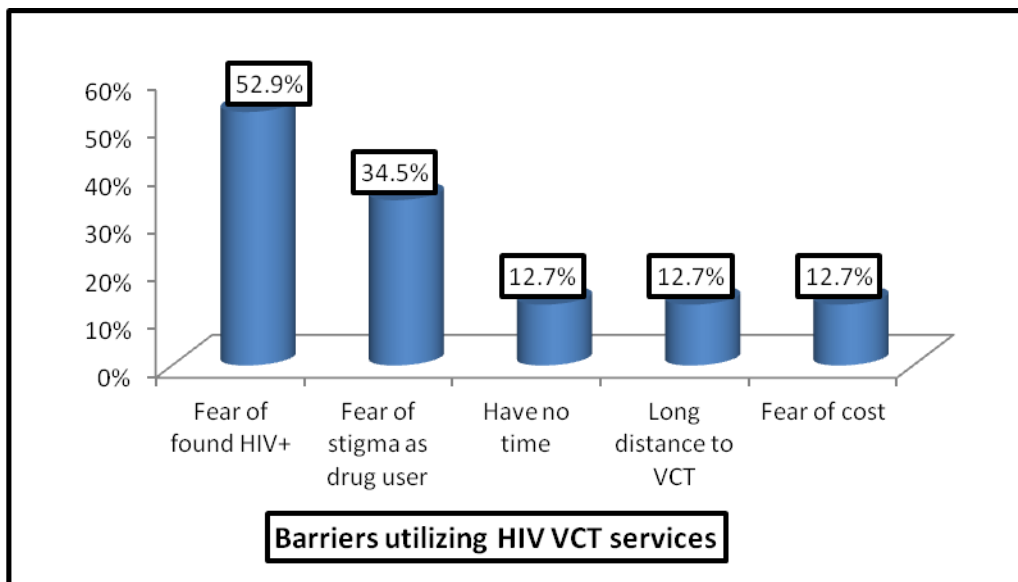
*Note: \* Fisher's Exact Test used*

### 4.3 Barriers on utilization of HIV-related services

#### 4.3.1 Personal Barriers

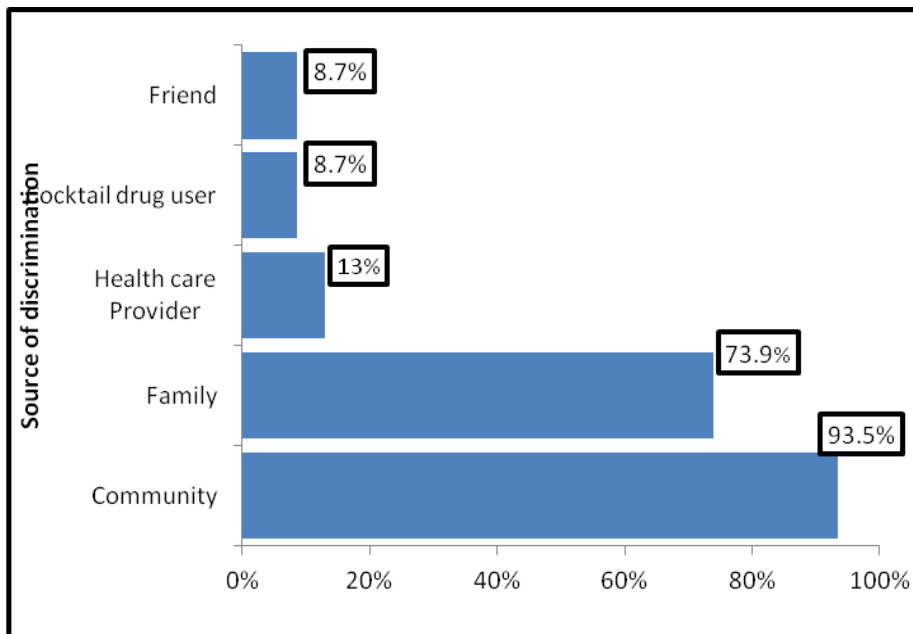
Among 10 participants who reported not to have ever tested for HIV since start using drugs, 5 of them stated that they did not undergo HIV test because they were not sick, 3 said have no time for that, while fear of positive results was expressed by also 3 IDUs.

All participants asked to mention three top barriers they face when trying to utilize HIV testing and counseling services. A total of 90 participants responded to the question and 35/90 participants (38.9%) said they faced no barriers, the remaining mentioned several list of barriers. The responses based on multiple responses from 55 respondents. Among those reported the barriers they faced, 'fear of found HIV positive' was the most mentioned barrier (52.7%; 29/55), then 19/55 participants (34.5%) stated 'fear of stigma' and 'do not have time', 'long distance to VCT' and 'fear of cost' mentioned by the same number of 7/55 participants (12.7%). Lack of services and lack of confidentiality were least mentioned barriers in the list, both mentioned by 3/55 participants. Barriers for utilizing HIV testing and counseling services presented in Figure 5.



**Figure 5 Barriers on utilizing HIV testing and counseling (n=55)**

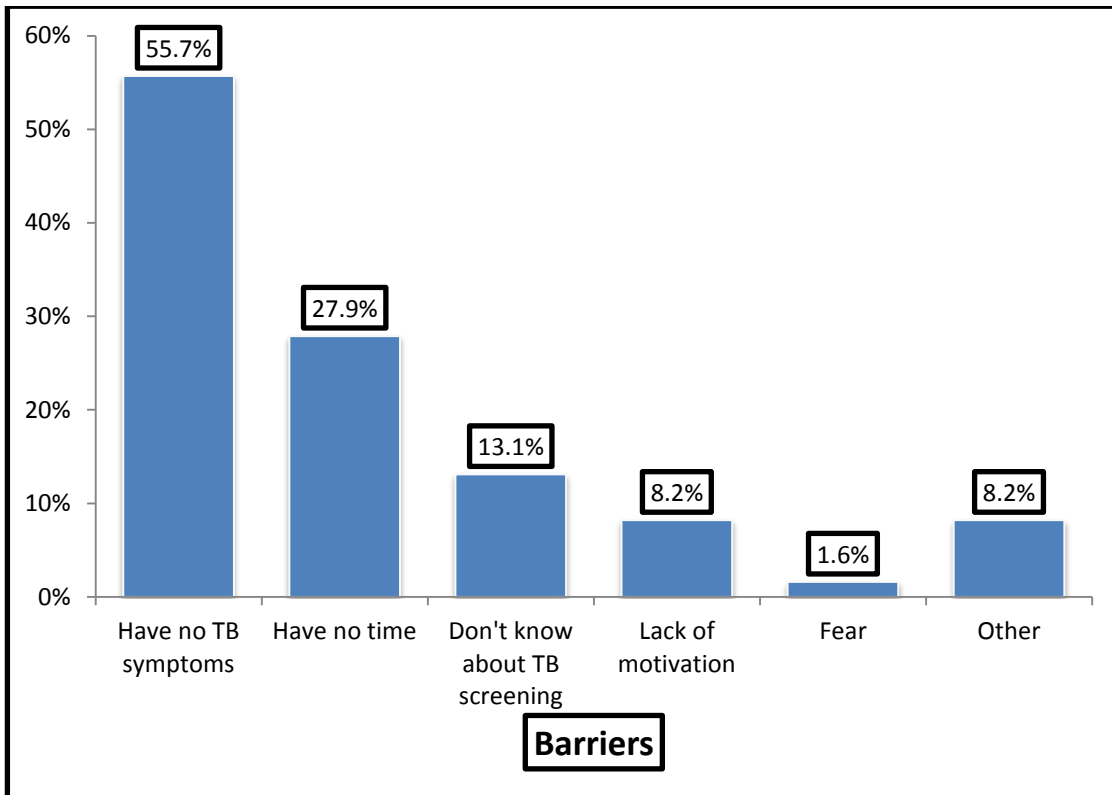
Further findings show that majority (92%; 92/100) of IDUs reported experiencing stigma and discrimination. As can be seen in Figure 6, the community was named as leading in stigmatization and discrimination of IDUs (93.5%; 86/92), followed by family members (73.9%; 68/92) then health care providers (13%; 12/92).



**Figure 6: Source of discrimination**

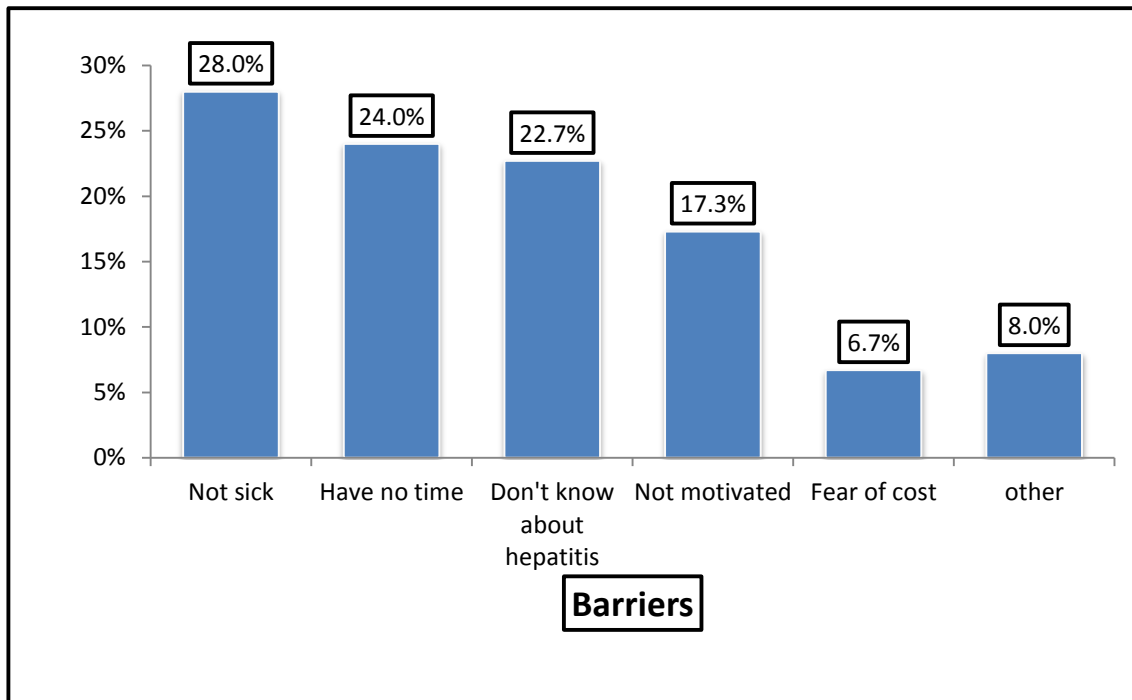
*Note: Percentages in the figure are based on 92 respondents who reported discrimination*

Moreover, barriers for utilizing other service particularly TB and hepatitis were also explored. A total of 17 participants out of 61 stated that lack of time is a barrier for them not having TB screening. But, majority (42/61 participants) did not screen because lack of awareness on where to do screening or its importance (Figure 7).



**Figure 7 Barriers on utilization of TB screening (n=61)**

On the side of hepatitis, the most barriers noted were misconception that diagnoses/screening was done for someone who is sick, (21/75=28%); do not have time to follow screening also mentioned as a barrier by 18/75 participants, while 13/75 (17.3%) said that they were not motivated to do screening (Figure 8).



**Figure 8 Barriers on utilizing hepatitis diagnosis (n=75)**

During interview, a list of barriers that IDUs would normally face when trying to utilize HIV-related services were read to each participant and asked to rank it as one perceived it on a three scale of “very important”, “less important” or “not a barrier at all”, as perceived by him. Table 7 provides responses as reported by the study participants. Fear of positive HIV test results was the most common type of barrier which was considered to be ranked as not important at all, while lack of a specific (for IDUs) professional personnel was reported as the most constraining factor for utilizing HIV-related services among IDUs.

**Table 7: Perceived importance of barriers to utilization of HIV-related services**

Barrier	Perception						Total
	Very important		Less important		Not a barrier		
	n	%	n	%	n	%	
Lack of professional personnel for IDUs	89	90	7	7.1	3	3.0	99
Lack of testing kits	86	86	6	6	8	8	100
Services cost too much for one to afford	86	87	4	4	9	9.1	99
Don't know where to get services	86	86	4	4	10	10	100
Discrimination from healthcare providers	80	80	5	5	15	15	100
Stigma	79	79	6	6	15	15	100
Fear of being harassed or arrested by police	77	77	9	9	14	14	100
Long waiting time to get services	75	76	13	13.1	11	11.1	99
Long traveling distance to the services	68	86	9	9	23	23	100
Fear of being identified as drug user	67	67	9	9	24	24	100
Restricted opening hours	66	67	12	12.1	21	21.2	99
Limited time to discuss problems with health provider	62	63	9	9.1	28	28.3	99
Fear of positive results	61	62	9	9.1	29	29.3	99
Taking care of children/other family members at home	57	59.4	13	13.5	26	27.1	96

### **4.3.2 Structural barriers on utilization of HIV-related services among IDUs**

Initially it was planned to visit 8 facilities that provide HIV-related health services. By the end of data collection date, due to time and other logistic limitations, principal investigator managed to visit a total of 4 health facilities including Rahaleo and Fuoni (operated VCT only); ZAYEDESА and M/Mmoja (VCT and CTC). The aspects of observations were time barriers, availability of prevention components (condoms and bleach); availability of drugs for opportunistic infections, testing kits, and whether needle and syringe program implemented and training of staff on drugs issues.

All facilities acknowledged timely supplies of HIV testing kits (in every three months), condoms kept in each doctors' and counselor's room and who ever client need them was given. Health care providers said that they attended training on drugs and HIV at least once in a year. At ZAYEDESА center they even conducted in-house training on HIV and drugs to all staff whereby the last one was from 21<sup>st</sup> – 25<sup>th</sup> June 2014.

Apart from Mnazi Mmoja hospital, drugs for opportunistic infections were not available from other health facilities visited, the only drugs available were ARV and whoever client with opportunistic infections supposed to get the drugs on his own costs. Health care providers alleged that though needle and syringe program was not a government program yet, but can provide even one if IDU need it. All VCT centers including ZAYEDESА did not test for STI, TB or hepatitis rather they take the specimen or refer the client to M/Mmoja hospital. The number of staff was quite enough as compared with the number of clients served. IDUs receive care at same facilities that general populations attend.

## CHAPTER FIVE: DISCUSSION

The study sample is skewed, such that there were more males than female and young participants who were interviewed. This could be because drug use practices particularly drugs injection is mostly dominated by young males. Findings like this are documented in 2010 PEPFAR (Needle et al., 2011), in India (Chakrapani, 2012) and Dar es Salaam by Williams (2009) where male IDUs were many than females. The fact that higher proportion of participants was from urban district as expected, than west district, this suggest that injection drug use is most common in urban areas than semi-urban or rural. A 2005 drug use study in Zanzibar came with the same figure; it recruited 75% of participants from urban district (Dahoma et al., 2006).

As our results show, majority of individuals affected with drug use were those with low level of education i.e. completed primary or O'level education, as well as no occupation. In most cases education level achievement is directly related with type of occupation. Therefore, the increased proportion of youth who fail to continue with higher education and unemployed was reflected by seeing them engaged more on drug use.

As reported from other studies, female IDUs were also selling sex as their occupation, this situation was also found in our study. Engaging in sex work is a result of lacking a legal source of income. Our results showed that divorced and unmarried individuals were more likely to be injecting drug users than married. It was also reported by Chakrapani (2012) that IDUs in India comprised of more unmarried people, it was 48% males and 33% females, and it was 75% from a study done in Dar es Salaam, as reported by Williams (2009). This can be explained by the fact that lack or loss of sexual partner may impose certain psychological/emotional stresses that if not well managed may cause someone to engage in deviant behaviors like drug use.



According to the results, most of the IDUs were living with their parents/family. These findings are expected and not surprising because in Zanzibar, it is a common culture for a youth to stay at his parents' home until he gets married, at the same time parents continue to provide him with basic needs. A study on HIV sero-prevalence in Dar es Salaam, also showed that about 60% of IDUs were living in parents' home (Williams, et al., 2009). The HIV-substance use study conducted in 2005 in Zanzibar also reported high prevalence of drug users, characterized by youth, unmarried and with low level of education (Dahoma et al., 2006).

Awareness about what services offered to injecting drug users and where to get them is essential for optimal utilization of the services. In Zanzibar, IDUs were recognized as most at risk population to get STIs and other blood-borne diseases, thus the prevention, screening and treatment services for those diseases were available at government and non-government facilities. The study meant to assess at what level injecting drug users residing in urban-west region were aware of these services.

Majority of study participants found to have low awareness level on HIV-related services provided to injecting drug users. Services like HIV testing and counseling, availability of condoms and availability of ARV were mostly known. Most of IDUs were not aware about other services provided such as screening/diagnosis of other diseases like STI, TB and hepatitis, availability of bleach kits (JIK and cotton), and health education. Similar findings reported from other studies conducted in Africa. For example, limited awareness on dangers of HIV infection from sharing injection equipments reported to exist among Kenyan IDUs (Beckerleg et al., 2005). This can be explained by the fact that, HIV/AIDS campaign, spots and outreach services were more frequently conducted and advertised than other diseases or services. Furthermore, large proportion of respondents indicated being aware of places to get HIV testing. These findings are similar with the study done to key populations in South India by Beattie et al., (2012) which demonstrated that knowledge on HIV counseling and testing was higher among this population than other HIV services. Hepatitis vaccination is provided

free for IDUs by ZACP but as said earlier, most of the target individuals were unaware of this. Some of the interviewed participants had never heard of the hepatitis disease.

According to this study, PE/outreach workers, health workers and fellow drug users were reported as the main source of information about health services provided. Moreover, urban district respondents were more likely to be aware of services than west district respondents. This could be because of majority of the services and programs/projects stationed in urban district. Moreover, Participants who completed advanced level or college seem to be more aware than others. It seems that IDU who stay with family members had advantage of gaining high level of awareness then IDU who live without his family members. This suggests that family could be the crucial point of transmitting HIV information to the drug users.

Research findings further shows that men were more aware of the HIV services than women. It is expected to see men more aware than women because men have opportunities to many sources of information; they are most of the time staying outside the house than women.

The study sought to examine the proportion of injecting drug users who utilize the HIV-related services specifically with interest to HIV testing and counseling, TB and hepatitis screening/diagnosis, and the findings show that majority of the participants utilize one service only. The utilization of health services special to injecting drug users follow the same trend of awareness. That is, HIV testing and counseling was the most service used compared with TB and hepatitis. Most of the participants ever tested for HIV since start using drugs and very few did the screening of TB and hepatitis. This findings differ from that reported by UNAIDS (2011) report, whereby reported that less than one-quarter (23%) of global IDUs received HIV testing and counseling. The high utilization of HIV testing and counseling among Zanzibar IDUs could be contributed by its extensive outreach and mobile VCT services implemented by the government and NGOs in collaboration with international agencies. On the other hand, the low rate of IDUs screening for TB and hepatitis could be the

result of low awareness about availability of the services and their modes of transmission. Similar findings of low uptake of TB and hepatitis services was also found in the IDU study done in Northeast India whereby 25% reported ever tested for HBV and 22% have been tested for TB and HCV as well (Chakrapani, 2012). Notably, many of mobile and outreach services focused on HIV/AIDS rather than TB and hepatitis, this could be the explanation too for low use of these two services.

During this study it was learned that most of IDUs preferred to go at VCT centers owned by NGOs for testing. This can be due to the fact that NGOs services are more user-friendly and attract more youth than government. Integration of services available at one NGOs center (for instance counseling, bleach kits, counseling on recovery) that help the user to save time could also be the reason why most drug users went there. Very few participants visited private health facilities, this could be due to cost implications whereby it was observed at one private hospital that Tsh. 7000/= is charged for HIV test. Outreach programs of different NGOs helped to motivate drug users in general to use the services. ZAYEDES is one of the most mentioned centers that provide HIV-services to drug users in Zanzibar.

Moreover, the utilization of health services was relatively not satisfactory in west district than urban district. Most of the services were located in urban side, this, entail difficulties to drug users from west district to follow the services. Despite the fact that ground transport is not a problem in Zanzibar, but for injecting drug users traveling distance to follow the services is one of barriers. Nevertheless, older age participants found to be more likely to test for HIV and TB than younger ones. This can be explained due to the fact the older IDUs worried more about their health because they were already exposed to risk behaviors for a longer period than the younger; even the understandings might differ between these two age differences.

Apart from visiting health facility for treatment, participants were also asked whether they visited the facility for counseling. There is a difference of 2% between those who said “yes” and “no” – half of them (51%) said never visited health facility for counseling only. Nevertheless, it was found that those who are currently married were more likely to seek

counseling than unmarried. The results were unexpected because in most cases individuals who are single were expected to seek more counseling at health facilities than their counterparts who have couples. The results show that it is uncommon in our circumstances for someone to visit health facility in order to seek counseling only.

Other studies conducted to assess accessibility of HIV services to drug users came with similar results of low access. In U.S, only 15% of drug users engaged in drug treatment (Needle et al., 2011); only 4% of HIV IDUs were on HIV treatment in Dar es Salaam, and ¼ of the IDUs tested positive had never accessed any HIV care and treatment (Mbwambo, 2010). A review done in China, Vietnam, Russia, Ukraine and Malaysia showed that only 25% of HIV infected IDUs received ARV (Mathers et al., 2008).

In spite of spread of HIV education in the community to the large extent, proportion of IDUs still held the misconception that HIV test is done when someone is sick. Similar perception was highly noted on TB screening and hepatitis diagnosis. This could result from the long time culture of not having regular medical check-up among Zanzibar people and low awareness as well. Injecting drug users expected to be well informed about these diseases and take the screening regularly because their injecting practices put them in a high risk of acquiring the diseases. Fear of being found HIV positive was reported as the major barrier by IDUs for utilizing HIV testing. In the current study sample, a significant proportion was not tested for hepatitis and TB either because of lack of time or not sick; often the latter is major reason reported. IDU in most of time think on how and where he can get drugs, so he has no time for other staff. However, it was noted that some IDUs failed to use the services only because they were not well motivated. Therefore, steps need to be taken by government and NGOs to increase mobilization sessions. Similarly, inability to afford cost of drugs and lack of knowledge about where to get services, fear of stigma were among the barriers recognized to face IDU (Chakrapani, 2012; Wolfe et al., 2010)

Stigma and discrimination from community are other issues that hinder IDUs on utilizing health services. The existing stigma and discrimination causes IDUs to hide themselves and not willing to visit health services. IDUs claimed of being mocked even by small children

and when they visit health facilities other patients/clients dishonored them. In this study population, IDUs claimed to be discriminated even by their fellow drug users who were non IDU referred to as “cocktail user”. Chakrapani (2012) and Nieburg & Carty (2011) also commented that IDU were subjected to stigma and discrimination in India and Kenya.

Structural barriers defined as the conditions or events which occur/exist under circumstances where care is provided that in one way or another discourage IDU to use or continue using the service. Generally, services were found to be user-friendly for IDUs with few barriers. In one facility, special unit for MARPs (including IDUs) was established and there is a special time for them only to be attended every day. The opening hours are rational and waiting time is not too long, within 1and half hour all procedures are completed and IDU is given first priority. However, some centers were not attended by IDUs for the past two months like Rahaleo and Fuoni.

At present, ZACP has introduced hepatitis vaccination which is available for free to IDUs but the challenge is, it is only provided at one center located in urban. Moreover, most of the targeted population had not received it either due to lack of knowledge about the service or the provider did not promote it. Needle and syringe programs are not formally initiated in Zanzibar, but a lot of IDUs were able to obtain new syringes or needle and pharmacy is the main place for them to get new syringes. Unavailability of TB and hepatitis tests and drugs for opportunistic infections at the VCT centers contributes in low utilization of HIV-related services. Because if IDU visit a health facility and did not receive the service he expect, it is hard for him to come again. Efforts should be directed to mobilize IDUs to use the services and provide them with all the required services during their first visit at each facility.

## CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Conclusions

1. Level of awareness on HIV-related services available for IDUs in Zanzibar was found to be low among injecting drug users and is independent of the socio-demographic characteristics. Most of IDUs did not know about the services provided for them with free of charge at all health facilities in the country.
2. HIV counseling and testing services were much more utilized than TB and hepatitis services. The utilization is quite high and significantly higher in the urban district than in the west district. Being older and staying alone also increases the utilization of HIV-related services.
3. Lack of awareness on the linkage between injecting drugs, HIV, TB and hepatitis and the importance of screening for those diseases is the main barrier that challenge injecting drug users which also resulted into low utilization of these services. Many participants had the misconception that screening/diagnosis is done when someone have symptoms or feel sick.
4. The existing stigma and discrimination from the community surrounds IDUs and their family members is the barrier towards utilization of health services related to HIV.
5. Lack of TB and hepatitis testing services at VCT centers and unavailability of opportunistic infection drugs were among the structural barriers that found to exist in the health facilities which in one way or another affect utilization of health services by IDUs.

## 6.2 Recommendations

1. Ministry of Health and Social Welfare of Zanzibar and collaborating partners should raise awareness of IDUs on the health services available to them through media and outreach services.
2. The government should consider policies that promote IDUs to utilize more health services. Such policies like reducing if not removing the cost of screening and drugs for opportunistic infections among drug users.
3. VCT centers need to be equipped with essential supplies for screening tests of TB and hepatitis so that eliminate the need of following these tests at referral hospital i.e. Mnazi Mmoja.
4. Culturally accepted approaches may be necessary to provide education in the community on the connection of HIV and injection of drugs in order to end up stigma and discrimination in the community.
5. Further research is needed to compare the health services utilization between injection drug users and non-injection drug users.

## REFERENCES

- Beattie, T.S.H., Bhattacharjee, P., Suresh, M. et al., 2012. Personal , interpersonal and structural challenges to accessing HIV testing , treatment and care services among female sex workers , men who have sex with men and transgenders in Karnataka state , South India. *J Epidemiol Community Health*, 66, pp.42–48.
- Beckerleg, S., Telfer, M. & Hundt, G.L., 2005. The rise of injecting drug use in East Africa: a case study from Kenya. *Harm reduction journal*, 2, p.12. Available at: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1236949&tool=pmcentrez&rendertype=abstract> [Accessed June 1, 2014].
- Beyrer, C.,Wirtz, A., Baral, S., Peryskina, A & Sifakis, F., 2010. Epidemiologic Links Between Drug Use and HIV Epidemics : An International Perspective. *Journal of Acquired Immune Deficiency Syndrome*, 55, pp.10–16. Available at: [www.jaids.com](http://www.jaids.com).
- Broz, D., Kim, A., Dahoma, M. et al., 2010. Correlates of HIV Infection among Injection Drug Users in Unguja, Zanzibar, 2007. In *AIDS 2010 - XVIII International AIDS Conference: Abstract no. MOAC0401* ". Vienna, Austria. Available at: <http://www.iasociety.org/Default.aspx?pageId=11&abstractId=200736009>, accessed Mar 22, 2014.
- Chakrapani, V., 2012. *Access to comprehensive package of services for injecting drug users and their female sex partners: Identification and ranking of barriers in Northeast India*, New Delhi.
- Dahoma, M.J.U., Salim, A., Abdool, R. et al., 2006. HIV AND SUBSTANCE ABUSE : THE DUAL EPIDEMICS CHALLENGING ZANZIBAR. *African Journal of Drug & Alcohol Studies*, 5(2).
- Ghimire, B. Suguimoto, S., Zamani, S., Ono-Kihara, M. & Kihara, M. 2013. Vulnerability to HIV infection among female drug users in Kathmandu Valley, Nepal: a cross-sectional study. *BMC public health*, 13, p.1238. Available at: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3908481&tool=pmcentrez&rendertype=abstract>.
- Girchenko, P. V., Dobroskok, O. V. & Dugin, S.G., 2012. HIV spread among different groups of IDUs and influence of awareness about HIV-status on safety of sexual and injection behaviors. Available at: <http://hiveurope.eu/Portals/0/Conference> accessed May 31, 2014.



- Mathers, B.M., Degenhardt, L., Phillips, B. et al., 2008. Global epidemiology of injecting drug use and HIV among people who inject drugs : a systematic review. *The Lancet*, 6736(08), pp.1–13. Available at: [www.thelancet.com](http://www.thelancet.com).
- Mbatia, J., 2011. Assessment of risk practices and infectious disease among drug users in Temeke District, Dar es Salaam, Tanzania. Available at: <http://www.medecinsdumonde.org/> accessed April 17, 2014.
- Messner, L. & Kazantseva, T., 2013. *GENDER ASSESSMENT : ACCESS TO HIV SERVICES BY KEY POPULATIONS IN KYRGYZSTAN*, Arlington, VA 22209 USA. Available at: [aidstar-one.com](http://aidstar-one.com).
- Morison, L., 2001. The global epidemiology of HIV / AIDS. *British Medical Bulletin*, 58, pp.7–18. Available at: <http://bmb.oxfordjournals.org/> on May 29, 2014.
- Needle, R., Anderson, G., Prohow, S. & Djomand, G. 2011. *Regional Workshop on HIV and Drug Use, NAIROBI, KENYA*. Available at: [http://www.usaid.gov/pdf\\_docs/PNADX495.pdf](http://www.usaid.gov/pdf_docs/PNADX495.pdf).
- Needle, R.H. & Zhao, L., 2010. *HIV Prevention among Injection Drug Users: Strengthening U.S. Support for Core Interventions*, Washington, D.C. Available at: [www.csis.org](http://www.csis.org).
- Nieburg, P. & Carty, L., 2011. *HIV Prevention among Injection Drug Users in Kenya and Tanzania: New Opportunities for Progress*, Washington, D.C. Available at: [www.csis.org](http://www.csis.org).
- Ratliff, E.A., Mccurdy, S., Mbwambo, J. et al., 2013. An Overview of HIV Prevention Interventions for People Who Inject Drugs in Tanzania. , 2013.
- Semaan, S., 2010. Time-Space Sampling and Respondent-Driven Sampling with Hard-To-Reach Populations. *Methodological Innovations Online*, 5(2), pp.60–75. Available at: [www.methodologicalinnovations.org.uk/wp-content/uploads/2013/11/7.-Semaan-English-formatted.pdf](http://www.methodologicalinnovations.org.uk/wp-content/uploads/2013/11/7.-Semaan-English-formatted.pdf)/accessed on Aug 18, 2014.
- TACAIDS, 2013. *Tanzania HIV/AIDS and Malaria Indicator Survey 2011-12*, Dar es Salaam - Tanzania. Available at: [www.nbs.go.tz](http://www.nbs.go.tz).
- UNAIDS, 2013. *2013 GLOBAL FACT SHEET*, Available at: [communications@unaids.org](mailto:communications@unaids.org).
- UNAIDS/WHO/UNICEF, 2011. *Global HIV/AIDS response:Epidemic update and health sector progress towards Universal Access - Progress Report 2011*,

- Williams, M.L., Mccurdy, S., . Bowen, Aet al., 2009. HIV SEROPREVALENCE IN A SAMPLE OF TANZANIAN INTRAVENOUS DRUG USERS. *AIDS Education and Prevention*, 21(5), pp.474–483.
- Wolfe, D., Carrieri, M.P. & Shepard, D., 2010. HIV in people who use drugs: Treatment and care for injecting drug users with HIV infection : a review of barriers and ways forward. *The Lancet*, 376(9738), pp.355–366. Available at: [http://dx.doi.org/10.1016/S0140-6736\(10\)60832-X](http://dx.doi.org/10.1016/S0140-6736(10)60832-X).
- [www.cdc.gov/nchhstp/newsroom/2012/HIVIncidence](http://www.cdc.gov/nchhstp/newsroom/2012/HIVIncidence) [Accessed April 18, 2014].
- [www.voanews.com/content/zanzibar-falls-victim-to-the-international-heroin-trade-141414703/181120.html](http://www.voanews.com/content/zanzibar-falls-victim-to-the-international-heroin-trade-141414703/181120.html). News of March 04, 2012 7:00pm/Accessed May 31, 2014.
- Zhang, L., Chow, E., Jing, J. et al., 2013. HIV prevalence in China: integration of surveillance data and a systematic review. *The Lancet infectious diseases*, 13(11), pp.955–63. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/24107261> [Accessed April 3, 2014].

**Appendix 1: Informed Consent, English Version****MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES****CONSENT TO PARTICIPATE IN THE STUDY ON BARRIERS TOWARDS UTILIZATION OF HIV-RELATED SERVICES AMONG INJECTION DRUG USERS IN URBAN-WEST REGION, ZANZIBAR, TANZANIA****Introduction**

Greetings! My name is **Mwanaidi Ali** a student from Muhimbili University of Health and Allied Sciences. I'm conducting a study on barriers towards utilization of HIV-related services among Injection Drug Users in Urban-West region in Zanzibar.

**Purpose of the Study**

Purpose of this study is to understand the barriers that injection drug users face on utilizing HIV-related services in urban-west region, Zanzibar. Also, we would like to know to what extent people who inject drugs utilize HIV services; and if they are aware on the services available their awareness level on the services. We hope this information will help to improve the provision of HIV services among drug users.

**What participation involves?**

If you agree to participate in this study you will be asked questions about HIV services and HIV risk behaviors. It will not take more than 1 hour to answer all questions.

**Confidentiality**

Your answers are completely confidential. Your name will not be written on this form, and will never be used in connection with any of the information you tell me. All information will be entered into computer programmed with only the study identification number.

**Risks**

No harm is anticipated to you because of joining this study.

**Rights to Withdraw and Alternatives**

Taking part in this study is completely your choice. You have the right not to answer any question in this interview. You can stop the interview at any time and stop participating in the study. Refusal to participate or withdrawal warrants no penalty neither loss of benefits to which you are otherwise entitled. However, your honest answers to these questions will help us better understand what barriers IDUs face in relation to HIV services.

**Benefits**

There is no direct benefit for participating in this study. We hope that the information you are going to provide will help to improve HIV services among drug users in the future.

**Money matters**

We are not expecting that you will have any additional costs for participating in this study. There is no plan to give you money for your participation.

**Who to Contact**

If you ever have questions about this study, you should contact the study coordinator who is also the **Principal Investigator, MWANAIDI ALI SAID**, Muhimbili University of Health and Allied Sciences (MUHAS), P.O. Box 65001, Dar es Salaam (Mob. no. 0777486278 or 0689096180). If you ever have questions about your rights as a participant, you may call **Prof. M. MOSHI, Director of Research and Publications of MUHAS**, P. O. Box 65001, Dar es Salaam (Tel: 2150302-6) or **C.K. MAKWAYA who is the supervisor** of this study (Mob. 0713 608099).

**Signature**

Do you agree?

Participant Agrees

Participant disagree

I, \_\_\_\_\_ have read/the consent has been read to me and understood the contents in this form. My questions have been answered, and I agree to participate in this study.

Signature of the participant \_\_\_\_\_

Signature of witness (if participant cannot read) \_\_\_\_\_

Signature of the Research Assistant \_\_\_\_\_

Date of signed consent \_\_\_\_\_

*(Signature of interviewer certifying that informed consent has been given verbally by respondent)*

## **Appendix 2: Informed Consent Form, Swahili Version**

### **CHUO KIKUU CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI**

### **RIDHAA YA KUSHIRIKI KATIKA UTAFITI WA KUANGALIA VIKWAZO WANAVYOKUTANA NAVYO WATUMIAJI WA MADAWA YA KULEVYA KWA KUJIDUNGA SINDANO KATIKA KUTUMIA HUDUMA ZA UKIMWI KATIKA MKOA WA MJINI MAGHARIBI, ZANZIBAR, TANZANIA**

#### **Utangulizi**

Ndugu hujambo/habari! Mimi naitwa **Mwanaidi Ali** ni mwanafunzi kutoka Chuo Kikuu cha Afya Muhimbili. Ninafanya utafiti kuhusiana na vikwazo wanavyokutana navyo watumiaji wa madawa ya kulevya kwa kujidunga sindano katika kutumia huduma za ukimwi katika mkoa wa Mjini Magharibi, Zanzibar.

#### **Lengo la utafiti huu**

Lengo la utafiti huu ni kuelewa vikwazo ambavyo wanaojidunga sindano za madawa kulevya wanakutana navyo katika kutumia huduma za ukimwi katika mkoa wa Mjini Magharibi, Zanzibar. Pia tungependa kujua ni kwa kiwango gani wanaojidunga sindano za madawa ya kulevya wanatumia huduma za ukimwi na pamoja na kuelewa tabia hatarishi kwa ukimwi walizonazo. Tunatumai taarifa hizi zitasaidia kuboresha utoaji wa huduma za ukimwi kwa watumiaji wa madawa ya kulevya.

#### **Ushiriki unahusisha nini?**

Ikiwa utakubali kushiriki katika utafiti huu utaulizwa maswali kuhusiana na huduma za ukimwi na tabia hatarishi za ukimwi. Haitochukua zaidi ya saa moja kujibu maswali yote.

#### **Usiri**

Majibu yako yatakuwa ni siri kabisa. Jina lako halitoandikwa katika fomu hii, na halitotumika kuunganisha na taarifa yeyote utakayonipatia. Taarifa zote zitaingizwa kwenye kompyuta kwa kutumia nambari ya utambulisho ya utafiti tu.

#### **Hali hatarishi**

Hatutegemei madhara yeyote kwako kwa kushiriki katika utafiti huu.

**Haki ya kujiondoa na mengineyo**

Kushiriki katika utafiti huu ni uamuzi wako mwenyewe. Una haki ya kutojibu swali lolote katika mahojiano haya. Unaweza kusimamisha mahojiano wakati wowote na kusimamisha ushiriki wako. Kukataa kushiriki au kujiondoa katika utafiti hakutaambatana na adhabu au kupoteza manufaa yeyote ambayo umekuwa ukiyapata. Hata hivyo, majibu yako mazuri kwa maswali yetu yatatusaidia kufahamu vikwazo gani watumiaji wa madawa ya kulevywa wanapata kuhusiana na huduma za ukimwi.

**Manufaa**

Hakuna manufaa ya moja kwa moja kwako kutokana na kushiriki katika utafiti huu. Tunatumai kuwa taarifa utakazotupatia zitasaidia kuboresha huduma za ukimwi kwa watumiaji wa madawa ya kulevywa hapo baadae.

**Masuala ya fedha**

Hatutegemei kuwa utapata gharama zozote za ziada kwa kushiriki katika utafiti huu. Hakuna mpango wa kukupatia pesa kwa kushiriki kwenye utafiti huu.

**Nani wa kuwasiliana nae**

Ikiwa una swali lolote kuhusiana na utafiti huu, wasiliana na mtafiti mkuu, **MWANAIIDI ALI SAID**, mwanafunzi wa chuo kikuu cha afya Muhimbili (MUHAS), S.L.P 65001, Dar es Salaam (Mob. no. 0777486278 or 0689096180). Ikiwa una swali lolote kuhusu haki zako, unaweza kuwasiliana na **Prof. M. MOSHI**, mkurugenzi wa idara ya utafiti (MUHAS), P.O. Box 65001, Dar es Salaam. (Tel: 2150302-6) au **C.K. MAKWAYA msimamizi** wa utafiti huu (Mob. 0713 608099).

**Sahihi**

Je umekubali?

Mshiriki amekubali

Mshiriki hajakubali

Mimi, \_\_\_\_\_ nimesoma/nimesomewa na nimefahamu maelezo ya kwenye fomu hii. Maswali yangu yamejibiwa, na ninakubali kushirikir kwenye utafiti huu.

Sahihi ya mshiriki \_\_\_\_\_

Sahihi ya mtafiti msaidizi \_\_\_\_\_

Sahihi ya shahidi (ikiwa mshiriki hajui kusoma) \_\_\_\_\_

Tarehe ridhaa iliyosainiwa \_\_\_\_\_

*(sahihi ya mtafiti inathibitisha kwamba ridhaa imetolewa kwa mdomo na mshiriki)*

**Appendix 3: Questionnaire, English Version**

**MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES**

**SCHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES**

**BARRIERS TOWARDS UTILIZATION OF HIV-RELATED SERVICES IN URBAN-  
WEST REGION, ZANZIBAR**

**QUESTIONNAIRE FOR INJECTION DRUG USERS**

Name of Interviewer ..... Date of Interview \_\_\_/\_\_\_/2014

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**1. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENT**

<b>Qno.</b>	<b>Question</b>	<b>Responses</b>	<b>Coding</b>
1.1	Record sex of respondent	1. Male 2. Female	<input type="checkbox"/>
1.2	How old are you?	_____years  <i>End interview if below 15 years, thank the participant for his/her time</i>	
1.3	Where do you live (district)?	1. Urban 2. West 9. No response	<input type="checkbox"/>
1.4	What is your current marital status?	1. Married 2. Single 3. Divorced/widow 4. Cohabiting 9. No response	<input type="checkbox"/>

1.5	Have you attended school?	1. Yes 2. No ( <b>Go to 1.7</b> )	<input type="checkbox"/>
1.6	What is your education level?	1. Primary 2. Secondary O'level 3. Secondary A'level 4. College/university	<input type="checkbox"/>
1.7	What do you do for living?	1.No occupation 2.Fishing 3.Business/Self employment 4.Marker 5.Porter 6.CSW 7.Casual labor 8.Other _____	<input type="checkbox"/>
1.8	Whom do you live with?	1.Parents/Guardian/family 2. Alone 3.Friend non drug user 4. Fellow drug user 5.Other _____ 9. No response	<input type="checkbox"/>

## **2: AWARENESS AND UTILIZATION OF HIV SERVICES**

<b>Qno.</b>	<b>Question</b>	<b>Responses</b>	<b>Coding</b>
2.1	Do you know that there are HIV services available for injection drug users?	1. Yes 2. No ( <b>Go to 2.4</b> ) 9. No response	<input type="checkbox"/>
2.2	Can you mention the type of HIV services that you know?  <b>DO NOT READ THE LIST. MULTIPLE ANSWERS POSSIBLE.</b>	<b>MARK (√) FOR ALL THAT APPLY</b> 1. HIV Counseling and testing 2. ARV 3. Viral hepatitis management 4. STIs management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>



		5. Access to condoms <input type="checkbox"/>
		6. Bleach kit <input type="checkbox"/>
		7. Health education <input type="checkbox"/>
		8. TB management <input type="checkbox"/>
		9. None mentioned ( <b>Go to 2.4</b> )
2.3	Who informed you about the services?  <b>MULTIPLE ANSWERS POSSIBLE.</b>	1. Peer educator/outreach worker <input type="checkbox"/>
		2. Health worker <input type="checkbox"/>
		3. A friend <input type="checkbox"/>
		4. Fellow drug user <input type="checkbox"/>
		5. Addict recovery <input type="checkbox"/>
		6. Other _____ <input type="checkbox"/>
2.4	Do you know where to get HIV test?	1. Yes <input type="checkbox"/>
		2. No <input type="checkbox"/>
		9. No response <input type="checkbox"/>
2.5	I don't want to know the result, but have you ever had an HIV test since start using drugs?	1. Yes ( <b>Go to 2.7</b> ) <input type="checkbox"/>
		2. No <input type="checkbox"/>
		9. No response <input type="checkbox"/>
2.6	Why have you never gone for HIV test?  <b>MULTIPLE ANSWERS POSSIBLE.</b>	<b>MARK (√) FOR ALL THAT APPLY</b>
		1. Fear of positive result <input type="checkbox"/>
		2. Fear of being identified as injection drug <input type="checkbox"/>
		3. The VCT centre very far <input type="checkbox"/>
		4. Stigma <input type="checkbox"/>
		5. Discrimination at health facilities <input type="checkbox"/>
		6. Opening hours not friendly <input type="checkbox"/>
		7. Don't know where to go for testing <input type="checkbox"/>
		8. Others _____ <input type="checkbox"/>
		<b>Continue 2.11</b>
2.7	Did you voluntarily undergo the HIV test, or were you required to have the test?	1. Voluntary <input type="checkbox"/>
		2. Required <input type="checkbox"/>
		9. No response <input type="checkbox"/>

2.8	How many times did you test for HIV since started injection drugs?	1. Less than 3 times 2. 3 -5 times 3. More than 5 times	<input type="checkbox"/>
2.9	When was the last time that you went for HIV test?	1. Less than 3 months 2. 3 – 6 months 3. More than 6 months	<input type="checkbox"/>
2.10	What type of health facility did you do the test?	1. Government 2. Private 3. Faith based/NGOs 4. Military 9. No response	<input type="checkbox"/>
2.11	Have you ever had TB screening?	1. Yes ( <b>Go to 2.13</b> ) 2. No 9. No response	<input type="checkbox"/>
2.12	Give 2 reasons why not screened for TB	1. _____ 2. _____	
2.13	Have you ever had STI screening?	1. Yes ( <b>Go to 2.15</b> ) 2. No 9. No response	<input type="checkbox"/>
2.14	Give 2 reasons why not screened for STIs	1. _____ 2. _____	
2.15	Have you ever had Hepatitis screening?	1. Yes ( <b>Go to 2.17</b> ) 2. No 9. No response	<input type="checkbox"/>
2.16	Give 2 reasons why not screened for Hepatitis	1. _____ 2. _____	
2.17	Have you ever gone at health facility for counseling?	1. Yes 2. No ( <b>Go to 2.19</b> ) 9. No response	<input type="checkbox"/>
2.18	What type of counseling did you need?	1. HIV prevention 2. Drug de-addiction 3. Opportunistic infections prevention 4. Other _____	<input type="checkbox"/>
2.19	If needed to pay for the services, can you afford?	1. Yes 2. No 9. No response	<input type="checkbox"/>

2.20	Do you think HIV services are within a suitable distance?	1. Yes 2. No 9. No response	<input type="checkbox"/>
2.21	If drug using partner have infected with HIV, can he/she get ART?	1. Yes ( <b>Go to 3.1</b> ) 2. No 9. No response	<input type="checkbox"/>
2.22	Why can't get ART?	1. _____ 2. _____ 3. _____	

### **3: BARRIERS TO HIV SERVICES UTILIZATION**

<b>Qno.</b>	<b>Question</b>	<b>Responses</b>	<b>Coding</b>
3.1 a)	Do you think the HIV services are user friendly to IDUs?	1. Yes 2. No 9. No response	<input type="checkbox"/>
3.1 b)	Do you think IDUs are stigmatized?	1. Yes 2. No 9. No response	<input type="checkbox"/>
3.1 c)	Do you think IDUs are ignored /discriminated?	1. Yes 2. No 9. No response	<input type="checkbox"/>
3.2	Have you ever been discriminated?	1. Yes 2. No ( <b>Go to 3.5</b> ) 9. No response	<input type="checkbox"/>
3.3	Discriminated by whom?  <b>READ THE LIST</b>	<b>MARK (√) FOR ALL THAT APPLY</b>  1. Family 2. Community 3. Health care provider 4. Cocktail drug user 5. Friend 6. Other _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

3.4	How often did you experience discrimination?	1. Most often 2. Occasionally	<input type="checkbox"/>
3.5	For you, what are the main three barriers in getting utilization of HIV testing and counseling?	1. _____ 2. _____ 3. _____	
3.6	Can you obtain new, unused needles and syringes when you need them?	1. Yes ( <b>Go to 3.8</b> ) 2. No 9. No response	<input type="checkbox"/>
3.7	Why you can't obtain new, unused needle and syringes?	1. I don't have the money to buy 2. I don't know where to get 3. Others _____ 9. No response  <i>Continue 3.9</i>	<input type="checkbox"/>
3.8	Where can you obtain new, unused needles and syringes?  <b>DO NOT READ OUT LIST.</b>  <b>MULTIPLE ANSWERS POSSIBLE.</b> <b>PROBE ONLY WITH</b> <b>"ANYWHERE ELSE"</b>	<b>MARK (√) FOR ALL THAT APPLY</b>  1. Pharmacy <input type="checkbox"/> 2. Health worker <input type="checkbox"/> 3. Health facility <input type="checkbox"/> 4. Family/relatives <input type="checkbox"/> 5. Sexual partner <input type="checkbox"/> 6. Friends <input type="checkbox"/> 7. Other drug users <input type="checkbox"/> 8. Drug dealer <input type="checkbox"/> 9. Other _____ <input type="checkbox"/>	
3.9	Here is a list of barriers people who inject drugs reporting to face when trying to utilize HIV-related services. Please tell me the extent to which each one of these is, to you, a barrier towards utilization of HIV services:		

<b>Barrier</b>	<b>Very important</b>	<b>Less important</b>	<b>Not a barrier</b>	<b>Code</b>
Stigma				
Don't know where to get services				
Discrimination from healthcare providers				
Fear of positive results				
Fear of being harassed or arrested by police				
Fear of being identified as drug user				
Travelling distance to follow the services				
Lack of testing kits				
Services cost too much for one to afford				
Lack of professional personnel for IDUs				
Waiting too long to get services				
Limited time to discuss problems with health provider				
Restricted opening hours				
Taking care of children/other family members at home				

**USE THE CODES BELOW;**

**Very important = 3;**

**Less important = 2;**

**Not a barrier = 1**

3.10 What is your opinion about HIV-services provided to people who inject drugs in Zanzibar?

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*That is the end of our questionnaire. Thank you very much for taking time to answer these questions. We appreciate your help.*

**Appendix 4: Questionnaire, Swahili Version**

**CHUO KIKUU CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI**

**DODOSO KWA AJILI YA WATUMIAJI WA MADAWA YA KULEVYA KWA KUJINDUNGA SINDANO, KUELEWA VIKWAZO WANAVYO KUTANANAVYO KATIKA KUZITUMIA HUDUMA ZA UKIMWI KATIKA MKOA WA MJINI-MAGHARIBI, ZANZIBAR**

Jinal la mhojaji ..... Tarehe ya mahojiano \_\_\_/\_\_\_/2014

**1: TAARIFA ZA AWALI ZA MSHIRIKI**

Swali namba	Swali	Majibu	Alama
1.1	Jaza jinsia ya mshiriki	1. Me 2. Ke	<input type="checkbox"/>
1.2	Una umri wa miaka mingapi?	___ ___ miaka <b><u>Maliza mahojiano ikiwa yuko chini ya miaka 15; mshukuru mshiriki kwa muda wake</u></b>	
1.3	Unaishi wapi (wilaya)?	1. Mjini 2. Magharibi 9. Hakujibu	<input type="checkbox"/>
1.4	Ni ipi hali yako ya ndoa?	1. Nimeoa/lewa 2. Sijaoa/olewa 3. Mjane 4. Naishi na mpenzi 9. Hakujibu	<input type="checkbox"/>
1.5	Je umewahi kusoma shule?	1. Ndio 2. Hapana ( <b>Nenda 1.7</b> )	<input type="checkbox"/>

1.6	Ni kipi kiwango chako cha elimu?	1. Elimu ya msingi 2. Elimu ya sekondari (F.I-IV) 3. Elimu ya juu (F. V-VI) 4. Chuo/Chuo kikuu	<input type="checkbox"/>
1.7	Unafanya kazi gani ili kuweza kuishi?	1. Sina kazi 2. Mvuvi 3. Biashara/nimejiajiri 4. Fundi 5. Mchukuzi 6. Kujiuza 7. Vibarua 8. Nyenginezo _____	<input type="checkbox"/>
1.8	Unaishi na nani?	1. Mzazi/Mlezi/Familia 2. Peke yangu 3. Rafiki sio mtumiaji madawa 4. Mteja mwenzangu 5. Wengineo _____ 9. Hakujibu	<input type="checkbox"/>

## **2: UELEWA NA MATUMIZI YA HUDUMA ZA UKIMWI**

<b>Swali namba</b>	<b>Swali</b>	<b>Majibu</b>	<b>Alama</b>
2.1	Je unaelewa kuwa kuna huduma za ukimwi zinapatikana kwa ajili ya watu wanaojidunga madawa ya kulevya?	1. Ndio 2. Hapana ( <b>Nenda 2.4</b> ) 9. Hakujibu	<input type="checkbox"/>
2.2	Unaweza kutaja aina ya huduma za UKIMWI unazozijua?  <b>USIMSOME MAJIBU JIBU ZAIDI YA MOJA INAWEZEKANA.</b>	<b>WEKA ALAMA YA (√) KWA YOTE ATAKAYOJIBU</b>  1. Ushauri nasaha na kupima 2. ARV 3. Uchunguzi na matibabu ya homa ya ini 4. Uchunguzi na matibabu ya magonjwa ya zinaa	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

		5. Kondomu <input type="checkbox"/> 6. Bleach (JIK) <input type="checkbox"/> 7. Elimu ya afya <input type="checkbox"/> 8. Uchunguzi na matibabu ya TB <input type="checkbox"/> 9. Hakutaja yeyote ( <b>nenda 2.4</b> ) <input type="checkbox"/>
2.3	Nani alikujuulisha kuhusu huduma hizi?  <b>JIBU ZAIDI YA MOJA INAWEZEKANA.</b>	1. Mwelimishaji rika <input type="checkbox"/> 2. Mfanyakazi wa afya <input type="checkbox"/> 3. Rafiki <input type="checkbox"/> 4. Mteja mwenzangu <input type="checkbox"/> 5. Sober house <input type="checkbox"/> 6. Wengineo _____ <input type="checkbox"/>
2.4	Je unafahamu wapi pa kupima virusi vya ukimwi?	1. Ndio <input type="checkbox"/> 2. Hapana <input type="checkbox"/> 9. Hakujibu <input type="checkbox"/>
2.5	Sihitaji kujua majibu, lakini je umewahi kupima virusi vya ukimwi tangu ujingiize kwenye utumiaji wa madawa ya kulevya?	1. Ndio ( <b>Nenda 2.7</b> ) <input type="checkbox"/> 2. Hapana <input type="checkbox"/>
2.6	Kwanini hujawahi kupima virusi vya ukimwi?	<b>WEKA ALAMA YA (✓) KWA YOTE ATAKAYOJIBU</b>  1. Woga wa kugundua nimeathirika <input type="checkbox"/> 2. Woga wa kutambulika kuwa najidunga <input type="checkbox"/> 3. Kituo cha kupima kiko mbali <input type="checkbox"/> 4. unyanyapaa <input type="checkbox"/> 5. kubaguliwa katika vituo vya afya <input type="checkbox"/> 6. mida ya kufungua vituo sio mizuri <input type="checkbox"/> 7. Sijui wapi pa kwenda kupima <input type="checkbox"/> 8. Nyenginezo _____ <input type="checkbox"/>  <b>Endelea 2.11</b>



2.7	Je ulipima kwa hiari au ulilazimika kupima?	1. Hiari 2. Nililazimika 9. Hakujiibu	<input type="checkbox"/>
2.8	Ni mara ngapi umeshapima virusi vya ukimwi tangu uanze kujidunga sindano?	1. Chini ya mara tatu 2. Mara 3 – 5 3. Zaidi ya mara 5	<input type="checkbox"/>
2.9	Ni lini mara ya mwisho ulipima virusi vya ukimwi?	1. Chini ya miezi 3 2. Miezi 3 – 6 3. Zaidi ya miezi 6	<input type="checkbox"/>
2.10	Ni kituo gani cha afya ulipima?	1. Serikali 2. Binafsi 3. Dini/NGOs 4. Jeshi 5. Kwengine _____	<input type="checkbox"/>
2.11	Je, umewahi kufanya uchunguzi wa kifua kikuu tangu uanze kujidunga?	1. Ndio ( <b>Nenda 2.13</b> ) 2. Hapana 9. Hakujiibu	<input type="checkbox"/>
2.12	Kwanini hujajichunguza kifua kikuu?	1. _____ 2. _____	
2.13	Je, umewahi kufanya uchunguzi wa magonjwa ya zinaa tangu uanze kujidunga?	1. Ndio ( <b>Nenda 2.15</b> ) 2. hapana 9. Hakujiibu	<input type="checkbox"/>
2.14	Kwanini hujafanya uchunguzi wa magonjwa ya zinaa?	1. _____ 2. _____	
2.15	Je, umewahi kufanya uchunguzi wa homa ya ini tangu uanze kujidunga?	1. Ndio ( <b>Nenda 2.17</b> ) 2. Hapana 9. Hakujiibu	<input type="checkbox"/>
2.16	Kwanini hujafanya uchunguzi wa homa ya ini?	1. _____ 2. _____	
2.17	Je umewahi kwenda kituo cha afya kwa ajili ya kupata ushauri tu?	1. Ndio 2. Hapana ( <b>Nenda 2.19</b> ) 9. Hakujiibu	<input type="checkbox"/>

2.18	Ni ushauri wa aina gani ulikuwa unahitajia?	1. Kujikinga na ukimwi 2. Kuacha madawa 3. Kujikinga na magonjwa nyemelezi 4. Mengineyo_____	<input type="checkbox"/>
2.19	Iwapo utahitajika kulipia huduma za afya, je unadhani unamudu?	1. Ndio 2. Hapana 9. Hakujiibu	<input type="checkbox"/>
2.20	Je unadhani huduma zitolewazo kuhusiana na ukimwi zimo ndani ya masafa yanayofikika?	1. Ndio 2. Hapana 9. Hakujiibu	<input type="checkbox"/>
2.21	Iwapo mwenzako atakuwa ameathirika na ukimwi, je unadhani anaweza kupata dawa za ARV?	1. Ndio ( <b>Nenda 3.1</b> ) 2. Hapana 9. Hakujiibu	<input type="checkbox"/>
2.22	Kwanini unadhani hawezi kupata ARV?	1. _____ 2. _____ 3. _____	

### **3: VIKWAZO KWA HUDUMA ZA UKIMWI**

<b>Swali namba</b>	<b>Swali</b>	<b>Majibu</b>	<b>Alama</b>
3.1 a)	Je unadhani huduma za ukimwi ni rafiki kwa watumiaji wa madawa kwa kujidunga sindano?	1. Ndio 2. Hapana 9. Hakujiibu	<input type="checkbox"/>
3.1 b)	Je unafikiri watumiaji wa madawa kwa kujidunga sindano wananyanyapaliwa?	1. Ndio 2. Hapana 9. Hakujiibu	<input type="checkbox"/>
3.1 c)	Je unafikiri watumiaji wa madawa kwa kujidunga sindano wanadharauliwa/wanabaguliwa?	1. Ndio 2. Hapana 9. Hakujiibu	<input type="checkbox"/>

3.2	Je, wewe mwenyewe umeshawahi kubaguliwa?	1. Ndio 2. Hapana ( <b>nenda 3.5</b> ) 9. Hakujibu	<input type="checkbox"/>
3.3	Ulibaguliwa na akina nani?  <b>MSOME MAJIBU</b>	<b>WEKA ALAMA YA (√) KWA YOTE ATAKAYOJIBU</b>  1. Familia <input type="checkbox"/> 2. Jamii <input type="checkbox"/> 3. Mfanyakazi wa afya <input type="checkbox"/> 4. Mteja wa cocktail <input type="checkbox"/> 5. Rafiki <input type="checkbox"/> 6. Wengineo _____ <input type="checkbox"/>	
3.4	Ni mara ngapi umebaguliwa?	1. Mara nyingi 2. Mara chache	<input type="checkbox"/>
3.5	Kwa upande wako, ni vikwazo gani vikubwa vitatu unakutanavyo unapotaka kupima virusi vya ukimwi?	1. _____ 2. _____ 3. _____	
3.6	Je, unaweza kupata sindano au bomba mpya au isotumika unapohitaji?	1. Ndio ( <b>nenda 3.8</b> ) 2. Hapana 9. Hakujibu	<input type="checkbox"/>
3.7	Kwanini huwezi kupata sindano au bomba mpya, isotumika?	1. Sina pesa za kununulia 2. Sijui pa kuzipata 3. nyenginezo _____ 9. Hakujibu  <b>Endelea 3.9</b>	<input type="checkbox"/>
3.8	Ni wapi unaweza kupata sindano au bomba mpya, isotumika?  <b>USISOME MAJIBU.</b>  <b>JIBU ZAIDI YA MOJA INAWEZEKANA.</b>	<b>WEKA ALAMA YA (√) KWA YOTE ATAKAYOJIBU</b>  1. Duka la dawa <input type="checkbox"/> 2. Mfanyakazi wa afya <input type="checkbox"/> 3. Vituo vya afya <input type="checkbox"/> 4. Ndugu /jamaa <input type="checkbox"/>	

	<b>DADISI ZAIDI IKIWA TU AMEJIBU “POPOTE”</b>	5. Mpenzi <input type="checkbox"/>	6. Rafiki <input type="checkbox"/>	7. Mtumiaji wa dawa za kulevya <input type="checkbox"/>	8. Muuzaji madawa ya kulevya <input type="checkbox"/>	9. Kwengineko _____
3.9	Hii ni orodha ya vikwazo ambavyo watu wanaojidunga sindano za madawa ya kulevya wanakutanavyo wanapojaribu kuziendea huduma za ukimwi. Tafadhali nieleze kwa kiwango gani kila moja wapo kwa unavyofikiria wewe ni kikwazo katika kuziendea huduma za ukimwi:					
<b>Kikwazo</b>		<b>Kikwaz o sana</b>	<b>Kikwaz o kidogo</b>	<b>Sio kikwaz</b>	<b>Alama</b>	
Unyanyapaa						
Kutoelewa mahala pa kupata huduma						
Kubaguliwa na wahudumu wa afya						
Kuogopa majibu ya kuwa nimeathirika						
Kuogopa kukamatwa na polisi						
Woga wa kutambulika kuwa najidunga sindano za madawa ya kulevya						
Mwendo mrefu kufuata huduma						
Ukosefu wa vifaaa vya kupimia (lack of testing kits)						
Gharama za huduma						
Ukosefu wa wataalamu wa watumiaji madawa						
Unasubiri muda mrefu kuhudumiwa						
Muda mchache wa kujadili na mtaalam wa afya						
Muda maalum wa kutoa huduma						
Kuhudumia watoto/wanafamilia						

**TUMIA ALAMA ZA HAPO CHINI KUJAZA;**

**Kikwazo sana = 3;**

**kikwazo kidogo = 2;**

**sio kikwazo = 1**

3.10 Nini maoni yako kuhusiana na huduma za ukimwi zinazotolewa kwa watu wanaojidunga sindano za madawa ya kulevya Zanzibar?

*Huu ndio mwisho wa maswali yetu. Ahsante sana kwa kutumia muda wako kujibu maswali. Tunashukuru kwa mwitiko wako.*

## Appendix 5: Checklist, English Version

### MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

### OBSERVATION CHECKLIST FOR STRUCTURAL BARRIERS ON UTILIZATION OF HIV-RELATED SERVICES AT HEALTH FACILITIES

1.1 Name of health facility .....

1.2 Date of observation \_\_/\_\_/2014

1.3 Services observed/provided, (**MORE THAN ONE ANSWER IS POSSIBLE**)

1. HIV testing
2. HIV counseling
3. Care and treatment
4. HCV Screening/diagnosis
5. TB screening/diagnosis
6. STI screening/diagnosis

ITEM	AVAILABLE		NOT AVAILABLE	REMARKS
	SEEN	NOT SEEN		
Testing kits				
Qualified health care provider				
Staff attended in job training on drug use				

Availability of drugs for opportunistic infections				
Availability of free condoms to IDUs and their sexual partners				
Availability of needle and syringe program				

**OBSERVATION OF TIME**

Opening hours \_\_\_\_\_

Maximum time to discuss with client \_\_\_\_\_

Maximum time a client waiting at health center \_\_\_\_\_