

**DETERMINANTS OF HEALTH SEEKING BEHAVIOUR AMONG
PATIENTS WITH SUBSTANCE USE DISORDER ADMITTED AT
MATHARI NATIONAL TEACHING AND REFERRAL HOSPITAL**

BY

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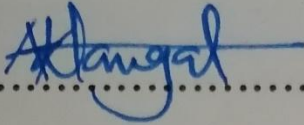
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**THIS DISSERTATION IS SUBMITTED IN PARTIAL FULFILMENT FOR
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DECLARATION

I, **Amos Kipkoech Langat**, Reg. No. **H56/34406/2019**, hereby declare that this is my original work and has not been submitted to any other institution or university for purpose of obtaining a degree or any other award.

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DEDICATION

This study is dedicated to my family for their patience and perseverance during my studies and to the staff at Mathari National Teaching and Referral Hospital for their commitment to serve humanity. It is my hope that through this work we are going to touch the core of substance use disorder and health seeking behaviour at the community level. Together we can do it.

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OPERATIONAL DEFINITIONS

Determinants: Factors that influence the nature and outcome of health seeking behaviour. They include biological, psychological and social factors.

Health seeking behaviour: Any action or inaction undertaken by individuals who perceive themselves to have a health problem or to be ill to find an appropriate remedy from a professional health care provider in a medical facility of choice

Substance Abuse: A maladaptive pattern of drug use manifested by recurrent and significant adverse consequences related to repeated use of the drug(s). Substance abuse is the hazardous or harmful use of psychoactive substances.

Substance dependence: A maladaptive pattern of substance use, leading to clinically significant impairment or distress.

Substance intoxication: The development of reversible substance-specific syndrome due to recent ingestion of a substance. Clinically significant maladaptive behavioural or psychological changes that are due to the effect of the substance on the CNS & develop during or shortly after use of the substance.

Tolerance: A need for markedly increased amounts of the substance to achieve intoxication or desired effect; or markedly diminished effect with continued use of the same amount of the substance.

ABBREVIATIONS AND ACRONYMS

DALY	Disability-adjusted life years
DSM	Diagnostic statistical manual
GBD	Global burden of disease
GOK	Government of Kenya
HBM	Health belief model
HSB	Health seeking behaviour
IREC	International research and ethics committee
KNH	Kenyatta National Hospital
MNTRH	Mathari National Teaching and Referral Hospital
NACADA	National Authority for the Campaign against Alcohol and Drug Abuse
NHIF	National Hospital Insurance Fund
SPSS	Statistical Package of Social Science
SUD	Substance use Disorder
UON	University of Nairobi
WHO	World Health Organization

ABSTRACT

Background: Substance abuse is a global public health problem that has impacted negatively on the health, economic and social aspects of communities. An upsurge of international narcotic drug trafficking has increased distribution and availability of illegal substance use in Kenya. This has led to increased substance use and addiction which have physical and mental health effects. Majority over 70 percent of people with substance use disorders in low-resourced countries like Kenya do not receive treatment. **Purpose:** This study established the determinants of health seeking behaviour for patients with substance use disorder admitted at Mathari National Teaching and Referral Hospital (MNTRH).

Methods: MNTRH was purposively selected for the study and a descriptive cross-sectional study design adopted. A sample size of 72 patients with substance use disorder aged between 18 – 55 years were selected by stratified and random sampling methods. Data was collected using interviewer administered questionnaires and analyzed using the statistical package of social sciences (SPSS version 21). Univariate analysis was done and results presented using mean, frequency distribution and proportions. Bivariate analysis was done using Pearson's Chi square test to determine relationship between categorical variables and P values of 0.05 or less was considered to be significant.

Results: Age, education level and employment status with P values below 0.05 were significant determinants in health seeking. Participants aged below 35 years were the majority seeking mental health care. Psychological factors mainly social stigma contributes to low number of patients seeking healthcare. Alcohol and marijuana are the most abused substance and 65.3% used substances daily. Onset of substance use after 18 years was reported by 63.9% of the participants.

Ethical issues: Principle of autonomy, confidentiality, beneficence and justice was observed and guidelines of KNH/UON research ethics committee who approved the study was adhered to.

Conclusion: Younger and more educated people using substances seek mental health services at the hospital. In addition employment status was associated with better health seeking behaviour. Polysubstance use is common among respondents.

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

World Health Organization (WHO) estimates the global burden of disease attributed to alcohol and illicit drug use at 5.4 percent of the total burden of disease. An estimated 5 percent of the global adult population used drugs at least once as per UN World Drug Report 2017. The findings of this WHO report indicated that an estimated 29.5 million drug users which represent about 0.6 percent of the global adult population suffer from drug use disorders. Recently, concerns have been raised globally about the increase in alcohol use during the COVID-19 pandemic. This was attributed to the distress of the pandemic and the restrictions imposed as part of containment measures

The highest prevalence rate of substance use is reported in West and Central Africa between 5.2 percent and 13.5 percent and keeps rising. According to the (GBD 2016 Alcohol and Drug Use Collaborators, 2018), cannabis is one of the illicit substances mostly abused in Africa, followed by stimulants of amphetamine type such as "ecstasy" and methamphetamine.

In Kenya, alcohol and cigarettes are legally accepted and consumed across various communities. According to a study (Kamenderi et al., 2020), findings showed the prevalence rate of alcohol use at 12 percent among participants aged 15 – 65 years. Recently, during the ongoing COVID-19 pandemic reports in Kenya suggested increased levels of substance use as per (Jaguga & Kiburi, 2020).

The impact of substance use on the health of the general population is huge. For instance, according to (Abuse, 2020), an estimate of 40 million adults aged 18 years and above have suffered from form of mental disorder and around 8 million suffered

from substance use disorder and another mental disorder. The two disorders though co-morbid, it is not clear whether there were similarities in the underlying risk factors. Other health effects according to (Degenhardt et al., 2017) indicate that globally 5-10% of HIV infection results from injecting drug use. A similar study in Kenya by (Syvertsen et al., 2015) indicated that injecting drug users are at higher risk of HIV infection and other blood-borne viruses (hepatitis B) as a result of sharing needles and syringes. Sexual practices of people who inject drugs contribute to the spread of HIV infection in the general population through sexual contacts. Appropriate health seeking behavior according to the Ministry Of Health (2016) protocol for management of substance use disorders, outlines the use of pharmacological treatment, psycho-social interventions and rehabilitation services. This should be provided within laid down international standard operating procedures. To reduce the health burden of substance use, proper health seeking behaviour is required to minimize complications and improve quality of life.

1.2 Statement of the problem

In Kenya, studies on drug and substance abuse have focused on the prevalence of substance abuse, evidence of substance use contribution in HIV transmission (Syvertsen et al., 2015), and most recently on drug use during Covid 19 pandemic (Rehm et al., 2020). There is little information on the health seeking behaviour of patients with substance use disorder. A study in Kenya by Ndeti et al (2008) found out that majority (87%) of patients admitted at MNTRH for treatment of substance use disorder had a coexisting condition and a minority (less than 5%) of patients had taken the initiative to look for help for a drug use problem only. Despite the decentralization of health services by the government of Kenya, the number of people with mental disorders seeking health care in hospitals is low. Majority (85%) of

individuals who require mental health services cannot access the service in Kenya as reported in a study by (Mutiso et al., 2017). The general public seek health care when they consider the symptoms of the ailment as a threat to their health. According to a study by Mwangela (2018) on complementary pathways utilized by local communities with mental disorders, the conventional medical approach is considered a better option as compared to complementary approaches like faith healers and traditional healers. However, according to (Mbwayo et al., 2013) local communities still seek medical attention from traditional healers because they are readily available in rural communities and have a role in provision of mental health service (Musyimi et al., 2018).

It is for this reason that the study was conducted to understand the determinants of health seeking behaviour among patients with substance use disorder admitted at MNTRH.

1.3 Justification of the study

The Government of Kenya established the National Campaign Authority against Drug Abuse (NACADA) with an act of parliament in 2001. NACADA was tasked to undertake public education and awareness campaigns against drug abuse especially among youths. The government also established a drug rehabilitation unit at Mathari National and referral hospital in 2003 to provide drug abuse treatment and rehabilitation services using a multidisciplinary approach for both in-patients and out-patients. Despite the concerted efforts by the GOK and private organizations in drug rehabilitation and treatment programs, not much has been achieved in lowering the burden of substance use. Treatment and long-term interventions are required in the management of substance use disorder as per (Rehm et al., 2013). This means

compliance and adherence to treatment is required to achieve public health impact and avoid relapse. Therefore understanding the determinants from the perspective of the patients will ensure this is achieved with patients' involvement. Findings will be beneficial in creating awareness on the determining factors and interventions in order to improve health seeking and the quality of care received by patients. Lastly, the study is also in line with the Kenyan (NACADA) policy target of reducing drug/alcohol abuse by the year 2030.

1.4 Research Questions

What factors determines the health seeking behaviour of patients with substance use disorder aged 18 years and above receiving mental health services at Mathari hospital?

1.5 Broad Objective

To establish determinants of health seeking behaviour among patients with substance use disorder aged 18 - 65 years admitted at Mathari hospital by focusing on the following specific objectives.

1.6 Specific objectives

1. To determine the socio-demographic factors that influence health seeking behavior among patients with substance use disorder.
2. To assess psychological factors associated with health seeking behaviors among patients with substance use disorder.
3. To determine substance use characteristics that affect health seeking behavior among patients with substance use disorder.

1.7 Hypothesis

There is a relationship between determinant factors and health seeking among patients with substance use disorder admitted at Mathari National Teaching and Referral Hospital.

1.8 Significance of the study

The study contributes to the body of knowledge on determinants of health seeking behaviour among patients with substance use disorder. The research findings will be relevant to policymakers at the institutional and national levels. It will provide information that helps strengthen existing policies and formulation of new evidence-based policies. This potentially improves the quality of health services provided and promotes programs that increase the uptake of mental health services by those who abuse various substances.

CHAPTER TWO: LITERATURE REVIEW

2.1 Concept and Prevalence of substance abuse in Kenya.

Substance abuse is defined as the maladaptive pattern of substance use whether licit or illicit, manifested by recurrent and significant adverse consequences related to repeated use of the drugs according to DSM-5 and ICD-10 (Vahia, 2013). The World Drug Report (2017) indicated increased use of illicit substances creating a global public health concern yet these substances are prohibited under international control systems.

Drug and substance use among general population in Kenya according to (Kamenderi et al., 2020), follows the same global pattern. Alcohol use is the highest and prevalence stands at 12.2%, tobacco 8.3% and khat/miraa 4.1% while marijuana is widely abused narcotic drug. Local communities have used alcohol to mark traditional ceremonies and also for leisure purposes making it generally accepted despite their effects on health as a result of addiction. There is an upsurge of international narcotic drug trafficking in Kenya. Nairobi the capital city, is ranked among the top four African cities that have a serious drug problem while Mombasa port is the transit point for drug trafficking according to (UNODC, 2014). Several substances are accessible to the users in the streets and are abused across age groups in different parts of the country as reported by (Kamenderi et al., 2020). Current diversion, illicit distribution and abuse of prescription drugs that are classified such as synthetic pain medicines, sedative-hypnotics, and psycho-stimulants among healthcare workers is also rising as per study (Mokaya et al., 2016).

In the context of this study, the substance of abuse include those drugs/substances which are allowed by law, for use by persons like nicotine and alcohol, and those which are not allowed by law (Illicit) like heroin, cannabis cocaine, and mandrax.

There are five different broad categories of substance of abuse according to (Enevoldson, 2004) which include sedatives, stimulants, hallucinogens, organic solvents and drugs that enhance athletic performance. These drugs can be taken per oral, inhaled, snorted or injected to produce various effects in the body

2.2 Effect of drugs on Health

Substance use disorders occur when an individual no longer feels in control over their need to use a substance and becomes dependent on it. According to (Cooper, 2001) the definition has shifted to a category of substance use disorder defined in a spectrum from mild to severe. Globally, alcohol use disorders are the most prevalent of all substance use disorders with over 100 million cases while cannabis dependence is the most common illicit drug use disorder recording 22 million cases (UNODC, 2014). According to review of studies by (Patra et al., 2010, Hurtz et al., 2007) alcohol use increases the risk of injury or death as seen in many road traffic accidents. The risk of non-communicable diseases (cancer, gastrointestinal, and cardiovascular disorders) have been linked to the use of alcohol and cigarette. Pregnant women who abuse drugs exposes fetus to effects of drugs leading to negative pregnancy outcomes like spontaneous abortion, stillbirth, premature birth, intrauterine growth retardation and low birth weight. The negative implications to newborns result in chronic condition known as fetal alcohol spectrum disorders (FASD) according to (Schoeps et al., 2018). Alcohol and other substances of abuse also causes mental health issues (addiction, substance-induced psychosis, depression, anxiety), oral health issues among others. Substance use increases risky sexual behaviors which predisposes to HIV infection. A study by (Jürgen Rehm et al., 2017), in Kenya indicated that sexual decision-making and partner selection are affected by drinking to mild intoxication which would result in increased sexual risk. According to (*Kenya-AIDS-Progress-Report*), over a million

people living with HIV at the end of 2016 were contributed by substance use. For those who inject drugs, the prevalence of HIV (18 percent) is higher than that in the general population (5.6 percent). This is contributed significantly by sharing non-sterile syringes and needles when administering drugs of abuse.

The "cannabis use disorder", which results from prolonged cannabis use, is described in the DSM 5 (American Psychiatry Association, 2013) as psychosis, anxiety disorder, and increased suicide risk are part of this chronic disorder. Cannabis use in adolescents and adults can cause negative effects on behaviour and cognitive abilities. These effects include problems with concentration and memory, mood changes, and aggressive behaviour which subsequently can lead to, problems at school, risky sexual behaviour, and more traffic accidents. According to (Degenhardt et al., 2018) results indicated over two million deaths among men, and a million disability-adjusted life years (DALYs) were linked to the consumption of alcohol in 2016. In conclusion, long-term and heavy use of drugs may come with a couple of disorders, affecting physical and mental health ultimately lead to economic and social issues.

2.3 Concept and practice of health-seeking behaviour

Health-seeking behavior (HSB) is defined by many researchers` as an "action undertaken by individuals who perceive themselves as having a health problem or to be ill, to find an appropriate remedy." In this study, the desired HSB of people who abuse substances is seeking help from a professional health care provider in response to an illness as defined by (Musinguzi et al., 2018b). The different responses of individuals to illness depends on their knowledge and perceptions of health, socioeconomic constraints, adequacy of available health services and attitude of healthcare providers (Wade and Halligan, 2005).

Various studies have described determinant factors that significantly affect health-seeking behaviour during illness episodes and broadly categorized them into two groups. As per (Musinguzi et al., 2018a), the first group of studies describes the process from identification of symptoms of a disorder to the utilization of the formal system in provision of healthcare. Low utilization of government health facilities is linked to poor access, attitude of staff, lack of privacy, poor communication skills and long waiting hours to be attended, rather than because people were rejecting biomedical health. This qualitative approach led to the development of 'pathway models'. The second group uses a quantitative approach based on biomedical model which emphasizes the process of illness response. The focus is on outlining set of determinants which are associated with the choice of different kinds of health service. This study adopted the second approach to conceptualize the determinants of health seeking behaviour.

In Africa, cultural perceptions on the causes of different diseases have a direct relationship with health-seeking behaviour. According to a study (Mbwayo et al., 2013), traditional healers in the communities were consulted for various reasons like attribution of aetiology of illness to supernatural sources. Other reasons are chronic illness that are incurable by modern medicine and as prevention against possible ill-health.

2.4 Determinants of health seeking behaviour

Health seeking determinants varies across individuals in the community and several factors overlap in their effect on the individual ability to seek health care. These factors depend upon interpersonal and intrapersonal characteristics and behaviour, wider community norms and expectations together with available health provider

services (Oberoi et al., 2016). The study will establish determinant factors that are patient specific.

2.4.1 Demographic factors

These are individual factors in humans that affect human functioning and behaviour as per (M.S, 2013). They are seen as primary determinants of human behaviour which are influenced by the social environment. Individual biological differences affect health seeking behaviour in terms of biological make-up and genetics, body response to drugs, signs and symptoms of illness. In this study, chronological age, Sex, occupation and education level are considered sociodemographic factors that determine health seeking behaviour.

2.4.1.1 Age

Chronological age is defined as the number of years one has been alive. The study of age difference in health seeking behaviour among youths (Ahern et al., 2007) found out that older adolescents who abuse drugs seek professional help more than younger ones. This shows that age is an indicator that influence decision-making when seeking health care. This is because autonomy in decision-making is achieved as a person grows older.

2.4.1.2 Sex

Visible sex characteristics are used to classify humans as either male or female although recent data estimates less than 1 percent of the adult population identify as transgender Females typically start using substances later than male counterparts and comparatively seek treatment earlier according to (Brady & Randall, 1999). Females are predisposed to drug abuse by co-morbid psychiatric disorders like anxiety and depression according to (Brady & Randall, 1999) as compared to male counterparts.

2.4.1 Psychological factors

Human behaviour involve powerful internal influences that guides and drives an individual throughout life according to Bandura's theory. People's concept and feelings about themselves are generally labelled as self-concept and self-esteem. Psychological factors are individual specific and influences both health and illness. Positive self-esteem promotes health in relation to achievement of satisfaction and improve coping skills important in mental health. Perception of factors such as risks, susceptibility to an illness, and the severity of symptoms, predict behaviour relating to health, and can help to understand the health seeking behaviour as explained by (Jones et al., 2015). The attitudes towards health seeking is based on individual beliefs and perceptions about effectiveness of the treatment options available. This will affect adherence and compliance to treatment.

Some patients with mental disorder related to alcohol or substance abuse have been discriminated by a societal belief that they are responsible for their illness (Mbwayo et al., 2013). They face stigma in the community and are denied the traditional sick role accorded to the sick person in African society. Some patients voluntarily get admitted because of mistreatment at home by relatives others are referred to far-off facility and get abandoned upon discharge. As indicated in a study by (Mutiso et al., 2017) persistent stigmatization and discrimination also permeate through the medical profession community. Stigma also reduces access and utilization of available treatment services especially among the youths as seen in a study by (Moses, 2009), therefore making it difficult to eradicate substance abuse.

2.4.3 Socio-cultural factors

A group of people living in the same geographical location share same characteristic and therefore have a similar way of life. Culture is a complex term referring to values, customs, beliefs and practices whose meaning is passed from one generation to another through a process of enculturation as per Lenninger's theory of culture care universality and diversity (McFarland & Wehbe-Alamah, 2019). Socio-cultural factors brings out identities that are unique to individuals and communities at large. The choice of health care options are based on the cultural understanding and acceptance of their health delivery system. Indeed health and illness have been ascribed as an integral part of the cultural system because of the difference in perception of disease causation as well as accepted modalities of treatment as per (Kleinman, 1980).

Every community in Kenya has a system of health practices based on values, beliefs and attitudes. A study by (Abubakar et al., 2013) found that local communities in the coast region used conventional treatment approaches as complementary services to traditional healers. The decision to seek help from traditional healer is influenced by the how disease symptoms present and the social environment. They have different categories of illness based on culture and the categorization will influence the belief in the treatment modality and ultimate utilization of health care services.

Religious beliefs and practices also form an integral part of culture. Many religious individuals understand disease causation from a spiritual dimension. As a result spiritual/faith healers are contacted for mental disorders in Kenya according to a study by (Mochache et al., 2020). The results indicated that spiritual healing is one of the complementary pathways utilized by the local communities in solving mental health problems, because of their availability, affordability and accessibility as they form

part of the community's cultural belief system even though modern medicine may be available.

2.4.3.2 Socioeconomic factors

The aggregate index of an individual's social and economic standing, reflects their educational level, income and occupation and has been positively associated with better health (Baker, 2014). Progressive education improves knowledge health literacy, beliefs and practices that have been associated with better health and health outcome. A study by (Latunji & Akinyemi, 2018) in Nigeria found that poor socioeconomic status, low level of education, unemployment, lack of effective social support networks, unstable living conditions, long-distance from a treatment center, and high cost of transport negatively influenced treatment compliance and health seeking behaviour. Economic factors led to the delay in access to appropriate services. There was a consistent concern regarding the cost barrier in accessing health services. (Akeju et al., 2016).

2.5.1 Health care delivery in Kenya

The organization of mental health services in Kenya is integrated into the mainstream health service delivery system in the country according to (Atieno Wagoro & Duma, 2020). They are structured into six levels, where level one to four one are under the management of county government while level five and six are managed by the national government. The only level six hospital is MNTRH which serves as the main referral hospital in the country. Secondary general referral hospitals (level 5) and counties (level 4) at various regions have a low (10-20) bed capacity. Primary healthcare facilities which include Sub-county hospitals (level three), dispensaries (level two) and community units (level one) do not have capacity to provide mental

health services. As a result majority (85 percent) of individuals who require mental health services cannot access the service as require (Mutiso et al., 2017).

Kenya has a small number of mental health professionals according to study on staff ratio by (Mutiso et al., 2017) therefore impacting negatively on service delivery to needy patients. This has caused disparities in the quality of service delivery in health institutions across the country causing a concern to the government according to (Ministry of Health, 2016).

2.5 Theoretical framework

This study is guided by the Health Belief Model that was developed in the 1950s and has been adopted by Sheeran & Abraham (1995). This model is useful in explaining and predicting healthcare seeking behaviour according to (Asampong et al., 2015).

2.5.1 The Health Belief Model

The model was first presented with only four key concepts, but currently has six constructs according to (Jones et al., 2015). The model applies to this study as follows;

Perceived threat: An individual perception of the threat of substance use to physical and mental health. An action is taken to prevent illness when the individual perceives themselves as susceptible (perceived susceptibility) to substance use disorder or when they believe they will face a serious consequence (perceived severity). This will push the individual to seek help from any available health provider either complementary or conventional system of health.

Perceived benefit: The belief that an action taken will be beneficial in reducing severity of symptoms. The expected positive outcome motivates the individual to seek help.

Perceived barriers: These are obstacles that prevents a person from adopting health promotive behaviour. Barriers include but are not limited to the high cost of treatment,

inability to access health care because of distance to health facility are factors considered when seeking healthcare.

Cues for Action: The concept was added later to the model to "stimulate behaviour." The cues basically constitute the strategies to activate readiness for behaviour change. Cues to action such as, positive treatment outcomes of people who are close to them or negative outcomes like witnessing the death of a colleague from substance use disorder will have an influence on an individual's health seeking behaviour.

Self-Efficacy: Belief in their own capacity to take action together with the cues to action motivates the person to achieve the targeted behaviour change.

In conclusion, knowing the aspects of the Health Belief Model, when designing an appropriate intervention will improve compliance to treatment modality. According to (Asampong et al., 2015) when faced with alternatives, an individual usually chooses actions that most likely yield a positive outcome. As a result, changes in health seeking behaviour arise under these circumstances.

Application of the theory: The HBM applies to the current study in that individual perceptions of their current health status as a result of substance use and susceptibility to substance use disorders will inform health-seeking behaviors. Beliefs regarding barriers to some health seeking options such as not being aware of the available treatment options, social stigma, higher cost of care, availability, and distance to health facilities will determine health-seeking behaviors. The observation of treatment outcomes of other people who are close to them form the cues to action. Self-efficacy was considered where the focus is on socio-demographics factors such as age, gender, educational and education levels, and how these factors influence health-seeking behaviors.

The perceptions are related as illustrated in the figure below

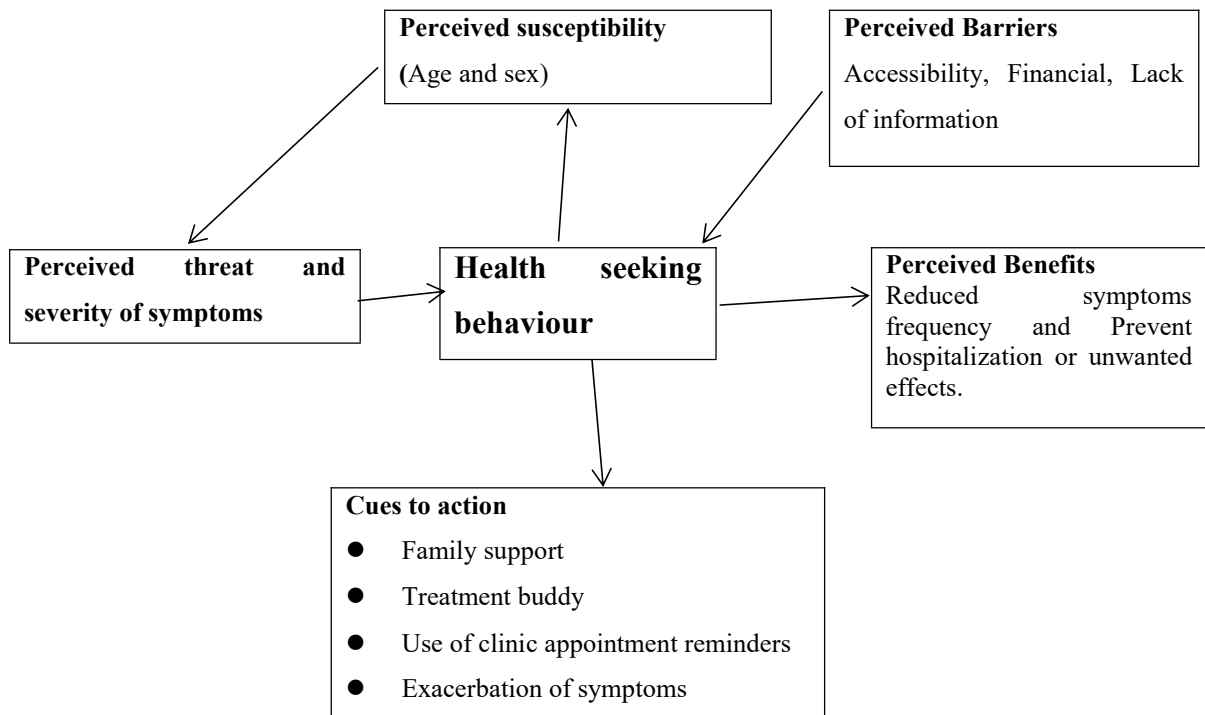


Figure 1: Illustration of health belief model

Source: Hochbaum, Rosenstock and Kegels 1950

CHAPTER THREE: STUDY METHODOLOGY

3.1 Study Area

The study was conducted at Mathari National Teaching and Referral Hospital the largest mental health institution in Kenya. The hospital is situated along Thika superhighway six Kilometres North of Nairobi city centre. The hospital was established during the colonial period in 1910 as a small pox centre later converted to a lunatic center. The hospital has six male wards, four female wards and a drug rehabilitation unit thus able to meet a substantial sample size for this type of study design. Its core services include pharmacological, psychological and electroconvulsive treatment. The services are either outpatient or inpatient. The hospital has bed capacity of 600 patients yet the inpatient population stretches to 1000 patients. The catchment area is mainly the Nairobi area informal settlements where the prevalence of drug and substance abuse is highest in Kenya according to (Kamenderi et al., 2020)

3.2 Study Design

This study adopted a descriptive study design using a quantitative approach. The study described the characteristic seen in patients with substance use disorder and determinants of health-seeking behaviour as explained by (Kothari and Ebrary, 2004). The cross sectional research design enabled the researcher to identify the determinant factors of health seeking behaviour using the patients admitted at the time of study.

3.3 Study population

Patients aged between 18-55 years with a confirmed diagnosis of substance use disorder.

3.4 Sampling

3.4.1 Sample size determination

The sample size determination technique appropriate to provide a representative sample from the proportion was calculated using the Fischer formula. To determine the sample size, according to (*Mugenda and Mugenda 2003*) application of the following formula for population sizes less than 10,000 :

$$n = \frac{z^2 p q}{d^2}$$

Where:

n=the desired sample size (if the study population is greater than 10,000).

z=the normal standard deviation at the desired confidence interval level taken to be 1.96 which corresponds to the 95% confidence interval

p=the proportion in the target population estimated to have substance use disorder, the characteristics being measured is not known in the hospital. Since p is not known, it was estimated to be 50% (Ebrahim, 2018)

q = the proportion in the target population estimated not to have the characteristics being measured (1-p).

d = Standard error at 95% confidence limit (0.05%)

$$\text{Therefore } n = \frac{(1.96)^2 (0.5) (0.5)}{(0.05)^2}$$

n= 384 participants

If the target population is less than 10,000, the alternative formula below is applied.

$$n_f = \frac{n}{1+n/N}$$

Where:

nf=the desired sample size (when the population is less than 10,000)

n= the desired sample size (when the population is more than 10,000)

N= the estimated population size within the period of study which approximately 90.

The above can be substituted as follows:

Therefore $nf = \frac{384}{1 + 384/90}$

$$= \frac{384}{5.266}$$

$$= 72$$

= 72 participants with substance use disorder

3.4.2 Sampling Technique

The stratification method of sampling of all the wards allowed the researcher to obtain estimates of known precision for a certain specified population by treating each ward as a stratum as seen in (Kothari and Ebrary, 2004). A sample frame of all patients admitted to the hospital was obtained from the central registry. Patients were categorized based on their diagnosis. The proportion of patients for study in each stratum (ward) was determined by dividing the number of patients with substance use disorder in that ward by the total number of patients admitted in that ward then multiply by 72 which is the estimated sample size as shown below;

$$= \frac{\text{Total number of patients with substance use disorder (strata)}}{\text{Total number of patients admitted in that ward (strata)}} \times \text{Sample size (72)}$$

Total number of patients admitted in that ward (strata)

The calculation above was applied in each stratum (ward) so as to get the proportionate number of patients. To select specific patients to be interviewed from each stratum, random sampling method was used so as to minimize bias.

3.4.3 Recruitment and consenting procedure

As soon as approval to conduct the study was obtained, a meeting with the hospital nursing service manager was conducted to discuss the researcher's intention to conduct the study. With permission of the hospital administration, a meeting with the nurses in charge of various wards was held to discuss the study participants' eligibility criteria and date of commencement. The ward in-charges provided a list of all patients admitted in the ward to facilitate identification of prospective participants using random sampling. The researcher approached the patients and requested them if they were willing to participate in the study. Additional information was provided as per the consent document attached (Appendix I). After 24 hours mini-mental status examination form (Appendix III) was filled and patient gave informed consent. This procedure was repeated in all wards.

3.5 Eligibility criteria

3.5.1 Inclusion Criteria

- 1) The participants between 18 - 55 years of age.
- 2) A positive toxicology screening results and admitted for management of substance use disorder during the period of the study.
- 3) The participants who acknowledge using any substance of abuse at least once in the last month before admission.
- 4) The participants who attain a score above 24/30 in a mini-mental status examination tool (Appendix III)
- 5) Participants with insight thus able to give informed consent

3.5.2 Exclusion criteria

- 1) The participants with Covid 19 signs and symptoms and on isolation wards at MNTRH.
- 2) The participants who had participated in the pre-test.

3.6 Conceptual framework

The conceptual framework of the study is derived from the health belief model to show the interrelation of determinants of health-seeking behaviour. This framework explains the inter-relatedness of determinant factors and health-seeking behaviour. This is used to explore the patients' perceptions about illness and actions taken when they perceive ill health. Actions are based on the existing intervening variables which moderate the health-seeking behaviour. The independent variables are sociodemographic, psychological and substance use related factors while the dependent variable is the health-seeking behaviour. This is illustrated in figure 2 below;

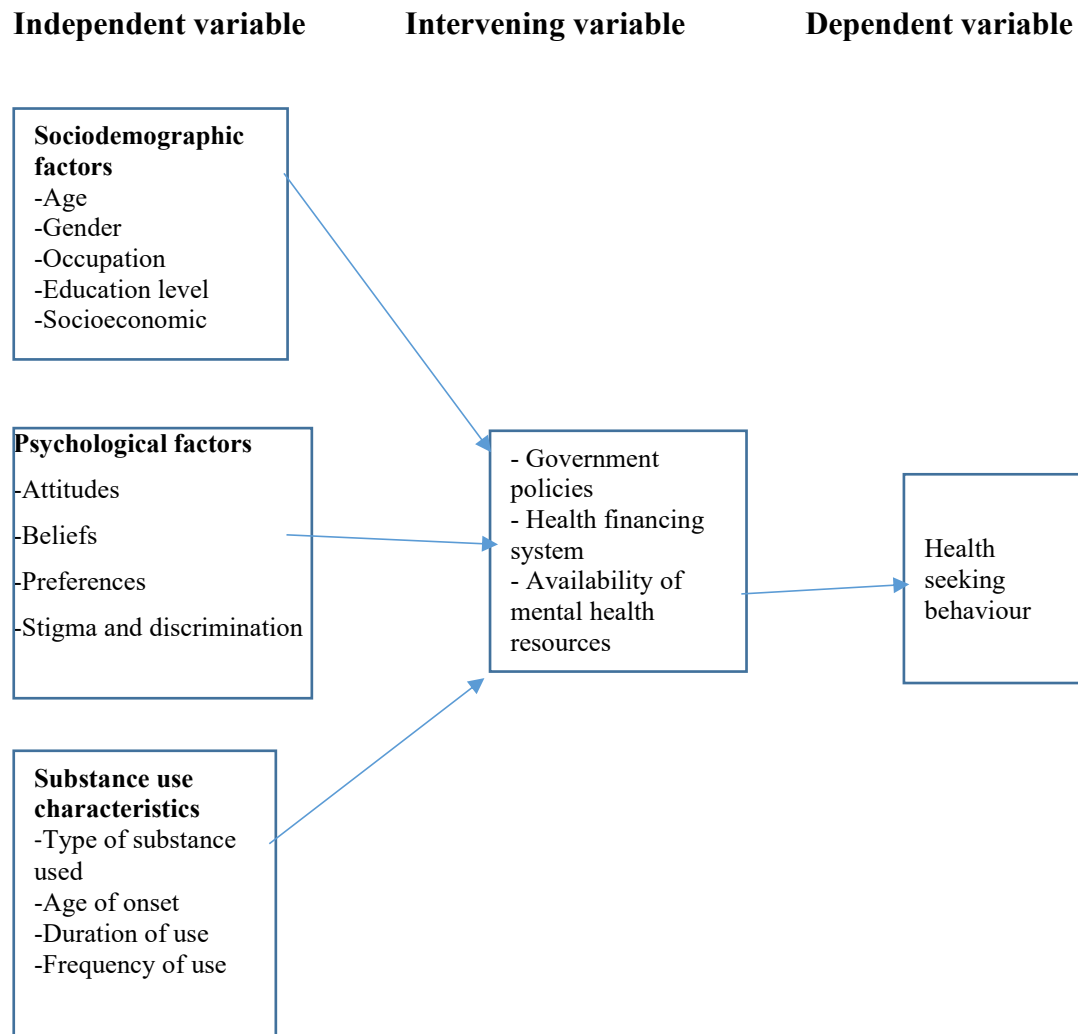


Figure 2: Conceptual framework

3.7 Study variables

3.7.1 Independent variables

These include factors that determine the health seeking behaviour. They are patient factors (sociodemographic, psychological) and substance use characteristic factors.

- Social determinants are external factors that influenced health seeking behaviour. These factors are; social support systems of family, friends and community,

cultural values and practices related to health, religious affiliations, practices and socioeconomic status indicated by social position, education level and occupation.

- Psychological determinants are attitudes, beliefs and perceptions of vulnerability and susceptibility to health effects due to drug abuse. These were rated using the Likert scale.
- Substance use characteristics were age at onset of use, type of substance used, frequency and duration of substance use.

3.7.2 Dependent variable

The health-seeking behaviour of the participants with substance use disorder. Appropriate health seeking behaviour includes taking the initiative to visit a health facility or health care practitioner for treatment, in addition to compliance and adherence to treatment. This was measured using these indicators; willingness to attend follow-up clinic and preferential choice of health care in management of substance use disorder.

3.7.3 Intervening variables

These are variables that don't influence health seeking behavior directly. They include government policies on drug and substance use, health financing and availability of mental health resources both physical and human.

3.8 Data Collection instruments and procedures

3.8.1 Data collection instruments

A semi-structured questionnaires with open and closed-ended questions (Appendix IV) was developed by the researcher based on a literature review on determinants of

health seeking behaviour. A questionnaire was preferred as it the most widely used tool for collecting data as it is efficient. The questionnaire had five sections intended to meet the specific objectives of the study. The first section collected data on demographic characteristics of participant, the second section had questions on socioeconomic factors and third section captured history of drug use and health seeking behaviour. The fourth section on sociocultural factors and fifth section explored the attitudes on health- seeking behaviour. It was administered in approximately 45-60 minutes.

3.8.2 Data quality control assurance

Quality research refers to a scientific process encompassing all aspects of study design and protection against systemic bias, non-systemic bias and inferential errors (Kothari and Ebrary, 2004). To ensure data quality, one-day training research assistants by the principal researcher on how to administer the questionnaire to ensure accuracy and consistent data was collected. The research assistants participated in the pre-test in order to familiarize themselves with the questions in the data collection tool.

3.8.3 Pre-Testing the study instrument

Pre-testing the questionnaire was done using 5 percent of the study participants admitted at MNTRH. The purpose of the pretest was to ensure the questions meet objectives, to familiarize with the study questions and ensure a uniform understanding of the questions. The outcome of a pretest helped in standardizing the questionnaire. All ethical procedures was followed during the pre-testing of the tool.

3.8.4 Data Collection procedures

The researcher observed and adhered to all the COVID 19 public health directives according to World Health Organization protocols. Before the interview all participants were screened for any signs and symptoms of COVID 19 then interviews were conducted in a well ventilated room maintaining the 1.5 metres during the face to face interaction, wearing facemask all the time. Handwashing with soap and running water or use of alcohol based sanitizer before and after interview. Once completed, the questionnaires were serialized to ensure the anonymity of the participants is maintained.

3.9 Data management, protection and analysis

3.9.1 Data management and protection

All the questionnaires were checked for completeness and data was stored in a research file in the computer whose access was restricted to the principal investigator. To maintain confidentiality all identifiers were removed and replaced with a code to represent the individual participant. Coded data was arranged and entered into Microsoft excel then exported to SPSS version 23. Completed questionnaires were kept in a lockable cabinet throughout the study, accessed only by authorized person and will be securely stored for a period of five years before being permanently destroyed.

3.9.2 Data Analysis

Quantitative data was coded and processed using Statistical Package for Social Science (SPSS) software package. Descriptive analysis of demographic data and a further cross tabulation was done individually between dependent and independent variables. Data from the Likert scale rating was analyzed in terms of percentages of

the response of the respondents. Categorical data were subjected to Pearson's Chi-square test, confidence interval and P value of < 0.05 indicated significance between the factors that determine health-seeking and the predicted estimates. Then data was presented in frequency tables, bar graphs to show dispersion or distribution of relevant factors.

3.10 Ethical Considerations:

Autonomy: Individuals above 18 years of age with a mini MSE status score $>24/30$ (appendix 3) were included in the study. The study purpose, the potential risks and benefits and rights as per (Appendix I) was explained and patient given 24 hours to make a decision. Participation was voluntary upon obtaining informed consent.

Privacy and confidentiality: All participants were assured of confidentiality from the beginning of the interview. A suitable place for the interview at the hospital was identified to ensure privacy was maintained. Names of participants were not recorded instead they were assigned codes. The participants' information were not shared with anyone and the results were presented and discussed without revealing the identities of the participants.

Beneficence: No incentive or individual payment was given to those who participated in the study. Results of the study will contribute in policy development towards better management of patients with substance use disorder.

Risks: The research was approved by KNH-UON Ethics Research Committee to ensure that it didn't predispose patients to harm and adherence to ethical conduct as stipulated. Data was collected using interviewer-administered questionnaires with minimal risk to the participant. To protect from COVID 19 disease transmission the following measures were put in place;

- a) Adherence to public health directives by screening the research staff and participants for any signs and symptoms of COVID-19 using the Ministry of Health protocol before any person to person interaction patients with possible exposure or symptomatic of Covid-19 were not included in the study.
- b) Interviews were conducted in a well ventilated room and spacious enough to facilitate physical / social distance of 1.5 metres between the participant and principal investigator.
- c) All the participants and research staff wore face masks properly at all times during the face to face interaction.
- d) Hand washing using soap and running water or alcohol based sanitizer with at least 70% alcohol concentration performed before and after the interview.

Justice: Exclusion and inclusion criteria, as well as random sampling method, was used to select participants fairly.

3.11 Study Limitation

The study was conducted in one public national and referral hospital in Nairobi County whose catchment area is mainly urban setting. However the hospital serves the entire country as complicated cases are referred here for further management therefore the results to be generalizable. However, other studies conducted in different hospitals at the rural setting, using a larger sample size could strengthen the study findings.

3.12 Dissemination plan

Study findings were made available at the Nursing department, mental health unit at MNTRH and University of Nairobi library for reference. In addition, abstract presentation during scientific conferences and publication of manuscript in peer reviewed journals.

CHAPTER FOUR: RESULTS

4.1 Introduction

This chapter presents the findings of the study guided by study objectives. The findings are presented in tables, charts, graphs and narrative for interpretation. The first section shows the distribution of sociodemographic characteristics of the respondents. The subsequent sections on psychological factors and substance use characteristics that determine health seeking behaviour. The study observed 100% response rate in that a total of 72 questionnaires were administered to patients with substance use disorder admitted at Mathari National and Referral hospital during the study period.

4.2 Demographic characteristics of the respondents

Demographic factors refer to a combination of factors that define characteristics of a respondent in a specific group of population. These demographic characteristics included age, gender, education level, occupation and the residence of the respondents were measured quantitatively.

4.2.1 Age distribution of the participants

The age of the respondents ranged between 18-55 years with a mean of 29.26 years. The findings as shown in figure below indicates that 43.1% (n=30) of the respondents were aged between 18-26 years. Those aged 27-35 years were 38.9% (n=28). This implies that majority were a youthful group. Those aged 36-44 were 11.1% (n=8) while only 8.3% (6) were above 45 years

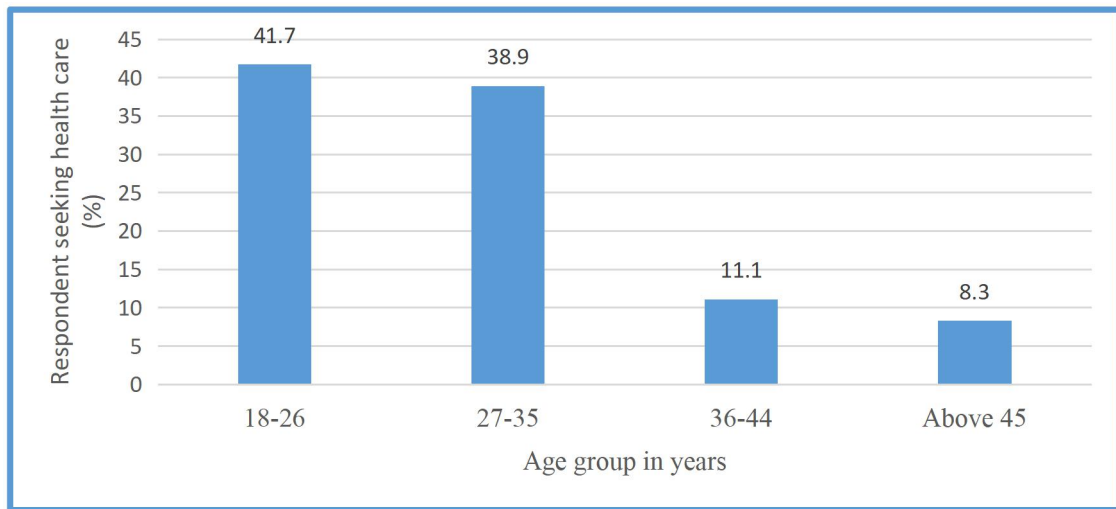


Figure 3: The bar graph showing the age distribution of respondents in years

4.2.2 Gender distribution of the participants

The gender distribution of the participants indicated that the highest participants were male patients 76.3% (n=55) while 23.7% (n=17) were female patients.

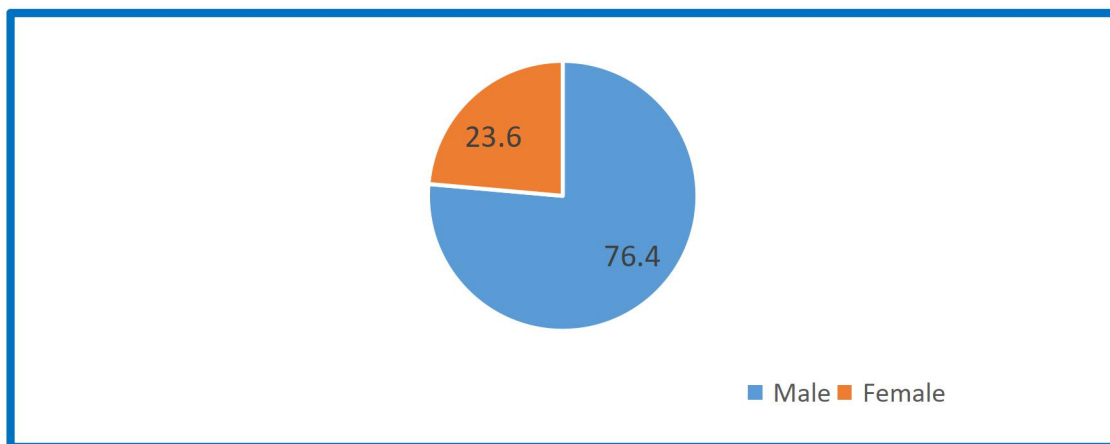


Figure 4: Pie chart showing the gender of respondents

4.2.3 Education level of respondents

The level of education was assessed using the highest level of qualification attained. As shown by bar graph below, 52.8% (n=38) of the participants attained secondary

education, 26.4% (n=19) attained primary education and 19.4% (n=14) had tertiary level of education. Only 1.4% (n=1) did not complete primary education.

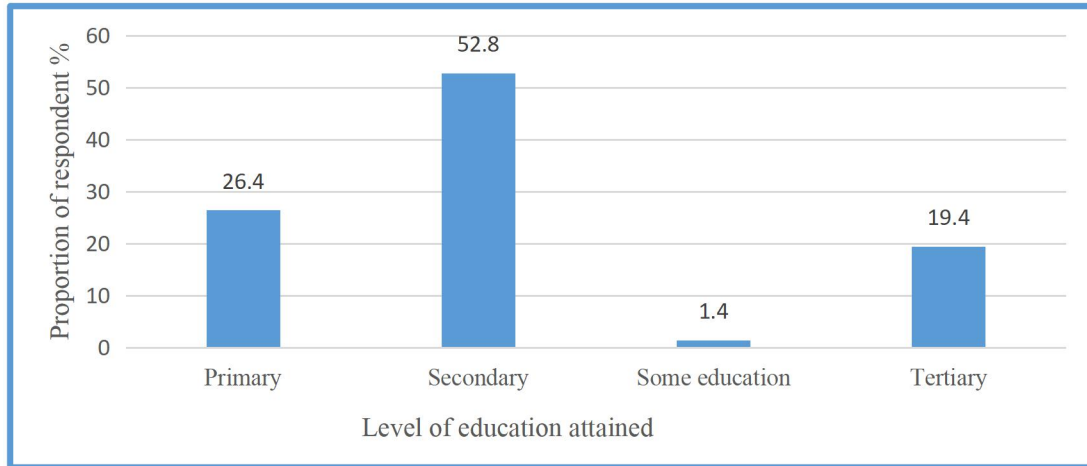


Figure 5: Bar graph showing level of education of respondents

4.2.4 Marital status of respondents

The marital status of the respondents were 62.5% (n=45) single while 18.1% (n=13) were married. However 16.7% (n=12) were separated with their spouses and 2.8% (n=2) were never married.

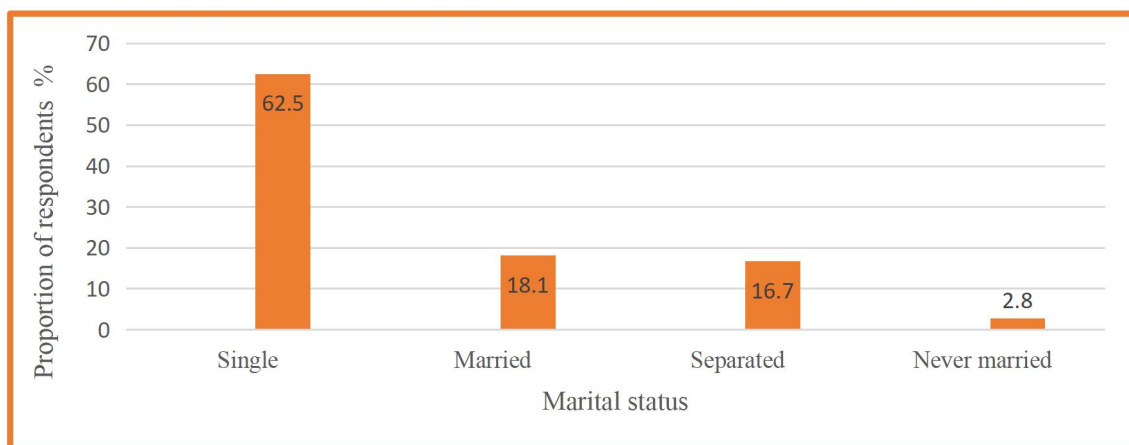


Figure 6: Bar graph showing the marital status of the respondents

4.2.5 Occupation of respondents

As shown in bar graph below, 50.1% (n=36) of the participants were self-employed while 19.4% (n=14) were students in various colleges and 19.4% (n=14) were not employed at all. Only 11.1% (n=8) were employed.

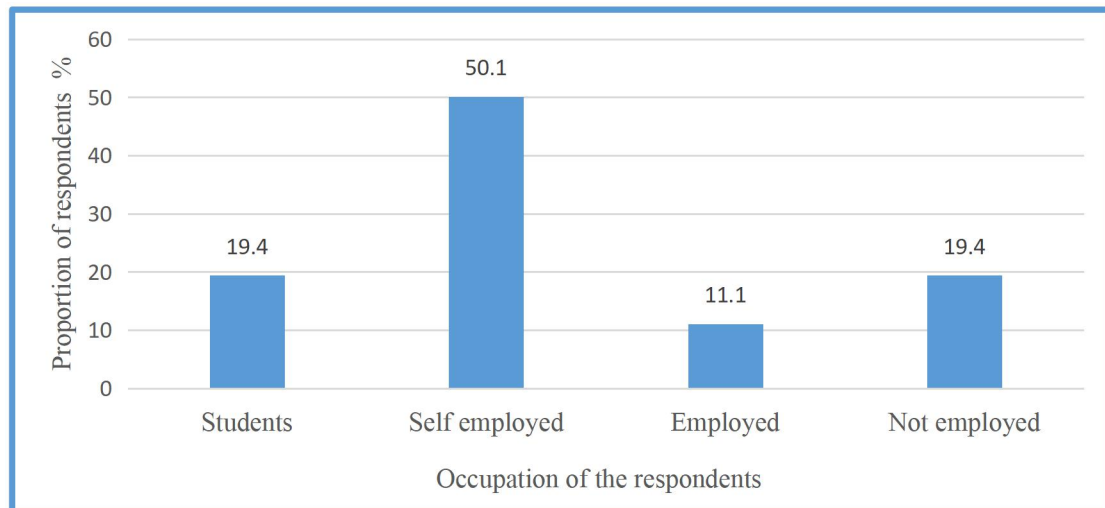


Figure 7: Bar graph showing the occupation level of the respondents

4.2.6 Residence of the respondents

The graph indicates that more than half 56.9% (n=41) are residents of Nairobi county while the neighboring counties of Kiambu at 12.5% (n=9); Kajiado 8.3% (n=6); Muranga 4.2% (n=3) and other counties contributed 18.1% (n=13) as indicated in the figure below.

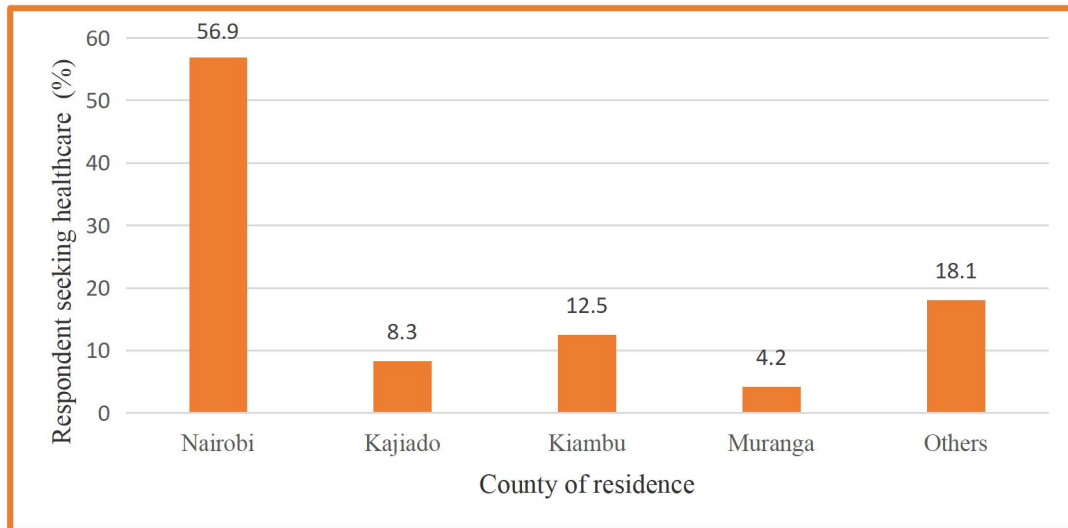


Figure 8: Bar graph showing the residence per county of respondents

4.2.7 Socioeconomic factors of the respondents

Majority of the participants over 95.8% (n=69) used motor vehicle and the amount spent indicated that 44.4% (n=32) spent between Ksh. 100-500, 30.6% (n=22) spent less than Ksh. 100 while 9.8% (n=6) spent over Ksh. 1000.

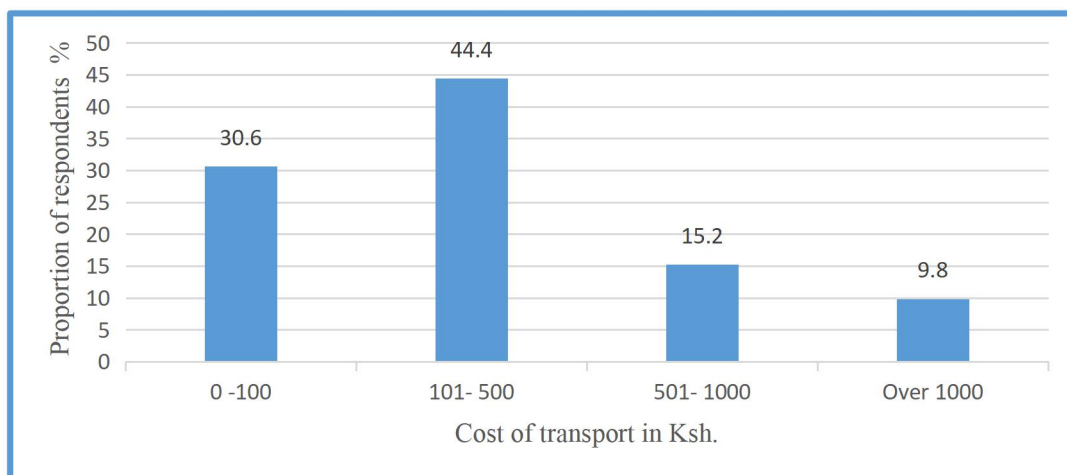


Figure 9: Bar graph showing the amount spent to visit the hospital

As shown in the pie chart below, 56.9% (n=41) of the participants did not have medical insurance while 43.1% (n=31) had medical insurance mainly NHIF used to pay for the hospital bill.

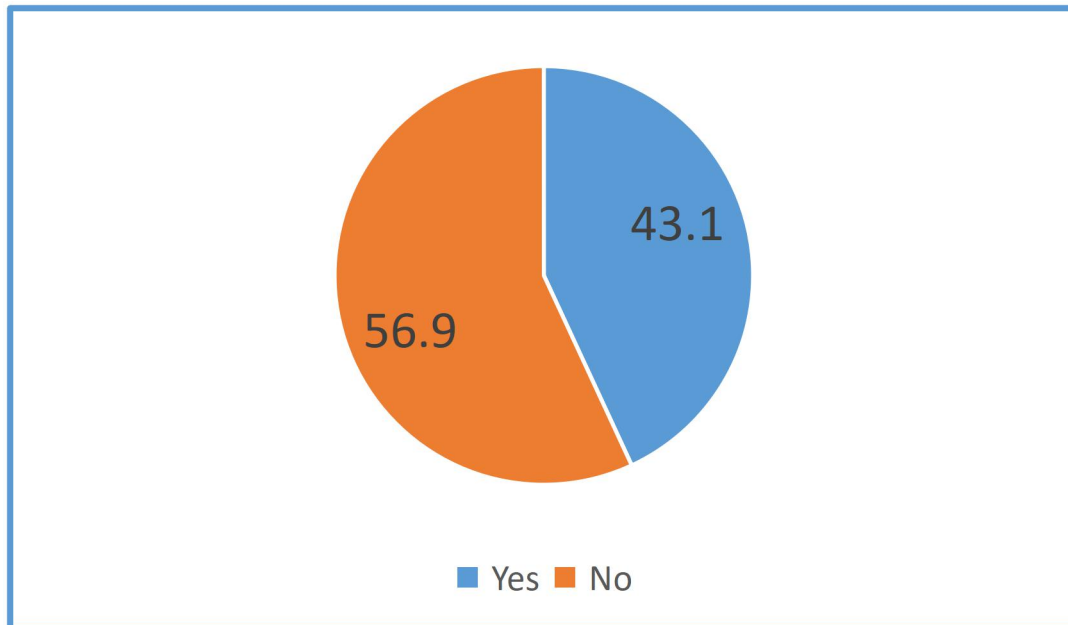


Figure 10: Pie chart showing medical insurance coverage of the respondent

4.2.8 Family social support

More than half 58.3% (n=42) of the respondents relied on the relatives for upkeep while 41.7% (n=30) were self-reliant. As shown in the table 4.1 below majority 90.3% (n=65) of the respondents were brought in by relatives to the hospital and have been visited while admitted.

Table 1: Family social support of the respondents

Variable	Respondents	Percentage
Source of livelihood (n=72)		
Self	30	41.7
Relatives	42	58.3
Total	72	100
Brought by to the hospital (n=72)		
Self	1	1.4
Relatives	65	90.3
Police	6	8.3
Total	72	100
Visitation while at hospital (n=72)		
YES	60	83.3
NO	12	16.7
Total	72	100

4.3 Sociodemographic factors and health seeking behaviour

The socio-demographic factors of the respondents indicated that age, education level and employment status were significant in health seeking with P-values less than 0.05. Other factors like gender, county of residence and marital status of the participants were not significant as their P- values greater than 0.05 as shown in table 2 below.

Table 2: Bivariate analysis of the sociodemographic factors of respondents

Description	Prevalence Odds ratio(95% ci)	X ²	P-value
Employment status(n=72)			
Employed	6.8(2.2-20.5)	12.64	0.001*
Not employed			
Age (n=72)			
18-26 years	0.06(0.01-0.43)	10.7	0.004*
27-35 years	0.18(0.03-1.09)	10.7	0.06
35-44 years	Ref ^{**}	Ref ^{**}	Ref ^{**}
Above 45 years	0.06(0.004-0.97)		0.047*
Gender(n=72)			
Female			
Male	1.6(0.5-5.5)	0.54	0.47
County of residence(n=72)			
From Nairobi			
From outside Nairobi	1.2(0.4-3.2)	0.07	0.79
Marital status(n=72)			
Married	3.4(0.99-11.8)	3.79	0.05
Not married			
Education level			
Some education	-	-	-
Primary level	Ref ^{**}	Ref ^{**}	Ref ^{**}
Secondary level	5.54(1.11-27.54)		0.03*
Tertiary level	3.4(0.52-22.02)		0.199

* Statistically significant at p value of 0.05.

** Reference group

From the bivariate analysis those aged 18 to 26 years (POR=0.06, $X^2 = 10.7$, p-value=0.004) and those aged 45 years and above (POR=0.06, 95%, p-value=0.047) were statistically significant. The study findings revealed that there was negative correlation between age and health seeking behaviour in that the youngest age group were more likely to seek health care for substance abuse as compared with those of the age group of 35-44 years. Health seeking behaviour in relation with gender was not of any statistical significance (POR=0.54, p-value=0.047). Respondents with secondary education were more likely to seek healthcare than those with primary education (POR= 5.54, 95% Ci=1.11-27.54, p-value=0.03). The education level of the participants was a significant factor determining health seeking behavior.

Employment status was found to be significant factor in the health seeking behavior. Respondents who were employed had a better health seeking behavior than those who were unemployed with a prevalence odds ratio (POR) of 6.8 and 95 % confidence interval (95%CI) of between 2.2 and 20.5 and P-value of 0.001.

4.4 Psychological factors associated with health seeking behaviors

Psychological factors are individual patient factors that drives actions to seek healthcare. These factors included the preference and willingness to seek healthcare due to substance use disorder, awareness on effects of substance use, attitudes towards hospital services received and level of satisfaction. They were measured in a likert scale rating from 0-5. The results as shown in the table indicated that majority 84.7% (n=61) preferred seeking healthcare from a medical facility; 13.9% (n=10) preferred traditional healers and 1.4% (n=1) preferred spiritual healers. 69.4% (n=50) of the respondents were not willing to come to the facility for treatment and 30.6% (n=22) were willing and convinced to come to the hospital for treatment.

Table 3: Preference and willingness to seek healthcare

Variable	Respondents	Percentage
Preferred choice of healthcare (n=72)		
Medical facility	61	84.7
Traditional healer	10	13.9
Spiritual healer	1	1.4
Willingness to seek health care (n=72)		
YES	22	30.6
NO	50	69.4
Total	72	100

The Likert scale rating from respondents indicated that 65.3% (n=47) participants strongly disagreed that they lacked knowledge on the effects of drugs on their health. This is attributed to majority of respondents have completed at least primary level of education. An assessment on quality of hospital services received during the admission was based on feelings of health status improvement since admission, experience of stigma and discrimination in the health facility, level of satisfaction on the care received. 72.2% (n=52) strongly agreed and reported health improvement while 1.4% (n=1) strongly disagreed. 77.8% (n=56) strongly agreed that the hospital services were helpful and felt satisfied with the services received. The findings on assessment of stigma and discrimination indicated that 70.8% (n=51) strongly agreed they have not felt stigmatized and discriminated during the period of admission while 16.7% (n=12) have felt stigma and discriminated while admitted at the hospital. Upon discharge patients 72.2% (n=52) strongly agreed that they will comeback for follow up clinic once discharged

4.5 Substance use characteristics associated with health seeking behaviour

The study found three substances use characteristics affecting health seeking behaviour namely; age at onset of substance use, type of substance used, frequency and duration of use.

4.4.1 Age at onset of substance use and health seeking behaviour

The age at first use of substances indicated that 63.9% (n=46) of participants started after 18 years and 36.1% (n=26) started using substance after 18 years.

Table 4: Age at onset of substance use

Variable	Respondents	Percentage	Prevalence Odds ratio (95% ci)	P value
Age at onset of substance use(n=72)				
Below 18	26	36.1	Ref**	Ref**
Above 18 years	46	63.9	5.6(1.4-21.4)	0.01*
Total	72	100		

4.4.2 The type of substance used per participant

The results on type and number of substance used per respondent indicated that alcohol 22.2% (n=16) then cannabis 15.3% (n=11) were the single most abused substance. However for respondents who used more than one substance, 32.0% (n=23) combined two substances and 30.5% (n=22) combined three or more substances as shown in the table 5 below.

Table 5: Type of substance used by the respondents

Variable	Type of substance used	Frequency	Percentage
The number of drugs used per participant (n=72)			
One substance	Alcohol	16	37.5
	Cannabis	11	
At least two drugs	Alcohol + Cigar	8	32.0
	Alcohol + cannabis	6	
	Alcohol + miraa	1	
	Cannabis + cigar	4	
	Cannabis + miraa	4	
At least three or more drugs	Alcohol, cannabis, miraa, cigar, cocaine	22	30.5
TOTAL		72	100

4.4.2 The frequency and duration of substance use

The pattern of substance use varied from one respondent to another. Most of the respondents 65.3% (n=47) used substances daily while 29.2% (n=21) were using weekly. Monthly use was 4.2% (n=3) as shown in the table below.

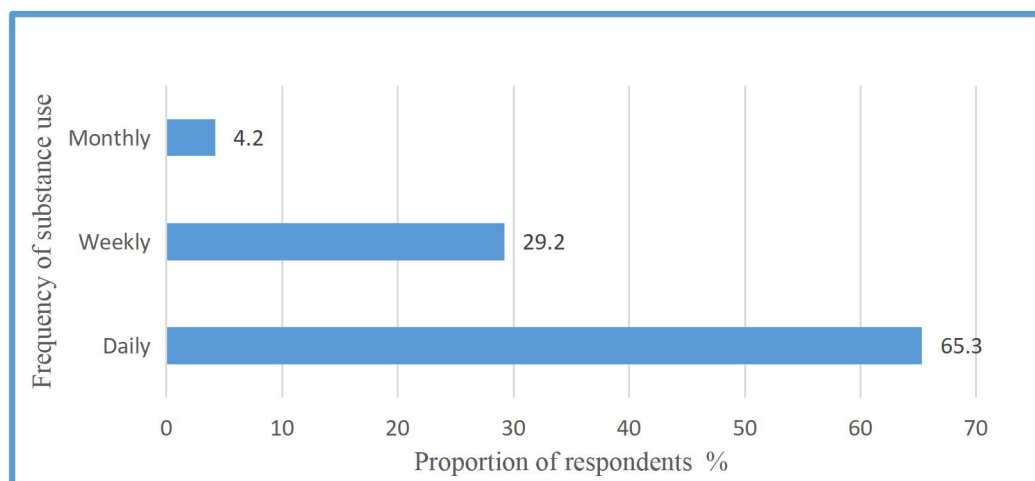


Figure 11: Bar graph showing the frequency of substance use per respondents

The duration of substance use ranged from 1 - 22 years. The graph below show the duration of substance use and 38.9% (n=28) have used the substance for 1-5 years, 30.5% (n=22) used between 6-10 and 12.5% (n=9) have used for over 20 years.

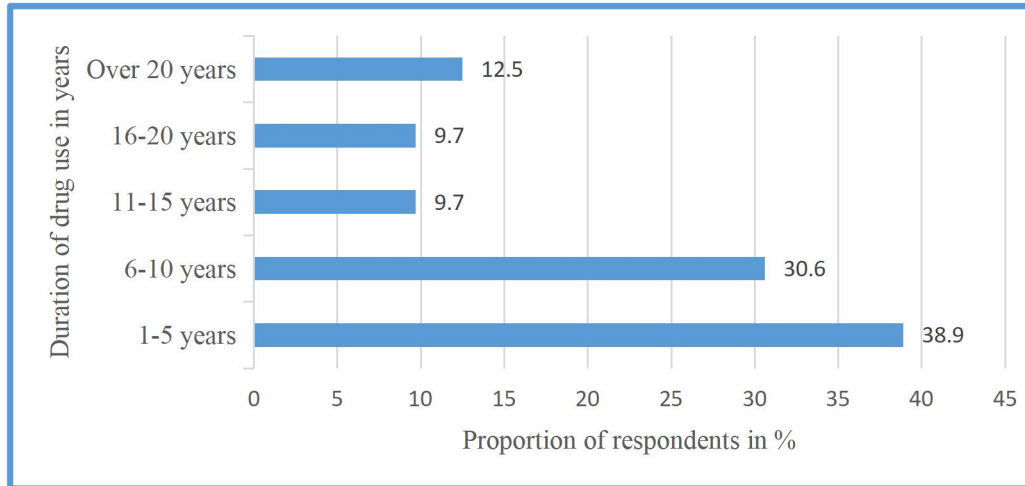


Figure 12: Bar graph showing the duration of drug use per respondent.

Table 6: Analysis of association of substance use characteristics and health seeking behaviour

Description		Prevalence Odds ratio (95% ci)	P-value
Age of onset (n=72)			
	Below 18 years	Ref**	Ref**
	Above 18 years	5.6(1.4-21.4)	0.01*
Number of substance used (n=72)			
	Single	Ref**	Ref**
	At least two	0.95(0.31-2.91)	0.93
	Three or more	0.36(0.08-1.5)	0.17
Marijuana use (n=72)			
	Yes		
	No	7.6(2.45-23.5)	0.00001
Frequency of drug use (n=72)			
	Daily	Ref**	Ref**
	Weekly	0.15(0.03-0.74)	0.02*
	Monthly	0.73(0.06-8.7)	0.81
Duration of use(n=72)			
	1-5 years	Ref**	Ref**
	6-10 years	1.6(0.48-5.54)	0.43
	11-15 years	0.57(0.05-5.77)	0.63
	16-20 years	1.14(0.18-7.28)	0.89
	Over 20 years	2.2(0.47-11.0)	0.30

As seen in table 6 above, respondents who started using drugs when above 18 years, were more likely to seek health care (POR=5.6, 95% CI=1.4-21.4, p-value=0.01). Based on the type of substance used, those respondents who did not use marijuana had a better health seeking behavior with a significantly higher odds of seeking health care POR=7.6(95% CI=2.45-23.5, p-value=0.00001) than respondents who used marijuana. The frequency of substance use indicated that respondents who used substance weekly had a significantly lower odds of seeking healthcare (POR=0.15, 95% CI=2.45-23.5, p-value=0.00001) compared to those who used substances daily.

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

In this chapter detailed discussion of the findings of the study in relation with other studies. In the first section, the sociodemographic factors of the participants are discussed. The second section discusses the psychological factors that influence health seeking behaviour and the third section discusses the substance use characteristics that determine health seeking behaviour. Then conclusions are drawn from the findings and recommendations.

5.3 Sociodemographic factors of the participant

In this study, of the 72 participants almost half 43.1% (n=30) were aged between 18-26 years. This age group were likely to seek healthcare as compared to the other age groups in the study. At younger age, participants relied on family and other available social support for decision making on seeking treatment and rehabilitation services for substance use disorder. As age advances there were lesser participants seeking healthcare for substance use disorder. This was contrasting with a study by (Engeda et al., 2016) which found that the likelihood of seeking healthcare increases with age although it is confounded by other variables such as education, occupation and socio-economic status which are likely to increase with age.

With respect to gender of the study findings revealed that male participants were three times more likely to seek health care than female counterparts. This did not represent a selection bias in that the proportion of male patients with substance use disorder at the hospital was high. This is in agreement with a study by (Barke et al., 2011) in Ghana which found a higher number of male patients with substance used disorders

utilizing mental services. In contrast another study by (Chandra & Minkovitz, 2006) found that females typically start using substances later than males and comparatively seek treatment earlier. Gender has an influence on health seeking behaviour, with men having a tendency of late presentation to health services leading to higher levels of potentially preventable health problems among men than their counterparts. Females who abuse substances in the Kenyan society encounter unique barrier of social stigma which negatively affect health seeking behaviour. This contribute to their low number of females seeking health care.

This study found the level of education to be significant factor in health seeking among the participants. Education level has a direct relationship with employment status in Kenya and this reflects an individual's socioeconomic status and affordability of the medical service. A study by (Engeda et al., 2016) yielded same results in that those with higher level of education are more likely to seek health care. Medical insurance mainly NHIF which is a mandatory contribution by those employed is used to pay for the medical services in the hospital. More than half the participants did not have medical cover meaning they paid for the medical services out of pocket. This was found to be a factor of consideration when making decision to seek health care even though it didn't have any statistical significance in the study.

5.4 Psychological factors determining health seeking behaviour.

The study found that majority of the participants were not willing to seek treatment. However given a chance to choose where to seek treatment the participants reported they would still prefer medical treatment over other forms of treatment like spiritual and traditional healers. Psychological factors determine the willingness, preference, perceptions and attitude towards the services provided at the hospital. Substance use disorder is not perceived by majority as an illness that require medical attention yet it

affects mental and physical health. In addition it disrupts the social and occupational functionality. This wrong perception affects health care seeking and utilization of the available treatment services. Preference on the choice of healthcare are based on either previous experience or the severity of the illness. Attitudes towards health seeking is based on individual beliefs, values and perceptions about effectiveness and quality of treatment services available.

The societal cultural background have a direct influence on how the patients perception of ill health. Some patients with mental disorder related to alcohol or substance abuse have been discriminated by a societal belief that they are responsible for their illness. A study in the USA by (Ahern et al., 2007) indicated that persons who use illicit drugs face stigma. This is no different in the African society as some communities deny them the traditional sick role accorded to the sick person in African society. Although stigma surrounding mental disorders is widespread and a well acknowledged barrier to health seeking behaviour for mental problems according to a study by (Barke et al., 2011) the study found comparatively low reporting by patients while admitted at the hospital. A study by (Luitel et al., 2017) demonstrated that individuals with SUDs face a large amount of stigma from various sources, including themselves. Furthermore, other studies like (Chandra & Minkovitz, 2006) offer evidence that these different stigmas have an impact on variables that may, in turn, affect the likelihood that a person will complete treatment or achieve recovery. These variables include desire to continue in treatment, engagement with treatment and self-efficacy. Stigma is a psychological barrier that affects access and utilization of mental health. This study has shown that participants did not report facing stigma and discrimination while in the hospital. Efforts should be undertaken to address the

negative views and fight against stigma in order to reduce the treatment gap in the society.

5.5 Substance use characteristics

Substance use characteristics determine the development of symptoms of substance use disorder and therefore health seeking behaviour. Among those who sought health care, alcohol and cannabis were the most commonly abused substances and this agrees with a study on status of substance abuse in Kenya by (Kamenderi et al., 2020). Alcohol is readily available within the community ranging from local brews to commercial brands that are sold legally in the country. Illegal substances like cannabis are also readily available and are packaged in smaller quantities sold at lower prices hence afforded by people of low socioeconomic status. Cannabis plays an important role in development of psychosis in vulnerable individual contributing to a higher portion of those seeking mental health care. This compares with a study in Ghana by (Dragt et al., 2012) where alcohol and cannabis use disorders were the most common. People when intoxicated with the substance develop abnormal behaviour, gross social impairment and their functionality is affected within the society. This triggers the health seeking behaviour through the social support system in order to avert and reverse the health effects of the substance.

The age at first use of substances indicated that more than half (63.9%) of participants started using substances after 18 years. This finding is contrasting with a study by (Dragt et al., 2012) which indicated that younger age at onset of substance use was significantly related to early onset of symptoms that contributes on the need for health seeking earlier. At 18 years, young adults experience freedom of being away from parental watch, peer pressure and increase in availability of various substance,

they begin using drugs. The frequent use and longer duration of use leads to development of health effects which in long-term become chronic.

5.6 Conclusion

Based on the findings of this study the researcher draws the following conclusions,

1. Younger participants are seeking healthcare in the hospital. Education level also influence health seeking behavior significantly. These factors depend on interpersonal and intrapersonal characteristics, broader community health practices, norms and availability of health services.
2. The overall synthesis of this study shows that, the knowledge of the determinants of health seeking behaviour can improve the planning, designing and implementation of social and health interventions aimed at improving the health status of the young people prone to the substance abuse.
3. Substance use characteristics including age at onset, frequency of substance use and type of substance use significantly affect health seeking behaviour. Most common substances of abuse are alcohol and Marijuana.

5.7 Recommendations

Based on the findings the researcher recommends that;

5.7.1 Recommendation for policy

The National Government through the Ministry of Health, Gender and other health stakeholders like NACADA, in the fight against substance abuse, need to consider inclusive and participatory approach to capture the youth. The facilities need to be made more youth friendly by provision of services that are accessible, acceptable, and appropriate for the recipient. Treatment and rehabilitative services need to be readily available specifically closer to those who abuse drugs and delivered in the right style

in order to be acceptable and utilized by the targeted population. Identification and removal of obstacles and barriers like stigma at the community and hospital that impede access and utilization of available treatment options by individuals with substance use disorder. This is achieved through effective awareness campaigns and education on dangers of substance use through mass media, social media and community outreach efforts.

5.7.2 Suggestions for further research

The study has provided a starting point for further research on determinants of health seeking behaviour among patients with substance use disorder. Comparative studies at different hospitals in Kenya at the rural community setting in order to establish the accessibility and affordability of the available mental health services for substance use disorders in Kenya.

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APPENDICES

Appendix I: Participant information and consent form

Title of the study:

Determinants of health-seeking behaviour among patients with substance use disorder admitted at Mathari National Teaching and Referral Hospital.

Principal Investigator: Amos Kipkoech Langat, Msc. in Mental Health and Psychiatric Nursing at the University of Nairobi.

Introduction:

This is a study to find out the determinants of health-seeking behaviour among patients with substance use disorder admitted at Mathari hospital. The purpose of this form is to give you the information you will need to help you decide whether or not to be a participant in the study. Your participation is entirely voluntary and during the study, you can ask about anything that you want including risks and benefits, your rights and what as a participant you need to do. If in case you are uncomfortable, you are free to withdraw from the study. Refusal to participate in this study will not affect the service offered to you in the hospital in any way. This is called informed consent.

What is the purpose of the study?

The researcher will be interviewing patients with substance use disorders to find out the factors that determine their health seeking actions and their health needs. The researcher is therefore asking for your consent to participate in the study.

What will happen if you decide to participate in this study?

If you agree to participate in this study the following will happen.

You will be interviewed by the researcher in a private place where you will be free and comfortable answering the questions. The interview will take approximately 45 minutes.

Are there risks, benefits associated with the study?

Medical research has the potential to introduce risks like emotional, psychological and social risks. Efforts shall always be put in place to minimize the risk. Privacy will also be intruded therefore the researcher will keep everything as confidential as possible. No names will be used as you will be assigned a code to protect your identity. All paperwork will be kept in a locked cabinet.

Also answering questions during the interview may be uncomfortable for you. Any question you feel uncomfortable answering can be skipped during the interview. You have the right to refuse the interview or any question asked during the interview. In case of psychological injury, contact the principal investigator for psychological counseling or referral to a professional accordingly.

Will being in the study cost you anything?

Being in the study will not cost you any money.

What if you have any questions in the future?

If you have any concerns or questions about participation in the study please contact the researcher through mobile no. 0721958739.

For more information about your rights as a participant in the research please contact the Chairperson/secretary Kenyatta national hospital or the University of Nairobi ethics and research committee. Telephone no 276300 Ext 44102 email uonknherc@uonbi.ac.ke

The researcher will pay back for call charges to those numbers if the call is for study-related communication.

What are your other options? Your decision to participate in this study is voluntary. You are at liberty to withdraw from the study if you feel uncomfortable, without loss of privilege or intimidation whatsoever.

Participant`s statement of consent

I have read this statement or have had a chance to be read it for me. I have had a chance to discuss this with the researcher. I have asked my questions asked and answered in a language I understand. I have been explained the risk and benefits about the research. I know my participation in the study is voluntary and may opt to withdraw at any stage if I am uncomfortable. I participate without undue influence or coercion and expect no financial implication whatsoever. I understand the efforts put in place to protect my privacy and confidentiality. I have not withdrawn any legal rights that I have by signing this consent.

I agree to participate in the research. YES NO

Participant signature/ thumbprint..... Date

Researchers` statement

I the undersigned have fully explained to the researcher the relevant details about the research to the participant and believe the participant has understood and is participating at will.

Researchers` name.....

Researcher`s signature..... Date.....

In case of any concerns feel free to reach out to the researcher at mobile no 0721958739. You can also contact KNH/UON-ERC on 276300 Ext 44102 email uonknh-erc@uonbi.ac.ke

Supervisors` contacts

1. Dr. Miriam Wagoro

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Appendix 2: Fomu ya ukusanyaji data na idhini ya mgonjwa

Kichwa cha utafiti: Uamuzi wa tabia ya kutafuta afya kwa wagonjwa wa utumizi wa madawa za kulevya ambao wamelazwa katika hospitali ya kitaifa cha mafundisho na rufaa cha Mathari.

Mtafiti mkuu: Amos Kipkoech Langat, mwanafunzi shahada ya uzamili, Chuo kikuu cha Nairobi.

Utangulizi

Utafiti huu ni wa kuchunguza uamuzi wa tabia ya kutafuta afya kwa wagonjwa wanaotumia wa madawa za kulevya ambao wamelezwa katika hospitali ya kuu ya masomo na rufaa ya Mathari. Fomu hii inakupa habari ambayo unahitaji ndio uamue kama utashiriki katika utafiti huu. Kushiriki ni kwa hiari yako na katika utafiti huu jisikie huru kuuliza maswali yoyote kuhusiana na madhumuni ya utafiti, nini kitatokea ikiwa unashiriki katika utafiti, hatari na faida zinazoweza kutokea kwa kushiriki na haki zako kama mshiriki mhojiwa. Ukihisi wasiwasi wowote uko huru kujiondoa kwa mahojiano. Kukataa kushiriki kwa huu utafiti hautaathiri huduma ambayo unapokea kwa hospitali kwa njia yoyote. Hii inaitwa idhini iliyojulishwa. Unapaswa kuelewa kanuni za jumla ambazo zinatumiwa kwa washiriki wote wa utafiti: i) Uamuzi wako wa kushiriki ni wa hiari kabisa ii) Unaweza kujiondoa kwenye utafiti wakati wowote bila kutoa sababu ya kujitoka kwako iii) Kukataa kushiriki katika utafiti hakutaathiri huduma unazostahili katika kituo cha afya au vituo vingine.

Utafiti huu unahusu nini?

Utafiti huu ni kuchunguza ni nini kinafanya watu wanaotumia madawa za kulevya kutafuta matibabu katika hospitali ya masomo na rufaa ya Mathari. Kutakuwa na kuhojiwa na mtafiti anataka kuuliza idhini yako ili ushiriki katika utafiti huu.

Nini kitatokea ukiamua kushiriki kwenye utafiti huu?

Ukikubali kushiriki, tutakuuliza maswali kadhaa. Utahojiwa na mtafiti kwa mahali ya kibinafsi ambapo utakua huru na starehe kujibu maswali. Utahojiwa kwa dakika isiyopita arobaini na tano.

Kuna athari, madhara au hasara zozote zinazohusikana na utafiti huu?

Kushiriki katika utafiti wowote wa kimatibabu iko na uweza wa kuleta athari ya kihemko, kisaikologia na kijamii. Kuna juhudi kadha wa kadha zimewekwa ili kupinguza hatari hii. Njia moja ni kuhakikisha ubinafsi wako haujaingiliwa mtafiti atahakikisha njia za usiri zimefuatwa kama kuhakikisha jina lako halijaandikwa mahali yoyote kwa karatasi. Makaratasi yote yote yatafungiwa.

Pia ukijibu maswali unaweza patwa na wasiwasi kwa hivyo ukipata hisia kama hio uko huru kukosa kujibu swali wakati wa mahojiano. Uko na haki ya kukataa kuhojiwa ama kuulizwa maswali. Ikiwa utapata majeraha ya kisaikolojia wasiliana na mtafiti mkuu ambaye atahakikisha umepata ushauri ufaayo ya kisaikolojia.

Je, kushiriki katika utafiti huu kuna gharama yoyote?

Kushiriki kwako haina gharama yoyote kifedha.

Na ukiwa na maswali zaidi baadaye?

Ukitaka kujua zaidi kuhusu utafiti huu au una maswali yoyote, tafadhali wasiliana na Amos Kipkoech Langat, Chuo kikuu cha Nairobi nambari ya simu ni 0721958739.

Ikiwa unahitaji kuelezwa zaidi kuhusu haki zako katika utafiti huu, tafadhali wasiliana na katibu wa kamati ya maadili na utafiti ya KNH-UoN nambari ya simu 276300 Ext 44102 barua pepe uonknh-erc@uonbi.ac.ke

Mtafiti atagharamia malipo yote iwapo mawasiliano kwa simu itahitajika.

Uko na chaguo gani zingine?

Ushiriki wako katika utafiti huu ni kwa hiari yako. Uko na huru wa kujiondoa kama unahisi usumbufu wowote bila kupoteza ubinafsi ama kupata vitisho yoyote.

Taarifa ya mhojiwa ya idhini

Nimesoma taarifa kuhusu utafiti huu na kujadiliana na mtafiti. Nimeuliza maswali na nikajibiwa vilivyo kwa lugha ambayo nimeelewa. Nimeelezwa hatari na faida kuhusu utafiti huu. Ninajua ninashiriki kwa hiari yangu na niko na chaguo la kujiondoa katika hatua yeyote ikiwa sijaridhika. Ninashiriki bila kushurutishwa vyovyote na sitaraji kutumia fedha ama kupata malipo yeyote. Ninaelewa ya kwamba iko jitihada zimewekwa kulinda faragha yangu na usiri. Sijapoteza haki zangu za kisheria kwa kutia sahihi idhini hii.

Ninakubali kushiriki katika utafiti huu. Ndio La

Sahihi ya mhojiwa/ alama ya kidole..... Tarehe.....

Taarifa ya Mtafiti

Mimi kama mtafiti nimeelezea kikamilifu maelezo yanayofaa kuhusu utafiti huu na nina imani ya kwamba mhojiwa ameelewa yote inayofaa kuhusu utafiti na anahusika kwa hiari yake.

Jina ya mtafiti.....

Sahihi..... Tarehe.....

Ukiwa na wasiwasi wowote, uko na huru kuwasiliana nami mtafiti mkuu kwa nambari ya simu 0721958739. Unaweza pia wasiliana na KNH/UoN-ERC kwa namba 276300 ugani 44102 barua pepe uonknh-erc@uonbi.ac.ke

Wasimamizi wa utafiti

1. Dr. Miriam C. A. Wago

Barua pepe: carole@uonbi.ac.ke

Nambari ya simu: 0722737356

2. Dr. Irene G Mageto

Barua pepe: igmageto@uonbi.ac.ke

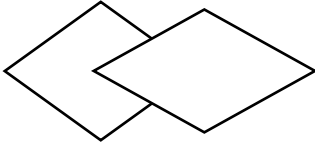
Nambari ya simu: 0724205419

Appendix 3: Mini Mental Status Examination

Participant's Code.....

Date.....

Maximum score	Participant's score	Questions
5		"What is the season year? Season? Day of the week? Date? Month?"
5		"Where are we now? State? County/ town? Hospital? Floor?"
3		The examiner names three unrelated objects clear and slowly then ask the patient to name all three of them. The patient's response is used for scoring. The examiner repeats them until the patient learns all of them, if possible. Number of trials
5		"I would like you to count backward from 100 by sevens." (93, 86, 79, 72, 65, ...) Alternative: "Spell WORLD backward." (D-L-R-O-W)
3		"Earlier I told you the names of three things. Can you tell me what those were?"
2		Show the patient two simple objects, such as a wristwatch and a pencil, and ask the patient to name them
1		"Repeat the phrase: 'No ifs, ands, or buts.'"
3		"Take the paper in your right hand, fold it in half, and put it on the floor." (The examiner gives the patient a piece of blank paper.)
1		"Please read this and do what it says." (Written instruction is "Close your eyes.")
1		"Makeup and write a sentence about anything." (This sentence must contain a

		noun and a verb.)
1		<p>“Please copy this picture.” (The examiner gives the patient a blank piece of paper and asks him/her to draw the symbol below. All 10 angles must be present and two must intersect.)</p> 
30		TOTAL

Interpretation of MMSE Scores:

Score	Interpretation
24-30	No cognitive impairment
18-23	Mild cognitive impairment
0-17	Severe cognitive impairment

Source: • Folstein MF, Folstein SE, McHugh PR: “Mini-mental state: A practical method for grading the cognitive state of patients for the clinician.” J Psychiatry Res 1975;12:189-198.

Appendix 4: Study instrument for participant

Introduction

I am conducting a study to assess the determinants of health-seeking behaviour among patients with substance use disorder. I will be grateful if you could spend a little of your time completing this interview with me. Your participation in this study is entirely voluntary. Any information provided is private and confidential. All answers given are correct and the study is only for academic purposes. Please feel free to answer the questions below. Thank you.

Participant Code..... Date.....

INSTRUCTIONS

- a) Please do not write name of participant anywhere in the questionnaire
- b) Put a tick in box after a response
- c) Where no choices are provided indicate responses in the space provided

SECTION I: DEMOGRAPHIC DATA

1. What is your age in completed years?.....
2. What is your gender?
Male Female
3. What is your highest educational level completed?
Some education Primary Secondary Tertiary
4. What is your marital status?
Single Never married Divorced
Married Separated Widowed

SECTION II: PATTERN OF SUBSTANCE USE

5. At what age in years did you start using drugs?

6. How often do you use drugs?

Daily Weekly Monthly Yearly

7. How long have you used Drugs of abuse?

Days Months Years

8. How much do you spend on drugs in one session?

Less than sh.100 Between sh.100 – 500

Between sh. 500-1000 Above sh.1000

9. Which drugs had you taken before admission?

Alcohol Marijuana Heroine Others

SECTION III: HEALTH SEEKING BEHAVIOUR

10. Were you willing or convinced to come to the hospital?

Yes No

11. Who brought you to the hospital?

Self Friends/Relatives Good Samaritan Police

12. Had there been a time you wanted to get to Mathari Hospital but you were not able to?

Yes No

If yes, give reason.....

13. How many admissions to this hospital in the last one year?

14. What health challenges have you been experiencing in the past one year before admission?

SECTION IV: SOCIOECONOMIC STATUS

15. What is your employment status?

Student Self-employed Employed Retired
Unemployed Casual worker

16. Do you have a medical cover/ insurance?

Yes No

17. If No, who will pay for the hospital bill? Specify.....

18. Who caters for your livelihood?

Self Others Specify.....

19. If self, how many others do you cater for?

1-2 3-4 5 and above

20. How is your accommodation arrangement?

Rental Personal house Housed by relative/ friend streets

21. If living with parents/ relatives, what is the family type?

Monogamy polygamy Single parent other

Specify.....

22. How do you get to this facility?

By foot Bicycle Motorbike Motor vehicle

23. If using a vehicle how much do you spend in Ksh....to get to this facility?

24. Which county do you reside from?

SECTION V: SOCIO-CULTURAL FACTORS

25. What is your ethnicity?

26. Are there cultural beliefs in you tribe that prohibit drug use?

Yes No

27. If given a choice, where would you prefer to seek healthcare?

Traditional healer spiritual healer Medical facility
Others, specify

28. Give reasons for your response the choice above.....

29. Has any family member visited you while you were admitted?

Yes No

30. Do you know of any religious beliefs related to drug and substance abuse?

Yes No

Section VI: Attitude of Substance abusers towards treatment at the hospital

Please do kindly rate yourself on the following by ticking on the appropriate space provided.

Statement	Strongly agree	agree	Neutral	Disagree	Strongly disagree
31. You did not know about the health effects of substance abuse before coming to the hospital					
32. Coming to the hospital has helped you understand your problem of drug and substance use					

33. Your health has improved since admission					
34. The care provided in the hospital is helpful.					
35. You will tell a friend about the importance of coming to the hospital for treatment					
36. You have not felt discriminated or stigmatized during the period of admission.					
37. You are satisfied with the services received at the hospital					
38. You will come back to the clinic for follow up once discharged from the hospital					

Thank you for your time.

Appendix 5: Fomu ya kusanya takwimu

Utangulizi

Mimi ninafanya utafiti wa tathmini wa uamuzi ya tabia za kutafuta afya kwa wagonjwa ambao wanatumia madawa za kulevya. Nitashukuru iwapo utachukua nafasi yako kushiriki katika mahojiano. Majibu yote ni sahihi na yatatumika kwa sababu ya utafiti ya kielimu pekee. Majibu yako hapa ni ya kibinafsi na siri. Ushiriki katika utafiti huu ni kwa hiari yako. Tafadhali jisikie huru kujibu maswali yanayofuata. Asante.

Nambari ya mhojiwa..... Tarehe.....

MAAGIZO

- a) Usiandike jina lako popote kwa hili karatasi.
- b) Weka sahihi kwa kijisanduku kama unakubaliana
- c) Kama hakuna chaguo, weka jibu kwa nafasi uliotolewa baada ya swali.

SEHEMU YA KWANZA: TAKWIMU ZA IDADI

1. Miaka yako ni ngapi?
2. Jinsia?
Kiume Kike
3. Kiwango cha elimu?
kiasi Msingi Sekondari Elimu ya juu
4. Hali ya ndoa?
Moja Hujawai kuoa Talaka
Ndoa Kuishi kando kando Mjane /

SEHEMU YA PILI: MATUMIZI YA DAWA YA KULEVYA

5. Ulianza kutumia dawa ya kulevya ukiwa na miaka ngapi?
6. Matumizi ya dawa ya kulevya?
Siku Wiki Mwezi Mwaka
7. Umetumia dawa ya kulevya kwa muda gani?
Masiku Miezi Miaka
8. Takribani pesa ngapi unatumia kwa madawa za kulevya katika kikao kimoja?
Chini ya sh.100 Kati ya sh.100 – 500
Kati ya sh. 500-1000 Zaidi ya sh.1000
9. Ulitumia madawa gani ya kulevya kabla ukuje hospitali kulazwa?
Pombe Bangi heroini Zinginezo

SEHEMU YA TATU: TABIA ZA KUTAFUTA AFYA

10. Ulikuwa hospitali kwa hiari yako bila kushurutishwa?
Ndio La
11. Nani alikuleta hospitali?
Mimi Marafiki/Ndugu Samaria mwema Polisi
12. Kuna wakati ungetaka kuja hospitali ya Mathari na haukuwa na uwezo?
Ndio La
Ndio, nipe sababu.....
13. Umelazwa mara ngapi hospitalini kwa mwaka moja uliopita?

14. Changamoto zipi za kiafya umekumbana nazo kwa mwaka moja uliopita?

SEHEMU YA NNE: MAMBO YA KIJAMII NA UCHUMI

15. Hali yako ya ajira ni gani?

Mwanafi zi Ajira ya kibina Kuajiriwa Mstaafu
Bila ajira Mfanya kazi ya kawaida

16. Je, una bima ya afya?

Ndio La

17. Kama hauna bima, nani atagharamia matibabu yako kwa hospitali?

18. Je, mahitaji yako kwa kila siku inagharamiwa na nani?

Mimi wengine

19. Kama ni wewe, watu wangapi wengine wanakutegemea?

1-2 3-4 5 na zaidi

20. Je unaishi kwa nyumba aina gani?

Kukodisha Kwangu kutegemea marafiki au ndugu mtaani

21. Kama unaishi kwa wazazi ama ndugu, aina ya familia ni gani?

Mke moja Mitala Mzazi moja Ingingine
taja.....

22. Je, ulikuja namna gani hadi kwa hospitali?

Kutembea Baiskeli Pikipiki Gari

23. Ukitumia gari kuja hospitali, nauli ni pesa ngapi?

24. Unitoka kaunti gani?

SEHEMU YA TANO: SABABU ZA KITAMADUNI

25. Kabila lako ni gani?
26. Kunayo imani za kitamaduni kwa kabila lako ambayo yatakuzuia kutumia madawa ya kulevya?
 Ndio La
27. Ukiambiwa uchague ungependa kupata matibabu kutoka kwa nani kati ya wao?
 Mganga wa kienyeji Mponyaji wa kiroho Hospitalini
 Yeyote ingine
28. Sababu ya chaguo lako apo juu.....
29. Kunayo moja wenu kwa familia ambaye amekutembelea ukiwa umelazwa kwa hospitali?
 Ndio La
30. Kunayo imani ya kidini kuhusu matumizi ya dawa ya kulevya?
 Ndio La

SEHEMU YA SITA: MTAZAMO WA WALE WANAOTUMIA DAWA ZA KULEVYA KUHUSA MATIBABU KWA HOSPITALI.

Tafadhali weka alama ifaayo kilingana na hisia yako kuhusu kualii uliyopewa.

Kauli	Nakubali sana	Nakubali	Si upande wowote	kutok ubaliana	Kutok ubaliana zaidi
31. Sikuwa najua madhara ya kutumia dawa za kulevya kwa afya yangu kabla kulazwa hospitalini					
32. Kukuja hospitali imenisaidia kuelewa					

shida yangu ya madawa ya kulevya					
33. Afya yangu imeboreka tangu nilazwe hospitali					
34. Matibabu ya hospitali yamekuwa kwa manufaa kwangu					
35. Nitaambia rafiki yangu umuhimu ya kuja hospitali kwa matibabu					
36. Ukiwa umelazwa hospitali, umehisi kubaguliwa kwa njia yeyote.					
37. Umeridhika na huduma ya matibabu hapa hospitali					
38. Utarudi kufuatiliwa kwa kliniki baada ya kuenda nyumbani?					

Asante sana.

Appendix 6: Clearance to undertake research by Mathari Hospital

MATHARI HOSPITAL

CLEARANCE TO UNDERTAKE RESEARCH IN MATHARI HOSPITAL

TO: ALL WARDS INCHARGES Date 08/09/21

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


AMOS KIPKORCH LANGAT

From (Name of training institution)

UNIVERSITY OF NAIROBI

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

Please accord them/him/her the necessary support.

Thanks
Date: 8/9/2021
Signature: 
In-Charge C.M.E.D

Appendix 7: Letter of approval by ERC



UNIVERSITY OF NAIROBI
COLLEGE OF HEALTH SCIENCES
P O BOX 19676 Code 00202
Telegrams: varsity
Tel: (254-020) 2726300 Ext 44355

KNH-UON ERC

Email: uonknh_erc@uonbi.ac.ke
Website: <http://www.erc.uonbi.ac.ke>
Facebook: <https://www.facebook.com/uonknh.erc>
Twitter: @UONKNH_ERC https://twitter.com/UONKNH_ERC



KENYATTA NATIONAL HOSPITAL
P O BOX 20723 Code 00202
Tel: 726300-9
Fax: 725272
Telegrams: MEDSUP, Nairobi

Ref: KNH-ERC/A/294

26th August, 2021

Amos Kipkoeh Langat
Reg. No.H56/34406/2019
School of Nursing Sciences
College of Health Sciences
University of Nairobi



Dear Amos

RESEARCH PROPOSAL: DETERMINANTS OF HEALTH SEEKING BEHAVIOUR AMONG PATIENTS WITH SUBSTANCE USE DISORDER ADMITTED AT MATHARI NATIONAL TEACHING AND REFERRAL HOSPITAL (P351/05/2021)

This is to inform you that the KNH- UoN Ethics & Research Committee (KNH-UoN ERC) has reviewed and **approved** your above research proposal. The approval period is 26th August 2021 – 25th August 2022.

This approval is subject to compliance with the following requirements:

- i. Only approved documents (informed consents, study instruments, advertising materials etc) will be used.
- ii. All changes (amendments, deviations, violations etc.) are submitted for review and approval by KNH-UoN ERC before implementation.
- iii. Death and life threatening problems and serious adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the KNH-UoN ERC within 72 hours of notification.
- iv. Any changes, anticipated or otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to KNH- UoN ERC within 72 hours.
- v. Clearance for export of biological specimens must be obtained from KNH- UoN ERC for each batch of shipment.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. (Attach a comprehensive progress report to support the renewal).
- vii. Submission of an executive summary report within 90 days upon completion of the study.

Protect to discover

Appendix 8: Study work plan

Months activity	Feb to May 2021	June to Aug 2021	Aug to Oct 2021	Oct to Nov 2021	Nov to Dec 2021
Proposal development					
Approval from ethics committee					
Data collection and data analysis					
Report writing					
Presenting and final submission of the report					

Appendix 9: Budgetary allocation for the study

ITEM	QUANTITY	UNIT COST	TOTAL KSH.	TOTAL COST
HUMAN RESOURCE				
Training of Research assistants (2)	1 day for 2 people	1000.00	2,000.00	
DATA COLLECTION				
Principal researcher	30 days	500.00	15,000.00	
Research assistants (2)	30 days for 2 people	10,000.00	20,000.00	
Data analysis		20,500.00	20,500.00	
Sub- Total				57,500.00
MATERIALS AND SUPPLIES				
Data bundles	2 GB for 5 months	1000.00	1,000.00	
Biro pens Dozen	1 dozen		250.00	
Field books	1 dozen		150.00	
Folders	1 dozen		100.00	
Photocopying Questionnaires	80 copies	50.00	4,000.00	
REPORT WRITING AND PRINTING				
Research proposal	3 copies	500.00	1,500.00	
Final report	3 copies	500.00	1,500.00	
Sub- Total				8,500.00
Contingency	10%		6,000.00	
Grand Total				72,000.00