DETERMINANTS OF UPTAKE OF HIV COUNSELLING AND TESTING AMONG PATIENTS WITH SUBSTANCE USE DISORDER ATTENDING SERVICES AT MATHARI HOSPITAL

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UNIVERSITY OF NAIROBI

SEPTEMBER, 2015
DECLARATION

I Margaret Anyango Odidi declare that this thesis on “Determinants of Uptake of HIV Counseling and Testing among patients with Substance Use Disorder at Mathari Hospital” is my original work and has not been presented for another degree or any other award.

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### LIST OF ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune deficiency Syndrome</td>
</tr>
<tr>
<td>CBT</td>
<td>Cognitive Behaviour Therapy</td>
</tr>
<tr>
<td>CDC</td>
<td>Centre for Disease Control</td>
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<tr>
<td>FGD</td>
<td>Focus Group Discussion</td>
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<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>IDU</td>
<td>Injecting drug Use</td>
</tr>
<tr>
<td>NACADA</td>
<td>National Authority for the campaign Against Alcohol and Drug Abuse</td>
</tr>
<tr>
<td>NASCOP</td>
<td>National STI/AIDS Control Programme</td>
</tr>
<tr>
<td>PITC</td>
<td>Provider Initiated Counselling and Testing</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually Transmitted Infection</td>
</tr>
<tr>
<td>SUD</td>
<td>Substance Use Disorder</td>
</tr>
<tr>
<td>VCT</td>
<td>Voluntary Counselling and Testing</td>
</tr>
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<td>WHO</td>
<td>World Health Organization</td>
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OPERATIONAL DEFINITIONS

Attitude - Ones preferred way of thinking pertaining to a situation or phenomenon

Counselling - A deliberate discussion aimed at motivating an individual to take action or a response towards positive behaviour as a way of resolving the maladaptive one

Perception - How one views and does interpretation of issues

Risk - Having an increased chance of getting an unfavourable outcome

Substance Use Disorder - Manifestation of behavioural, mental and relationship problems due to use of illicit or licit substances.

Testing - Agreeing to be done a HIV test

Uptake of HIV counselling and testing – Accepting to receive counselling and be tested for HIV.

Value - That which one considers as important
ABSTRACT

Patients with substance use disorder form an important category that need to be targeted by counselling and testing services. The hospital contact during rehabilitation for substance use can be used as an entry point for HIV counselling and testing. The study aimed at exploring the determinants of uptake of HIV counselling and testing among substance users attending services at Mathari hospital. The study design was cross sectional and employed purposive sampling to recruit participants. Data was collected from 127 participants using questionnaires, two focus group discussions and four key informant interviews. Patients with a doctor’s diagnosis of substance use disorder were recruited and screened using standard mini mental status examination tool in order to participate in the study. Only those with scores of 23 points and above were given questionnaires to fill. Permission to conduct the study was obtained from Ethics and Research Committee at Kenyatta National Hospital/University of Nairobi, Medical Superintendent of Mathari Hospital, Department of Continuing Education, the Nursing Officer in charge of the rehabilitation unit and the manager of Asumbi Rehabilitation Centre. Data was cleaned, coded and analysed using SPSS version 20. Determination of association between socio demographic variables and uptake of HIV counselling and testing services was done using Chi square where \( P \leq 0.05 \) was considered to be of statistical significance. Focus group discussions and key informant interviews were captured verbatim and organised in themes. The findings have been presented in tables, graphs, pie charts and discussion done to focus on the results in relation to objectives and previous studies. Among the 127, only 4 (3%) were females while 123 (97%) were males. The study revealed that 59.8% of the participants had knowledge of HIV transmission. All the respondents 127 (100%) admitted that there was an increased risk to HIV infection due to substance use. Those who had undergone HIV counselling and testing were 100 (78.8%). They stated that they did so to know their HIV status. Those who did not seek counselling and testing services were 27 (21.2%) and most of them mentioned fear as the main reason for not seeking testing for HIV. There was significant statistical relationship between age, level of education and marital status on knowledge on HIV transmission. The study however showed no association between counselling process and uptake. Uptake of HIV counselling and testing is good among patients with SUDs. Fear is a deterrent factor in seeking counselling and testing services. There is therefore need to design programmes that target females with SUDs and address fear to improve uptake. Preventive strategies geared towards patients with SUDs can play a major role in reducing new HIV infections. A total of Ksh 117,500/- for support was received from Linked Mental Health Research Training for Improved Health Outcomes in Kenya.

KEY WORDS: Counselling, Perception, Vulnerability, Uptake, substance use disorder.
CHAPTER ONE: INTRODUCTION

Voluntary counselling and testing (VCT) has been scaled up in many countries as way of addressing new infections (CDC, 2009). It offers individuals with an opportunity to know their HIV status and resultant options on how to deal with a negative or positive result. Studies have shown that VCT is an effective strategy in the prevention and care of Human Immunodeficiency Virus (HIV) and Acquired immune deficiency syndrome (AIDS) according to (Menzies et al., 2013). Report from center for disease control and prevention (CDC, 2009) indicate that there is an upward trend currently being observed among substance users particularly the injecting drug users (IDUs). In Kenya, new HIV control plans have targeted this group due to their increased vulnerability to HIV infection (NASCOP, 2013). Even though HIV awareness is high, 82% of Kenyans do not know their HIV status (UNAIDS, 2012). The utilization of HIV counseling and testing services by substance users largely depends on their acceptance and is expected to play a pivotal role in controlling new infections.

Drug users form a core group with increased risk to HIV infection (Beckerleg et al., 2009). Chandra et al (2005) noted that 41% of psychiatric patients are more likely to contract HIV especially those that engage in sex while under the influence of alcohol. The prevalence of drug abuse among Kenyans is estimated to be 22% (NACADA, 2012). A study carried out in all the provinces of Kenya, revealed that alcohol prevalence among those aged 15-65 years is 13% in all the provinces except North Eastern (NACADA, 2007).

Several studies in the recent past have postulated a correlation between substance abuse disorders and HIV infection especially among injecting drug users (Kapadia et al., 2005). A Centre for Disease Control report (CDC, 2009) and (Fonner et al.,
revealed that patients who use drugs and engage in HIV risk behaviours such as sex with multiple partners, have sex in exchange for money and unprotected sex risk contracting HIV. These behaviours are often influenced by an individual's pre-existing knowledge, attitudes, skills, and self-efficacy and the presence of environmental factors that promote, reinforce, or inhibit change (Gelder et al., 2008). The need to take a particular step often relies on one's willingness to participate in a health promotion activity.

Population risk factors also lead to increased morbidity of STIs in particular groups, such as pregnant women and persons with mental illness (CDC, 2009). Persons with substance use disorder need education regarding risk to HIV infection to enable them practice safe sex and ultimately go for testing to enhance early detection and management (Menzies et al., 2013).

Counselling plays a pivotal role in that it is during such an encounter that information provided enables one to take action or respond after careful considerations or reflection regarding the outcomes and on the options (Gelder et al., 2008). They further assert that risk factors based on an individual’s risky behaviours are modifiable. It therefore aims at enabling patients gain insight into their illness and the destructive behaviour patterns that need to be changed.

Risk management particularly to HIV infection requires to be incorporated in the psychosocial interventions and care of persons with substance use disorders (Menzies et al., 2013). It is during counselling that specific individual’s needs are identified and vulnerability to HIV infection is dealt with. This is supported by Ndetei and Szabo (2011) who state that for patients/clients to engage in safe sex practices, risk
assessment is better done based on detailed knowledge and understanding received after a lengthy period of constant probing contact.

In Kenya, there have been efforts to integrate voluntary VCT and provider initiated testing and counselling (PITC) in several ongoing care initiatives including substance use rehabilitation programmes (NACADA, 2012). Whereas the gains of these preventive interventions have been noticeable in the general population, HIV prevalence among injecting drug users (IDUs) is still escalating. Furthermore, the country still has challenges in dealing with this category since there are only a few registered rehabilitation centres countrywide.

Counselling as an intervention plays an important role in helping individuals deal with distressing situations in life. It entails the use of various models such as psychodynamics, cognitive behaviour therapy (CBT) and system changes (Gelder et al, 2008). These are aimed at providing problem solving skills and are useful in supportive or motivational therapies for individuals, groups and families. It is during such interaction with the counsellors that HIV education is given as well as the need to have an HIV test in order to facilitate HIV care and management. Browne and Wechsberg’s (2010) study highlighted the need to incorporate interventions that target risky sexual behaviours.

The decision to take action concerning a particular health situation is often based on the knowledge and perception of the individual regarding the risk (Tanya and Lefkowitz, 2008). Counselling as an intervention is geared towards providing accurate information and has been shown to play a crucial role in influencing behaviour change through a process involving individualized education, acquisition of
HIV/AIDS knowledge and rationale for knowing one's HIV status (Fonner et al., 2012). Engagement in risk reduction strategies require well-articulated individualized and interactions that aim at identifying specific problems.

Psychiatric patients with substance use disorders require much support in order to develop positive coping strategies. Indulgence in irresponsible sexual behaviours and the resultant risks of dealing with societal problems that have far reaching stigma implications such as HIV infection and mental illness pose an even complex scenario for substance users compounding the already challenging situation. People are likely to participate in protective behaviours when they are equipped with the necessary skills that produce positive outcome of behaviour.

The rehabilitation centre at Mathari hospital was established in 2003 with the aim of giving education on illicit drug use and its link to HIV particularly among injecting drug users. Various care approaches such as use of psychotropic medication, counselling, psychotherapy, occupational therapy, guidance and recreation are offered in an attempt to care for persons with substance use problems. Patients with substance use problems therefore need adequate information and skills on which to base their decisions for dealing with both substance and HIV risks (Ndetei and Szabo, 2011).

1.1 Problem Statement

Despite the use of various strategies to deal with the HIV situation, it still continues to be a problem of public health concern. The increase in new HIV infections among Injecting drug Users (IDUs) and substance users (SUDs) is an issue of global concern today (CDC, 2009). Kenya too has seen a rise in injecting drug use and HIV infection in the major cities such as Nairobi and the coastal towns of Mombasa and
Malindi (Beckerleg et al., 2005). A study conducted among SUDs in Malindi attending Omari rehabilitation centre particularly injecting drug users (IDU) revealed HIV prevalence as high as 83.3% (Beckerleg et al, 2005).

Another study conducted in Nairobi among drug users indicated that 44.9% were heroin users who inject themselves. The study findings further showed that 52.5% of the group were HIV positive (Mwatelah et al, 2014). Ndetei et al (2008) revealed that 34.4% of patients admitted at Mathari hospital are as result of substance abuse disorder. Prevalence of substance use is 74.8% among patients admitted in Mathari Maximum Unit (Asuga and Makanda, 2008). Thus, with the rising drug use currently being noted in the country, particularly among IDU it is becoming an area of focus in the transmission of HIV.

Even though counselling for HIV testing has been widely scaled up among the general population in Kenya, 82% of Kenyans do not know their HIV status (UNAIDS, 2012). It is important to note that substance users form a special at risk population that is often marginalized and stigmatized yet they too require to be targeted by HIV preventive and care services.

In this regard, by exploring the determinants of the uptake of HIV counselling and testing among SUDs is critical in order to gauge whether they will participate in primary or secondary HIV prevention (Morojele, 2013). The study therefore intends to provide evidence based data that would be useful for reference on areas of strengths and gaps that can be of assistance in improving services. The study findings can also be used to inform further inquiry in areas of identified gaps.
1.2 Justification

According to CDC report, individuals who use substances are at a higher risk of contracting HIV due to needle sharing and unprotected sex (CDC, 2009). Patients with substance use disorder experience loss of control on the use of alcohol and substances thus increasing their vulnerability to risky sexual behaviours (Calsyn et al, 2010). Continued substance use during therapy may have an impact on the knowledge, perception and utilization of care services compromising the need to accept to be counselled and tested or even to practice safer sexual behaviours as only 16% of drug users have access to outreach services (KDHS, 2008-2009). WHO, (2005) states that there is a research gap in the area of substance use disorders, mental illness and HIV/AIDS and further recommends the need to investigate service delivery interventions and their impact on the outcomes.

The role of counselling is to equip individuals with information and skills to make informed decisions on choices that are aimed at improving care outcomes (Fonner et al, 2012). An understanding of the determinants of HIV uptake and whether to accept to participate in the care activities is important. The acceptability of HIV counselling and testing services during or at the end of therapy is useful in promoting awareness of an individual’s status thereby facilitating early treatment and care. The patient’s point of view and willingness to have counselling and testing services for HIV is important.

Thus in identifying factors that influences HIV counselling and testing either positively or negatively among this group of patients is of value. The findings can inform decision making so that they are pegged on interventions with the greatest
impact. Reduction in HIV risk behaviours and resultant prevalence among substance users is of importance since this ultimately causes reduction in the national infection rates.

1.3 Research Questions

1) Do patients with SUDs have a better perception on vulnerability to HIV infection?
2) What are the factors that influence uptake of HIV counselling and testing among patients with SUDs?

1.4 Broad objective

To establish the determinants of uptake of HIV counselling and testing among persons with substance use disorders attending services at Mathari Hospital

1.4 Specific Objectives

1. To find out the perception on risk to HIV infection among patients with SUDs attending services at Mathari.
2. To identify factors that influence uptake of HIV counselling and testing among patients with SUDs attending services at Mathari hospital.
3. To determine the association between respondent characteristics and uptake of HIV counselling and testing among patients with substance use disorders attending services at Mathari hospital.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Injecting drug use is becoming an increasing and important cause of HIV transmission in the global arena. The emergence of the upward trend in HIV has been observed in the United States of America and African countries such as Tanzania and Kenya (CDC, 2009). Even though stability of new infections has been achieved, the problem seems to be increasing among substance users particularly the IDUs.

It is important to note that persons with mental illness and especially those with substance use disorder are at an increased risk of contracting HIV infection as substances often interfere with their cognitive abilities (Calsyn et al, 2010). These often alter their ability to reason effectively making them vulnerable to unprotected sexual practices.

2.2 HIV and Mental Illness

HIV prevalence among mentally ill inpatients and outpatients has been reported to be between 5% and 23%, compared with a range of 0.3% to 0.4% in the general population (Sessional Paper, 2000). According to World Health Organization (WHO, report 2008), there is behavioural risk for HIV transmission in 30 – 60 % of persons with severe mental illness. This is attributable to individuals’ way of judgment as mental illness alters a person’s ability to acquire or utilize information on HIV prevention. The use of licit and illicit substances has been shown to be associated with liberal and unprotected sex (Browne and Wechsberg, 2010).

HIV and psychiatric disorders have a complex relationship (Chandra et al, 2005). A HIV diagnosis is likely to present trauma to a person leading to mental illness. At the
same time persons with mental illness and more so substance use disorder are more predisposed to HIV. Teplin et al (2008) revealed that juveniles with co-morbid substance use and mental disorders have an increased risk to HIV as high as 62% especially those who had engaged in sex with multiple partners and 59% who had had unprotected sex.

Even though many global studies done have demonstrated a link between drugs and substance use in relation to high risk sexual behaviours, Leigh and Stall (2008) in their two year longitudinal study with adolescents, argue that there are also study findings that have not established such links. They however reckon that a narrow focus on certain aspects such as risky sexual behaviours has limited the understanding on how exactly these factors correlate.

In Kenya, HIV prevalence among people who inject drugs is 19.3% and this is way beyond the national prevalence of 6.3% according to Kenya Demographic Health Survey (KDHS, 2008/2009). A study by Ndetei (2009), further established that there exists a relationship between socio-demographic characteristics and substance abuse. The new HIV infections in the country are mainly attributable to subgroups in the population that engage in high risk sex and drug related HIV risk behaviours (NASCOP, 2013).

2.3 Substance Use and HIV

Several studies in the recent past have postulated a correlation between substance use disorders and HIV infection especially among injecting drug users (Kapadia et al, 2005). This is also supported by Centre for Disease Control (CDC report, 2009) which states that individuals who abuse drugs are at a higher risk of contracting HIV due to unprotected sex and sharing of needles among injecting drug users. Similarly,
Campbell et al, (2013) has reported an increase in new HIV infections among men who engage in sex with other men (MSM). Chandra et al (2005) in their study noted that 41% of psychiatric patients are more likely to contract HIV especially those who engage in sex while under the influence of alcohol.

Risk factors for HIV and sexually transmitted infections is as a result of risky behaviour patterns such as engagement in unprotected sex, indulgence in sex with high risk groups like sex workers and engaging in sex while under the influence of alcohol or drugs (Brodish et al, 2011). The use of injecting drugs has a direct link to HIV transmission where contaminated needles and syringes are shared among IDUs. Thus substances/ drugs exert there influence on one’s cognitive abilities by altering judgment and rational thinking predisposing them to unsafe sex (Gelder et al, 2008).

2.4 Role of Counselling in HIV Prevention

Counselling in everyday life situations often denotes advice (Gelder et al, 2008). In the year 2000 all nations agreed to a global HIV target that sought to reduce the spread by 2015 as part of the United Nations Millennium development goals (UNAIDS, 2012). To achieve this one of the set targets was that 90% of people living with HIV were to know their status.

Counselling plays an important role in equipping individuals with accurate knowledge and skills necessary for making informed decisions on whether or not to engage in HIV risk reduction behaviours and resultant consequences. Information shared during counselling provides a patient with an opportunity for reflection on the impact of the various outcomes and the need to take an appropriate response (Weledji et al, 2014).
Studies have shown that low and inaccurate knowledge make individuals perceive themselves as having lower risk to HIV and take no step in testing which is the link to treatment and care (Brewer et al, 2004). Lansier et al (2013) states that sexual health discussion between health care providers and patients/clients is a proactive way of providing information that facilitates testing for HIV thus early detection of illness for continued care and management.

2.4.1 Approaches to counselling

There are various approaches to counselling that can be employed in practice;

- Interpersonal counselling- this entails the use of a structured psychological treatment of interpersonal problems (Braun and Clarke, 2006).

- Psychodynamic counselling – put emphasis on past experiences in relation to the development of present behaviour manifestations and stems from the works of Sigmund Freud. It was first described by Jacobs in 1998 (Gelder et al, 2008).

- Problem solving counselling- Involves highly structured techniques and is effective in less severe forms of mood disorders. It is more focussed and individuals are helped to deal with the identified situations in a realistic manner (Vacarolis and Halter, 2010).

2.4.2 Counselling for specific Purposes

Counselling is often needed for people undergoing various situations such as grief, late effects of trauma, relationship problems, and students experiencing adjustment disorders and for prevention of risks.
There are various counselling approaches such as voluntary counselling and testing (VCT), diagnostic testing and counselling (DTC) as well as provider initiated testing and counselling (PITC) that have been adopted and integrated in existing care services in an attempt to reduce spread and improve quality of life (Kenya National AIDS Strategic Plan 2006-2010). There are however various counselling approaches/modalities employed by the different care institutions. The country has made deliberate attempts to expand VCT services in order to address the Sixth Millennium Development goal of providing health care to all who need it (Denison et al, 2008).

Beckerleg and Hundt (2004) state that risky sexual behaviours in most instances are influenced by ones pre-existing knowledge, attitude and negotiation skills. They furthers assert this stating that risky behaviours are modifiable. Weledji et al, (2014) concurs stating that behaviour learnt can be unlearnt. Knowledge on risky sexual behaviours has important implications in the prevention of new HIV infections.

Whereas counsellors take a proactive step in identifying areas of gaps in knowledge and formed attitudes that require change, a comprehensive sexual assessment should be carried out for those with SUD. In so doing, care providers are able to interact with patients at an individual level in order to enable them realize the need for services.

Despite the positive role that counselling plays in HIV risk reduction, counsellors dealing with substance users often feel inadequate and state the need for further training to prepare them (Hanson et al, 2011). This is particularly so for those counselling men who have sex with men. This is supported by Pollack and D’Aunno (2010) who found that despite the link between substance use and HIV only few substance use programmes give HIV testing services. Mitchel and Oltean (2007) on the other hand revealed that counsellors do not find it easy to conduct sexual risk
assessments. This is due to the perception that substance users are likely to evade discussion around this subject presumably because these behaviours put them and others at increased risk for HIV.

People are unique and also possess subjective experiences that play a great role in influencing how they perceive the world around them (Pearson et al, 2005). Despite the use of various strategies to deal with the HIV/AIDS situation like risk reduction counselling, skill building, HIV testing and counselling as well as screening for alcohol and drugs, it still continues to be a problem of public health concern. Mental illness and particularly substance use disorder often affect health seeking behaviours and even diagnostic and treatment services for HIV/AIDS.

2.4.3 Uptake of HIV counselling and testing

Whereas efforts have been concerted on HIV counselling and testing in Kenya, studies done have mainly targeted such groups like pregnant mothers, youths/adolescent, married couples and those aged 18 months and above. The need to identify persons infected in order to commence early treatment requires that individuals access counselling and testing services as it is only those who know their status that are in a position to make informed decisions. The current shortages experienced in public health care institutions, the scaling up of VCT, PMTCT, DITC, PITC and devolution are likely to have challenges that impact on counselling services as well. Available data regarding a study done in Nyanza indicate that there is still low uptake 47% women and 37% men (Huchko et al, 2011).
2.4.4 Conceptual Framework

The conceptual framework above presents the relationship between the variables under study. The individuals’ demographic characteristics (age, education, gender, income and religion) form the independent variables.

HIV risk and uptake of HIV counselling and testing are dependent to some degree on age, level of education, gender and religious beliefs. These variables also affect the quality of counselling which in turn has some impact on the perceived risk of HIV and uptake of HIV counselling and testing.
2.4.5 Applied Theory: Theory of Goal Attainment

The theory utilized to underpin this study is the theory of Goal Attainment by Imogene King (Chinn and Krammer, 2011). This theory evaluates the interactive process and attainment of client identified needs involving transactions that are dynamic and participatory. It involves the use of knowledge in order to help and empower individuals to undertake action that result in positive health outcomes. It further stipulate the need for participatory involvement during the process. Effective transaction with the client patient results in achievement of goals. There is focus on patient outcomes that result from interpersonal relationships (Tomey and Alligood, 2006). HIV counselling and testing involves interactive processes that equip the client with necessary skills to do reflection, be assertive and ultimately to take responsible health actions such knowing ones status in order to access care and support. Figure 7 below presents a diagrammatic illustration of the counselling process. Transaction entails uptake of HIV counselling and testing services and resultant feedback to both the counsellor and patient.
2.4.6 How the theory links to the study

The utilization of this theory in the study is based on the realization that persons with SUDs have maladaptive behaviour patterns that require them to make deliberate attempts to deal with. The theory has been successfully used in practice to stimulate continued learning, personal growth and development (Tomey and Alligood, 2006). It enables patients to accurately perceive their situations while offering them coping strategies. This requires well-articulated and setting of achievable goals that are realised over a stipulated period of time. Persons with SUD who access care are not only counselled on the drug risk behaviour but HIV vulnerability as well with the aim of accessing counselling and testing services. This is also a pertinent risk that is often addressed during the three months period of rehabilitation.
CHAPTER THREE: METHODOLOGY

3.1 Study Design
This was across sectional study that used both quantitative and qualitative methods to collect data. The use of mixed methods of data collection has been shown to be useful in answering attitudinal research questions in mental health (Heyraert et al, 2013).

3.1.1 Tool and data collection
A self-administered semi structured questionnaire was used to obtain information on socio demographic characteristics, knowledge, HIV vulnerability and uptake of HIV counselling and testing. Two FGDs comprising of young adults who were single and another of middle aged married participants were conducted. Four care providers at the rehabilitation unit and CSAT were also interviewed to collect information pertaining to patient’s views on the usefulness and reasons for uptake of the counselling and testing services. This supported by Onmuegbuzie and Turner (2007) and Hanson et al, (2005) who state that the two methodologies used in combination often compliment each other. Numeric data provided statistical information while verbatim data presented views regarding perception and reasons for uptake of HIV counselling and testing services that were useful in triangulation.

3.1.2 Sampling Method
Participants for the study were purposively sampled and recruited from among those at the rehabilitation Unit, clinic for substance abuse treatment and outpatient clinic. Purposive sampling was used as the study sought to gather information on issues, needs and concerns of persons with SUD. This is a group with deviant characteristics and purposive sampling method was used to ensure that the study covered persons whose phenomenon was the subject of investigation. This is supported by Teddlie and
Yu. (2007) who state that purposive sampling is useful in mixed methods in which there is need to understand complex issues relating to human behaviour and as such require setting of priorities and action. Boswell and Cannon (2007) further concur on the use of purposive sampling stating that this method allows the researcher to select accessible participants that the researcher can possibly reach with certain characteristics that are of interest to the study. In order to ensure that those who participated had comprehension to make informed judgment a SMMSE tool was administered.

### 3.1.3 Study Setting

The study was carried out at Mathari Teaching and Referral Hospital. Mathari hospital was established in 1901 initially to cater for soldiers who developed mental disorder. It has since become a major referral hospital that admits patients from all over the country. It has a bed capacity of 750 beds (Kenya Mental Health Draft Policy, 2009). The hospital is composed of an administration block, Outpatient clinics for medical/surgical conditions, three female wards, five male wards, an amenity ward for both males and females, a comprehensive care centre (CCC), Electro-convulsive unit, clinic for substance abuse and treatment and the rehabilitation unit that cater for non-forensic patients. The maximum security unit that caters for forensic patients has two male wards, a female ward and the infirmary ward that caters for both male and female patients with medical conditions that require hospitalization.

A rehabilitation unit for persons with substance use disorder at the hospital was commenced in 2003. The 52 bed capacity ward admits both males and females. There are seven (7) beds assigned for female patients with substance disorder who need treatment at the unit. It is the only public institution that provides rehabilitation
services for persons with substance use disorders. Patients received at the unit stay for a period of 90 days before they can be discharged. There is also a methadone ward that began treatment for patients with heroin addiction in January 2015. The facility’s admission for 2014 was approximately 300 patients and outpatients seen were about 700 (Hospital data as per existing registers). Thus there was amonthly average 25 and 58 respectively.

3.1.4 Study Population

A total of 127 participants were selected purposively from among those undergoing inpatient treatment and those on outpatient follow up for substance use disorder at clinic for substance abuse treatment and outpatient clinics.

3.1.5 Sample Size Determination

The sample size was obtained using Fisher et al found in Mugenda and Mugenda (2004). The prevalence of SUD among psychiatric patients is 8.8% according to WHO 2004, cited by Ndetei (2008) thus the sample size for the study was:

\[
 n = \frac{z^2 p (1-p)}{d^2}
\]

Where: 

- \( n \) = the desired sample size 
- \( z \) = the standard normal deviation at the required confidence level (z score of 1.96) 
- \( p \) = the prevalence of substance use disorder among those with mental illness (8.8 % according to WHO 2004 Report) 
- \( d \) = margin of error of 5 per cent 

\[
 n = \frac{(1.96)^2 \times 0.088 \times 0.912}{(0.05)^2}
\]
\[ \frac{3.8416 \times 0.088 \times 0.912}{0.0025} = \frac{0.3083}{0.0025} = 123 \]

An additional 10% of 123 which is 12.3 rounded to 12 was added to cater for any losses or attrition during the study period. This is according to Burns and Grove, (2011) who state that an acceptance rate of 90% ensures the sample remains representative of the study population. Thus the sample was 123 + 12 = 135.

Whereas 135 questionnaires were issued, only 127 (94%) of the respondents gave responses that met the threshold that was used in analysis.

### 3.1.6 Inclusion Criteria

Those who were included in the study had to have a doctor’s diagnosis of SUD, be willing to participate voluntarily and were also to have insight in order to give informed consent. Insight implied awareness regarding their illness, symptoms and interpretation of these (Gillen, 2006). This was further ascertained by use of a standardized mini mental status examination (SMMSE) tool whereby those whose scores were 23 and above were considered to be of good cognitive functioning and as such could give informed consent. A SMMSE score of 23-30 was considered normal, 19-23 borderline and less than 19 impaired as adopted from (Reisberg et al, 1982). This was to evaluate the cognitive function of the respondents. Those whose scores were 23 and above were enrolled to participate in the study while those who scored below 23 were considered as having problems with insight and as such lacked the ability to effectively comprehend the study questions.
3.1.7 Exclusion Criteria

Those excluded from the study were patients who lacked insight thus had SMMSE scores of 22 and below, those who had other mental health disorders other than SUD or those who declined to participate.

3.1.8 Independent Variables

The variables such as age, gender, religion, education and socio economic status were addressed by the questionnaire with socio- demographic data (Questionnaire part1).

3.1.9 Dependent variables

The Variables regarding knowledge on VCT, perception of Vulnerability to HIV infection and uptake HIV counselling and testing was be gathered in part II questionnaire that entailed several questions on knowledge and willingness to use VCT services.

3.1.10 Confounding Variables

Insight as a confounding variable was controlled by the use of a standardized mini mental status examination (SMMSE) tool. This tool was administered individually to all patients so as to determine their eligibility to participate in the study.

SMMSE tool has been widely used to evaluate cognitive function in a wide range of conditions such as type 2 diabetes mellitus, Alzheimer’s disease and dementia. It has high validity and reliability as was shown in the Turkish study where it had a specificity of 0.95 and sensitivity of 0.91 (Gungen et al, 2012). Despite its wide use, it has challenges when used in evaluating people with visual impairment thus its use in the older people may not yield good results, since there is a strong association between poor results and impaired visual acuity (Jefferis et al, 2012).
3.1.11 Recruitment and Consenting Procedures

The recruitment of participants commenced on 19/5/2015 and was continued for a period of 8 weeks. Patients with the diagnosis of SUD receiving inpatient care or those attending outpatient services that met the inclusion criteria and consented to participate were considered eligible for recruitment. A detailed explanation regarding the study was provided both verbally and in written. The information given included the study rationale, objectives, proposed benefits, the aspect of voluntarism and confidentiality. Any anticipated harm and how it would be mitigated were highlighted. Only those who had a doctor’s diagnosis of SUD participated in the study. Those who accepted to participate in the study were then asked to give a written consent.

3.1.12 Ethical Considerations

Permission to conduct the study was sought from the Ethics and Research Committee (ERC) for Kenyatta National Hospital/University of Nairobi. Entry to the study site was done after permission had been sought from the Medical Superintendent at Mathari hospital, Director of continuing nursing education at the institution and the various in-charges involved in the care of patients in outpatient and rehabilitation unit.

Study participants were given detailed information regarding the study in terms of the topic, purpose, proposed benefits any expected harm and how that would be dealt with both verbally and in written. After clarification of any concerns, those willing to participate were recruited purposively as they came to the ward and the clinic.

Respect and confidentiality regarding participant information was ensured and data collected was coded to ensure anonymity and kept securely under lock and the key kept by the investigator.
The study being one that anticipated to gather personal and sensitive information on sexual matters, it was envisaged that there could have been psychological harm resulting in emotional trauma. There were however no major emotional issues encountered except for minor issues raised by the respondents and those were adequately addressed by the principal investigator, nurses and counsellors at the facility. Whereas, the supervisors were not part of the project team, their technical guidance and support throughout the entire process was of crucial value since they are professional psychologists.

3.2 Data collection Procedures
3.2.1 Data collection instruments

Data was collected over a period of eight weeks. Quantitative data was collected mainly through the use of self-administered questionnaire to willing participants after it had been pre-tested. This gathered data pertaining to socio demographic information, knowledge on HIV transmission, substance use, risk vulnerability and uptake of counselling and testing services. Questions in the questionnaire were mainly adopted from Metzger and Mblank risk assessment battery (RAB), a tool for evaluating HIV risk perception and vulnerability. It however was customized to our situation (Metzger and Mblank, 2013). RAB has been widely used in the assessment of sexual and drug risk behaviours. Chandhury et al, (2010) employed the use of this tool in their research with pregnant mothers with drug dependence. The tool was also translated into Kiswahili for those who could not understand English.
Pre-testing of the questionnaire was done amongst 14 participants at Asumbi Rehabilitation Centre in Karen, a facility that offers counselling services to persons with substance use disorder. This was to ensure clarity, proper sequencing and wording of the questions. This helped to ascertain whether the tool captured relevant information that would answer the study objectives.

3.2.2 Focus Group Discussions

Two FGDs comprising 7 persons (FGD1) and 10 people for (FGD2) were conducted. This facilitated collection of contextual information regarding factors that either promote or hinder uptake of HIV counselling and testing and views on perceived vulnerability to HIV infection. The first FGD comprised of seven unmarried young males aged between 19 to 26 years. The second FGD had 10 participants aged 32-56 years. This was done so as to enable participants to actively contribute in groups that were of similar ages and encounters. To minimize bias a standard interview guide was used in both instances. This is supported by Burns and Grove, (2011) who states that subjective experiences of social actors cannot be obtained through use of quantitative instruments alone.

The groups were homogeneous to allow for comfort, confidence and privacy. Heterogeneous groups often hinder free deliberations regarding sexual issues that are perceived as sensitive and are often guarded by individuals. Boswell and Cannon (2007) concur stating that homogeneous groups enhance free participation and generalizability of data.

The FGDs were formed after the collection of information by questionnaires. This approach is useful in the area of HIV/AIDS as it facilitates collection of sensitive data on sexuality and perceptions regarding HIV vulnerability. Key informant interviews
from health care providers working with the patients was also done. This elicited vital information on types of counselling offered, patients responses, their experiences as well as challenges.

Primary data was obtained through questionnaires, SMMSE tool, interviews and FGDs while secondary data was obtained from patient’s records to include doctor’s diagnosis.

3.2.3 Validity and reliability of the instruments

Different tools were used to collect information. An already validated RAB questionnaire tool that was customized and pretested to ensure it addressed the study objectives was used.

3.2.4 Quality Assurance of qualitative data

This was ensured by use of two FGDs, having an assistant and observer who also took notes as well as the use of question guides with open ended questions during the deliberations. The discussions were audio tapped and played back to the participants to ascertain that the deliberations were a true reflection of the issues discussed. The transcribed data was read twice and themes captured from the audio tapped narratives interpreted in line with the research questions. This was further validated with the respondents.

3.3 Data Analysis

The data collected was checked for completeness, coded and fed into the computer and analysis done using SPSS version 20 package for quantitative data. Qualitative data was transcribed and categorized in themes to bring out commonalities of attributes and the emerging themes captured in verbatim. The reporting has been
done in narratives statements to augment quantitative data in a logical manner. Results are presented in frequency tables, percentages, simple statistical correlations, bar graphs and pie charts. Associations showing interrelations between variables was computed using Chi–square at $P \leq 0.05$ being of statistical significance.

### 3.4 Study Limitations

The study drew participants only from the public institution and this omitted views of those patients in private and faith based institutions. Gender representation was also a limitation as most of the patients admitted and receiving follow up care for substance use at Mathari hospital were mainly males. Patients with financial challenges too may have been left out of the study as those seeking care either as inpatients or outpatients have to meet the hospital charges (user fees) of Ksh 50/= per visit for the out-patients and daily bed occupancy payment of Ksh 1500/= for inpatients.
CHAPTER FOUR: RESULTS

This chapter presents the findings that include socio-demographic profiles of the respondents captured in part A of the questionnaire. Part B was grouped into the following areas: knowledge on HIV transmission, substance use and perceived risk to HIV infection, access to counselling and testing services, counselling process and the association between socio-demographic characteristics, and uptake of HIV counselling and testing. Whereas 135 questionnaires were distributed, those that were returned and used in data analysis were 127 (94%).

4.1 Socio-demographic characteristics of the participants

4.1.1 Age of Respondents

Figure 3 below shows the ages of the respondents. A total of 127 (100%) responded to the question about their age that ranged from 17 to 59 years with a mean age of 34.6 years. The age distribution of the respondents was as follows: 10-19 years 4 (3.1%), 20-29 years 38 (29.9%), 30-39 years 49 (38.6%), 40-49 years 26 (20.5%), and 50-59 years 9 (7.1%).
4.1.2 Gender of the participants

The participants in the study were mainly males 123 (97%) while females were 4 (3%) as shown in Figure 4 below.

Figure 3: Age of Respondents

Figure 4: Gender of Respondents
4.1.3 Marital status of the Respondents

Figure 5 below represents marital status of respondents. Those who reported to be single were 59 (46.5%) accounting for the highest proportion followed by the married who were 52 (40.9%) while those who were separated were 14 (11%). Only 2 (1.6%) reported to be divorced.

![Marital Status of Respondents]

**Figure 5: Marital Status of Respondents**

4.1.4 Religion of Respondents

![Religion of Respondents]

**Figure 6: Religion of Respondents**
A total of 122 participants were Christians accounting for 96.1% of the respondents. Muslims were 4 (3.1%) and only 1 (0.8%) was a Buddhist as shown in Figure 6 above.

4.1.5 Participants Level of Education

Most of the participants numbering 61 (48%) had attained secondary level of education, followed by those who had university level of education at 49 (38.6%). Those with primary level of education were 15 (11.8%) while those with no formal education were 2 (1.6%) as shown in Figure 7 below.

4.1.6 Respondents occupation

Results as seen in Table 1 below, indicate that most of the respondents were either teachers or self-employed. Teachers were 28 (22%) while those in self-employment were 28 (22%). These were followed by those who were in the others category at 8
(6.3%). Those in security services were 5 (3.9%), health professionals were 5 (3.9%) and the non-employed were 5 (3.9%).

Table 1: Occupation of Respondents

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>Teaching</td>
<td>28</td>
<td>22.0</td>
</tr>
<tr>
<td>Transport</td>
<td>13</td>
<td>10.2</td>
</tr>
<tr>
<td>Health Profession</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>Security (Police/ Military...)</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>Employed in Informal business</td>
<td>14</td>
<td>11.0</td>
</tr>
<tr>
<td>Self Employed</td>
<td>28</td>
<td>22.0</td>
</tr>
<tr>
<td>Farmer</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Other Civil servant</td>
<td>9</td>
<td>7.1</td>
</tr>
<tr>
<td>Student</td>
<td>11</td>
<td>8.7</td>
</tr>
<tr>
<td>Others</td>
<td>8</td>
<td>6.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.1.7 Respondents Income

Out of all the respondents, 40 (31.3 %) were in the Kshs. 10,000-20,000 per month income bracket. Those who earned below Kshs. 10,000/- were 35 (27.7%) while 33 (25.8%) earned above 30,000/-. The remaining 19 (15.2%) fell in the Kshs. 21,000-30,000 income bracket as shown in Figure 8 below.
4.2 Factors that influence uptake of HIV counselling and testing among patients with SUDs.

4.2.1 Knowledge of HIV transmission

Table 2 below presents respondents knowledge on the various ways of acquisition of HIV infection. Respondents numbering 76 (59.4%) gave three correct ways of how one could acquire HIV. Those who gave two correct ways were 31 (24.4%) while 17 (13.4%) gave one correct way. Only 3 (2.4%) did not know any correct way of HIV transmission.

Table 2: Knowledge of HIV Transmission

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not know any</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Know 1 correct way</td>
<td>17</td>
<td>13.4</td>
</tr>
<tr>
<td>Know 2 correct ways</td>
<td>31</td>
<td>24.4</td>
</tr>
<tr>
<td>Know 3 correct ways</td>
<td>76</td>
<td>59.8</td>
</tr>
<tr>
<td>Total</td>
<td>127</td>
<td>100</td>
</tr>
</tbody>
</table>
4.2.2 Age and Knowledge of HIV Transmission

In order to assess knowledge of HIV transmission among the various age groups, participants were asked to state three ways of HIV transmission. The findings were as shown in Figure 9 below.

![Figure 9: Knowledge of HIV Transmission by Age](image)

Results showed that knowledge on HIV transmission was good among those aged 30-39 years whereby 30 respondents stated three correct responses while this was lowest among those aged 10-19 years where only 1 respondent was able to state three correct modes of acquiring HIV infection.
### Table 3: Chi-Square Results on Knowledge by Socio-demographic Characteristics

<table>
<thead>
<tr>
<th>Knowledge on HIV Transmission by:</th>
<th>Chi square value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>22.787</td>
<td>0.030*</td>
</tr>
<tr>
<td>Marital Status</td>
<td>34.868</td>
<td>0.000*</td>
</tr>
<tr>
<td>Level of Education</td>
<td>28.608</td>
<td>0.001*</td>
</tr>
<tr>
<td>Occupation</td>
<td>33.957</td>
<td>0.167</td>
</tr>
<tr>
<td>Income</td>
<td>13.569</td>
<td>0.139</td>
</tr>
</tbody>
</table>

*p values with statistical significance

There was a significant relationship between knowledge of the modes of HIV transmission and age (Chi square = 22.787, P=0.030), marital status (Chi square = 34.868, P=0.000) and level of education (Chi square = 28.608, P=0.001). There was however no statistical relationship between knowledge and occupation (Chi square = 33.956, P=0.167) and income (Chi square =13.568, P=0.139) as shown in Table 3 above.

#### 4.2.3 Marital Status and Knowledge of HIV Transmission

Table 4 below shows that knowledge regarding HIV transmission was better among those who were married and among those who were single where 35 (71.4%) and 30 (53.6%) gave three correct responses respectively. Knowledge was however low among those who were divorced or separated. Results further revealed a statistical significance in the relationship between marital status and knowledge on HIV transmission (Chi square = 34.868, P=0.000).
Table 4: Knowledge of HIV Transmission by Marital Status

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Do not know any</th>
<th>Know 1 correct way</th>
<th>Know 2 correct ways</th>
<th>Know 3 correct ways</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>1 (1.8%)</td>
<td>13 (23.2%)</td>
<td>12 (21.4%)</td>
<td>30 (53.6%)</td>
<td>56 (100.0%)</td>
</tr>
<tr>
<td>Married</td>
<td>1 (2.0%)</td>
<td>2 (4.1%)</td>
<td>11 (22.4%)</td>
<td>35 (71.4%)</td>
<td>49 (100.0%)</td>
</tr>
<tr>
<td>Divorced</td>
<td>1 (50.0%)</td>
<td>0 (.0%)</td>
<td>0 (.0%)</td>
<td>1 (50.0%)</td>
<td>2 (100.0%)</td>
</tr>
<tr>
<td>Separated</td>
<td>0 (.0%)</td>
<td>0 (.0%)</td>
<td>7 (50.0%)</td>
<td>7 (50.0%)</td>
<td>14 (100.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>3 (2.5%)</td>
<td>15 (12.4%)</td>
<td>30 (24.8%)</td>
<td>73 (60.3%)</td>
<td>121 (100.0%)</td>
</tr>
</tbody>
</table>

4.2.4 Educational level and Knowledge of HIV Transmission

Findings as seen in Table 5 below indicate that knowledge of HIV transmission was highest among those with secondary education. Those with secondary education that were able to state three correct modes of transmission were 38 (66.7%). This was followed by those with university level of education at 31 (66.0%). It was however low among those with primary level or no education. Only 3 (20%) among those with primary education were able to state three modes of transmission while those with no education did not know any. Findings further revealed a statistical significance between level of education and knowledge of transmission of HIV infection (Chi square = 28.608, P=0.001).

Table 5: Knowledge of HIV Transmission by Level of Education

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Do not know any</th>
<th>Know 1 correct way</th>
<th>Know 2 correct ways</th>
<th>Know 3 correct ways</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>.2(0%)</td>
<td>0(0%)</td>
<td>2(100.0%)</td>
</tr>
<tr>
<td>Primary</td>
<td>0(0%)</td>
<td>6(40.0%)</td>
<td>4(26.7%)</td>
<td>3(20.0%)</td>
<td>15(100.0%)</td>
</tr>
<tr>
<td>Secondary</td>
<td>0(0%)</td>
<td>5(8.8%)</td>
<td>13(22.8%)</td>
<td>38(66.7%)</td>
<td>57(100.0%)</td>
</tr>
<tr>
<td>University</td>
<td>0(0%)</td>
<td>5(10.6%)</td>
<td>11(23.4%)</td>
<td>31(66.0%)</td>
<td>47(100.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>0 (0%)</td>
<td>30(24.8%)</td>
<td>30(24.8%)</td>
<td>72(59.5%)</td>
<td>121(100.0%)</td>
</tr>
</tbody>
</table>
4.2.5 Occupation and Knowledge of HIV Transmission

Only 121 respondents gave answers to the question on knowledge of HIV transmission in relation to one's occupation. The level of knowledge was assessed by getting them to give ways of HIV transmission. Table 6 below showed that knowledge was higher among teachers with 24 (85.7%) giving three correct ways of HIV transmission. Among the health professionals, 4 (80%) mentioned three correct ways while among other civil servants and security personnel, 6 (75%) and 3 (60%) respectively were able to give three correct ways. It was relatively low among those who did not indicate their occupation and students where only 2 (40%) and 3 (33.3%) respectively were able to state three ways of HIV transmission. However, none of the farmers was able to give three correct ways of HIV transmission. Results did not yield any relationship between knowledge of HIV transmission and occupation (Chi square =33.957, P=0.167).
Table 6: Knowledge of HIV Transmission by Occupation

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Do not know any</th>
<th>Know 1 correct way</th>
<th>Know 2 correct way</th>
<th>Know 3 correct way</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0 (.0%)</td>
<td>1 (20.0%)</td>
<td>2 (40.0%)</td>
<td>2 (40.0%)</td>
<td>5 (100.0%)</td>
</tr>
<tr>
<td>Teaching</td>
<td>1 (3.6%)</td>
<td>0 (0.0%)</td>
<td>3 (10.7%)</td>
<td>24 (85.7%)</td>
<td>28 (100.0%)</td>
</tr>
<tr>
<td>Transport</td>
<td>1 (8.3%)</td>
<td>3 (25.0%)</td>
<td>1 (8.3%)</td>
<td>7 (58.3%)</td>
<td>12 (100.0%)</td>
</tr>
<tr>
<td>Health Profession</td>
<td>0 (.0%)</td>
<td>0 (0.0%)</td>
<td>1 (20.0%)</td>
<td>4 (80.0%)</td>
<td>5 (100.0%)</td>
</tr>
<tr>
<td>Security (Police/ Military…)</td>
<td>0 (.0%)</td>
<td>0 (0.0%)</td>
<td>2 (40.0%)</td>
<td>3 (60.0%)</td>
<td>5 (100.0%)</td>
</tr>
<tr>
<td>Employed in Informal business</td>
<td>0 (.0%)</td>
<td>2 (14.3%)</td>
<td>4 (28.6%)</td>
<td>8 (57.1%)</td>
<td>14 (100.0%)</td>
</tr>
<tr>
<td>Self Employed</td>
<td>1 (3.6%)</td>
<td>3 (10.7%)</td>
<td>10 (35.7%)</td>
<td>14 (50.0%)</td>
<td>28 (100.0%)</td>
</tr>
<tr>
<td>Farmer</td>
<td>0 (.0%)</td>
<td>1 (100.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>1 (100.0%)</td>
</tr>
<tr>
<td>Other Civil servant</td>
<td>0 (.0%)</td>
<td>0 (0.0%)</td>
<td>2 (25.0%)</td>
<td>6 (75.0%)</td>
<td>8 (100.0%)</td>
</tr>
<tr>
<td>Student</td>
<td>0 (.0%)</td>
<td>3 (33.3%)</td>
<td>3 (33.3%)</td>
<td>3 (33.3%)</td>
<td>9 (100.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>3 (2.6%)</td>
<td>13 (11.3%)</td>
<td>28 (24.3%)</td>
<td>71 (61.7%)</td>
<td>115 (100.0%)</td>
</tr>
</tbody>
</table>

4.2.6 Income and Knowledge of HIV Transmission

Results in table 7 below on knowledge of modes of transmission of HIV indicate that there was no significant variation across the income brackets. The results regarding knowledge of transmission ranged from 14 (47%) among those earning below Kshs. 10,000 to 13 (81%) and among those in the Kshs. 21,000 – 30,000 income bracket who had knowledge of three correct ways of transmission.

Further analysis shows no statistical association between income and knowledge on HIV transmission (Chi square = 13,569, P=0.139).
Table 7: Knowledge of HIV Transmission by Income

<table>
<thead>
<tr>
<th>Income</th>
<th>Do not know any</th>
<th>Know 1 correct way</th>
<th>Know 2 correct ways</th>
<th>Know 3 correct ways</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 10,000 pm</td>
<td>1 (3%)</td>
<td>7 (23%)</td>
<td>8 (27%)</td>
<td>14 (47%)</td>
<td>30 (100%)</td>
</tr>
<tr>
<td>10,000 - 20,000 pm</td>
<td>2 (6%)</td>
<td>4 (11%)</td>
<td>6 (17%)</td>
<td>23 (66%)</td>
<td>35 (100%)</td>
</tr>
<tr>
<td>21,000 - 30,000 pm</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>3 (19%)</td>
<td>13 (81%)</td>
<td>16 (100%)</td>
</tr>
<tr>
<td>Above 30,000 pm</td>
<td>0 (0%)</td>
<td>1 (4%)</td>
<td>9 (33%)</td>
<td>17 (63%)</td>
<td>27 (100%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3 (3%)</strong></td>
<td><strong>12 (11%)</strong></td>
<td><strong>26 (24%)</strong></td>
<td><strong>67 (62%)</strong></td>
<td><strong>108 (100%)</strong></td>
</tr>
</tbody>
</table>

4.3 Perception on HIV Vulnerability due to substance use

Results indicate that respondents were either using one or more substances. A total of 101 (79.5%) were using more than one substance while the remaining 26 (20.5%) were using one substance as seen in Figure 10 below.

Figure 10: Use of Substances

The results in Figure 11 show the respondent’s acceptance of the existence of a link between substance use and exposure to HIV infection. Most of the participants 97 (76.4%) gave “Yes” as their response to the question as to whether there is a link.
between substance use and vulnerability to HIV while 30 (23.6%) gave “No” as their response.

Participants in the two FGDs unanimously accepted that there was an association between substance use and HIV transmission (FGD1& 2). They further mentioned incidences where the influence of substance led to unprotected sex.

![Figure 11: Substance use and exposure to HIV](image)

Figure 12 below presents the views of respondents on vulnerability to HIV infection due to substance use and what is likely to happen when one is under the influence of substances. The responses included impairment of judgment as stated by 34 (49.9%) respondents, exhibiting carelessness as stated by 20 (28.2%), forgetting to use protection as stated by 11 (15.5%) and making one to have increased desire to engage in sex was stated by 6 (8.5%) respondents.
Figure 12: Participants Knowledge on Relationship between HIV Infection and Substance Abuse

4.4 Respondents rating of counselling and testing services

Various aspects regarding counselling were rated using a likert scale. This was to elicit responses of the respondents in order to determine if there was any association between uptake of HIV counselling and testing and the manner in which the process was conducted.

Table 8: Rating and Chi Square results of Counselling Services

<table>
<thead>
<tr>
<th></th>
<th>Overall Rating of counselling services</th>
<th>Communication with Counsellor</th>
<th>Privacy</th>
<th>Confidentiality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>2 (1.8)</td>
<td>-</td>
<td>-</td>
<td>1 (0.9)</td>
</tr>
<tr>
<td>Fair</td>
<td>14 (12.8)</td>
<td>12 (11.0)</td>
<td>7 (6.5)</td>
<td>11 (10.3)</td>
</tr>
<tr>
<td>Good</td>
<td>24 (22.0)</td>
<td>32 (29.4)</td>
<td>31 (29.0)</td>
<td>28 (26.2)</td>
</tr>
<tr>
<td>Very Good</td>
<td>36 (33.0)</td>
<td>36 (33.0)</td>
<td>38 (35.5)</td>
<td>40 (37.4)</td>
</tr>
<tr>
<td>Excellent</td>
<td>32 (29.4)</td>
<td>29 (26.6)</td>
<td>31 (29.0)</td>
<td>27 (25.2)</td>
</tr>
<tr>
<td>Total</td>
<td>109 (100.0)</td>
<td>109 (100.0)</td>
<td>107 (100.0)</td>
<td>107 (100.0)</td>
</tr>
<tr>
<td>Chi Square</td>
<td>5.717</td>
<td>2.908</td>
<td>3.188</td>
<td>6.39</td>
</tr>
<tr>
<td>P Value</td>
<td>0.335</td>
<td>0.406</td>
<td>0.363</td>
<td>0.172</td>
</tr>
</tbody>
</table>

NB. Percentage rating of services are in brackets
The overall rating of the counselling services was good. Table 8 above shows that those who indicated poor and fair were 2 (1.8%) and 14 (12.8%) respectively while the rest represented by 24 (22.0%), 36 (33.0%) and 32 (29.4%) rated the services as good, very good and excellent respectively.

In order to determine any association, various aspects were tested. The areas looked at included communication with the counsellor with (Chi square = 5.717, P=0.335); privacy (Chi square = 3.188, P=0.406); confidentiality (Chi square = 6.39, P=0.363); respect with (Chi square = 2.215, P=0.33) and the manner in which concerns were handled with (Chi square = 3.957, P=0.138). Results on the rated aspects of counselling showed no significant relationship between uptake of HIV counselling and testing and how the process was carried out as shown in Table 8 above.

![Fig 13: Handled Respectfully](image)

Figure 13: Handled Respectfully
4.5 Determination of association between Socio- demographic characteristics and Uptake of HIV counselling and testing

Chi square test was done to ascertain the relationship between the independent variables and uptake of HIV counselling and testing and these included:

- Age
- Gender
- Marital status
- Level of education
- Occupation
- Income
4.5.1 Association between Age and Uptake of HIV counselling and testing

Results in Figure 15 below indicated that there was no statistical association between age and uptake of HIV counselling and testing services (Chi square = 2.897, P=0.575).

![Figure 15: Ever had HIV Test by Age](image)

4.5.2 Association between Marital Status and Uptake of HIV counselling

Table 10 below shows that there was no significant statistical relationship between marital status and uptake of HIV counselling and testing (Chi square = 5.712, P=0.127).
Table 9: Marital Status and Ever had HIV Test

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Ever had HIV test</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Single</td>
<td>40 (69.0%)</td>
<td>18 (31.0%)</td>
</tr>
<tr>
<td>Married</td>
<td>43 (86.0%)</td>
<td>7 (14.0%)</td>
</tr>
<tr>
<td>Divorced</td>
<td>2 (100.0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Separated</td>
<td>12 (85.7%)</td>
<td>2 (14.3%)</td>
</tr>
<tr>
<td>Total</td>
<td>97 (78.2%)</td>
<td>27 (21.8%)</td>
</tr>
</tbody>
</table>

4.5.3 Association between Education and Uptake of HIV counselling and testing

Table 10 below shows that there was no statistical significance between level of education and uptake of HIV counselling and testing services (Chi square =5.320, P=0.150).

Table 10: Level of Education and Uptake

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Ever had HIV test</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>None</td>
<td>1 (50.0%)</td>
<td>1 (50.0%)</td>
</tr>
<tr>
<td>Primary</td>
<td>9 (60.0%)</td>
<td>6 (40.0%)</td>
</tr>
<tr>
<td>Secondary</td>
<td>46 (78.0%)</td>
<td>13 (22.0%)</td>
</tr>
<tr>
<td>University</td>
<td>41 (85.4%)</td>
<td>7 (14.6%)</td>
</tr>
<tr>
<td>Total</td>
<td>97 (78.2%)</td>
<td>27 (21.8%)</td>
</tr>
</tbody>
</table>

4.5.4 Association between Occupation and Uptake of HIV counselling

The results in Table 11 below show that there was no statistical relationship between occupation and uptake of HIV services (P=0.410).
Table 11: Occupation and Ever had HIV Test

<table>
<thead>
<tr>
<th>Occupation</th>
<th>n = 117</th>
<th>Ever had HIV test</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>3 (60.0%)</td>
<td>2 (40.0%)</td>
<td>5 (100.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td>23 (85.2%)</td>
<td>4 (14.8%)</td>
<td>27 (100.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>10 (76.9%)</td>
<td>3 (23.1%)</td>
<td>13 (100.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Profession</td>
<td>5 (100.0%)</td>
<td>0 (0%)</td>
<td>5 (100.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security (Police/ Military...)</td>
<td>5 (100.0%)</td>
<td>0 (0%)</td>
<td>5 (100.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed in Informal business</td>
<td>11 (84.6%)</td>
<td>2 (15.4%)</td>
<td>13 (100.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Employed</td>
<td>18 (64.3%)</td>
<td>10 (35.7%)</td>
<td>28 (100.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmer</td>
<td>1 (100.0%)</td>
<td>0 (0%)</td>
<td>1 (100.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Civil servant</td>
<td>8 (88.9%)</td>
<td>1 (11.1%)</td>
<td>9 (100.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>9 (81.8%)</td>
<td>2 (18.2%)</td>
<td>11 (100.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>93 (79.5%)</td>
<td>24 (20.5%)</td>
<td>117 (100.0%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.5.5 Association between Income and Uptake of HIV counselling

Results in Table 12 below shows those who had gone for counselling and testing services in each income bracket. Among those who earned below Ksh 10,000/=, 20 (67%) stated they had done so while 10 (33%) had not. In the 10,000 – 20,000/= income bracket, 26 (74%) had done so while 9 (26%) had not. Those in the Ksh 21,000 – 30,000/= income bracket had 15 (94%) who stated yes while 1 (6%) gave no as their response. Similarly those in the above 30,000/= income bracket had 25 (86%) who had gone for such services while 4 (14%) had not. Further analysis showed no significant statistical relationship between income and uptake of HIV counselling and testing (Chi square = 6.012, P = 0.111).
Table 12: Ever had HIV test by level of income.

<table>
<thead>
<tr>
<th>Ever had HIV test</th>
<th>Income</th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Below 10,000 pm</td>
<td>10,000 - 20,000 pm</td>
<td>21,000 - 30,000 pm</td>
<td>Above 30,000 pm</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>20</td>
<td>26</td>
<td>15</td>
<td>25</td>
<td>86</td>
</tr>
<tr>
<td>No</td>
<td>10</td>
<td>9</td>
<td>1</td>
<td>4</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>35</td>
<td>16</td>
<td>29</td>
<td>110</td>
</tr>
</tbody>
</table>

4.6 Factors that influence uptake of HIV counselling and testing

4.6.1 Uptake of HIV counselling and testing services

Results as seen in figure 16 below show the respondents who had undergone HIV counselling and testing were 100 (78.8%) and 27 (21.2%) had not been tested.

![Figure 16: Uptake of Counselling and Testing](image)
4.6.2 Reasons for going for HIV counselling and testing

Table 13 below presents participants’ reasons for accepting to undergo HIV testing. Participants who had had HIV testing done gave varied reasons for seeking such services as shown in Table 14 below.

Table 13: Participants’ Reason for Going for HIV Counselling and Testing

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>27</td>
<td>21.3</td>
</tr>
<tr>
<td>To know status</td>
<td>61</td>
<td>48.0</td>
</tr>
<tr>
<td>For my family</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Influence from partner</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>To change my behaviour</td>
<td>8</td>
<td>6.3</td>
</tr>
<tr>
<td>Risk vulnerability</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Friendly services</td>
<td>6</td>
<td>4.7</td>
</tr>
<tr>
<td>Influence from friends</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>Requirement to access services</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Fear of Death</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Not indicated</td>
<td>7</td>
<td>5.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Most of the respondents wanted to know their status 61 (48%), while others did so as a result of the desire to change behaviour 8 (6.3%) or because of influence from their partner 5 (3.9%), those encouraged by friends were 5 (3.9%), friendly services were 6 (4.7%), while 7 (5.5%) of the respondents did not state any reasons as indicated in Table 14 above.

4.6.3 Reasons for not utilising HIV counselling and testing services

Figure 17 below presents the reasons by respondents for not utilising HIV counselling and testing services. There were varied responses that were given by the respondents.
Figure 17: Participants reasons for not utilising services

The 21.2% of the respondents who had not gone for HIV testing gave different reasons as to why they had not sought HIV counselling and testing services. These included fear as stated by 15 (54.7%) respondents, some thought that they were not at risk 7 (29.1%), those who said they had not engaged in sex for the last six months were 3 (9.8%) while 2 (6.3%) felt it was not important to do so.

4.7 Qualitative Findings

Information obtained from the two FGDs and Key informant interviews were grouped into themes that included: knowledge on HIV transmission, preventive measures, areas covered during counselling sessions and participants opinion on counselling process.
4.7.1 Knowledge on modes of HIV transmission

There was good understanding of the modes of HIV transmission in the two FGDs and the responses indicated that transmission was through sexual intercourse, blood transfusion, from mother to child at birth, breast-feeding and the use of piercing objects. It was however noted that participants in FGD 2 gave in-depth details on these modes, they went on to give elaborate details.

4.7.2 Measures taken to prevent one from acquiring HIV infection

This was another theme captured during the discussion. Several ways were identified as crucial in preventing HIV infection. All the participants had knowledge on the measures to take so as to avoid contracting HIV. They mentioned use of protection during sexual intercourse, use of gloves when dealing with sharp objects and open wounds and abstinence as some of the ways of prevention.

4.7.3 Aspects that were discussed during counselling sessions

According to the discussions during the two FGDs, respondents highlighted several areas that were covered during counselling sessions. These focused mainly on life skills and the need to be assertive in order to say no to behaviours that expose one to risk either for substance use or HIV. Particular attention is given to exploration of how they started using substances, the effects of the substances in their lives and ultimately how to stop using the substances altogether. HIV was also dealt with during the sessions as was reported by the respondents “R1: I think, issues of sexuality... it’s either you abstain or when you engage in any sexual activity you use protection”.
4.7.4 Participant’s View of the counselling process

Some of the elements during counselling that have made the participants value the sessions were the manner in which confidentiality and privacy were ensured during the sessions. They were particularly concerned with issues of confidentiality. This was also expressed during the FGD deliberations “….anonymous itself and, as in, try to make you feel confident so that you can speak everything that you have in your soul, that is very useful because there is nothing that anyone can talk without you trying to convince him that this thing is just between me and you and no one is going to hear about it. That is good.” Another element is the improvements that they attribute to the program. They attribute the changes in their lives to the counselling sessions, which they said had helped them solve some of their lives' problems, and are now on a fresh start of life. “….Sometimes when you discuss a problem with a counsellor, they help you solving…first you open up with that issue, so the burden is halfway solved. Secondly, the topics that we deal with the counsellor that have gone positively, like my sexual behaviour, my academics, my school work I mean, I have also learnt how to socialize with other people healthy. I have been able to relate with my parents with much respect after being counselled by a counsellor and much more.”
CHAPTER FIVE: DISCUSSION

The study findings revealed that uptake of HIV counselling and testing was high among those aged 30-39 years and lowest among those aged 10-19 years. Chi square test indicated an association between age and knowledge regarding HIV transmission (P=0.030) thus knowledge to a large extent determines ones decision to undergo HIV counselling and testing. This study yielded similar findings as that of Kohler, et al (2014) that found an association between knowledge and uptake of HIV testing among antenatal on ARVs. Low levels of knowledge often make people have either inaccurate information or perceive themselves as having low risk of contracting HIV. Such individuals are likely to shun HIV counselling and testing (Brower, et al, 2004). Of the respondents who had not undergone HIV testing, 29.1% indicated that they considered themselves as not being at risk.

According to UNAIDS (2012) report, 82% of Kenyans do not know their HIV status despite high Knowledge and awareness. This was not so among those with SUDs where 100 (78.8%) had been tested. It is important to note that counselling at the facility focuses on accepting that substance use is a problem and that it has several other consequences for those undergoing treatment to begin the recovery process. This explains why the participants were willing to accept counselling and testing for HIV.

Similarly it was found that uptake was higher in both males and females since all the female respondents 4 (100%) reported having had a HIV test. Out of the 123 males, 96 (78%) had had a HIV test done while 27 (22%) of them had not been tested. These findings were similar to the study by Huchko et al (2011) done in Kisumu which revealed that a large proportion of females 47% than that of males 36% reported
having had a HIV test. There are relatively few females coming up for rehabilitation for substance use as noted in the study. Due to the gender skewedness in the results, efforts to draw conclusions on gender based on such findings is challenging as those receiving care at the CSAT and rehabilitation unit are mostly males. Female representation was inadequate to facilitate generalization of the results. Similarly the purposive sampling technique also makes it difficult to make generalizations except for this particular group in the study. Efforts should be made to create awareness and provide services to females with SUD as several previous studies have shown that women are equally at risk of HIV due to substance use.

Results clearly showed that there was an association between level of education and knowledge on modes of HIV transmission. This was further noted in the responses of FGD participants who gave elaborate explanations on the modes of transmission, link between substance use and HIV, and the preventive measures.

Results revealed a significant statistical association between marital status and knowledge on HIV transmission of (P=0.000). However, there was no relationship between marital status and uptake of counselling and testing (P=0.127). Thus, it can be observed that reasons other than awareness or knowledge do influence uptake of HIV counselling and testing among this group. 71.4% of the married had good knowledge of HIV transmission. Among those who were single, 53.6% had good knowledge of HIV transmission while 50% of those separated and those who are divorced had good knowledge. This implies knowledge was generally good and this concurs with the UNAIDS (2012) report that highlights high knowledge and awareness among the general population.
The study further revealed that most of the respondents had attained either secondary (47.2%) or university (38.6%) level of education. According to the findings regarding knowledge of HIV transmission, most of those with higher educational levels were able to give three correct responses. There was however no relationship between level of education with uptake of HIV counselling and testing (P=0.150). This implies that there were other factors that played a role in uptake other than knowledge. This was different from the study by Kohler et al (2014) that found an association between knowledge and uptake.

Despite the association noted between knowledge on HIV transmission and marital status (P=0.000), this did not translate to uptake of HIV counselling and testing as well at (P=0.127).

Thus it is important to note that knowledge alone does not translate to uptake of HIV counselling and testing among patients with SUD. Other strategies need to be employed to foster service utilization by addressing fear and perception of risk to HIV infection while sustaining/maintaining positive behaviour patterns that reduce risk vulnerability among this group. This view was echoed during key informant interview where it was stated that “persons in denial fear going for testing as they are usually angry with themselves and fear being tested due to their irrational sexual behaviours in the past.”

Most of the respondents were either in the teaching profession (22%) or self-employed (22%) while students formed 8.7% of the respondents. There is need to conduct further research to explore reasons that predispose teachers to substance use and ultimately risk to HIV since they also play a crucial role in shaping the character of their students. Where teachers stand out with maladaptive behaviour patterns, this
is likely to be emulated by students posing a great challenge and as such this can further compound the substance and HIV problem.

Most respondents (31.3%) had a monthly income of Ksh. 10,000/- to 20,000/- and those who earned above 30,000/- were 25.8%. Those who earned less than 10,000/- were 27.7%. There was no association between income and knowledge (P=0.139) or even with uptake of HIV counselling and testing (P=0.410). The purposive method of recruitment captured patients who had already come to the realization of the danger posed by substance and also were in a position to meet the treatment costs. This could have left out persons who could be of low socio-economic status, educational levels and resultant knowledge deficit. The rehabilitation services currently offered is inclined to serving persons who are able financially due to the requirement of being in a position to pay the user fees. The vast majority from the slums who are not spared from the substance problems may be disadvantaged in terms of access to rehabilitation services, although HIV testing is free according to the government policy guidelines.

Perception on risk vulnerability was evaluated by asking respondents on the use of substances. Nearly all respondents (78.8%) had used more than one substance while 21.2% had used only one substance. Several studies have shown polysubstance use among persons with SUD (Pollack and D’Aunno 2010). They further enumerated various ways in which one can expose him/herself to HIV and gave reasons like impairment of judgment (47.9%), careless behaviour (28.2%) forgetting to use protection (15.5%), and motivates to engage in sex (8.5%). It can be noted that most of the participants were aware of the link between substance use and HIV. Participants in the FGD explicitly stated this by reporting that after 2a.m., people in the bar are so drunk that they cannot make sensible judgment.
It is important to note that patients admitted in the rehabilitation unit or those attending follow up care at the centre for substance abuse treatment are substance are patients who are already motivated by the desire to make a positive change in their behaviours. They undergo counselling on various issues and on the need to deal with denial and pertinent risky sexual behaviours. Similarly all the participants in the FGDs unanimously accepted that there are risks of contracting HIV due to substance use. They further highlighted careless sexual behaviour, non-use of protection, memory impairment and increased desire to engage in sex as ways that expose persons with SUDs to HIV infection. One of the respondents in FGD 1 clearly stated the link between substance use and risk to HIV infection“…yes, there is a connection between HIV and substance use especially when you are talking about the drug of choice. For instance once you are in a pub you might come across a lady or a bar maid, as long as she sees you have a lot of money or cash, at that particular time, you can talk and agree but the more you take the more you lose your senses and once you lose your senses you might end up going with that particular lady and maybe you as the man you have the virus or the lady has the virus, automatically you are going to contract the disease.”

This was further supported by one of the respondents in the FGD 2 who stated that “..There is no ugly woman after 2.00 am which means that by that hour, everybody who is in the bar is absolutely drunk…”’ This clearly demonstrated the participants’ awareness and perception of risk to HIV infection due substance use.

Those who had not been tested gave fear as factor that played a role in hindering them. This was similar to results from the study among secondary students in Nairobi County (Chemngetich, 2012).
There was no association between the way services were provided and uptake of HIV counselling and testing. Whereas studies have shown a relationship between the quality of services such as distance to site accessibility and the counselling process to include, communication, privacy, confidentiality and relationship with the counsellor, this study did not reveal so. A study by Museve et al (2013) of Mount Kenya University students on the other hand found that lack of confidentiality was a major factor in uptake of HIV counselling and testing. Students were found to have preference to older females and males who were thought of as being able to keep information confidential as opposed to young females who easily breached confidentiality. This view was expressed during the FGD…”I have fallen a victim to these counsellors some are very young, they are almost the age of my daughter, so when you are choosing counsellors. ... some are very young and you can see they are joking, joking, they are not serious in whatever they are doing when they are counselling us.” This sentiment was emotively expressed by the respondents who felt there were certain issues that were sensitive, private and critical and therefore required care in the manner in which they are handled.

Even though there were sentiments on the manner in which counselling was being conducted, the study findings revealed that most of the respondents were quite satisfied with the services. This was captured in the areas where the respondents stated that their concerns were dealt with adequately and in a respectful manner. Persons who feel dissatisfied and poorly handled by health care providers are likely to shun using services.

Failure to find an association could have been due to non-control of the prior setting of the pre and post-test environments. Allowing respondents to do rating when the
environment for each individual is similar in terms of setting and a standardized process that each participant undergoes before doing the rating would give a better result in the correlation. Respondents interviewed at the facility gave different perspectives. There were those who were quite determined to make a difference in their lives and as such would undertake counselling and testing as a way of dealing with pivotal life issues and as such did not mind about how the process was carried out. Some on the other hand felt they had benefited a lot from the process. Results of these associations are also limited due to the purposive sampling of the study participants.

Even though the study showed no such association between counselling process and uptake, several studies have found this association. FGD respondents stated counsellor issues such as age differences for instance the very young counsellor and a middle aged patient of the opposite sex that can make patients hesitate to disclose vital information. Thus while the group that comprised the married participants had issues with the process, the FGD participants who were single and young expressed a differing viewpoint indicating that the process was very good and that there was need for the counselee to open up and openly discuss matters with the counsellor. They expressed satisfaction with the manner in which counselling sessions were conducted but had challenges with the frequent staff turnover noted in the facility. This was also expressed by participants in the two FGDs. For instance in one of the FGDs, this was clearly brought out where the respondents stated that the government needed to have permanent counsellors “...we need permanent counsellors, even if it doesn’t work for me I know it does for others.” The health care providers also concurred with the respondents highlighting staff shortages as an aspect that impacts on the process.
CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The study revealed that patients with SUDs have good knowledge on modes of HIV transmission. It can be noted however that uptake does not depend on knowledge alone but several other factors like perceived vulnerability and the desire to know one’s status.

Those who participated in the study are polysubstance users. The findings also showed that there was good uptake of counselling and testing among patients with SUDs and that there is a link between substance use and HIV infection.

Among those that had not gone for a HIV test, fear was identified as an important reason for not seeking services. It is an important aspect that can be adequately addressed through counselling and psychoeducation as individuals are empowered to deal with negative emotions during such encounters with the aim of overcoming such.

6.2 Recommendations

Deliberate attempts should be made to reach the female gender who could be suffering silently and are not accessing care due to their low socio economic status. There is also need to address fear as factor that hinders uptake of HIV counselling and testing in a bid to improve uptake.

Thus there is need to delineate key areas that need improvement and sustenance of positive care aspects in order to enhance HIV prevention and care. Concerted efforts should be made to make rehabilitation services accessible to females who are not exempted from substance use problems as very few are coming forward for rehabilitative care services at the facility.
Kenya as country is now having the family fabric greatly threatened by the challenges posed by substance use among all age groups and social strata. Programmes need to be put place in to address issues of persons with SUDs in an attempt to reduce HIV infection as the study findings have demonstrated a link between HIV and substance use.

6.3 Future Research

Future research needs to be carried out to explore factors that hinder use of rehabilitation services by females who are currently not coming for such services.

Even though HIV counselling and testing is being carried out at the facility, there is need for further enquiry to evaluate patients’ satisfaction with process factors in a longitudinal study in order to inform policy.

There is need to carry out a community survey of those with substance use disorders that would include non-facility based participants in order to get a better understanding of the phenomena.

6.4 Dissemination Plan

The findings of the study will be shared with health professionals at the institution where data was collected to enable them identify information that could help in improvement of care provision at the facility.

The study results will also be presented during the annual scientific conference for Kenya Medical Training College to reach a wider audience.

There is intention to publish the findings in order to increase access of the results to health care professionals and the public at large.
REFERENCES


1. **APPENDIX I: Project timeline from October 2014 – Sept 2015**

<table>
<thead>
<tr>
<th>Activity</th>
<th>2014</th>
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<tr>
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<tr>
<td>Concept Paper &amp;Proposal development</td>
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</tr>
<tr>
<td>Proposal presentation</td>
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</tr>
<tr>
<td>Peer review &amp; Presentation to for approval</td>
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</tr>
<tr>
<td>Recruitment of study Participants</td>
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<tr>
<td>Data collection</td>
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</tr>
<tr>
<td>Data entry and analysis</td>
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</tr>
<tr>
<td>Manuscript writing and submission</td>
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</tr>
<tr>
<td>Dissemination of study findings</td>
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# APPENDIX II: BUDGET

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<td><strong>Total Budget (in KSH)</strong></td>
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</table>
APPENDIX III: INFORMED CONSENT FORM

Participant informed consent Form

Title: Determinants of Uptake of HIV counseling and testing among Patients with substance use disorders attending services at Mathari Hospital

Supportor: PRIME K

Principal Investigator: Margaret Anyango Odidi (MScN Student UON)

Dear Participant,

I Margaret Anyango Odidi is a Master of Science in Nursing student at the university of Nairobi. The purpose of this study is to explore determinants of uptake of HIV counseling and testing among persons with substance use disorder at Mathari Hospital.

There may be no direct benefits to you but by filling the questionnaire or responding during the focus group discussions, you may ponder over some issues that can give you an opportunity to take positive action. The findings of this study will go a long way in improving care both by providers and to patients later since it is aimed at enhancing provision of quality care.

The researcher intends to gather information through the use of a self-administered questionnaire, focus group discussion and key informant interview.

Filing of the questionnaire may take approximately 20-30 minutes, while the focus group discussion may take 45-60 minutes and the discussion will be audio taped.

There will be no invasive procedures during this study but information required will involve issues concerning personal and sensitive sexual matters. This may cause some uneasiness or emotional distress. In the event of such occurrences you will be referred to the counsellors in the facility for support and management.

The information you give will be kept confidential and information gathered kept securely. Anonymity will also be ensured but where possible attempts will be made to have the study findings published in a journal in order to share the information with others for purposes of care improvement.

I wish to let you know that your participation in the study is voluntary. You should not feel intimidated or forced to do so if you do not want to be part of the study. If during the study you feel like leaving, you are still free to opt out. This will not jeopardize your treatment or care at the facility for now or in future.

There will be a token payment of Ksh 200/- (Kenya shillings two hundred) to cater for your transport and time.

Should you have any areas that are unclear to you or questions that need to be answered regarding the study, please feel free to contact the undersigned whose contacts are given below;
Margaret Odidi, University of Nairobi, P. O Box 19676. tel; 0722489341.

Kenyatta National Hospital and University of Nairobi/Ethics and Research Committee. P.O. Box 20723 – 00202 (telephone:020-726300-9 and 020-2726300)
CONSENT FORM
To be signed by those willing to take part in the study.

I........................................................... do hereby state that I have been given necessary information pertaining to the study. I have understood why the study is being carried out and has voluntarily accepted to participate.

Participants signature.............................................

Date............................................................

Witness (Researcher)
I do confirm that I have given adequate information relating to the study both verbally and in written. I have sought for a written consent from the study participant.

Witness............................................................

Date.............................................................
FOMU YA ARIFA

Fomu ya makubaliano kwa wanaoshiriki

Title: Mambo yanayo changia kuitikia ushauri na mapimo dhidi ya virusi vya ukimwi miongoni mwa wagonjwa ambao wana tatizo ya utumizi wa madawa za kulevya wanao pata huduma katika hospitali ya Mathari.

Jina la Mudhamini: PRIME K

Mtafiti Mkuu: Margaret Anyango Odidi (MscN UON)

Kwa Wanaoshiri,

Mimi Margaret Anyango Odidi ni mwanafunzi wa shahada ya uuguzi kiwango cha Masters katika chuo kikuu cha Nairobi. Shahaba ya utafiti huu ni kubainisha mambo yanayo changia kuitikia ushauri na kupimwa dhidi ya virusi vya ukimwi miongoni mwa watu wanao tatizo ya utumiaji wa madawa za kulevia katika hospitali ya Mathari.

Kujaza fomu hii au kijibu maswali wakati wa vikao vya vikundi uenda usikufaidi moja kwa moja lakini yaweza kufanya utakafiri juu ya mambo yatakayo kuwezea kuchukua hatua mwafaka. Matoke ya utafiti huu itachangia pakubwa huduma zinazotolewa na wahudumu na kufaidi wagonjwa kama njia ya kuboresha hali ya huduma.

Mtafiti anuia kukusanya habari kupitia fomu zakujijazia, vikao vya vikundi na mahojiano na washauri wakuu.

Kujaza fomu yaweza kuchukua takriban dakika 20-30, na majadiliano kwa vikao vya vikundi yaweza kuchukua dakika 45-60 na majadiliano yata rekodiwa.

Hakuta kuwa na taratibu zinazo hujumu wakati wa utafiti huu ingawa habari zinayo takikana zita kuwa na mambo yana kibinafsi na ngono. Hii inaweza kisababisha hali ya kutatanisha na kifadhaisha moyoni. Iwapo jambo hili litatukia utaelekezwa kwa msahauri katika kituo ili upate huduma na usaidizi.

Habaru ambazo utapeana itawe kwa njia ya siri na mambo yote yatakayo kusanywa yata ifadhila kikamilifu. Itakahikisha ya kwamba hautajulikiana na ikiwezekana juhudi zitafanya kuchapisha matokeo ya utafiti huu katika jarida kwa ajili ya kueneza habari kwa wengine kwa juhudi ya kuboresha huduma.

Ningependa kukuharifu ya kuwa kishiriki kwako kwenye utafiti ni kwa hiari. Usitishwe wala kusurutishwa kufanya hivyo ikiwa hautaki kushiriki kwenye utafiti. Ikiwa utajisikia kwamba unataka kujitwa kwa utafiti inapo endelea, uko huru kujitwa. Hai haalina huduma unao pokea katika kituo hii wakati huu au baadae.

Kutakuwa na malipo kidogo ya Ksh 200/- (Shilingi mia mbili za Kenya) ili kugharamia usafiri na wakati wako.

Iwapo kuna mambo ambayo haieleweki kwako au maswali yanayo hitaji majibu kuhusu utafiti huu, ujisikie huru to wasiliana na wafwatao kupitia anwani na nambari za simu zilizo peanwa hapa;
Margaret Odidi, Chuo kikuu cha Nairobi, Sanduku la Posta 19676, Nambari ya Simu; 0722489341.

Hospitali ya Kitaifa ya Kenyatta and Chuo Kikuu cha Nairobi/Kamati cha Maadili na Utafiti. Sanduku la Posta 20723 – 00202(Numbari ya Simu:020-726300-9 and 020-2726300)
FOMU YA ARIFA

Ya kujazwa na wale ambao wamekubali kushiri katika utafiti.

Mimi.............................................................. nina sema hapa ya kwamba nimepewa habari inayostahili kuhusu utafiti huu. Nimeelewa madhumuni ya utafiti huu na nikakubali kwa hiari yangu kushiri.

Sahihi ya Mshiriki ....................................................

Tarehe..............................................................

Mshahidi (Mtafiti)....................................................

Nadhibitisha ya kwamba nimepeana habari kamili inayohusiana na utafiti kwa maneno ya mdomo na kwa maandishi. Nime pata arifa ya makubaliano kutoka kwa mshiriki wa utafiti.

Shahidi..............................................................

Tarehe..............................................................
APPENDIX IV: SAMPLE QUESTIONNAIRES

PART A: SOCIO-DEMOGRAPHIC INFORMATION

Kindly give your honest response and indicate by putting a tick in the boxes or writing in the spaces provided. You are not required to write your name on the paper.

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

2. What is your sex?
   A. Male  
   B. Female

3. Where do you stay? Please indicate ............................................................

What is your marital status?
   A. Single
   B. Married
   C. Divorced
   D. separated
   E. Widowed

4. What is you religion?
   A. Christian
   B. Muslim
   C. Buddhist
   D. Any other specify ........................................................................

5. What is your level of education?
   A. None
   B. Primary
   C. Secondary
   D. University
6. What do you do for a living? Please indicate in the space provided......................
........................................................................................................................................

7. How much is your monthly income (estimate in Kshs.)
   a) Below 10,000/=  
   b) 10,000 – 20,000/=  
   c) 21,000 – 30,000/=  
   d) Above 30,000/=  

   [ ]
   [ ]
   [ ]
   [ ]
PART A: SOCIO-DEMOGRAPHIC INFORMATION (Kiswahili)

Tafadhali peana majibu yako wazi kwa kuweka alama kwenye visanduku au kwa kuandika kwenye nafasi ilioko. Huitajiki kuandika jina lako kwenye karatasi hii.

1. Umri wako ni?.................................................................

2. Jinsia yako ni?
   A. Mume
   B. Mke

3. Unaishi wapi? Tafadhali andika ..........................................................

4. Hali yako ya ndoa ni?
   A. Ujaoa/ujaolewa
   B. Umeoa/umeolewa
   C. Mumetalikiana
   D. Munaishi kando
   E. Mjane

5. Dini yako ni?
   A. Mkristo
   B. Muislamu
   C. Mubudha
   D. Yoyote nyingine, eleza.................................................................

6. Kiwango chako cha elimu ni?
   A. Hakuna
   B. Shule ya Musingi
   C. Shule ya Upili
   D. Chuo Kikuu

7. Unafanya nini ili kujimudu kimaisha? Tafadhali andika kwenye nafasi iliiko..........................................................

..................................................................................................................................................
8. Mapato yako kwa mwezi ni ngapi (Takriban kwa Kshs.)

   a) Chini ya 10,000/=  
   b) 10,000 – 20,000/=  
   c) 21,000 – 30,000/=  
   d) Zaidi ya 31,000/=
PART B: KNOWLEDGE ON HIV VULNERABILITY AND FACTORS THAT INFLUENCE UPTAKE OF HIV COUNSELING AND TESTING SERVICES

Please indicate by putting a tick in the boxes provided against the response you consider appropriate or by writing in the spaces provided.

1. Have you engaged in sex in the last six months?
   A) Yes  
   B) No

2. How many sexual partners have you had in the past six months?
   A) 1  
   B) 2  
   C) 3  
   D) More than 3

3. Did you use any protection during every sexual encounter?
   A) Yes  
   B) No

4. Have you ever used the following substances?
   You can put more than one tick if you have used more than one substance
   YES | NO  
--- | ---
   a) Cigarettes 
   b) Alcohol 
   c) Bhang 
   d) Miraa 
   e) Cocaine 
   f) Heroin 
   g) Any other specify

5. In your opinion, does the use of these substances expose you to risky sexual behaviours?
   A) Yes  
   B) No
6. Can the use of these substances put you at risk of contracting HIV?
A) Yes ☐
B) No ☐
Kindly state how for either response? ..........................................................................................................................

7. How can one get HIV infection? Give three ways
a) ...........................................................................................................................
   ....
b) ...........................................................................................................................
   ....
c) ...........................................................................................................................

8. Have you heard of VCT?
A) Yes ☐
B) No ☐

9. Is HIV counselling and testing carried out at this facility?
   a) Yes ☐
   b) No ☐

10. Are VCT centres/sites within easy reach?
    a) Yes ☐
    b) No ☐

11. Have you ever thought of seeking services for HIV counselling and testing?
    A) Yes ☐
    B) No ☐

12. If your answer to the above question is yes, what encouraged you?
    ..................................................................................................................................................
If No, what has prevented you from seeking these services?

a. Fear
b. I did not consider myself to be at risk
c. I have not engaged in sex for the last six months
d. It has not been of importance to me
e. Scared of the results
f. Feel discouraged
g. There is lack of privacy
h. There is no confidentiality

a) Any other specify.................................................................

13. Have you ever had a HIV test?
   a) Yes
   b) No

If your answer to the above question is YES, what were the results?
   a) Negative
   b) Positive

14. Was HIV counselling and testing done in this facility?
   a) Yes
   b) No

15. Who would you like to share your results with?
   a) Spouse
   b) Friend
   c) Brother
   d) Sister
   e) Any other
      specify.................................................................
If no, give reasons?

16. Was it your own intention to have the test?
   a) Yes ☐
   b) No ☐

In a scale of 1-5 where 1 = poor, 2 = fair, 3 = good, 4 = very good and 5 = excellent

17. How would you rate the counselling services that were offered to you?
   Poor ☐ Fair ☐ Good ☐ Very good ☐ Excellent ☐

18. How was your communication with the counsellor like during the session?
   Poor ☐ Fair ☐ Good ☐ Very good ☐ Excellent ☐

19. How would you rate privacy during the session?
   Poor ☐ Fair ☐ Good ☐ Very good ☐ Excellent ☐

20 a) How was confidentiality?
   Poor ☐ Fair ☐ Good ☐ Very good ☐ Excellent ☐
   b) In your opinion, were you handled respectfully?
      a) Yes ☐ b) No ☐

21. Were your concerns adequately addressed during the counselling encounter?
   a) Yes ☐ b) No ☐

22. In your view, what do you think can be done to make these services better?
   ----------------------------------------------------------------------------------
   ----------------------------------------------------------------------------------
   ----------------------------------------------------------------------------------
   ----------------------------------------------------------------------------------

Thank you for agreeing to fill the questionnaire.
SEHEMU B: KUWA NA HABARI KUHUSU UDHAIFU UNAYO HATARISHA, VIRUSI VYA UKIMWI NA MAMBO YANAYO ZUIA AU KUZIDISHA KUITIKIA HUDUMA ZA USHAURI NA MAPIMO DHIDI YA VIRUSI VYA UKIMWI

Tafadhali onyesha kwa kuweka alama kwenye visanduku zilizo wekwa kulingana jibu unayo fikiria ni sawa au kuandika katika nafasi zilizo peyanwa.

1. Je, umewayi kushiri ngono kwa muda wa miezi sita zilizopita?
   A) Ndio  
   B) La  

2. Umeshiriki ngono na watu wangapi kwa muda wa miezi sita zilizopita?
   A) 1  
   B) 2  
   C) 3  
   D) Zaidi ya 3  

3. Je ulitumia kondomu kila wakati ulipo shiriki ngono?
   A) Ndio  
   B) La  

4. Je umewahi kutumia vitu vifatavyo siku yoyote?
   Waweza kuweka alama zaidi ya moja iwapo ume wahi kutumia zaidi ya kutu kimoja

   NDIO  LA

   a) Sigara  
   b) Pombe  
   c) Bhangi  
   d) Miraa  
   e) Cocaine  
   f) Heroin  
   g) Chochote kingine (Eleza ni nini).................................
5. Kwa ufahamu wako, eleza jinsi ulipata maisha yako na vitu hivi?

   A) Nzuri [ ]   B) Mbaya [ ]

   Tafadhali eleza ni nini vitu hivi vilikutenda..................................................

6. Je, matumizi wa vitu hivi vinaweza kukutia hatarini wa kuambukizwa virusi vya ukimwi?

   A) Ndio [ ]   B) La [ ]

   Tafadhali eleza jinsi gani kwa yeyote ya majibu yako? ..........................................

   a) ..........................................................
   b) ..........................................................
   c) ..........................................................

8. Je, umewahi kisikia juu ya VCT?

   A) Ndio [ ]   B) La [ ]

9. Je, ushauri na upimaji wa visuri vya ukimwi vintekelezwa kwenye kituo hicho?

   A) Ndio [ ]   B) La [ ]

10. Je, vituo vya VCT viko karibu?

    A) Ndio [ ]   B) La [ ]

11. Je, umewahi kufikiria juu ya kutafuta huduma ya ushauri and mapimo dhidi ya
    viruri vya ukimwi?

    A) Ndio [ ]   B) La [ ]

12. Ikiwa jubu kwa swali ilitangulia ni ndio, ni nini ilikuhamasisha

    ..................................................................................................................
Ikiwa jibu lako kwa swali ilitangulia ni la, ni nini ilikuzuia kutafuta huduma hizi?

A. Uoga  
B. Sikudhani niko hatarini ya kuambukizwa  
C. Sijawahi kushiriki ngono kwa mwiezi sita zilizopita  
D. Sijalichukua kama jambo la muhumu kwangu  
E. Hofu ya majibu  
F. Na kosa mvuto  
G. Haifanywi kwa njia ya faragha  
H. Ukosefu wa siri  
I. Lolote linguine, eleza.................................................................

13. Je, umewahi kupimwa virusi vya ukimwi?
   a) NDIO  
   b) LA  
Iwapo jibu ni ndio, majibu yalikuwa nini?
   a) Hasi (-ve)  
   b) Chanya (+ve)  

14. Je, ushauri na kupimwa ulitekelezwa kwenye kituo hichi?
   a) NDIO  
   b) LA  

15. Je, ungependa kumjulisha nani majibu?
   a) Mkee/Mume  
   b) Rafiki  
   c) Kaka  
   d) Dada  
   e) Mwingine, eleza.................................................................
Ikiwa ni la, kwa nini?

... .................................................................

16. Je, ilikuwa niya yako mwenyewe kupimwa?
   a) Ndio
   b) La

Onyesa kwa viwango 1 – 5, ikiwa 1=Mbaya, 2=Nzuri kiasi, 3=Nzuri, 4=Nzuri sana, 5=Bora

17. Ukiangalia huduma ya ushauri uliopewa ungekiweka kiwango gani?

Mbaya □ Nzuri kiasi □ Nzuri □ Nzuri sana □ Bora □

18. Je mazungumuzo baina yako na mshauri ilikua vipi?

Mbaya □ Nzuri kiasi □ Nzuri □ Nzuri sana □ Bora □

19. Hali ya fragha ilikuaje wakati wa mashauri?

Mbaya □ Nzuri kiasi □ Nzuri □ Nzuri sana □ Bora □

20. a) Hali ya siri ilikuaje?

Mbaya □ Nzuri kiasi □ Nzuri □ Nzuri sana □ Bora □

b) Kwa maoni yako, ulihudumiwa kwa heshima?
   a) Ndio □ b) La □

21. Je, mambo yako yalishugilikiwa vilivyo wakati wa mashauri?

a) Ndio □ b) La □

22. Kwa maoni yako, ni jambo gani unadhani yaweza kufanywa ili kuboresha huduma hizi?

..................................................................................................................
..................................................................................................................
..................................................................................................................

Asante kwa kukubali kujaza fomu hii.

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## APPENDIX V:標準化小型精神状態検査

### SMMSE TOOL

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>TIME ALLOWED</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 a. What year is this?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>b. Which season is this?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>c. What month is this?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>d. What is today’s date?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>e. What day of the week is this?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>2 a. What country are we in?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>b. What province are we in?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>c. What city/town are we in?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>d. IN HOME – What is the street address of this house?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>IN FACILITY – What is the name of this building?</td>
<td>10 seconds</td>
<td>1</td>
</tr>
<tr>
<td>e. IN HOME – What room are we in? IN FACILITY – What floor are we on?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>3 SAY: I am going to name three objects. When I am finished, I want you to repeat them. Remember what they are because I am going to ask you to name them again in a few minutes. Say the following words slowly at 1-second intervals - ball/car/man</td>
<td>20 seconds</td>
<td>/</td>
</tr>
<tr>
<td>4 Spell the word WORLD. Now spell it backwards.</td>
<td>30 seconds</td>
<td>/</td>
</tr>
<tr>
<td>5 Now what were the three objects I asked you?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>6 SHOW wristwatch. ASK: What is this called?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>7 SHOW pencil. ASK: What is this called?</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>8 SAY: I would like you to repeat this phrase after me: No ifs, ands or buts.</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td>9 SAY: Read the words on the page and then say what it says. Then hand the person the sheet with CLOSE YOUR EYES on it. If the subject reads and does not close their eyes, repeat up to three times. Score only if subject closes eyes</td>
<td>10 seconds</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td><strong>HAND</strong> the person a pencil and paper. <strong>SAY:</strong> Write any complete sentence on that piece of paper. (Note: The sentence must make sense. Ignore spelling errors)</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>30 seconds</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>PLACE</strong> design, eraser and pencil in front of the person. <strong>SAY:</strong> Copy this design please.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 minute</td>
</tr>
<tr>
<td>1</td>
<td>/</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>ASK</strong> the person if he is right- or left-handed. Take a piece of paper and hold it up in front of the person. <strong>SAY:</strong> Take this paper in your right/left hand (whichever is non-dominant), fold the paper in half once with both hands and put the paper down on the floor. Score 1 point for each instruction executed correctly.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>30 seconds</td>
</tr>
<tr>
<td>2</td>
<td>/</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>/</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>TOTAL TEST SCORE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/30</td>
</tr>
</tbody>
</table>

APPENDIX VI: INTERVIEW SCHEDULE FOR FOCUS GROUP DISCUSSION

1. How is HIV transmitted?
2. How can one prevent himself/herself from contracting HIV infection?
3. What do you think is the connection between substances and HIV?
4. What does counseling mean to you?
5. Which are the areas covered during counseling?
6. Which aspects have you found most useful?
7. What areas were least helpful?
8. Which areas need improvement and how?
ORODHA YA MASWALI KWA VIKAO VYA VIKUNDI

1. Je virusi vya ukimwi zinasambazwa vipi?
2. Jinsi gani mutu anaweza kuambukizwa virusi vya ukimwi?
3. Je, wadhani kuna huusiano gani kati ya madawa ya kulevya na virusi vya ukimwi?
4. Je, ushauri una maana gani kwako?
5. Ni sehemu gani yanayo guswa wakati wa ushauri?
6. Je, ni maswala yapi yame kuwa na msaada zaidi?
7. Ni mambo gani hayakuwa na msaada sana?
8. Ni sehemu gani inahitaji kuboreshwa na ni kwa njia gani?
APPENDIX VII: KEY INFORMANT INTERVIEW

Guiding Questions

1. How has the patient’s response to HIV counselling and testing been?

2. In your opinion, how would you explain the counseling that is offered to the patients and the areas covered?

3. What challenges do you experience?

4. How do you think they can be overcome?
APPENDIX VIII: LETTER TO THE RESEARCH AND ETHICS BOARD

School of Nursing Sciences
University of Nairobi
P.O. Box 19676-00200
Nairobi

10\textsuperscript{th} February, 2015

The Chairman,
KNH/UON Ethics and Research Committee
P. O Box 20723-00202
Nairobi

Dear Sir/Madam,

RE: REQUEST FOR PERMISSION TO CARRY OUT RESEARCH IN
MATHARI TEACHING AND REFERRAL HOSPITAL

I am kindly seeking for permission to conduct a study on ‘‘determinants of uptake of
HIV counseling and testing among persons with substance use disorder at Mathari
Hospital.’’ This research is undertaken in partial fulfilment for the award of degree in
Master of Science in Mental Health/Psychiatric Nursing.

Your assistance will be greatly appreciated. Enclosed herein please find the research
proposal and my student identification for your perusal.

Yours faithfully,

Margaret Anyango Odidi
Re: Request for Permission to Carry Out Research at Mathari Hospital

10th February, 2015

Dear Sir/Madam,

I am a master of nursing student at the University of Nairobi specialising in mental health/psychiatric nursing. I am kindly seeking for permission to conduct a study on “Determinants of Uptake of HIV counselling and testing among patients with substance use disorders attending services at Mathari Hospital.” This research is undertaken in partial fulfilment for the award of degree in Master of Science in Mental Health/Psychiatric Nursing.

Your assistance will be highly appreciated. Enclosed herein please find the research proposal and my student’s identification for your perusal.

Yours Faithfully,

Margaret Anyango Odidi
APPENDIX X: LETTER TO ASUMBI REHABILITATION CENTRE

School of Nursing Sciences
University of Nairobi
P.O. Box 19676-00200
Nairobi

10th February, 2015

The Director
Asumbi Rehabilitation Centre
P. O. Box 34374-00100
Nairobi

Dear Sir/Madam

RE: REQUEST FOR PERMISSION TO DO A PRETEST OF STUDY QUESTIONNAIRES AT ASUMBI REHABILITATION CENTRE

I am a master of nursing student at the University of Nairobi specialising in mental health/psychiatric nursing. I am kindly seeking for permission to conduct a study on ‘‘Determinants of Uptake of HIV counselling among patients with substance use disorders attending services at Mathari Hospital.’’ This research is undertaken in partial fulfilment for the award of degree in Master of Science in Mental Health/Psychiatric Nursing.

Your assistance will be highly appreciated. Enclosed herein please find the research proposal and my student’s identification for your persual.

Yours Faithfully,

Margaret Anyango Odidi
APPENDIX XI: MAP SHOWING SITE OF MATHARI HOSPITAL
APPENDIX XII: LETTERS OF AUTHORIZATION

Ref: KNH-ERC/RR/306

22nd April, 2015

Margaret Anyango Odidi
H56/6746/2013
School of Nursing
College of Health Sciences
University of Nairobi

Dear Margaret,

Research Proposal: Determinants of uptake of HIV counseling and testing among patients with substance use disorder attending services at Mathari Hospital (P82/02/2015)

This is to acknowledge receipt of your research protocol and to inform you that upon review the KNH Ethics and Research Committee made the following observations and suggestions:

1. Note that in the abstract you have stated that data will be analyzed using Ms Excel while in the main proposal you have indicated that data analysis will be done using SPSS. Check on this.
2. Explain the conceptual framework i.e. relationship between variables (Page 15).
3. Explain how the applied theory links to the study (Page 16).
4. Justify the choice of purposive sampling for the study (Page 17).
6. Ethical considerations:
   - Explain how emotional trauma will be dealt with.
   - Are the supervisors part of the project team?
7. Informed consent and research tools/data collection instruments need to be translated to Kiswahili. Ensure you attach these translations.
8. In the informed consent form, address voluntary participation and compensation (Page 32).

Recommendations
Revise and resubmit two (2) copies of the proposal within a period of two (2) weeks time with effect from the date of this letter.

Yours sincerely,

[Signature]

PROF. M. M. CHINDIA
SECRETARY, KNH/UON-ERC

Protect to Discover
MAY 19TH 2015

KNH/UON-ERC
P.O. BOX 20723-00202
TEL: 020-726300-9/020-2726300

DEAR SIR/MADAM

ODIDI MARGRET ANYAGNGO

This is to certify that we have consented to the above person’s request to do a pretest of study questionnaires at our institution. The date for the filling of the questionnaires has been set on May 21st 2015 at 11.30 am.

Yours Faithfully,

Paul Ndungu
Programs Officer

CATHOLIC BISHOP OF HOMA-BAY
ASUMBI TREATMENT CENTRE
P.O. Box 34374-00100
TEL: 020-2322497/8
0715 - 997445
MATHARI HOSPITAL

CLEARANCE TO UNDERTAKE RESEARCH IN MATHARI HOSPITAL

TO: .../C.S. .../Rehabilitation .../and CSAT

Dates .../25/15

This is to inform you that (name/no. of students)

Margaret Aningo Odidi

From (Name of training institution)

U.O.N.

Has/have been cleared by the office of the Medical Superintendent to undertake research at Mathari hospital from .../26/15 to .../30/15.

Please accord them/him/her the necessary support.

Thanks.

In charge: C.M.D.

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