SUBSTANCE USE AMONG OLDER ADULTS ATTENDING OUTPATIENT CLINICS AT THE MOI TEACHING AND REFERRAL HOSPITAL ELDORET, KENYA

BY

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MOI UNIVERSITY

DECLARATION

Declaration by the Candidate

This thesis is my original work and has not been presented for any award in any other learning institution. Due references have been provided for all supporting literature and resources.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADA	Alcohol and Drug Abuse
ASSIST	Alcohol, Smoking and Substance Involvement Screening Test
AUD	Alcohol Use Disorder
AUDIT	Alcohol Use Disorder Identification Test
CBO	Community Based Organization
CBT	Cognitive Behavioral Therapy
DALYs	Disability Adjusted Life Years
DSM	Diagnostic Statistical Manual (fifth edition)
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
MET	Motivation Enhancement Therapy
MI	Motivational Interviewing
MTRH	Moi Teaching and Referral Hospital
NACADA	National Authority for Campaign against Alcohol and Drug Abuse
NGO	Non-Governmental Organization
NTV	Nation Television Station.
OA Older	Adult (age 50 years and above)
OPD	Outpatient Department
STM	Supportive Therapy Model
SUD	Substance Use Disorder
UNDESA/PD	United Nations Department of Economic and Social Affairs Population Development
USA	United States of America
WHO	World Health Organization

OPERATIONALISATION OF TERMS

Chang'aa	In this study refers to Kenya's traditional distilled spirits
Drugs	in this study it refers to chemical that, when taken, alters the physiology or psychology of the user.
Nonmedical purposes	in this study it refers to the use of substance for other purposes other than medical purpose.
Older Adult	Older Adult refers to an individual who is over 50 years.
Substance use	Substance use is the use of psychoactive drugs/substances for non-medical purposes such as for recreation

ABSTRACT

Background: National Authority for the Campaign against Alcohol and Drug Abuse (NACADA) in 2022 reported that over the past ten years, substance use has considerably increased throughout Kenya. However, there is limited literature regarding substance use among specific populations particularly older adults (50 years and above) as the national estimates do not disaggregate substance use by older age groups.

Objectives: The objectives of this study were: to determine the prevalence of substance use, to assess factors associated with substance use, and to establish the preferred interventions to substance use among older adults attending the Outpatient Clinics at the Moi Teaching and Referral Hospital (MTRH).

Methods: The study adopted a cross-sectional design that employed a quantitative approach. Stratified sampling was used to select five Outpatient Clinics at MTRH. Within the Clinics, consecutive sampling was used to select 402 consenting older adults. A questionnaire and the WHO Alcohol, Smoking and Substance Involvement Test (ASSIST) tools were used to collect data. The University of California Brief Assessment of Capacity to consent (UBACC) was used to assess participants' capacity to consent. Data was analyzed using descriptive analyses including: mean, frequencies and percentages to summarize data and analyze the prevalence. Chi-square and logistic regression were used to measure associations.

Results: The life prevalence of substance use among older Adults attending Outpatient Clinics at MTRH was 80% and the prevalence based on the past three months was 66.7% (95% CI; 1.53%-1. 63%). The Commonly used substances in order of prevalence were; alcohol (42%), tobacco (16.8%), cannabis (6.7%) and inhalants (1.2%). Factors associated with substance use were; Age 55-59 years (36.8%, p=0.001), married people (37.0%, p=0.001), religion (Christians) (40.5%, p=0.001), income of below 9,999 Kenyan shillings (21.5%, p=0.001), those not working (31.4%, p=0.001), those with chronic illness (43.7%, p=0.001) and those with a history of substance use (54.8%, p=0.000). From logistic regression model family history of substance use and chronic illness were significantly associated with substance use. Professional counselling taking a longer time; above six weeks (p=.002), Peer Support Group (p=.003) and pharmacological treatment (p=.001) were the preferred inteventions for substance use.

Conclusion: There was a high prevalence of substance use among older adults attending Outpatient Clinics at MTRH. The most commonly used substance was alcohol. Factors associated with substance use were: being married, low monthly income, family history of substance use, and having a chronic illness. Most preferred interventions were: professional counseling, peer support group and pharmacological treatment.

Recommendations: The study recommends individualized interventions to address substance use among older adults. MTRH need to screen for substance use and focus counseling services on adults attending the clinics; and NACADA needs to enhance programs specific to older adults to facilitate prevention and minimize substance use.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

The world's population is aging, and as it does, older persons are at an increased risk of using drugs and alcohol(Kuerbis, 2019). Alcohol and illegal drugs are two examples of psychoactive chemicals that can be used to the detriment of older adults health. DSM V describes substance use disorder as continuing to use a substance while having serious problems with it (American Psychiatric Association, 2013). An older adult is defined in this study as someone who is 50 years of age or older. There is no agreed-upon definition of "old" age in the literature, and several studies have used various ages(Carew & Comiskey, 2018).

The lower threshold for older persons was typically 40 years for studies conducted in European nations and 50 years for studies conducted in the USA. The biological physiological changes and mind that start around this age and make one more susceptible to the detrimental consequences of substance use are the only factors used to determine this age (Carew & Comiskey, 2018; Kuerbis, 2019; World Drug Report, 2018).

Contrary to historical trends that have contributed to the misconception that older adults in the modern era never use substances, research shows that substance use among older people is currently on the rise and that it is significant (Kuerbis, 2019) . Studies from several nations demonstrate that although starting with a reduced incidence, drug use among older persons has increased over the past ten years and at a quicker rate than usage among younger people (World Drug Report, 2018). Age-related substance use has long been understudied and only recently has its significance been acknowledged (Carew & Comiskey, 2018) .

According to global population information, older people are becoming a larger percentage of the population worldwide. The baby boom generation, which was born from 1946 -1964 after World War II, is to blame for this. 2019 (UNDESAPD). Because there were not many elderly illicit drug consumers in the past, it was widely believed that older people did not consume drugs. It is important to recognize that the current cohort of older adults differs from previous generations. Many older individuals today were exposed to and used substances earlier in life and have continued these patterns into older age, reflecting a cohort or "baby-boomer" effect rather than new initiation in later life (United Nations Office on Drugs and Crime [UNODC], 2023; National Institute on Drug Abuse .(NIDA, 2024)

In the US, the World Drug Report showed a 12-fold increase from 1996-2016 in the total number of people above 50 years using drugs. In 1996, 900,000 people above age 50 had used drugs in the past year in the US, this number increased to 10.8 million people having used drugs in the previous year in 2016. The increase was particularly significant from 2006-2016, when the number tripled from 3.6 million to 10.8 million people(World Drug Report, 2018). The Substance Abuse and Mental Health Services Administration (SAMHSA) reported that Substance use among older adults is a public health issue as there were more hospitalizations of older adults in the US, for substance related issue(M. (Ph. D. Mattson et al., 2017).

Europe is experiencing a significant aging of its people. The number of Europeans aged 65 and up tripled throughout the twentieth century, while life expectancy doubled. Between 2001 and 2020, it is anticipated that the number of seniors who have substance use issues or who due to requirement for an addiction to drugs would more than double. This is due in part to the magnitude of the baby-boom generation

and their greater rate of substance usage (Gossop, 2008). In Germany, drug use increased more among those aged 40 and up in the previous year than among those younger. Cannabis usage among people aged 55-64 has been expanding at a faster rate than any other cohort, according to annual prevalence data from Germany and the UK (World Drug Report, 2018).

Among Chile, the cumulative prevalence of cannabis consumption increased more in persons aged 45-64 than in younger people. A similar pattern was discovered with cocaine consumption. During the period 1996-2016, the yearly prevalence of cocaine usage decreased for those aged 12-18 and 19-25, but surged 14-fold for those aged 35-44(World Drug Report, 2018). In India, the absolute number of elderly people with SUDs is increasing. This is partly due to the gradual population ageing in India and the rest of the world. A nationwide survey conducted in 2015 revealed that, around 70% of current of psychoactive substances users were aged 40 years or less, while only 30% were in the middle age and elderly(Sarkar et al., 2015). Because of age and physiological changes, older people are more susceptible to chronic illnesses; up to 80% of older people have chronic diseases(Milton et al., 2008).As a consequence, this group has a higher likelihood of using drugs more frequently than the general population. Clinical, societal, and economical advancements are impacted by geographic variances and/or changes in pharmaceutical use over time. It's critical to recognize, comprehend, and address these pharmaco-epidemiological disparities. According to a World Health Organization (WHO) projection from 1998, 5.6 percent of Pakistan's population is over 60, and that number could rise to 11 percent by 2025(Zafar et al., 2006)).

Drug use investigation decisions are required due to the paucity of data on drug use among elderly individuals in developing nations and because of the aging global population. Similar to that, it encourages enhanced contact between researchers, healthcare authorities, and practitioners in the field (Sarwar et al., 2017). Drug utilization research assesses how drugs are used and how they affect society. It also helps to prioritize a nation's medical needs by guiding the choosing of drugs for national prescriptions. Data from drug usage reviews are useful resources for assessing the quality of healthcare(Sarwar et al., 2017). According to a study on older individuals and problem drinking in South Africa, those 60 and over typically engage in a moderate rate of dangerous drinking. These findings were different from most studies in low and middle income countries that found high alcohol problem drinking among older adults(Peltzer & Phaswana-Mafuya, 2013).

According to Okonoda, James, Piwuna, and Envuladu (2020), AUDs in the elderly are linked to physical, emotional, and social deficits, as well as the following traits (Okonoda et al., 2020) . Women in particular are more at risk of acquiring "telescoping" dependency, which refers to the rapid growth of dependence. Older persons who drink heavily are much more likely to endure social marginalization and financial difficulties. Alcohol is the substance which older people abuse most, despite the fact that the frequency of AUDs decreases with age. A variety of performance issues in the areas of cognition, social interaction, psychology, and physical health are linked to AUDs. Male seniors who have a background of frequent drinking are five times more likely to get psychological disorders. Although alcohol and other drugs use among the elderly presents a number of difficulties, medical staff detection is frequently substandard, resulting in underdiagnosis, misdiagnosis, and insufficient treatment. The symptoms of alcoholic beverages and drug use problems have a high

correlation with other prevalent comorbidities in the aged, such as loss of memory, despair, other psychotic disorders, and other maturity level physical ailments, according to health professionals. Substance abuse may either cause problems or make them worse (Okonoda et al., 2020).

Kenya, like the other nations, has seen a growth in substance usage in adults, age 50 years and above; with larger usage of known substances such as khat and cannabis, whilst drugs that have lately become available in Africa, such as cocaine and heroin, believed to be used more regularly among those aged 18-24 (World Drug Report, 2018). According to a national survey carried out by NACADA in 2017, 4.9 million Kenyans between the ages of 16 and 65 were actively using it at most one drug. Alcohol had 3.3 million users, followed by cigarettes with 2.3 million and khat with 1.1 million active users as the most popular substances (NACADA, 2019). NACADA reported that the country continues to face an increase in the burden of SUDs which is made more complex by low affordability and accessibility of treatment facilities. (World Drug Report, 2018) While NACADA is making progress in addressing drug and substance addiction concerns in Kenya, the issue of drug usage among older individuals has not been specifically addressed in the organization's goal (NACADA, 2019).

In Kenya, the 2022 *Status of Drugs and Substance Use* national survey reported that approximately 17.5% of the population aged 15–65 years currently used at least one psychoactive substance, with alcohol (11.8%) and tobacco (8.5%) being the most prevalent, and evidence of increasing cannabis use by about 90% over the preceding five years. However, these national estimates do not disaggregate substance use by older age groups (50+), underscoring the gap in local data on older adult substance use (NACADA, 2022).

1.2 Problem Statement

The population of older adults is rising in Kenya and in the world. The life expectancy is increasing and in 2019, it was at 66.44 years in Kenya. A study investigating growing old in Kenya found that there is ignorance for planning both by the government and citizens in Kenya that leads to no financial and mental preparation for old age (Gacheru, 2009). The productivity losses of Disability Adjusted Years lost among older adults in Kenya, resulting from Mental and Substance abuse disorders led to an equivalent of $ 158,285,962 (3.5%) of the non-communicable disease indirect costs (Kirigia, Mburugu, & Huka, 2017). This demonstrates that Kenya suffers significant losses as a result of the sickness and mortality of senior citizens, with substance addiction playing a part.

Alcoholic beverages and drug misuse have considerably increased throughout the nation and according to a 2017 NACADA national study, 4.9 million Kenyans between the ages of 15 and 65 were currently using at least one drug. NACADA developed strategies to deal with youth substance addiction in the 2019–2022 strategic plan (NACADA, 2019). However this plan leaves out the older adults even though the increase in use among older adults as published by the World Drug Report (2018) were acknowledged in this plan (World Drug Report, 2018).

Kenya's health sector is predominantly focused on curative therapy, which does not address the entire health needs of older persons in terms of chronic illness prevention, rehabilitation, and treatment (Gacheru, 2009). Because current research on substance usage among the elderly is inadequate, estimating the scope and ramifications of this concern is difficult (Gossop, 2008). There is limited literature available from Africa, and this may explain why the health sector has not put in place measures to deal with

Substance use among the elderly. Therefore, there is need to conduct more studies to fill this gap.

1.3 Research Questions

- What is the prevalence of substance use among older adults at MTRH?
- What are the risk factors associated with substance use among older adults at MTRH?
- What are the preferred interventions for substance use among older adults at MTRH?

1.4 Research Objectives

1.4.1 Broad Objective

To assess substance use among older adults, 50 years and older, attending outpatient clinics at MTRH, Eldoret, Kenya.

1.4 .2 Specific Objectives

- To determine the prevalence of substance, use among older adults at MTRH.
- To establish the risk factors associated with Substance use among older adults at MTRH.
- To assess preferred interventions for substance, use among Older Adults at MTRH.

1.5 Significance of the study

This study is vital in addressing the underexplored issue of substance use among older adults in Kenya, particularly those aged 50 and above attending outpatient clinics. It fills a critical knowledge gap by providing local data that can inform healthcare policies, clinical practices, and public health interventions. With Kenya's aging population and limited research on substance use in this group, the findings will help integrate substance use screening into geriatric care, improve patient outcomes, and guide future research. The study also highlights the broader implications for public health planning and resource allocation.

1.6 Scope of the Study

The study focused on older adults seeking treatment for various conditions at MTRH. The study assessed the prevalence and the risk factors associated with substance use among older adults. The prevalence of substance use were limited to the types of substances used and the Psycho-social factors associated with substance use and preferred intervention for substance use among older adults. The study did not dwell on substance use disorders.

1.7 Justification of the study

Older persons experience a significantly higher burden of comorbid medical and psychological disorders compared to younger populations. Globally, approximately 70–80% of adults aged 60 years and above live with at least one chronic medical condition, and many experience multimorbidity (World Health Organization [WHO], 2022). Common conditions include hypertension, diabetes mellitus, cardiovascular disease, chronic respiratory illnesses, depression, and anxiety disorders. The coexistence of these conditions increases vulnerability to substance-related harm.

Substance use in older adults presents unique clinical risks because of age-related physiological changes, polypharmacy, and altered pharmacokinetics. With advancing age, there is reduced hepatic metabolism, decreased renal clearance, lower total body water, and increased body fat composition. These changes lead to higher blood concentrations and prolonged half-lives of alcohol and other psychoactive substances, even at lower doses (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2023; Kuerbis et al., 2014). Consequently, older adults are more susceptible to intoxication, drug interactions, falls, cognitive impairment, and overdose.

Polypharmacy further complicates this risk. Older adults are more likely to be prescribed multiple medications for chronic illnesses. Alcohol and other substances may interact adversely with antihypertensive, hypoglycemic agents, benzodiazepines, antidepressants, and opioids, worsening underlying conditions such as hypertension, diabetes, and anxiety disorders (WHO, 2022). Even low levels of alcohol consumption may significantly increase morbidity in this population.

Although historically fewer older adults sought treatment for substance use disorders (SUDs), recent global reports indicate a rising trend in substance use among aging populations, largely due to demographic shifts and cohort effects (United Nations Office on Drugs and Crime [UNODC], World Drug Report 2023). The baby boomer generation, which had higher lifetime exposure to substances, is now entering older age, contributing to increasing prevalence in this demographic.

Detection of substance use among older adults remains challenging. Symptoms of substance misuse such as confusion, memory loss, sleep disturbances, falls, or mood changes often overlap with common geriatric conditions including dementia, depression, and frailty. This overlap contributes to underdiagnoses and misclassification, particularly in primary healthcare settings (NIAAA, 2023).

Psychosocial transitions further heighten vulnerability. Aging is frequently accompanied by bereavement, retirement, social isolation, reduced income, and declining physical or cognitive function. These stressors may precipitate initiation or relapse of substance use, even among individuals with long-term sobriety. Studies show that bereavement and loneliness are strongly associated with increased alcohol use in later life (WHO, 2022; UNODC, 2023). In the Kenyan context, anecdotal and

media reports similarly highlight alcohol use following spousal loss, reflecting broader psychosocial vulnerabilities among older men.

Despite these risks, literature on substance use among older adults in Kenya remains scarce, with most national surveys focusing on populations aged 15–65 years without detailed disaggregation for those aged 50 years and above (National Authority for the Campaign Against Alcohol and Drug Abuse [NACADA], 2022). This gap limits understanding of the magnitude, patterns, and health consequences of substance use among older Kenyans.

1.8 Study Limitation

One major limitation of this study is the reliance on self-reported data using the WHO ASSIST tool. Older adults may underreport their substance use due to stigma, social desirability bias, or poor recall. To mitigate this, the interviews were conducted in a private, confidential setting by trained research assistants who emphasized anonymity.

Secondly, the cross-sectional nature of the study limits the ability to infer causal relationships between variables such as age, health status, and substance use. It provides only a snapshot of substance use patterns at a single point in time, without capturing changes over time. To address this limitation, the study design and analysis clearly acknowledged its descriptive scope. Although causality could not be established, associations were discussed in light of existing literature.

Another limitation is that the study was conducted at a single national referral hospital, which may limit the generalizability of the findings. Patients at this hospital may not represent the broader older adult population, particularly those in rural or community-based settings. To minimize this impact, efforts were made to recruit a diverse range of patients from various departments within the outpatient clinic.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Overview

This chapter reviews the literature available on drug abuse among the elderly. It will summarize the information from other researches carried out in the same field of study.

2.2 Concept of Substance Use

WHO defines psychoactive drug/substance use as the use of substances that when taken, have the ability to alter an individual's mood, consciousness and thinking process(WHO, 2004). The problem of drug use and abuse is often associated with young people but in reality, it has no age limits(Gossop, 2008).

Another definition of substance abuse is the risky or harmful use of stimulants like alcohol and illicit substances. The most often misused substances are liquor, cannabis (ganja), ganja, hashish (charas), different cough medications, hypnotic pills, brown sugar, opium, coke, tobacco (cigarettes, gutka, and pan masala), and other drugs. Drug abuse is another name for substance abuse. A pharmaceutical product or a found naturally material that is mainly utilized to change an existing process or state is called a drug (physical, psychological, or biochemical). Any chemical that alters a person's physical or mental functioning is referred to as a drug (Jordan & Andersen, 2017).

To use them is to abuse them, drug abuse were classified as an illness in 1956 by the WHO and the American Psychiatric Association, it is defined as the illicit use of any found naturally or pharmaceutical chemical for the purpose of changing a person's feelings, thoughts, or behaviors, without understanding or pondering about the harmful physical and mental side-effects that are induced (Jordan & Andersen, 2017).

The World Health Organization categorized use of these substances into three categories according to their socio-legal status; Substances used for medication, Illicit substances use and Legal/licit substance use (WHO, 2004). Licit substances like alcohol also have addictive properties and can cause serious problems for older adults. Older persons use more prescription and over-the-counter medications than middle-aged adults(Kuerbis et al., 2014a) . Some elderly people experience early or late onset (early start) drug use problems and continue to use drugs dangerously well into old age. Other elderly people have late start elevated drug dependency due to lifestyle changes and stresses that are common at this stage of life(Kuerbis, 2019)

Drugs are any substances that, when consumed, interfere with the body's regular psychological and biological processes, especially those involving the nervous system (Escandon & Galvez, 2006). Self-administration of any substance in a way that goes beyond social or medical norms within a given culture is referred to as drug abuse (WHO, 2003). Since both legal and illegal drugs have an impact on a person's mental health, they are both regarded as psychoactive drugs (NACADA, 2012).

The use of licit or lawful drugs and substances is socially acceptable and does not violate any laws. These substances include alcohol, cigarettes, and khat (miraa). Contrarily, the use, possession, and sale of illegal substances and drugs are prohibited and socially unacceptable. Examples of such drugs include cannabis, heroine, ecstasy, lysergic acid and mandrax and diethylamide. The majority of youth abuse prescription medicines(Muregi, 2017) In California, a study by Reed et al. (2020) found that psychoactive chemicals cause consumers to experience feelings of excess energy, euphoria, stimulation, depression, relaxation, hallucinations, transitory well-being, tiredness, and sleepiness. The consumer develops a physical and psychological addiction as a result(Reed et al., 2020). Drug and substance misuse can be lethal

because of their toxicity and addictiveness. They harm the body's essential organs and cause their degeneration, leading to conditions including liver cirrhosis, renal failure, and heart attacks. This makes the issue of drug and substance misuse in society complicated and calls for a lot of focus.

Addiction develops from substance abuse as tolerance and dependency grow. When a person develops a tolerance to a medication, they need progressively more of it to achieve the same results. The user is forced to raise the dosage of the drug they consume because earlier, smaller doses are no longer functional. Drug dependence grows over time. Both substance abuse and addiction require an unhelpful habit of drug use. Addictions indicators include the inability to fulfill crucial role responsibilities, legal concerns, and a rise in danger habits or exposure to harmful conditions(Fisher et al., 2016).The physiological signs of tolerance and symptoms of withdrawal, abstinence from critical duties due to substance need, time spent engaging in drug-related actions increasing, substance use lasting longer than anticipated, and continued use notwithstanding the deteriorating problems brought on by substance use are all indicators of substance addiction(Fisher et al., 2016).

While some medications only result in addictive behaviors, others also have both physical and mental side effects. If the drug consumption is stopped suddenly after person develops dependence, withdrawals symptoms are present. In a way, the body "beginn to protest" against the drug's unavailability by becoming "confused" According to the drug type taken, withdrawal effects might vary from little pain to seizures(Fava et al., 2015).

The severity of withdrawal effects is influenced by the physical health of the user, the substance taken, how much is consumed, and the length of abuse. The effects brought

on by a drug's presence in the body are typically reversed by the indications of opioid withdrawal. For instance, diarrhea serves as one of brown sugar's withdrawal effects yet it also causes nausea. This makes it more difficult for the person to give up narcotics. He must keep abusing the drug in order to avoid the unpleasant withdrawal symptoms that he wishes to avoid. As a result, the user is forced to keep using narcotics even after becoming aware of their negative effects(Fava et al., 2015).

2.3 Prevalence of Substance Use

One of Kenya's major societal issues is alcohol and drug addiction (ADA), which has numerous and obvious public health effects. Half of Kenya's drug users are aged 10 to 19, with more than 60% living in urban regions and 21% in rural ones (World Drug Report, 2018). The typical age of first use of chang'aa (local/traditional brew) and cigarettes is 9 years, and half of these kids have attempted chewing/sniffing tobacco, traditional liquor, and miraa by the age of ten. The median age of packaged alcohol usage is 11 years, while bhang use is 14 years. The large bulk of tobacco smokers (90 percent) smoke every day, whereas slightly more than 70% of miraa users and persons who sniff or chewed tobacco products use the drugs on a daily basis (World Drug Report, 2018). This could imply that the majority of adult users in Kenya began at an earlier age (early onset).

2.3.1 Alcohol

Alcohol remains the most commonly used substance across older people despite increased rates of illicit and prescription drug usage(Kuerbis et al., 2014a).According to the WHO (2018), a global forecast to 2025 indicates that both the prevalence rate of present use and alcohol intake would increase. Older persons drink more frequently than AUD, and at-risk drinking is more likely to be the cause of the detriment to their wellness and health. According to the Diagnostic and Statistical Manual of Mental

Disorders, the prevalence of alcohol use throughout adults 65 and older in the overall population in 2002 were predicted to be 1.2% for binge drinking and 0.24 percent for alcohol addiction. Prevalence estimates that account for people over 50 are higher. The Drugs in Focus Series by M. Gossop claims that older adults have a moderately high chance of acquiring problems with alcohol(Gossop, 2008)

A study focusing on Problem drinking among older adults and the associated factors conducted in South Africa found that people of 60 years and older engaged in moderate rate to risky alcohol drinking(Peltzer & Phaswana-Mafuya, 2013). Between 2007 and 2017, there was an increase in the alcohol use across individuals aged 15 to 65 nationwide (NACADA, 2019). In 2017, Kenya had a 12.2 percent alcohol consumption rate.(NACADA, 2019). An analysis of current alcohol use in Kenya showed that there were currently, 3.3million people using alcohol in Kenya, making it the most commonly used substance(NACADA, 2019). Nairobi, the Western and Eastern areas have the highest frequency. The findings also revealed that the rate of current alcohol usage was greatest among male participants and those living in cities.

Numerous researchers have conducted studies on workplace drunkenness in Kenya and elsewhere and offered suggestions on how to go forward, yet the issue still exists. According to a NACADA poll from 2011, 56 percent of public servants have ingested alcohol, 23 percent have used tobacco, 16 percent have chewed khat, 6.6 percent have smoked bhang, and 1.3 percent have used other drugs (such as mandrax, heroin, or cocaine) at least once in their lives. According to this survey, alcohol is the substance that public officers abuse the most, with a prevalence rate of 33%. Other information included the fact that 17% of public sector workers consumed alcohol and allegedly did so with coworkers. Therefore, more efforts should be taken to ensure that there

are sober government employees by implementing workplace initiatives to combat alcoholism in public organizations (NACADA 2011).

Alcoholism is typically treated with detoxification, counseling, and drugs like Vivitrol and Anti-abuse that block alcohol cravings or make drinking uncomfortable. Both in-patient facilities and outpatient settings are possible for receiving care. Alcohol consumption is prevalent in urban slums, which is a phenomenon that needs to be understood and handled by government and health professionals. Studies show that culture has a significant influence on how much alcohol young people consume. According to new research on young people in seven nations, whether young people get drunk as a deliberate behavior or as an unexpected result depends on the country they reside in. According to this study, culture had a bigger impact on young people's attitudes on alcohol and intoxication than did age or sex

Utilizing a stratified and purposive sampling strategy, 486 PWD were detected in the sample. To demonstrate the quantity and pattern of drug use among PWD, data were gathered using a questionnaire survey, and statistical analysis was carried out using percentages and frequency of descriptive statistics. According to the data, 35% of those surveyed had used drugs, with most doing so between the ages of 15 and 19. 43.3 percent. Furthermore, 13.6% said they had used drugs at least once in the preceding year, 7.4% in the month leading up, and 3.9% every day. The most popular drugs were marijuana (14.8%), khat (14.8%), cigarettes (19.6%), and alcoholic beverages (28.1%). The results showed that PWD had a greater level of drug use compared to the overall population for the majority of drugs. The findings demonstrate the pressing need for laws to specify how ADA prevention and treatment initiatives for PWD should be implemented.

Han, Moore, Sherman, Keyes, and Palamar (2019) found that among people aged 50, the incidence of previous binge alcoholic beverage use and AUD significantly increas ed from 2005/2006 to 2013/2014.This increase was considerable for prior excessive d rinking at 19.% (linear trend p0.001) and for AUD at 23.3 percent (linear trend p0.035) (Han et al., 2019).

Although men seemed to have a higher incidence of binge drinking and AUD than wo men, both women have shown dramatic increases. Hispanic race, male gender, and drug use were linked to excessive drinking in adjusted analyses utilizing gathered information, whereas male gender, drug use, prior sadness, or psychiatric disorder were linked to AUD. In the US, binge drinking and AUD are on the rise among older people, and females are more likely to exhibit these tendencies. To tackle the increasing number of seniors who are abusing alcohol, providers and policymakers must be aware of these trends.

In their study, West, Severtson, Greenn, and Dart (2015) noted that alarming rises in rates of misuse and intentional misuse of these drugs have coincided with the large increases in the prescription usage of prescription opioids over the last twenty years. The study examined recent trends in abuse and misuse as well as the factors relating to death in older people sixty years and above (West et al., 2015)Although older people were less likely to abuse or misuse prescription opioids than younger folks, death rates among the elderly had a growing linear trend (P 0.0001) and exceeded those of younger individuals in 2012 and 2013. But at the other hand, mortality rates among younger people increased and decreased during the course of the course of the study, with current rates decreasing (P = 0.0003 for a quadratic trend). Older people showed a developing linear trend for suicide intent, whereas younger adults showed a

rising and subsequently falling trend for this measure (P 0.0001). (P 0.0001 for quadratic trend).

According to Kay et al. (2016), insomnia worsens with age, is significantly connected with depression, and has recognized as a health risk for suicide in multiple studies. Suicidal thoughts and non-suicidal depression groups had more acute sleeplessness than the attempted suicide group (p.05). After controlling for potential confounders such as demographics, cognitive capacity, alcohol addiction in the previous month, degree of depressive mood, anxiousness, and general health burden, and the differences remained. Furthermore, the existence of post-traumatic stress disorder, benzodiazepine usage, or interpersonal issues could not explain the increased severity of sleeplessness in the suicide attempt group(Kay et al., 2016).

Assarin and Lankarani (2016) undertook a cross-sectional study of 1,493 elderly Americans (age 66 or older) who were African Americans (n = 734) and White (n = 759). The Religion, Ageing, and Wellness Study from 2001 provided the information. Race, demography, socioeconomic status, and alcohol usage were all assessed. The level of education was an independent variable. The end result was alcohol consumption. The primary moderator was race. For data analysis, logistic regression was utilized. In the pooled sample, education was related with the likelihood of ever drinking. Nevertheless, race correlated with educational status on alcohol, indicating that education has a smaller influence on getting drunk for Blacks than for Whites. Without controlling for other factors, Whites who completed both high school and university had higher odds of never drinking. Among Blacks, finishing high school but not graduating was linked to ever having a drink(Assari & Lankarani, 2016).

Grucza et al. (2018) employed a meta-analytic method to evaluate trends within the prevalence of heavy alcohol use from six often or irregularly conducted national surveys in order to reconcile these contradicting findings (Grucza et al., 2018).For available points of time between 2000 and 2016, annual or quarterly prevalence estimates for the past 12 months or 30 days of alcohol usage and excessive drinking were made. To get meta-analytic tendency estimates for the wider public as well as according to gender, ethnicity, age, and academic achievement, estimates were integrated spontaneously linear regression in which incidence was viewed as a reasonably long time function. According to meta-analysis estimates, the rate of alcohol use and excessive drinking increased by an average of 0.30 percent (95 percent confidence interval [CI]: 0.22 percent, 0.38 percent) and 0.72 percent (95 percent CI]: 0.46 percent, 0.98 percent), respectively, each year.

Despite the significant between-survey variation in trend estimations, there was a definite stability in how much each demographic group was affected by trends. For instance, the majority of surveys found that alcohol consumption and heavy drinking frequency differences were significant and advantageous for persons aged 50 and above, but smaller, unfriendly, or inconsequential for those aged 18 to 29.

According to Breslow, Castle, Chen, and Graubard (2017), the bulk of US older persons use alcoholic beverages. The elderly population is expected to nearly double by 2050. Significantly more consumers are likely. Unadjusted rate of current drinking increased by 0.7 percent per year among males aged 60 and up (AAPC, p=0.02); daily amount and prevalence of excessive drinking remained unchanged. The adjusted results were comparable. Unadjusted incidence of current drinking increased by 1.6 percent per year among women aged 60+ (AAPC, p0.0001), although average volume remained unchanged; prevalence of binge drinking increased by 3.7 percent per year

(AAPC, p0.0001). The adjusted results were comparable. The trends differed depending on the age group and birth cohort. The unadjusted rate of current drinking among men born 1946-1954 increased by 2.4 percent annually (AAPC, p=0.02); adjusted data were non-significant(Breslow et al., 2017).

2.3.2 Tobacco Use

Among the elderly, tobacco use is rather common, with over 14% confessing to smoking in the preceding year and considerably and over 6% using both tobacco and alcohol in that time frame(Kuerbis et al., 2014a). Clinical trials looking at stop smoking therapy, as per Kuerbis et al, have revealed that older adults who utilize it are lengthy, persistent smokers who also are physiologically addicted to nicotine (Kuerbis et al., 2014).

The prevalence of current smoking among U.S. adults has dropped over the past few years, with a prevalence of 13.7% in 2018, as per Corneliusm, Wang, Jamal, Loretan, and Neff (2020). However, a variety of combustible, quasi, and electronic electronic cigarettes are available in the United States. The CDC looked at data from of the 2019 National Health Interview Study to analyze the most recent numbers of tobacco use among Americans over the age of 18 at the national level (NHIS). Eighty-five percent of current smokers (cigars, cigarettes, or pipes) utilized combustible products, while 18.6 % used two or more. Americans who were non-Hispanic, male, and older than 65 were more prone to consume any contemporary tobacco product(Cornelius et al., 2020).

Adults who identify as American Indian or Alaska Native (AI/AN), have a GED as their level of educational attainment, make less than $35,000 per year in family income, are lesbian, gay, or bisexual, are uninsured adults or Medicaid recipients, have a disability, or have mild, moderate, or serious generalized anxiety disorders.

The highest rate of e-cigarette use was recorded among persons aged 18 to 24 (9.3%), while more than half (56%) of these teenagers recorded never having smoked cigarettes. By incorporating extensive, scientific proof population-level measures (such as smoking rising prices, stringent smoke-free regulatory requirements, increased anti-tobacco TV commercials, and setback abstinence coverage), along with regulatory oversight of the manufacturing, marketing, and sale of all tobacco products, it is possible to lower tobacco-related illness and disease in the United States(Cornelius et al., 2020).

Hu et al. (2016) found that while adult smoking cigarettes has dramatically declined over the past 50 years in the United States, the usage of novel tobacco products has increased recently (1–3). Data from the 2013–2014 National Adult Tobacco Survey were examined by the Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA) to estimate tobacco use among 18-year-olds in the United States (NATS). In 2013–2014, 21.3 percent of US citizens used tobacco daily or occasionally, compared to 25.5 percent who smoked cigarettes daily, occasionally, or rarely. Notwithstanding attempts to curb smoking cigarettes, individuals continued to smoke smokes as the most popular tobacco in 2013–2014(Hu et al., 2016).

Adults who were unmarried, wedded, or not cohabitating (26.1%) or separated, kept separate, or bereaved (26.1%) had a higher incidence than those who were cohabitating or married (18.0 percent). The incidence was greater in LGB people (32.1%) than in heterosexist adults (32.1%), and that was higher among people with a household wealth of $20,000 per year (32.2%) than in people with a family income of $100,000 per year (12.1 percent). 20.7 percent. When the term "sometimes" was

inserted into the definition of usage, the frequency patterns remained virtually unchanged(Huda, 2019).

In their study, conducted by Creamer et al. (2019), the authors found that older persons in the United States acknowledged to using all types of tobacco products, including cigarettes, Cubans, electronic cigarettes, smokeless tobacco products, and pipes. More than half of those who used tobacco goods did so with combustibles (cigarettes, cigars, or pipes), while 18.8% used two or even more. Men, seniors over 65, those who identify as both American Indian and Native Alaskan, and GED holders are excluded from this category. In the years 2017–2018, more people used tobacco products and e-cigarettes. Between 2009 and 2018, there was a considerable increase in each of the three cigarette quitting indicators. The prevalence of nicotine sickness and death in the US can be decreased by improving system-based population treatments and regulating the production, marketing, and distribution of all tobacco products(Creamer et al., 2019).

2.3.3 Khat

Khat (miraa) was found to be the third most commonly used substance according to the national survey conducted by NACADA in 2017(NACADA, 2019). By 2017, there were 1.1 million Khat users in Kenya, according to NACADA. The world drug report showed that Khat was among the most commonly used drug among older adults in Kenya(World Drug Report, 2018).

According to Girma, Mossie, and Getu (2015), Khat (Catha edulis Forsk) is a psychostimulant herb that is widely farmed and consumed in Ethiopia. Weak research exists on the connection between khat use and muscle mass. The study discovered that khat chewers were lighter and less fat than non-chewers, but there was no association among khat chewing and fat-free mass index (FFMI). Furthermore, when

compared to males, older people and women were heavier and had less lean body mass. Cigarette smoking was found to be inversely associated to body mass index (FMI). As a result, those who smoke both khat and cigarettes have a higher smoking profile and weigh more than light smokers(Girma et al., 2015).

Geta, Woldeamanuel, Hailemariam, and Bedada (2019) report that 1198 individuals took part in the survey, with a 99.8% response rate. Khat users ranged in age from 34 to 11.2 years old, whereas non-users ranged from 34.73 to 11.4 years old. The mean systolic and diastolic blood pressure levels ranged from about to were higher than those of virtually (p 0.001). Diastolic blood pressure was substantially more common in khat chewers than in non-chewers (17.4% versus 8.7%, p 0.001). Both systolic and diastole blood pressure were shown to be substantially linked with the length of time spent eating khat (Beta coefficient = 0.83, p 0.001). It has been demonstrated that sex, age, weight, and alcohol usage are significantly linked both with systolic and diastolic blood pressure(Geta et al., 2019).

2.3.4 Illicit Substances

According to the 2012 National Survey on Drug Use and Health, the baby boomer generation is largely to blame for the sharp rise in the percentage of Americans aged 50 to 65 who reported using illegal drugs in the previous month (from 1.9 percent to 3.6 percent to 7.2 percent) (M. Mattson et al., 2013). Cannabis use is much more prevalent among elderly people than other illicit drug use(Kuerbis et al., 2014a). Less than one million adults aged 50 and older admitted using coke, stimulants, magic mushrooms, meth, or heroin in the year before compared to 4.6 million who used cannabis(M. (Ph. D. Mattson et al., 2017).

The national survey conducted in 2017 by NACADA showed that 269959 people in Kenya were using Cannabis in 2017. The national prevalence for psychoactive

substance use was 18.2%. A larger segment and number of elderly adults are at risk of alcohol misuse, prescription drug misuse, and illegal substance use, even though the current numbers of older people using substances and suffering from substance use disorders are modest compared to the general population(Kuerbis et al., 2014a).

In their investigation, Carew and Comiskey (2018) included a total of 76 titles for review. The majority of studies on elderly people use medicinal drugs and alcoholic beverages. Older drug addicts are becoming more prevalent and have a distinct profile; many of them enter treatment for the first time between the ages of 50 and 70. Findings show that although the number of heroin therapy hospitalizations is declining, the mean lifespan of those admitted is rising, and that the definition of old is not universal. Older patients have greater success with therapy than younger patients, while older women have better treatment results than older men. Older opioid addicts can be divided into two types (early/late onset)(Carew & Comiskey, 2018).

In their study, Carew and Comiskey (2018) reviewed 76 different books. Alcohol and prescription drugs are included in the majority of studies on older people. The number of older drug users is rising, and they have a distinct character. Many of them seek treatment for the first time between both the age of 50 and 70. Findings indicate that (1) there are fewer admissions for opioid treatment while the mean age of therapy hospitalizations is rising and (2) there isn't any consensus on what constitutes old. (4) Older patients beat younger counterparts on the basis of therapeutic efficacy, and (5) older women exceed older men in regard to treatment outcome measures. There are two sorts of elder opioid drug addicts(Carew & Comiskey, 2018).

Iaboni, Bronskill, Reynolds, Wang, Rochon, Herrmann, and Flint (2016) state that benzodiazepine drug prescription rates for elderly people have been declining due to its well-documented negative effects. Sedative medications like trazodone and quetiapine are frequently used off-label to treat behavioral or sleep problems in elderly people. The distribution of trazodone and quetiapine grew over time, but benzodiazepine dispensing decreased. This tendency was most noticeable in the elderly and those suffering from dementia. Psychotropic polypharmacy was related with the use of benzodiazepines, trazodone, and quetiapine. Overall trends in long-term care and in the neighborhood were comparable. While the use of benzodiazepines among older people in Ontario has declined over history, there has been a parallel trend toward the off-label, low-dose administration of trazodone and quetiapine as well as psychiatric pharmacological treatments. These prescribing trends place a focus on sedative replacement and highlight how crucial it is to confirm the effectiveness and safety of this method(Iaboni et al., 2016).

In their study, Tannenbaum, Diaby, Singh, Perreault, Luc, and Vasiliadis (2015) used the US Medicare viewpoint and a conservative yearly chronological structure to undertake a model-based economic evaluation (decision tree). A fake cohort of Medicare beneficiaries experiencing insomnia was used in the experiments. The major outcome metric was the additional cost per acquired performance of life year (QALY). Sensitivity studies were used to assess the reliability of the base-case results. The cost of sedative-hypnotic medication and the deterioration in the quality of life for the elderly are substantially exaggerated when drug-related accidents and hospitalization are not taken into consideration. The use of sleeping pill medications as first-line treatment for elderly sleep disorders should be reexamined by pubic payers(Tannenbaum et al., 2015).

According to Hendricks, Thorne, Clark, Coombs, and Johnson (2015), suicide is a substantial corollary of having poor mental health and is a major cause of death worldwide. Although the consequences of conventional hallucinogen usage on suicidality are not yet clear, they might offer long-term advantages for mental health. In more over 190,000 selected individuals from the National Survey on Drug Use and Health's previous five years (2008-2012), the researchers examined the relationships between traditional psychedelic use and mental trauma and suicidal behavior while controlling for a number of factors. These results support the idea that classic psychedelics' most restrictive legal status should be reviewed in order to aid in literature review and insinuate that even more serious medical study with classic psychedelic drugs is warranted. They also support the idea that classic psychedelics may have potential in the suicide prevention(Hendricks et al., 2015).

In Kenya, many illicit substances are used. The two most well-liked traditional brews, according to Okoyo et al. (2020), are chang'aa, or distilled spirits, and *busaa*, a fermented beer made from cereal. *Chang'aa* can be prepared with bananas in addition to the sugar and *busaa* garbage that are often used in its production. *Busaa* is normally made from the most abundant supply of grain, whether it be maize, millet, or sorghum(Okoyo et al., 2022). Drinking traditional brew is a widespread practice during many social and religious rituals, despite the fact that it is illegal to produce and sell it in Kenya (Carey et al., 2015). For instance, *busaa* drinking is an essential part of group genital mutilations, marriages, and funerals. Traditional brew consumption, once dominated by older males, has mainly evolved into a commercial industry with female and young consumers and is now thought to be produced and marketed more commonly by women (Menya et al., 2019).

2.4 Risk Factors Associated with Substance Use Among Older Adults.

The majority of research on the correlations and determinants of drug use in Aging Adults has focused on alcohol consumption(Kuerbis, 2019).Individual, societal, and family things that contribute to or are related with harmful drinking in older individuals may be applicable to other substances as well(Kuerbis et al., 2014a)

2.4.1 Socio- Demographic Factors and Substance Use

Social changes associated with aging may raise the likelihood of substance use in Older Adults. Being divorced, separated, or unmarried is connected with higher or dangerous drinking in later life, albeit this varies by gender (Kuerbis et al., 2014). Drug users continue to consume drugs as they mature. A study by Koechl et al. (2012) found that social exclusion is a significant risk factor for substance use, which is increasing with age due to a lack of support and loneliness; causes of isolation and loneliness include singleness, childlessness, living alone, declining health, a lack of companionship, and other adverse life events (Koechl et al., 2012) Lack of religious affirmation is also associated with increased category consumption levels, which were determined by a shift in drinking frequency and volume(Simoni-Wastila & Yang, 2006)

Demographic factors like being male, financial stability, young-old (those beginning their late life) and having less than a college education have been linked with excesss alcohol consumption during their late adult age (Kuerbis, 2019; Merrick et al., 2008; Platt et al., 2009; Wu et al., 2021). Having more financial capacity or wider financial perspectives, the only demographic factor that predicts greater consumption in later age, is only one of those factors(Kuerbis et al., 2014a). Additional social characteristics linked to substance use include financial stability, mourning, high

present workplace stress or increased job satisfaction full retirement, and unanticipated, unplanned, or mandatory retirement (Moos et al., 2010).

Man's health is influenced by his socio-cultural surroundings, which influences his psychophysical growth and well-being. His life-style and behavior are influenced by the same socio-environmental forces. History teaches us that man always has sought solace from the hardships and sufferings of daily life in the shape of medications, plants, and potions capable of easing tension, anxiety, exhaustion, aggravation, and even the change of truth into meditative or euphoric states. Among these drugs, alcohol seems to have legitimacy and approval in some civilizations when taken rationally and in moderation. Their applications are frequently related with a number of cultural rituals. So, why do some of these medicines pose significant social and public health issues today? The answer rests in the enormous power of public opinion in identifying real medical and public health concerns. Society has requested regulatory and population health action due to these drugs' detrimental impacts on one's health. These include tobacco, alcohol, heroin, amphetamine, and marijuana (Roy & Miah, 2017).

Major depressive illness was the most prevalent co-occurring mental disorder in our community, per Angoorani, Jalali, and Halabchi (2018). (18.1 percent). The majority of our cases (71.6 percent) originated in metropolitan areas, which may represent our country's increasing urbanization. The majority of responders had completed at least the upper secondary level of education. It could be due to improved educational facilities in Bangladesh these days, as well as the fact that the majority of the patients hailed from well-off families (Angoorani et al., 2018).

Substance misuse is one of the complex social issues, claim Jalilian et al. (2015). Having a better understanding of the sociodemographic characteristics of substance abusers could make this issue easier to handle. University students who live away from home run the danger of smoking and excessive drinking. It appears that students are becoming a high-risk population for substance usage as a result of moving and being estranged from their family. Furthermore, in the current study, mothers' educational qualification was a protective measure against smoking, demonstrating the useful function of mothers in bringing training concerns to their children, which might be regarded as a possibility in training schedules aimed to this group (Jalilian et al., 2015).

In their study, Mohammadi et al. (2020) found that young/adolescent boys are disproportionately affected by substance misuse (p 0.05). Male and female substance abusers differ significantly from one another (p 0.05). Four to five years after their first indulgence, some of them seek treatment. A third of abusers leave school before they complete their secondary education (p 0.05). The parents of abusers make up more than half of the population and are either divorced, separated, or never wed (p 0.05). Regarding racial or religious affiliation, there were no notable differences between abusers and non-abusers. The number of siblings in the household and crime are other characteristics that are positively associated to substance misuse. Surprisingly, despite the emotional and financial strains they put on their parents, most substance abusers believe that their parents' attitudes toward them are friendly and normal (Mohammadi et al., 2020).

Kuerbis (2019) examined the effects of retirement on older persons' drinking habits using the example of alcohol misuse. On this topic, a variety of viewpoints seem to be in favor. As retirees are cut off from their social network of former coworkers who

promote alcohol intake, drinking may decline for them from the perspective of social networks and social roles. Alternately, more leisure time and/or less demand from work-related activities may lead to an increase in drinking. A retired older person may use alcohol to deal with the stress of retirement, from a stress and coping perspective. Additionally, they might drink to ease stress and pain or get through boredom(Kuerbis, 2019).

2.4.2 Physical and Mental Health

Drinking to relieve discomfort is a significant long-term indicator of alcohol use in senior citizens (Benshoff & Harrawood, n.d.)(Benshoff et al., 2003). This does not, however, imply a causative relationship; rather, it simply means that people in better health are more likely to be able to consume more alcohol. Current alcohol consumption and risky drinking at an older age are linked to objectively improved health (Kuerbis, 2019; Kuerbis et al., 2014b). Studies have shown that drinking decreases as hospitalization, impairments, or depressive symptoms increase. Older binge drinkers have much worse overall health comparing to their reduced consuming peers (Benshoff & Harrawood, n.d.; Gossop, 2008)

Some research reveals a strong link between substance use and melancholy and other emotional problems in older persons (Kuerbis et al., 2014a).Chronic pain, physical limitations or restricted movement, poor physical health status, persistent physical illness, and a substantial drug cost or pharmacological treatments have all been linked to substance use in the elderly. Intellectual deficits, alzheimer, poor psychological functioning, prior or contemporary alcohol or other drug use disorder (including cigarette use), and prior or concurrent psychiatric disease have all been linked to and can predict older adult substance use (Kuerbis, 2019) Sleep disturbances and sleep

disturbances are widespread in older persons who drink alcohol or use it as a sleep aid(Kuerbis et al., 2014).

Many people experience the effects of behavioral health conditions such mental health problems, substance abuse and abuse, and lifestyle factors like unsuitable food habits, sedentary lifestyles, and social isolation patterns isolation, as per Drug Use and Health. These disorders are linked to an increased risk of physical illness, higher rates of mortality, poorer clinical outcomes, and higher costs for medical care. Mental illness and substance use issue treatment represents one of the ten categories of required resources for plans that are a part of the new healthcare system and Medicare supplemental benefit plans. Finally, integrated care is required by many state Medicaid programs (Crowley et al., 2015)

There are several reasons to believe that health perceptions will influence substance use and mental health usage. The most immediate explanation is that unfavorable health views might operate as antecedents or early warning indicators of genuine health complications that are later found during medical testing. Positive health perceptions may act as early warning signs of prospective psychological health problems, based on other research by Kaplan et al. (1987) that found a link between mental well-being and cognition assessments. Furthermore, people with poorer self-rated wellbeing were observed to see physicians more frequently also after controlling for other factors of physical ailments on national healthcare consumption (Fylkesnes, 1993). (1989) Connelly, Philbrick, Smith, Kaiser, & Wymer Therefore, psychological health issues are more likely to be found and identified in those with less favorable health perceptions than in people with more positive perceptions of health (Krasikova et al., 2015)

According to Chopik (2016), consumption of alcohol, tobacco, illegal drugs, and over-the-counter medicines declines with age. However, older persons are more affected by substance use because of changes in their metabolism brought on by aging. Older persons and their informal support networks sometimes deny or conceal mental health problems due to a lack of understanding and a high stigma around these issues (Chopik, 2016).

2.4.3 Coping Style

According to Marie (2016), coping is the term used to describe people's cognitive and behavioral attempts to manage internal and external pressures that are deemed to be taxing or exceeding the capacity of the individual. There are many different coping mechanisms that people can employ when faced with stressful conditions, and individuals can differ in the overall or dominant method they choose to employ (Khusid & Vythilingam, 2016). distinguished problem-focused coping from emotion-focused coping, active coping from passive coping, adaptive coping from maladaptive coping, and engagement coping from disengagement coping. They also noted that these coping styles are sometimes overlapping.

The way a person copes with stress or strain may indicate the onset of a problem with alcohol later in life. This was discovered to be the primary cause of late-onset substance use, particularly after retirement (Benshoff et al., 2003). The use of substances to deal with anxiety and avoidance coping style were revealed to be predictors of old age alcohol usen people who relied on coping according to the Health and Retirement Study, those who used tactics to deal with worry or solve problems were more likely to acquire and sustain a delayed drinking problem than those who depended on alternative coping mechanisms (Kuerbis et al., 2014a). A study of older persons who visited an ambulatory health care facility discovered that

depending on medications to relieve stress was linked to having a late-life drinking problem(Koechl et al., 2012) .

Unfortunately, there is no consensus on how to categorize coping mechanisms or the level of individual coping that should be used. In a two-experimental population of 3,738 working individuals, Nielsen and Knardahl (2015) observed a correlation between the use of ineffective coping methods and bad mental health and a correlation between the use of excellent coping mechanisms and great mental health. Although adaptable and susceptible to changes over time, particular effective coping strategies and the general idea of the best ones had some consistency (Girma et al., 2015).

With puberty, coping abilities became more adaptive, according to Wingo, Baldessarini, and Windle (2015), with very little sex difference in the rate of growth. Furthermore, research linking higher levels of TOC coping at age 17 to lower lifetime experience risks of alcohol and drug use disorders by age 24 suggests that attempts to enhance this flexible coping strategy in late adolescence, whether through wellness education programs or as a component of an addiction rehabilitation program for young adults, may help prevent addiction to drugs (Wingo et al., 2015). According to Martz et al. (2018), coping strategies fall into three categories: a) issue focus (solving the issue) as a way to concentrate on solving the problem, such as looking for relaxing diversions, physical recreation, working hard and accomplishing, and focusing on the positive methods; and b) problem coping (coping with the problem). These examples include seeking social support, professional help, spiritual support, and social action(Martz et al., 2018).

According to Yusufov, Braun, and Pirl (2019), there are primarily two sorts of coping strategies: engagement strategies, which deal with how to discover answers, and disengagement strategies, which instruct people to find peace from detrimental impacts. Additionally, they clarify how coping mechanisms, particularly the disengagement coping mechanisms connected to adolescent drug misuse, are related to drug addiction behavior(Yusufov et al., 2019).

In a cohort study conducted by van der Heijden et al. in 2022, 429 patients, 504 brothers and sisters and 220 controls were recruited. We investigated the relationship between coping and alcohol, cannabis, or tobacco usage. Using multivariable logistic regression models, relevant confounders were adjusted for. Passive coping and smoking were found to be positively correlated in patients (completely adjusted OR 1.65, 95% CI 1.18-2.31). Patients who smoked tobacco reported having more traumatic life events than patients who did not smoke tobacco, and passive coping moderated this link. None of the coping mechanisms were related to substance use in siblings or controls(van der Heijden et al., 2022).

Adults who rely more on approach coping, a type of problem-oriented stress-coping, and less on coping with avoidance, a type of emotion-focused stress-coping, are less likely to develop substance use problems and are more likely to be successful in recovery efforts if they do. This was discovered by van Dijk et al. in 2020. Studies of dependency and abuse of alcohol status in adult drinkers, problem drinking in drug-using women in prison, alcoholics and drug abusers undergoing the process of detoxification success in attempts to quit smoking, consumption of alcohol among community-dwelling middle-aged women, use of marijuana among inner-city, youths, and smoking habits in seventh-grade pupils have all produced results that are similar(van Dijk et al., 2019).

In conclusion, Holubova et al. (2016) contend that coping with stress and managing with temptation both independently increase the chance of substance use. According to research on stress management, relying on problem-focused coping lowers the chance of developing substance use disorders, but relying on emotion-focused coping raises that risk. According to research on temptation-coping, using these techniques increases the success of attempts to treat substance use disorders(Holubova et al., 2016).

2.4.4 History of Substance use

According to a few studies, older individuals with a history of alcoholism are more inclined to partake in dangerous drinking. Beynon observed that there was typically a significant rise in the likelihood of increasing their alcohol intake in later life among older persons with a history of drinking problems who did not refrain (Beynon, 2009) According to a different study, having drinking issues by the age of 50 increases your likelihood of drinking excessively or unhealthily in the future(Benshoff et al., 2003).

There are two types of substance misuse in older adults: early-onset and late-onset. Early-onset users begin using drugs or alcohol before the age of 65(Benshoff et al., 2003). These people experience the consequences of substance use and a higher prevalence of mental in nature social, and physical disorders than their counterparts who developed later. Two-thirds of the senior alcoholic population is predicted to be early-onset drug users (Benshoff et al., 2003). It is believed that stressful life events including the loss of a spouse, a change in living circumstances, retirement, and social isolation lead to delayed substance use. In comparison to early adopters, these people frequently experience fewer chronic health issues (Benshoff et al., 2003).Delay discounting as a connection between a person's drug usage and a parent's Family historyf drug misuse. The associations that stood out the most were those between

family drug use and personal alcohol use, the use of drugs by parents and individual alcohol use, overall familial histories of substance dependence and efficacy of lifelong drug experimenting, and generally parental family history of dependence on drugs as well as personal cannabis use. Notably, DD was a mediating factor, implying that other factors are involved in this pathway and thus a more thorough view of the processes of this mechanistic link could not be investigated. These are still top goals for future study in this field (VanderBroek et al., 2016).

Grant and Chamberlain's study (2020) found that 180 (31.3%) participants had a first-degree relative who had an SUD. Clinically, a family history of SUD was significantly associated with higher rates of substance use (alcohol, cigarettes), higher rates of problem gambling, and higher rates of mental health problems. A family history of substance use disorder was connected to higher rates of obsessive-compulsive traits, set-shifting disorders, bad decision-making, and spatially recall errors(Grant & Chamberlain, 2020).

2.5 Interventions for Substance Use among Older Adults

When placed among other older individuals, older persons performed better in treatment, according to a Lacoursiere program study of the treatment of older adults with substance use problems (Lacoursiere, 2013). The study also revealed that using drugs and alcohol is a poor form of coping (Lacoursiere, 2013). This indicates that programs to lessen substance abuse among older persons should teach participants effective coping strategies.

An efficient strategy for the intervention strategy of substance use disorder necessitates a coordinated and coordinated response from many performers to produce policies and programs based on research in numerous contexts and trying to

target different groups at various stages of severity and risk of Substance Use. The public health sector, often in close cooperation with personal care and community services, is best poised to capitalize the leadership in delivering appropriate care services for those who suffer from drug abuse abnormalities, according to World Health Organization (WHO, 2005) .

The fundamental public health principle to follow is to provide the minimal intrusive intervention with the greatest level of effectiveness at the lowest possible cost. When it comes to engaging older persons in substance addiction treatment, it is crucial to remember that older adults that do not have a history of continuous related to substance use are sometimes hesitant to be connected with what are stereotyped as bottom alcoholics or heroin abusers (Morelli, 2015). They must be recognized and handled in more comfortable environments (Morelli, 2015)

2.5.1 Psychosocial Interventions

This phrase refers to a variety of non-pharmacological methods for efficient drug use management. Psychosocial therapies address the environmental, psychological, and motivational factors that influence the use of excessive alcohol (Morelli, 2015). By boosting drug compliance, retaining patients in therapy, and acquiring skills that strengthen the effects of medications, they improve the efficacy of pharmacological treatment. This encourages abstinence and prevents relapse (Lacoursiere, 2013).

Cognitive-behavioral therapy (CBT) and supportive therapy models (STM) are two psychological and therapeutic methods that have been specifically examined in the setting of older people (Schonfeld et al., 2000).STM is a classic treatment with age-appropriate adaptations (Kuerbis et al., 2014). STM techniques arose as a result of concerns about the effectiveness of traditional treatment for older persons. It was discovered that aggressive techniques were inappropriate for and inconsiderate to

older folks, and that the particular difficulties confronting older people, such as health disorders, depression morbidity, and social exclusion, were neglected (Kuerbis et al., 2014)

2.5.2 Brief Interventions

Effective brief interventions take place in primary care settings and focus on the misuse or abuse of alcohol and prescription medications. It ranges in length from 15 minutes to an hour (Dupree, Broskowski, & Schonfeld, 1978). The goal of this treatment is to educate older adults about substance abuse and how it might impair their health (Kuerbis et al., 2014). Additionally, the intervention fosters the desire to change and, as needed, links committed users with more involved therapies. Comparative feedback, which compares a patient's drinking to that of their friends and includes brief recommendations, is one of the most often used brief interventions that looks to be quite beneficial for older adults who drink (Kuerbis et al., 2014).

Kuerbis (2019) discovered that when Older Adults received normative feedback (peer comparison) rather than individualized input, they reduced their alcohol use more (a review of the health consequences). Because of its client-centered, nonjudgmental approach, Motivation Enhancement Therapy (MET) is regarded acceptable for Older Adults (Miller R., Zweben, DiClemente, & G. Rychtaric, 1995). MET improves motivation by supporting Older Adults in identifying the perceived benefits of changing behavior, such as retaining independence and keeping good health, as well as the disadvantages of keeping the status quo (Miller R. et al., 1995).

The use of brief interventions has been demonstrated to improve motivation and raise the chance of follow-up quit attempts in the treatment of tobacco dependency. There is proof that quick interventions work to boost subsequent quit attempts. There is a significant dose-response relationship between therapy intensity and success in

quitting, and intensive counseling is particularly useful in this regard. The rate of abstinence is often higher the more intensive the treatment session. Additionally, some counseling techniques are very successful: According to Nesvg and McKay (2018), practical counseling and the provision of intra-treatment social support are linked to a considerable rise in abstinence rates (Nesvåg & McKay, 2018).

Feedback, accountability, advice, menu of possibilities, empathy, and self-efficacy (confidence for change) are a few characteristics that contribute to the efficacy of brief interventions. Brief intervention includes focused opportunistic screening for risky and dangerous drinkers in the treatment of alcohol-related issues. They are aimed at heavy drinkers and seek to limit their consumption (Linton et al., 2014) . Dependent drinkers who are looking for assistance for alcohol issues are not accepted by them. They frequently result in a 20-30% reduction in binge drinking. They are effective in a wide range of circumstances, including primary health care and disaster emergency, according to a significant body of research. The benefits of brief intervention have been demonstrated to include lower death rates and decreased alcohol use at 6 and 9 months in alcohol users hospitalized to general medical wards (Iyadurai et al., 2018).

2.5.3 Residential Rehabilitation

According to Chang, Martin, Tang, and Fleming (2016), there is little data on the results of treatment of patients in residential rehabilitation. 64 veterans were accepted to one of the two inpatient rehabilitation centers in the Northeast during the first quarter of the fiscal year 2012. For the year prior to and following residential rehabilitation, the documentation included demographic, physiological, and rehabilitative (outpatient and inpatient) information (Chang et al., 2016). We contrasted annual rates of therapy utilization. Service personnel used drugs on

average for 27.6 years, with a mean age of 48.2 years. Alcohol was perhaps the most commonly used drug (69 percent). 64 days on average after discharge, the bulk of hospitalized patients had SUD inpatient hospitalizations, with admissions happening more frequently (79%) in the year prior to and (53%) after residential therapy. The incidence rate of SUD outpatient hospitalization increased by 25% for every prior year's SUD inpatient hospital visit, decreased by 74% in the complete absence of use of opiates massive failure, and decreased by 2% for each day advancement during inpatient therapy length of stay when the extent of service-connected damage, familial factors, and months since the last SUD hospitalization have been taken into consideration. After residential therapy, risk indicators for SUD outpatient admission were in fact discovered; if they were validated, they might present chances for program improvement.

In their study, Wadd and Dutton (2018) found that some residential rehabs might not be adequately sensitive to the requirements of older persons. It would be oversimplified to imply that, based on a certain age classification, all older persons have the same needs. Additionally, the study findings of the study has been supported by Ortiz-Piña et al. (2021) who indicated that most of the older adults prefer residential rehabilitation since they provide them with almost all theta they need such as the wheel chairs among others (Wadd & Dutton, 2018).

2.5.4 Peer Support

In their study, Tracy and Wallace (2016) defined peer support as the process of getting non-professional, not to be clinical support from people with similar situations or illnesses in order to achieve long-term healing from issues brought on by problems with alcohol, various drugs, or mental healthcare workers. Alternative peer services and support are increasingly being used to aid in the recovering from substance use

disorders. However, because care and support is frequently not maintained separately out as a structured up-regulation and robustly empirical evidence tested, it is challenging to assess its effects. Although peer-to-peer meetings in alcoholism rehabilitation have a lot of potential, there isn't enough data to draw any definite conclusions (Tracy & Wallace, 2016). To further develop this crucial line of investigation, more thorough study in this field is needed.

Participation in peer support groups has been shown to be a strong predictor of remission and recovery maintenance, according to Bassuk et al. (2016). Benefits for the peer support group also include improved self-worth, self-assurance, emotions of accomplishment, and an improvement in their capacity to deal with obstacles(Bassuk et al., 2016).

Regardless of their role, peers can interact with patients outside the confines of traditional clinical care, claim Eddie et al. (2019). Their ability to fill significant care gaps is most likely the cause of their widespread acceptance across a variety of addiction treatment programs and why they have become an essential component of recovery management (Eddie et al., 2019). The majority of the studies, according to Neale et al. (2015)'s assessment, had statistically significant findings that participants in the peer intervention reduced their substance use, a range of recovery outcomes, or both. These findings suggest that peer therapies improve the lives of those who struggle with substance use disorders (Neale et al., 2015).

Individuals who received the peer treatment showed improvements in their substance use, a range of recovery outcomes, or both, according to the statistically significant findings reported by Barclay and Lalor (2022). These findings suggest that peer therapies improve the lives of those who struggle with substance addiction (Barclay &

Lalor, 2022). According to the survey, other positive results included feeling appreciated and a decline in the stigma attached to drug use. The accomplishment of the peer worker function was greatly aided by worries about managers who are not in recovery. As indicated by Davidson (2016), this study focused on improvements in the integration of support from peers professionals into care systems and experts' recognition of the role (Davidson, 2016).

2.5.5 Religious Counselling

With 3700 participants who met the inclusion criteria, Hai, Franklin, Park, DiNitto, and Aurelio (2019) conducted 20 research. Data from four studies that utilized passive controls, 14 studies that has used active restrictions, and two studies that has used both volatile and non - volatile controls were used to evaluate absolute and comparative regression analyses. When compared to inactive controls like no therapy, the relative effect of S/R interventions was tiny but meaningful (six trials, d =.537, 95 percent CI =.316, 1.390) because to insufficient power. S/R therapies showed a statistically significant relative impact (16 trials, d =.176, 95 percent CI =.001, 358) when contrasted to other interventions. This finding does not completely connect to the major contributions of non-12-step-oriented S/R therapies because only 12-step-oriented treatments were investigated in comparison to other interventions. Significant geographical disparities in the proportionality assess the significance are revealed by the moderator analysis. The study discovered evidence that S/R therapies are successful in treating patients with substance use disorders. Spiritual/religious (S/R) treatment for substance abuse disorders needs more high-quality efficacy research (Hai et al., 2019).

According to Hai et al. (2019), Spiritual Therapy is a popular standard of care for drug recovery among faith-based organizations in Nigeria. It offers a spiritual

perspective to problem- and conflict-solving techniques (Hai et al., 2019). In their study, Adogame (2016) found that, on the whole, the inhabitants responded favorably to the process of drug rehabilitation. Although the majority of the residents are aware of detoxification methods, they were unconvinced of their value in spiritual rehabilitation. There was a strong conviction that drug addiction is a spiritual problem and can only be resolved in this way. According to the inhabitants, ST's therapeutic powers include prayer, holy water, fasting, and sobriety. Poor treatment environments and a lack of funding for essential needs were noted as challenges. Residents and former residents offered suggestions for ways to increase the efficacy of ST, including the integration of cutting-edge detoxification methods with ST, proper training for clergy in contemporary practices, and government support for religious institutions(Adogame, 2016).

2.6 Conclusion

Around the world, more and more people are turning to alcohol and other substances in their senior years. The initiation of substance use can be early or late; some people start using in their senior years. This could be the result of stressors like health issues or major life events that are emotionally taxing. While individuals who begin using drugs later in life are more prone to abuse them, individuals who are introduced to alcohol and illicit drug use earlier in their lives may increase their usage later in life, i.e. after age 65.

Clinicians may not be aware that the elderly people they treat misuse prescription drugs, alcohol, or other substances. Since drug addiction in older adults is concealed and can resemble the symptoms of other aging-related issues, diagnosing dependencies in the seniors can be difficult. Substance use is sometimes used to mask serious underlying issues which if not treated may lead to other serious complications

e.g. mental illness and suicide or other serious health complications. Older adults in Kenya are faced with issues that could act as a trigger for substance use/misuse. These issues include, Retirement, taking care of their grandchildren, loss, financial insecurity and medical illnesses common in older adults. Cultural issues could also have a role in substance use among the elderly as they are used for ceremonial purposes. Even after the stress of work has subsided, drinking to cope with it may continue into retirement (Benshoff et al., 2003).

Few studies on substance use among older persons have been published in Kenya; the majority of these studies were carried out in developed countries and have little generalizability. The problem of substance usage among older persons in Kenya was brought to light through the study.

2.7 Conceptual Framework

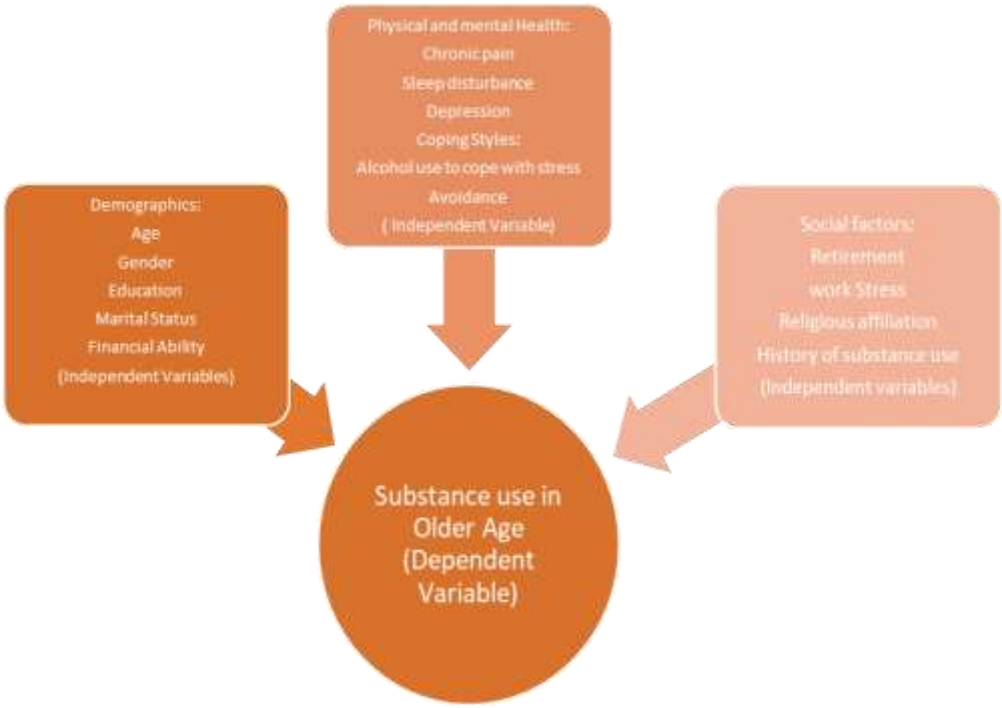

Figure 2.1: Conceptual Framework

The conceptual framework above represents the relationship between substance use in older age and different variables. This conceptual framework is based on literature from Kuerbis et al. (2014). Substance use in older age is the dependent variable and the demographic data in this case is the independent variable. The demographic data such as Age, Gender, Education, Marital Status and financial ability can lead to substance use (Kuerbis et al., 2014b). Confounding factors in this case is the physical and mental health i.e. depression, chronic pain and sleep problems(Kuerbis, 2019). These can lead to substance use in older adults and substance use in older adults can lead to the same. Coping mechanisms/strategies is also a confounding factor in that avoidance and use of substances to cope with stress can lead to use of substances in older age. Work stress, Religious affiliation, retirement (forced, unexpected, involuntary) and history of substance use are predictors of substance use in older adults (Kuerbis et al., 2014b).

CHAPTER THREE

3.0METHODOLOGY

3.1. Study Site

The study was conducted at the Moi Teaching and Referral Hospital in Eldoret outpatient department. Patients from the Western region of Kenya, eastern Uganda, and Southern Sudan can receive specialist care at MTRH, the second National Referral Hospital in Kenya. The facility provides outpatient, inpatient, and specialist healthcare services and is a level six hospital. Because of the substantial number of patients treated here, this study location was selected.

The outpatient clinics that were targeted for this study are the; Out Patient Department, Diabetic Clinic, Cardiac Clinic, Oncology Clinic and the Mental Health Clinic. These clinics were selected because these is were within the hospital are being treated It was presumed that equally, a higher number of older adults were attending these clinics(MTRH, 2024).

3.2 Study population

The target population for the study were patients seen at the outpatient department of MTRH seeking treatment at the time of the study. The researcher met them at the point of service provision

3.3 Study Design

This study used quantitative study approach and was cross-sectional in nature. One of the most popular non-experimental research designs across disciplines is the cross-sectional study, which gathers a significant amount of survey data from a representative sample of people drawn from the target population (Ponto, 2015).

To ensure adequate and proportional representation from each clinic, a proportionate allocation approach was used. The total sample size was divided across the five clinics based on the average monthly attendance of eligible older adult patients (aged 50 years and above) recorded in hospital outpatient statistics.

Each clinic received a predefined sample quota proportional to its contribution to the total older adult outpatient population that is 20%. Within each clinic, consecutive sampling was employed. This involved recruiting all eligible and consenting participants in the order they presented at the clinic until the allocated sample size for that clinic was reached.

Data collection was conducted over a defined period to account for daily and weekly variations in clinic attendance. Research assistants were present on different days of the week to avoid bias due to specific clinic schedules or patient flow patterns. This method allowed for the efficient recruitment of participants, minimized delays in reaching the target sample size, and ensured proportional representation across all five clinics**.**

Because this study is descriptive and will examine the prevalence of substance use among older persons, a cross-sectional study design was used. A cross-sectional investigation can be carried out reasonably quickly and cheaply. There was no intervention offered in this descriptive study (Hemed, 2015).

3.4 Eligibility Criteria

3.4.1 Inclusion criteria

The inclusion criteria to this study was, people seeking treatment at MTRH who are;

- 50 years old and above,
- Willing to participate in the study.
- Can speak English or Swahili.

3.4.2 Exclusion criteria

The study excluded people who meet the inclusion criteria but;

Are ill weak to sit for the duration of the exercise

3.3 Target Population

The target population was adults 50 years and older, attending the outpatient clinics at MTRH. Persons aged 50 and older have been selected based on the biological changes in the body and the brain that begins around this age, and increase ones susceptibility to the negative effects of substance use(Carew & Comiskey, 2018; Kuerbis, 2019; World Drug Report, 2018).

3.5 Sample Size

The Fisher's formula was used to determine the sample size. In a study by Atwoli and colleagues that examined the prevalence of substance use among college students(Atwoli et al., 2011) this method was used to figure out the sample size. The sample size was determined using the prevalence of 62 percent found in a study by Ndetei and colleagues among outpatients visiting rural and urban primary health facilities in Kenya (Ndetei et al., 2009) 2000). Z= 1.96 p=62% q= (1-p) d= 0.05.

N=Z^2pq/d^2

1.96^2*0.62*(1-0.62)/0.05^2

N=362.032

A sample size of 384, plus an extra 10% to cater for the nonresponse will be used.

N= sample size/ response rate

N= 362.032/0.9

N= 402.258

Stratification was done according to the 5 Out Patient Clinics and the sample size was distributed to represent the number of clients attending the clinics.

3.6 Sampling and Recruitment.

Given the aim and objectives of this study, a sample size of 405 patients was sufficient to demonstrate feasibility and gather data for the study. Stratified sampling was used to classify the sample into five subgroups, in this case; the specific clinics the patients were attending which were: Outpatient Department, Diabetic clinic, Cardiac clinic, Oncology clinic, and the Mental Health clinic. Consecutive sampling technique was used to obtain participants from each stratum.

Since most patients were seen at the outpatient department; it was anticipated that there was no generated list prior to the day of data collection. With the help of the nurse/clinical officer in-charge, a list of all older adults aged 50 and older attending the clinic on that day was obtained. The researcher established contact with the selected patients and informed them of the study and invite them to participate. Those patients who accepted to participate were taken to a private room where more detailed information about the study was given. The participants then completed the University of California Brief Assessment of the Capacity to Consent, to assess the capacity to consent. Those who scored between 15-20 of the total 20 points were found to have the capacity to consent. Those who provided written consent were recruited.

3.7 Research Instruments

The research instrument used in this study was a researcher designed questionnaire and the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) *(copies attached in the appendices).* The questionnaire has four sections; Section A to Section D. Section A of the questionnaire collected the demographic data such as age, gender, Education, Residence, Marital Status, Religious affiliation, Employment status and the monthly income. Section B of the questionnaire collected data that was

used to find the prevalence of Substance use, past year use of substance and the onset of substance use. Section C of the questionnaire collected data on the risk factors associated with substance use such as; stress and coping styles, history of substance use, Loss, Sleep, Illness, Retirement and the Living arrangement. Section D of the questionnaire collected the preferred interventions to reduce substance use among older adults. *Attached in the appendices.*

The study also used the University of California, San Diego Brief Assessment of Capacity to Consent (UBACC). The goal of the UBACC was to assist researchers in identifying study participants who require more extensive decisional capacity evaluation and/or rehabilitation efforts before enrolment. A ten-item scale with questions on knowing and appreciating the details of a research protocol was also part of the UBACC.

As a screening tool for the use of psychoactive substances, the World Health Organization's (WHO) Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) has also been proved to be reliable (Humeniuk et al., 2008) and therefore adopted. As there are different levels and types of substance use among people, ASSIST conducts screenings to determine the substances taken and the amount of risk associated with usage patterns (Humeniuk et al., 2008). Van der Westhuizen, Wyatt, Williams, Stein and Sorsdahl (2016) in their cross-sectional study carried out in an emergency center in Cape Town, they indicated that ASSIST is an effective tool, and that is what informed the researcher to adopt the tool. In Kenya, the WHO ASSIST was utilized in a study by Ndetei et al. (2009) to determine the prevalence of substance addiction among patients in 10 general health facilities(Ndetei et al., 2009). The instrument has also been used at MTRH by Jaguga et al. (2023) to screen for substance use in youth attending the Youth Clinic.

On the ASSIST, there are several possible answers for each question, and the answers to questions 2 through 7 each have a score. The client's response to each question is given a numerical score, which the interviewer circles. To create an ASSIST risk score for each substance (tobacco, alcohol, cannabis, cocaine, amphetamine-type stimulants, inhalants, sedatives/sleeping pills, hallucinogens, opioids, and "other" drugs), the scores from questions 2 through to 7 are summed together at the end of the interview (See Box 5 for an example). This score is known to as the specific substance involvement score for each drug class in technical reports and articles.

As laid out in the ASSIST questionnaire, each client had a 10 risk scores. ASSIST risk score for tobacco (range 0-31). ASSIST risk score for alcohol (range 0-39). ASSIST risk score for cannabis (range 0-39). ASSIST risk score for cocaine (range 0-39). ASSIST risk score for amphetamine-type stimulants (range 0-39). ASSIST risk score for inhalants (range 0-39). ASSIST risk score for sedatives or sleeping pills (range 0-39). ASSIST risk score for hallucinogens (range 0-39). ASSIST risk score for opioids (range 0 – 39). ASSIST risk score for ‘other’ drugs (range 0-39).

Piloting of the study tool

Prior to the start of the study, the questionnaire was be put through a pilot test to determine its validity and reliability. The two supervisors first analyzed the questionnaire to determine its face validity. The validity of the survey was subsequently examined in a pilot study. The instruments were piloted at Uasin Gishu County Hospital's Outpatient Department. The reliability command in SPSS was used to do a Cronbach's alpha test to evaluate the questionnaire's internal consistency. In this study, a Cronbach's alpha reliability coefficient of 0.6 to 0.8 was considered an acceptable degree of dependability. The instrument had a reliability value of 0.712 which indicated that it was reliable when it comes to the study.

3.8 Data Collection Procedure

Data was gathered by trained Research Assistants. All components of data collecting were taught to the Research Assistants including consenting, instrument issuance and how to maintain ethical practices. UBACC was given to the study participants before the research instrument was given to them. Once the participant was given all the information necessary for this study and signed the consent form, the data collection exercise begun. The questionnaire was administered; those participants who are able to complete it was done so while those who needed help were assisted. The questionnaire captured the demographic data and also information on the risk factors associated with substance use and intervention for substance use.

3.9 Study procedure

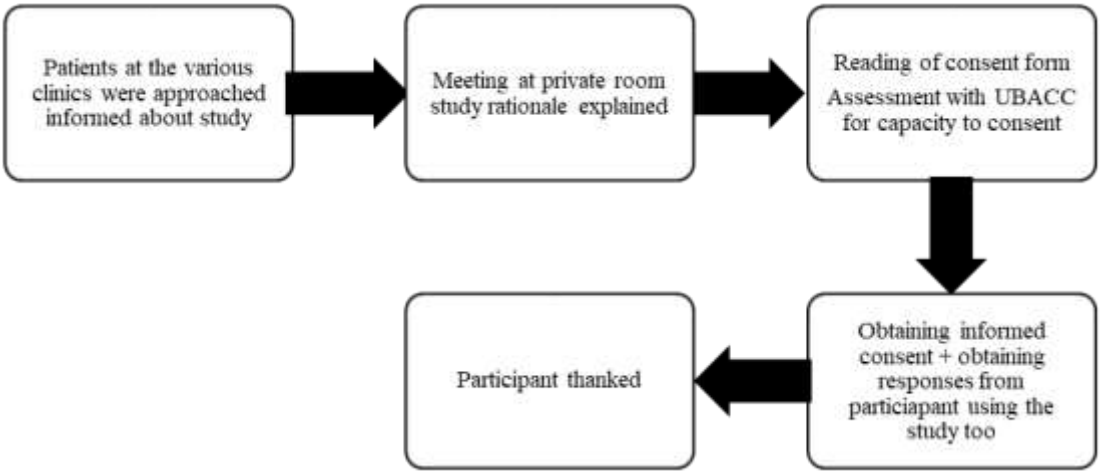

Figure 2.2: Study procedure

Source: Author

3.10 Data Management and Analysis

3.10.1 Data Management

All documents were given special identification numbers and kept safely in a locked cabinet. This information was only accessible to the lead investigator. Following data collection, any data used to recruit and book appointments, such as initial names, mobile numbers, or addresses, was erased. The data was entered into a Microsoft excel sheet and was double checked for accuracy. All data was stored in password protected computers De-identified data will be used in all publications and presentations. For seven years, all acquired data will be securely stored in a locked cabinet under lock and key before being destroyed.

3.10.2 Data Analysis

The acquired information was all entered into SPSS version 22. Data was checked before analysis to make sure it had been collected in accordance with pre-established standards and that ethical guidelines had been followed. Data was then cleaned and edited for issues of questionnaire completion errors and non-response. Substance use, which is the main outcome was examined in terms of prevalence, risk factors and interventions. To offer the fundamental characteristics of the data, such as mean, mode, median, range, variance, and standard deviation, descriptive analysis was carried out. The findings are presented using frequency tables and graphs. Inferences on this data has been made by conducting inferential analysis.

For the first objective which is the prevalence of substance use, data was analyzed for proportions and at 95% confidence interval. Comparison of prevalence between males and females has been presented in percentages and charts. All data has been presented in frequency tables, charts and graphs.

Table 3.2: Data Analysis Matrix

Objective	Level of Analysis	Independent Variables	Dependent Variables	Test
Prevalence of substance use	N/A	N/A	Substance use	• Proportions • 95% confidence Interval
Risk and Socio-demographic factors associated with substance use.	Bivariate Analysis	Age (continuous variable)	Substance Use	ANOVA
		Gender (categorical)		Chi-Square test
		Education Level (categorical)		Chi-Square test
		Marital Status (categorical)		Chi-Square test
		Residence (categorical)		Chi-Square test
		Religious affiliation (categorical)		Simple Regression Analysis
		Employment Status (categorical variable)		Simple Regression Analysis
		Income (continuous)		ANOVA
	Multivariate Analysis	Stress (binary variable)		Logistic Regression.
		Coping Style (categorical)		
		Loss (categorical)		
		Sleep (categorical)		
		Illness (categorical)		
		Retirement (categorical)		Logistic Regression
		History of substance use (binary)		
		Living arrangement (categorical)		
Preferred interventions to reduce substance use among older adults	N/A	N/A	Residential Rehabilitation Brief intervention Professional Counselling Peer Support group Pharmacological treatment Religious counseling Normative feedback	Analysis of Means (ANOM)

3.11 Data Dissemination

The study findings have been compiled into a comprehensive thesis, which has been submitted to the Dean of the School of Medicine. This submission marks the initiation of the approval process for the defense of the Master of Science in Clinical Psychology degree. The thesis will be archived in the Moi University repository, ensuring accessibility for future reference and research endeavors. Feedback to MTRH will given through a presentation at a Continuous Medical Education session held by the Hospital regularly. The researcher will write a manuscript to be published in peer reviewed journals. The study findings will also be presented in various scientific journals.

3.12 Ethical considerations

Permission to conduct the study was obtained from the Institution of Research and Ethics Committee, (IREC) IREC/2020/175 Permission was sought from Moi Teaching and Referral Hospital the Chief Executive Officer MTRH and Moi University School of Medicine, College of Health Sciences, Department of Mental Health and Behavioral Sciences. To take part in the study, individuals had to complete an informed consent form a detailed explanation of the purpose, the nature and content of the research were shared with the participants. To ensure confidentiality, the researcher made sure that the respondents remained unidentified. Everyone who participated did it voluntarily; no one will be forced. Participants in the study were advised of their right to withdraw at any time and that doing so would not have an impact on their clinical care. Data forms with unique identifiers were kept in lockable cabinet and access to them was restricted to the researcher only. The results of this investigation were accurately and completely reported.

CHAPTER FOUR

RESULTS

4.0 Chapter Overview

This chapter presents the results of the study. The findings are grouped into two sections. The first section captures the socio-demographic characteristics of the study participants. Second section captures findings in relation to the study objectives which were; to establish the prevalence of substance use among older adults at MTRH, to establish the risk factors associated with Substance use among older adults at MTRH and to assess preferred interventions for substance use among Older Adults at MTRH.

4.1 Sociodemographic Characteristics of Participants

The study sought to find out the sociodemographic characteristics of the study participants. Findings of the study are captured in table 4.1.

Table 4.1: Sociodemographic Characteristics of Participants

Socio-demographic Characteristics	Frequency	Percentage
Gender		
Male	261	**64.4%**
Female	144	35.6%
Age (years)		
50-59	244	**60.20%**
60-69	161	39.8%0%
Education Level		
Did not complete primary	58	14.3%
Primary	104	25.7%
Secondary	106	26.2%
Higher education	137	**33.8%**
Living situation		
Rural/village	130	32.1%
Town	114	28.1%
City	**161**	**39.8%**
Marital status		
Married	289	**71.4%**
Widowed	95	23.5%
Divorced/Separated	17	4.2%
Never married/single	4	1%
Religion		
Christian	359	**88.6%**
Muslim	45	11.1%
Other	1	0.2%

The findings of the study indicates that 64.4% of the study participants were male, 60.1% were between the age of 50 and 59 years, 33.8% had higher education, 39.8% live in a city, 71.4% were married and 88.6% were Christians.

4.1.1 Monthly Income

A question about respondents' monthly income was asked of them. Table 4.2 provides the study's results.

Table: 4.2: Monthly income in KES

Monthly income	Frequency	Percentage
Below 9,999	242	**59.8**
10,000- 19,999	44	10.9
20,000- 29,999	32	7.9
30,000- 39,999	45	11.1
40,000- 49,999	28	6.9
Above 50,000	14	3.5
Total	**405**	**100.0**

The study findings indicate that a majority of the respondents were earning below KES 9,999 at 59.8% while the lowest at 3.5% were earning above KES 50,000.

4.2 Prevalence and History of Substance Use

4.2.1 Life time prevalence of substance use

Table 4.3: Life time prevalence of substance use

Category	Frequency	Percentage
Never used substances	81	20.0%
Lifetime substance users	324	80.0%
Used substances in past 3 months	270	66.7%
Recent use among lifetime users	270 of 324	83.3%

Source: Field data (2022)

Out of 405 participants, 80.0% had used substances at least once in their lifetime, with 66.7% reporting use in the past 3 months; notably, 83.3% of lifetime users were also recent users, indicating a high rate of ongoing substance use.

4.2.2 Prevalence of Specific Substance of Use

The study sought to find out the prevalence of specific substance use. Findings of the study are presented in Table 4.3.

Table 4.4: Prevalence of Specific Substance of Use

Substance	Number (%)	Age of first use (years)	CI (95%)
Alcoholic beverages (beer, wine, spirits, etc.)	**170(42%)**	24.38	1.58% (1.53-1.63)
Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	68(16.8%)	21.47	1.83% (1.80-1.87)
Cannabis (marijuana, bhang pot, grass, hash, etc.)	27(6.7%)	14.30	1.93% (1.91-1.96)
Inhalants (nitrous, glue, petrol, paint thinner, etc.)	5 (1.2%)	6.19	1.99% (1.98-2.00)

Source: Field data (2022)

The findings of the study indicate that from the 405 respondents who took part in the study, 270 of them have at least used one substance in their life. Thus, indicating that there was a 66.7% prevalence when it comes to substance use among the older adults. The findings of the study indicate that the general prevalence of Alcohol beverages use among the study participants is 42% (95% CI; 1.53%-1.63%) with a mean age of 24.38 years for first users. In terms of tobacco products (cigarettes, chewing tobacco, cigars, etc.), the findings indicate that the prevalence is at 16.8% (95% CI; 1.80%-1.87%) with a mean age of 21.47 years for first users. Regarding cannabis (marijuana, bhang pot, grass, hash, etc.) use, the prevalence level is at 6.7% (95% CI; 1.91%-

1.96%) with a mean age of 14.30 years for first users. The prevalence of inhalants (nitrous, glue, petrol, paint thinner, etc.) use by the older adults is 1.2% (95% CI; 1.98%-2.00%) with a mean age of 6.19 years for first time users.

4.2.3 WHO-ASSIST Score and Substance Use Prevalence

The study sought to find out the score of the substances being used using WHO-ASSIST. The findings of the study are captured in Table 4.4.

Table 4.5: WHO-ASSIST Score and Substance Use Prevalence

Substance	Mean score
Tobacco	24.0
Alcohol	30.0
Cannabis	40.0
Cocaine	0.0
Amphetamine	0.0
Inhalants	26.0
Sedatives	0.0
Hallucinogens	0.0
Opioids	0.0
Overall	28.0

Source: Field data (2022)

From the findings of the study, those who are using Tobacco based substance had a score of 24.0 which according to the WHO-ASSIST require a brief intervention. Alcohol use has a mean score of 30 indicating that those using alcohol need more intensive treatment. Cannabis use has a mean score of 40 indicating that there is a need for a more intensive treatment. Inhalant use has a mean score of 26 indicating that there is a need for brief intervention among the users. Thus, it can be concluded that alcohol and cannabis use is out of control among the older adults and thus, intensive treatment is recommended to the users.

4.3 Association between Socio-Demographic factors and Substance Use

The goal of the study was to determine whether there is an association between socio-demographic characteristics and substance use. The analysis was done using Bivariate Analysis that involved the use of Chi-square, Simple Regression Analysis and ANOVA. The data of the analysis is presented in table 4.5.

Table 4.6: Association between Socio-Demographic factors and Substance Use

Variable	**Socio-Demographic %**	***df***	χ^2	***P* value**
Age				
50-59	36.8%	1	3.841.	0.000
60-69	5.4%			
Gender				
Male	26.9%	1	3.841	0.801
Female	15.3%			
Education Level				
Higher education	13.1%	3	7.815	0.520
Secondary	12.6%			
Primary	10.6%			
Did not complet primary	5.9%			
Residence in Past 12 months				
Rural/village	14.8%	3	7.815	0.316
Town	10.1%			
City	17.3%			
Marital Status				
Married	37.0%	3	7.815	0.000
Widowed	3.7%			
Divorced/Seprated	1.2%			
Never married/Single	0.2%			
Religion				
Christians	40.5%	2	5.991	0.000
Muslims	1.7%			
Other (pagan)	0.0%			
Monthly Income				
Below 9,999	21.5%	5	11.07	0.000
10,000- 19,999	4.2%			
20,000- 29,999	4.2%			
30,000- 39,999	5.2%			
40,000- 49,999	2.7%			
Above 50,000				

Source: Field data (2022)

The findings of the study indicates that there was a significant relationship between age and substance use, χ^2 (1, *N*=405) =3.841, *p*=0.000 with younger seniors (50–59) being more likely to use substances than those aged 60–69. Thus, the findings indicate that the age of the older adults attending outpatient clinic at MTRH influences their substance use behavior.

There is a significant relationship between marital status and substance use, χ^2 (3, *N*=405) =7.815, *p*=0.000. Being married is strongly associated with higher reported substance use. Hence, it can be concluded that marital status of the older adults attending outpatient clinic at MTRH influences their substance use habit.

There is a significant relationship between religion and substance use, χ^2 (2, *N*=405) =5.991, *p*=0.000. Christian participants reported the highest use. Therefore, it can be interpreted that religion of the older adults attending outpatient clinic at MTRH influences their substance use habit.Monthly income has a significant relationship with substance use, χ^2 (2, *N*=405) =11.07, *p*=0.000 with lower-income participants being more likely to engage in substance use. This means that substance use among older adults attending outpatient clinic at MTRH is associated by their monthly income levels.There was no significant relationship between gender and substance use, χ^2 (1, *N*=405) =3.841, *p*=0.801. Therefore, gender of the older adults attending MTRH has nothing to do with their substance use behavior.

There is no significant relationship between education level and substance use, χ^2 (3, *N*=405) =7.815, *p*=0.520. It can be interpreted to mean that substance use by the older adults attending MTRH has nothing to do with their level of education.

There is no significant relationship between place of residence in the past 12 months and substance use χ^2 (3, *N*=405) =7.815, *p*=0.316 While urban dwellers showed

slightly higher substance use. This is an indication that substance use among older adults attending outpatient clinic at MTRH is not associated with their place of residence in the past 12 months.

These findings suggest that younger seniors, married individuals, Christians, and low-income participants are more vulnerable to substance use.

4.4 Physical and Psychological Factors and Substance Use

4.4.1 Physical and Psychological Factors and Substance Use

The study sought to find out the Physical and Psychological factors associated with substance use. Findings are captured in Table 4.6

Table 4.7: Physical and Psychological factors associated with substance use

Risk factors	Percentage
Sleep pattern	
Normal	**68%**
Poor	32%
Significant loss	
Death	12.1%
Loss of property	16.8%
Loss of friends	8.7%
Loss of physical ability	62.4 %
Nature of job	
No -not working	31.4%
Yes -part-time	33.6%
Yes -full-time	29.6%
Retired	5.4%
Nature of Retirement	
Voluntary	68.2%
Involuntary	31.8%
Person living with	
Spouse	69.0%
Children	16.0%
Relatives	5.7%
Hired Help	5.8%
Alone	3.5%

Source: Field data (2022)

The study findings indicate that 68% of the respondents have a normal sleep pattern, 62.4% have experience loss in physical ability, 33.6% work as part-timers, 68.2% retired voluntarily and 69.0 % live with their spouses.

4.4.2 Physical and Psychological Factors Regression

The study conducted logistic regression analysis to ascertain the association between the risk factors and substance use. Findings of the study are presented in Table 4.7.

Table 4.8: Risk factors Logistic Regression

Risk factor	B	S.E	CI		P value
			LL	UL	
Chronic illness	.003	.0673	.0125	.569	0.001
History of substance use	2.584	.246	8.179	21.486	0.000

Source: Field data (2022)

The study used $p \leq .05$ as level of significance. The study findings indicates that the presence of chronic illness (p=0.001) and history of substance use (p=0.000) are significant risk factors to substance use among the older adults attending the outpatient clinic at MTRH.

4.5 Interventions to Reduce Substance Use among Older Adults

4.5.1 Interventions to Reduce Substance Use among Older Adults

The purpose of the survey was to assess the respondents preferred intervention for substance use among older persons. The study findings are shown in Table 4.8.

Table 4.9: Older Adults Preferred Interventions to Reduce Substance Use

Intervention	Yes	No
Residential Rehabilitation	36.8%	63.2%
Advice from clinicians about the effects of substance use, during a consultation.	29.4%	70.6%
Professional counselling taking a longer time; above six weeks. (CBT and STM)	46.9%	53.1%
Religious Counselling	39.5%	60.5%
Peer Support Group	46.2%	53.8%
Pharmacological treatment	42.7%	57.3%
Being told of peer substance use issues (Normative feedback)	44.7%	55.3%

Source: Field data (2022)

The findings of the study indicate that 36.8% agreed to the use of residential rehabilitation, 29.4% indicated advice from clinicians about the effects of substance use, during a consultation, 46.9% agreed with the use of Professional Counseling taking a longer time; above six weeks. (CBT and STM), 39.5% mentioned religious counselling, 46.2% preferred peer support group, 42.7% preferred pharmacological treatment and 44.7% preferred being told of peer substance use issues (Normative feedback).

4.6 Conclusion

The study demonstrates a high prevalence of substance use among older adults attending outpatient services at Moi Teaching and Referral Hospital (MTRH), with 80% reporting lifetime use and 66.7% recent use, highlighting persistent and ongoing substance-related behavior. Notably, alcohol and cannabis emerged as the most problematic substances, with mean WHO-ASSIST scores indicating the need for intensive treatment, while tobacco and inhalant use warranted brief interventions. Substance use was significantly associated with several sociodemographic factors, including younger age (50–59 years), marital status (being married), Christian religious affiliation, and low income, suggesting that these variables contribute to heightened vulnerability. In contrast, no significant associations were found with gender, education level, or recent place of residence, indicating these factors may play a less influential role in this context. Clinical risk factors such as the presence of chronic illness and a history of substance use were also strongly linked to current use. These findings underscore the complex interplay between sociodemographic and clinical determinants of substance use in later life. Preferences for intervention leaned toward professional counseling, peer support groups, and normative feedback, reflecting a need for psychosocially grounded approaches.

CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Discussion

5.1.1 Introduction

This section covers the discussion, conclusions and recommendations of the study based on the findings. The study had the following objectives; to establish the prevalence of substance use among older adults at MTRH, to establish the risk factors associated with their substance use and to assess their preferred interventions for substance use.

5.1.2 Prevalence of Substance Use

The study found the prevalence of the substance use among older adults attending various clinics at MTRH was 66.7%. The study findings indicate that the most used substances based on the respondents and in order of use are alcohol, tobacco, cannabis and inhalants respectively.

On the other hand, cocaine, amphetamine, sedatives, hallucinogens and opioids are not usedd by the respondents. Alcohol and drug use (ADA) is one of Kenya's significant social problems, with common and easily detectable public health manifestations. Half of Kenya's drug users are aged 10 to 19, with more than 60% living in urban regions and 21% in rural ones (World Drug Report, 2018). This is an indication that in the current study, there is a higher prevalence when it comes to substance use with the initiation age being lower.

The most commonly used substance is alcohol with a prevalence of 42% among the older adults with the age of first used being 24 years based on the average mean. The alcohol use prevalence among the older adults is lower as compared to the overall substance use when it comes to the older adults. According to Breslow, Castle, Chen,

and Graubard (2017), the bulk of US older persons use alcoholic beverages and on the other hand, Han et al. (2019) found that alcohol use among older persons is rising in the US, along with a parallel rise in harmful alcohol use. Alcohol use in the past year increased by 22.4% to 62.4% from 40% between 2001 and 2013, while high-risk drinking increased by 65.2% over same time. Okoyo et al. (2022) in their study found out that the typical age of first use of *chang'aa* a traditional liquor is age of ten and the median age of packaged alcohol usage is 11 years in Kenya which is lower that the established age of the study(Okoyo et al., 2022). Additionally, the study's findings are in line with those reported by Kuerbis et al. (2014), who found that despite increased rates of illicit and prescription drug misuse among the elderly, alcohol is still the drug that older people use the most frequently(Kuerbis et al., 2014a). Prevalence estimates that account for people over 50 are higher. The Drugs in Focus Series by Gossop (2008) claims that older adults have a moderately high chance of acquiring drinking problems(Gossop, 2008).

The second most common used substance is tobacco products (cigarettes, chewing tobacco, cigars, etc.) with 16.8% which is higher as compared to that of the general population. The mean age for the first usage of tobacco being 21 years. According to Hu et al. (2016), while adult cigarette smoking has dramatically declined over the past 50 decade globally, the usage of novel tobacco products has increased recently by 25.5% among the older adults. According to Khan (2022), 12% of Indians over the age of 50 use tobacco-related goods which is a lower prevalence compared to the current study(Khan, 2022). According to Kuerbis et al. (2014), tobacco use is rather prevalent among older people, with over 14% of people 65 and older reporting nicotine use in the previous 12 months and just over 6% reporting alcohol and smoking combined usage in the same period(Kuerbis et al., 2014a). Additionally,

older smokers tend to be long-term, daily smokers who are also biologically dependent on nicotine, as shown by clinical trials evaluating smoking cessation therapy, according to Kuerbis et al (Kuerbis et al., 2014).

The third most used substance by the study older adults is cannabis (marijuana, bhang pot, grass, hash, etc.) at 6.7% with the initial age of usage being 14 years based on the calculated mean. Han and Palamar (2020) reported in their study that the prevalence of cannabis usage in the previous year grew dramatically among persons over the age of 50 between 2006-007 and 2012-2013, with a 57.8% relative increase for those aged 50-64 and a 250% relative increase for those aged 65 and over. When data from 2006 to 2013 were pooled, 6.9% of older cannabis users met the criteria for use of cannabis or dependency this prevalence was similar to the findings of the current study.

The fourth common substance used by the respondents are inhalants (nitrous, glue, petrol, paint thinner, etc.) at 1.2% prevalence rate which is lower than the overall substance prevalence and with an initial age of 6 years based on the calculated mean. The findings of the study is in agreement with the findings of Parish et al. (2022) who found out that among the older adults, inhalant use is low as a results the their appeal, accessibility and also the serious immediate side effects that it has.

From the findings, other substances such sedatives or sleeping pills (e.g., valium, diazepam, etc.) and opioids (morphine, heroine, codeine and methadone etc.) were not used by the respondents. The lack of use of such substances might be linked to inaccessibility by the older adults or it might be due to the fact the older adults do not find them appealing.

Furthermore, the WHO ASSIST indicates that those who are using tobacco need intervention, alcohol users needed more intensive treatment, cannabis users needed a

more intensive treatment and inhalant users needed a brief intervention. The study's findings are consistent with those of Kranzler and Soyka (2018), who observed that people with alcohol use disorders should either be referred for a more extensive psychosocial intervention or provided brief counseling and naltrexone as their initial treatment(Kranzler & Soyka, 2018). In order to achieve the optimum results, the treatment can be modified with regular observation of the patient's drinking by changing the type or intensity of psychosocial treatment as well as by adding or removing another first-line drug.

In their study, Baker, Hides, and Lubman (2010) found that treating mental health disorders successfully with standard pharmacotherapy may lead to a decrease in cannabis use and that longer or more intensive psychological interventions may be necessary rather than brief ones, especially for heavier cannabis users and those with more severe and chronic mental disorders(Baker et al., 2010).

5.1.3 Socio-Demographics Factors and Substance use among Older Adults

From the findings the age, marital status, religion and monthly income of the older adults attending outpatient clinic at MTRH influences their substance use behavior. On the other hand, gender, level of education and place of residence in the past 12 months was not associated with substance use.

The findings that showed that age influenced substance use concur with those of Kuerbis et al. (2014), who found that societal changes brought on by aging may make older adults more likely to use drugs(Kuerbis et al., 2014a). Drug users keep using drugs as they get older. Gallegos et al. (2021) in their study suggests that a rising proportion of older persons are at danger of using dangerous substances, even though older people are now less than the rest of the population to seek out medical care for substance use problems (Gallegos et al., 2021). However, it is to be noted that

detection of association with substance use in older persons might be challenging because of the common symptoms with medical illnesses that are frequent in this age group(Kuerbis, 2024; Kuerbis et al., 2014a).

The findings showing married status is associated with drug use contradict those of Jang et al. (2018), who reported that adult social situations, such as marriage, are associated with fewer instances of current and potential substance use. Substance users are less inclined to marry, and the lower chances of substance use after marrying are related to pre-existing disparities between unmarried and married people(Jang et al., 2018). According to Martin (2019), married people tend to consume fewer substances than unmarried people(Martin, 2019). This trend, known as the "marriage effect," has been linked to declines in drinking, smoking, and marijuana use among married people. The study, on the other hand, agrees with the findings of Stringer and Baker (2018), who found that marital breakup was connected with increases in the same chemicals(Baker et al., 2010).

The findings that religion influences the substance use habit among older adults contradict those of Simoni-Wastila and Keriyang (2006), who found that a lack of religious identification was also connected with higher classification degrees of drinking, each defined by an increase in volume and time spent drinking(Simoni-Wastila & Yang, 2006). Guo and Metcalfe (2019) also discovered that increased religious attendance is connected with a lower risk of all types of substance use(Guo & Metcalfe, 2019). Furthermore, the association between religious attendance and substance use weakens with age. With a few significant exceptions, religious attendance shows a similar link with substance use among adults.

The findings of the study that indicated that monthly income is associated with substance use is consistent with a study by Baptiste-Roberts and Hossain (2018) that found those with the lowest incomes were more likely to admit to substance dependency issues than those with the greatest incomes(Baptiste-Roberts & Hossain, 2018).According to Were et al. (2022), the prevalence of substance and drug use is substantially higher among lower-income people than it is among higher-income people(Were et al., 2022). Low-income individuals spend far more money on illicit drugs and other addictive substances. Kuerbis et al. (2004) discovered that having greater financial assets was linked to substance use, in contrast to the current study which indicated that money had been associated with substance use (Kuerbis, 2024).

The findings of the study that indicated that gender is not associated to substance use among the older adults contradicts the findings of Chhatre, Cook, Mallik, and Jayadevappa (2017) that noted that older women and older men use substances in distinct ways. They also suggest that women over 65 are less likely than men to engage in binge drinking. Older women reported lower rates of illicit drug use in the year before, alcohol dependence or use, dependence on drugs or use, or both disorders compared to older men (Chhatre et al., 2017). On the other hand, McKee and McRae-Clark (2022) found that men are more likely than women to use almost all types of illicit drugs, and that men are more likely than women to use drugs that are illicit, which raises the risk that they will visit the emergency room or die from an overdose (McKee & McRae-Clark, 2022).

The study findings that established that there is no association between level of education and substance use disagreed with the findings of Haabrekke et al. (2015) found that people with a college degree were 6.34 times less likely to acquire alcohol misuse or dependency than people who had dropped out of high school(Haabrekke et

al., 2015). The estimated relative risk for individuals who had gone to college but did not graduate was 3.01. Furthermore, Kantor et al. (2015) found that mothers' educational attainment and area of residence were the two most important predictors of smoking in their study(Kantor et al., 2015). Living without parents raised the risk of smoking, whereas the likelihood of smoking decreased the higher the moms' educational level(Kantor et al., 2015).

Lastly, the study findings indicate that the place of residence in the past 12 months is not associated with substance use does not concur with the findings of Linton et al. (2014), who found out that moving to an area with moderate to high levels of rehabilitation or staying there continuously were both related with a lower likelihood of injecting drugs(Linton et al., 2014). The conclusions of the study are also disagreed with by Rigg and Monnat (2015), who found that urban adults use alcohol, marijuana, and various other illicit and prescribed drugs more frequently as adults due to their earlier use of these substances(Rigg & Monnat, 2015).

5.1.4 Physical, Mental and Social Factors Associated with Substance Use among Older Adults

The study findings indicate that presence of chronic illness and history of substance use are risk factors to substance use among the older adults attending the outpatient clinic at MTRH. On the other hand, stress, coping style, significant loss, sleep pattern, retirement and living arrangement are not associated with substance uses.

The findings that chronic illness was associated with substance has been corroborated by other studies. For example, Kuerbis et al. (2014) study indicated that drinking to relieve discomfort was a significant long-term indicator of alcohol use in senior citizens(Kuerbis et al., 2014a). This does not, however, imply a causative relationship. Other studies however have shown that drinking decreases as hospitalization, impairments, or depressive symptoms increase. Older binge drinkers have much

worse overall health comparing to their reduced consuming peers (Silva et a., 2018; Wu et al., 2021).

History of substance use is risk factors to substance use among the older adults according to the study which has been supported by various studies. Family drug use as well as personal alcohol use, parental drug use and individual alcohol utilize, overall family history of substance reliance and potency of lifelong experimenting with drugs, and in general parental family history of substance dependence as well as personal cannabis use history (VanderBroek et al., 2016). In addition, Springer and Cubaa (2018) discovered that 102 (49.5%) of the 206 patients in their study had a history of substance misuse(Springer & Cubała, 2018). 40.8% of substance users started using drugs when they were teenagers, while 45.6% started using drugs when they were between the ages of 20 and 3(VanderBroek et al., 2016).The findings that indicated that stress has no association with substance use contradicts the findings of Lehavot and Simoni (2011), aging might cause greater stress and despair, rendering seniors more susceptible to alcohol and drug usage issues. Substance use might result from the gradual loss of the ability to carry out basic daily duties, the loss of friends, and growing isolation in once active, social individuals(Lehavot & Simoni, 2011).

The study findings that established that coping style is not associated to substance use by the older adults disagrees with some studies. In their study, Skalski et al. (2013) stated that active coping methods, such as religion or taking action to cope, may act as deterrent factors and forecast decreases in drug use which defers with the current study (Skalski et al., 2013).

Significant loss is not associated with substance use among older adults contradicts the findings of several studies. In their study, Goldbach et al. (2014) came to the conclusion that some situations, such the death of a loved one, may make pre-existing

substance use disorders worse(Goldbach et al., 2014). Loss as a result of the death of loved ones may also be affected by modifications to the financial and social environment. Contrarily, personal losses including the passing of loved ones, divorce, and loss of child custody among older women, according to Conrad, Liu, and Iris (2019)(Conrad et al., 2019).

Sleep pattern has no association with substance use as indicated in the study has disagreed with various studies done on older adults. When an older adult experiences sleep problems, substance usage should be taken into account, particularly when it comes to alcohol, caffeine, and tobacco use. While acute alcohol use may shorten sleep length and improve sleep quality, it can also cause an increase in arousal (Hussain et al., 2022). Alcohol can make sleep disturbed breathing worse by lowering the tone of the pharyngeal muscles. Caffeine's stimulating effects can shorten sleep duration by increasing sleep latency and the amount of awakenings (Navarro-Martínez et al., 2020). The use of tobacco has been linked to sleeplessness in older persons. Nicotine may enhance wakefulness by influencing acetylcholine transmission in the central nervous system (Miner & Kryger, 2020), making it a potential facilitator of this effect(Miner & Kryger, 2020).

Retirement and living arrangement are not associated with substance uses as per the study findings. According to Kuerbis and Sacco's (2014) research, retirement may not have a significant direct influence on drinking patterns or problems, but aspects of the transition to retirement process (like the voluntariness of retirement) and personal characteristics like a history of problems with alcohol may encourage or discourage drinking(Kuerbis et al., 2014a). Additionally, in their study, Kuerbis et al. (2014) discovered that a person's housing condition or way of life can encourage or support substance use. For instance, it has been observed that the milieu of nursing facilities

supports and even encourages substance misuse among older people. It has been discovered that homelessness and problems with alcohol in later life are associated.

5.1.5 Interventions for Substance Use among Older Adults

The findings of the study indicate that of the intervention preferred by the respondents 46.9% agreed preferred the use of Professional Counseling taking a longer time; above six weeks (CBT and STM), 46.2% preferred peer support group, 44.7% preferred being told of peer substance use issues (Normative feedback), 42.7% preferred pharmacological treatment, 39.5% mentioned religious counselling, 36.8% agreed to the use of residential rehabilitation and 29.4% indicated advice from clinicians about the effects of substance use, during a consultation. Thus, it can be concluded that there are various forms of interventions that are available for adults who are abusing drugs.

The findings of the study on the choice of residential rehabilitation in the study disagreed with the findings of Wadd and Dutton (2018). In their study, Wadd and Dutton (2018) found that some residential rehabs might not be adequately sensitive to the requirements of older persons(Wadd & Dutton, 2018). It would be oversimplified to imply that, based on a certain age classification, all older persons have the same needs. However, the findings are supported by Ortiz-Piña et al. (2021) who indicated that most of the older adults prefer residential rehabilitation since they provide them with almost all theta they need such as the wheel chairs among others (Ortiz-Piña et al., 2021).

The preference of advice from clinicians about the effects of substance use, during a consultation as intervention as indicated by the study has been supported by Tremain et al. (2016) who in their study indicated that most of the older adults tend to have

faith in the clinicians and thus they take the advice that they take serious and more so when they are informed about the severity of their substance related condition(Tremain et al., 2016).

The study findings indicate that almost half (46.9%) of the older adults prefer professional counselling which has been supported Jones and Welfare (2017) who found that most of the older adults prefer professional counselors based on some of the benefits that comes with it(Jones & Welfare, 2017). The study noted that adults who are substance users prefer professional counselling because the counselling sessions gives them time to discuss the fears that they have and also they get to be given better coping mechanism.

From the study more than a third (39.5%) of the respondents indicated that they preferred the use of religious counselling which is in agreement with the Parenteau (2017) who established that rehabilitation that is combined with religious counselling have about 84% effectiveness when it comes to substance use reduction(Parenteau, 2017).

The study findings that indicate that almost half of the older adults prefer the use of peer support group and being told of by peer substance use issues resonates with the findings of Bassuk et al. (2016) who indicated that peer support group participation has been demonstrated to be a significant predictor of recovery and recovery maintenance(Bassuk et al., 2016). Benefits for the peer support group also include improved self-worth, self-assurance, emotions of accomplishment, and an improvement in their capacity to deal with obstacles.

The current study findings is comparable to that of Tracy and Wallace (2016) which indicated that peers are key when it comes to the management of substance use

among a group of peers according to Tracy and Wallace (2016)(Tracy & Wallace, 2016). Tracy and Wallace further indicated that peer support is effective as it is a technique for receiving and giving non-professional, non-clinical support from people with comparable circumstances or conditions in order to accomplish long-term healing from matters surrounding mental health providers, alcohol, and/or other drugs. Although peer-to-peer meetings in addiction rehabilitation have a lot of potential, there is not enough data to draw any definite conclusions. To develop on this crucial line of inquiry, more thorough study in this field is needed.

5.2 Conclusion

Based on the findings and the discussion that have been made, the study has made the following conclusions; there is a high prevalence when it comes to substance use among older adults attending various clinics at MTRH Which is higher than that of the general population. Additionally, those who are using tobacco need intervention, alcohol users needed more intensive treatment, cannabis users needed a more intensive treatment and inhalant users needed a brief intervention.

In terms of the prevalence of substance use, it is concluded that the highly used substance is alcoholic with the age of first used being 24 years based on the average mean followed by tobacco products (cannabis and finally inhalants with an initial age of use being 6 years. On the other hand, cocaine, amphetamine, sedatives, hallucinogens and opioids are not used by the respondents.

In terms of the socio-demographic factors and substance use, the study concludes that age, being married, religion (Christian), low monthly income, family history of substance use and having a chronic illness are associated with substance use among older adults attending outpatient clinic at MTRH. On the other hand, gender, level of education, place of residence in the past 12 months are not associated with substance

use among the older adults attending outpatient clinic at MTRH influences their substance use behavior.

Regarding physical and mental health factors, the study concludes that the presence of chronic illness and history of substance use are risk factors to substance use among the older adults attending the outpatient clinic at MTRH. On the other hand, stress, coping style, significant loss, sleep pattern, retirement and living arrangement are not associated with substance users.

In terms of the interventions for substance use, the study concludes that in order of preference the older adults prefer the use of; Professional Counseling, peer support group, being told of peer substance use issues (Normative feedback), pharmacological treatment, religious counselling, residential rehabilitation, and advice from clinicians about the effects of substance use, during a consultation. Thus, there are various forms of interventions that are available for adults who are using drugs.

5.3 Recommendations

The study recommends individualized intervention to address substance use among older adults. MTRH should integrate screening for substance use and focus counselling services on older adults attending the clinics. NACADA needs to enhance programs specific to older adults to NACADA needs to enhance programs specific to older adults to facilitate prevention and minimize the substance use.

5.4 Areas for Further Study

a. While this study focused on substance use among older adults, further research is recommended to explore the extent and patterns of drug use within this population. Understanding the frequency, types, and contexts of substance use among older adults will provide critical insights for designing more precise and effective prevention and treatment strategies.

b. There is a need for a study to be done that looks at the preferred interventions that have been mentioned in the study can be enhanced and how they can be best implemented in health settings that serve older adults.

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APPENDICES

Appendix I: Informed Consent.

INFORMED CONSENT FORM

Introduction: My name is Winnie Chemutai. I am a Student at the Moi University School of Medicine Pursuing a Masters degree in Clinical Psychology. I am talking to people about substance use among older adults. Information you tell me will be used to write a report to shed light into this subject. You will complete a questionnaire about substance use and related issues. Some of the questions will be about your personal life and behaviors such as drug taking and health. There are no right or wrong answers. You are free to refuse to answer any questions.

Study purpose of the study: The purpose of this study is to find out the prevalence of substance use among older adults, to assess the risk factors associated with substance use and to establish interventions to reduce substance use among older adults.

Procedure of the study: If you agree to participate in the study, you fill a questionnaire which will take you approximately 40-45 mins.

Risks of taking part: There are no known risks for taking part in this study.

Benefits of taking part: You will not get any monetary or material gains from participating in this study. However, the findings of this study will benefit the society at large.

Alternatives of taking part: You have the right to take part or not to take part in this study. You are free to drop out of this study at any stage.

Confidentiality: Anonymity of the information you provide is guaranteed. Don't put any identifying information on the questionnaire. No information will be linked to your hospital records.

Costs: You will not incur any study-specific costs

Payment: You will not receive any payment for taking part in this study. **Contacts for any queries**

For any questions about the study contact the researcher on 0779443547 or email chemutuigong@gmail.com or irec@mtrh.or.ke

Voluntary nature of study

Taking part in this study is voluntary. You may choose to take part in it or not. There will be no penalty or impact on you or your relationship with the investigator.

Signed:

Participant _____ Date _____

Researcher_____ Date_____

FOMU YA RIDHAA YA KUSHIRIKI UTAFITI (INFORMED CONSENT FORM)

Utangulizi

Jina langu ni **Winnie Chemutai**. Mimi ni mwanafunzi katika Shule ya Tiba ya Chuo Kikuu cha Moi nikisomea Shahada ya Uzamili katika Saikolojia ya Kitabibu. Ninalenga kuzungumza na watu kuhusu matumizi ya dawa za kulevya na pombe miongoni mwa watu wazima wenye umri mkubwa. Taarifa utakazonipa zitatumika kuandaa ripoti ili kutoa mwanga kuhusu mada hii.

Utajaza dodoso kuhusu matumizi ya dawa za kulevya na masuala yanayohusiana nayo. Baadhi ya maswali yatakuwa kuhusu maisha yako binafsi na tabia zako kama vile matumizi ya dawa na afya yako. Hakuna majibu sahihi au yasiyo sahihi. Uko huru kukataa kujibu swali lolote.

Madhumuni ya Utafiti

Madhumuni ya utafiti huu ni:

- Kubaini kiwango cha matumizi ya dawa za kulevya miongoni mwa watu wazima wenye umri mkubwa,
- Kutathmini sababu za hatari zinazohusiana na matumizi ya dawa hizo,
- Kubaini mbinu au hatua za kupunguza matumizi ya dawa za kulevya miongoni mwa watu wazima wenye umri mkubwa.

Utaratibu wa Utafiti

Ukikubali kushiriki katika utafiti huu, utajaza dodoso ambalo litachukua takribani dakika 40–45 kukamilika.

Hatari za Kushiriki

Hakuna hatari zozote zinazojulikana kutokana na kushiriki katika utafiti huu.

Faida za Kushiriki

Hutapata malipo ya fedha au faida ya mali kwa kushiriki katika utafiti huu. Hata hivyo, matokeo ya utafiti huu yatasaidia jamii kwa ujumla.

Mbadala wa Kushiriki

Una haki ya kushiriki au kutoshiriki katika utafiti huu. Uko huru kujiondoa katika utafiti huu wakati wowote bila madhara yoyote.

Usiri

Usiri wa taarifa utakazotoa umehakikishwa. Tafadhali usiandike jina lako au taarifa yoyote itakayoweza kukutambulisha kwenye dodoso. Hakuna taarifa itakayohusishwa na rekodi zako za hospitali.

Gharama

Hutagharamia chochote maalum kwa ajili ya kushiriki katika utafiti huu.

Malipo

Hutapokea malipo yoyote kwa kushiriki katika utafiti huu.

Mawasiliano kwa Maswali

Kwa maswali yoyote kuhusu utafiti huu, wasiliana na mtafiti kupitia: Simu: 0779443547

Barua pepe: chemutuigong@gmail.com

Au: irec@mtrh.or.ke

Hali ya Kujitolea

Kushiriki katika utafiti huu ni kwa hiari yako. Unaweza kuchagua kushiriki au kutoshiriki. Hakutakuwa na adhabu wala athari yoyote kwako au kwa uhusiano wako na mtafiti.

Sahihi:

Mshiriki _____ Tarehe _____

Mtafiti _____ Tarehe _____

Appendix II: Questionnaire

SELF ADMINISTERED QUESTIONNAIRE.

INTRODUCTION

The questions that follow concern your usage of substances such as alcohol, tobacco, and other drugs. The information you provide is kept private, and you are not required to respond to the questions if you decide not choose to. Because the data you provide is critical, please respond as honestly and correctly as possible. This is not an exam, a nd there are no correct or incorrect answers. Your information is absolutely private, a nd only the investigators will have privy to the formYour identity or address will neve r be associated with any of the data you supply.

Interview Number ……..

Country ……..

Date……

SECTION A: SOCIODEMOGRAPHICS

The questions that follow are about you. These questions are solely asked to assist us in analyzing the study's findings. Your assistance is critical to our study. (**PLEASE CIRCLE ONE CODE AND WRITE IN WHERE NECESSARY).**

I. Are you male or female?

1 Male

2 female

II. How old are you?

1. 50-59 years
2. 60-69 years
3. 70-79 years
4. 80 years and older

III. How many years of formal education have you completed?

1. Higher Education
2. Secondary School
3. Primary School
4. Did not complete Primary School.

IV. During most of the past 12 months, have you been living mostly in a rural area or village or in town, or in a city?

1. Rural area/ village
2. Town
3. City
4. Other……..

V. Which of the following best describes your current marital status?

1. Married
2. Widowed
3. Divorced or separated
4. Living as couple
5. Never married/single

VI. What Religion are you a member of?

1. Christian
2. Muslim
3. Other …….

VII. What is your monthly income in Kenyan Shillings

1. Below 9,999
2. 10,000- 19,999
3. 20,000- 29,999
4. 30,000- 39,999
5. 40,000- 49,999
6. Above 50,000

SECTION B: PREVALENCE AND HISTORY OF SUBSTANCE USE.

I. In your life, which of the following substances have you used? (for non-medical use only)

Substance	**Yes**	**No**	**Age of first Use.**
Alcoholic beverages (beer, wine, spirits, etc.)			
Tobacco products (cigarettes, chewing tobacco, cigars, etc.)			
Cannabis (marijuana, bhang pot, grass, hash, etc.)			
Sedatives or Sleeping Pills (Valium, diazepam, etc.)			
Opioids (heroin, morphine, methadone, codeine, etc.)			
Cocaine (coke, crack, etc.)			
Inhalants (nitrous, glue, petrol, paint thinner, etc.)			
Other - specify:			

If you answered yes to use of any substance above, please complete the ASSIST below.

SECTION C. THE RISK FACTORS ASSOCIATED WITH SUBSTANCE USE.

I. Do you, or did you work in a highly demanding job that caused a lot of stress?

1. Yes
2. No

II. How do you cope with stress?

1. By talking about it
2. Avoiding it
3. Counselling
4. Use of alcohol/ substance to relax
5. Other……

III. Is there any member of your family (nuclear or extended) who has a Substance use Problem?

1. Yes
2. No

IV. Did you use Alcohol or any drug when you were younger?

1. Yes
2. No

V. How would you describe your sleep in the last one month?

1. Normal
2. Poor
3. Excess

Specify……
……
……

VI. Have you experienced a significant loss in your life?

1. Death
2. Loss of property
3. Loss of friends
4. Loss of physical ability
5. Other…….

VII. Do you suffer from any pain for over three months? (muscle, joint, headache)

1. Yes
2. No

Specify ……..

VIII. Do you suffer from Diabetes, High blood pressure or any other chronic illness?

1. Yes
2. No

Specify……

IX. For most of the past 12 months were you working on a paid job full-time or part time?

1. No -not working
2. Yes -part-time
3. Yes -full-time
4. Retired

X. If retired, what was the nature of your retirement?

1. Voluntary
2. Involuntary
3. Forced
4. Unexpected
5. Other ……

XI. Who do you live with?

1. Spouse
2. Children
3. Spouse and Children
4. Relatives
5. Hired Help
6. Alone
7. Other ……

SECTION D: INTERVENTIONS TO REDUCE SUBSTANCE USE AMONG OLDER ADULTS

This section is aimed at getting your views on what can be done to reduce or avoid substance use among older adults. Answer yes if you think the intervention will help reduce or avoid substance use among older adults and no if you don't think the particular intervention will work.

If you have an intervention that you would recommend, please write it down below this table

Intervention	Yes	No
Residential Rehabilitation		
Advice from clinicians about the effects of substance use, during a consultation.		
Professional Counseling taking a longer time; above six weeks. (CBT and STM)		
Religious Counselling		
Peer Support Group		
Pharmacological treatment		
Being told of peer substance use issues (Normative feedback)		

Other……

DODOSO LA KUJAZA MWENYEWE (SELF-ADMINISTERED QUESTIONNAIRE)

UTANGULIZI

Maswali yafuatayo yanahusu matumizi yako ya vileo kama vile pombe, tumbaku na dawa nyingine za kulevya. Taarifa utakazotoa zitahifadhiwa kwa siri, na huna wajibu wa kujibu maswali ikiwa hutaki. Kwa kuwa taarifa zako ni muhimu sana, tafadhali jibu kwa uaminifu na kwa usahihi kadri uwezavyo. Huu si mtihani na hakuna majibu sahihi au yasiyo sahihi. Taarifa zako ni za siri kabisa, na ni watafiti pekee watakaokuwa na ruhusa ya kuona fomu hii. Jina lako au anwani yako haitahusishwa kamwe na taarifa utakazotoa.

Nambari ya Mahojiano ……
Nchi ……
Tarehe ……

SEHEMU A: TAARIFA ZA KIJAMII NA KIDEMOGRAFIA

Maswali yafuatayo yanakuhusu wewe binafsi. Yanaulizwa tu ili kusaidia katika uchambuzi wa matokeo ya utafiti. Ushirikiano wako ni muhimu sana.
(TAFADHALI ZUNGUSHA NAMBA MOJA TU NA ANDIKA PALE PANAPOHITAJIKA).

I. Wewe ni jinsia gani?

1. Mwanaume
2. Mwanamke

II. Una umri gani?

1. Miaka 50–59
2. Miaka 60–69
3. Miaka 70–79
4. Miaka 80 na zaidi

III. Umehitimu miaka mingapi ya elimu rasmi?

1. Elimu ya Juu
2. Sekondari
3. Shule ya Msingi
4. Sikumaliza Shule ya Msingi

IV. Katika miezi 12 iliyopita, uliishi zaidi wapi?

1. Eneo la vijijini/kijiji
2. Mji mdogo
3. Jiji
4. Nyingine……..

V. Hali yako ya ndoa kwa sasa ni ipi?

1. Nimeoa/Nimeolewa
2. Mjane
3. Nimetalikiwa/Nimetengana
4. Naishi kama mume na mke
5. Sijawahi kuoa/kuolewa

VI. Wewe ni wa dini gani?

1. Mkristo
2. Mwislamu
3. Nyingine ……

VII. Mapato yako ya kila mwezi kwa Shilingi za Kenya ni kiasi gani?

1. Chini ya 9,999
2. 10,000 – 19,999
3. 20,000 – 29,999
4. 30,000 – 39,999
5. 40,000 – 49,999
6. Zaidi ya 50,000

SEHEMU B: KIWANGO NA HISTORIA YA MATUMIZI YA DAWA

I. Katika maisha yako, ni dawa zipi kati ya zifuatazo umewahi kutumia? (kwa matumizi yasiyo ya kitabibu)

Dawa	Ndiyo Hapana	Umri wa kwanza kutumia
Vileo (bia, divai, pombe kali n.k.)		
Bidhaa za tumbaku (sigara, tumbaku ya kutafuna, sigara kubwa n.k.)		
Bangi (marijuana, bhang n.k.)		
Dawa za kutuliza au za usingizi (Valium, diazepam n.k.)		
Opioidi (heroini, morphine, methadone, codeine n.k.)		
Kokeni (coke, crack n.k.)		
Vimumunyisho/kuvuta hewa (gundi, petroli, rangi n.k.)		
Nyingine – taja:		

Ikiwa umejibu “Ndiyo” kwa dawa yoyote hapo juu, tafadhali jaza kipimo cha ASSIST hapa chini.

SEHEMU C: SABABU ZA HATARI ZINAZOHUSIANA NA MATUMIZI YA DAWA

I. Je, unafanya au uliwahi kufanya kazi yenye msongo mkubwa wa mawazo?

1. Ndiyo
2. Hapana

II. Unakabiliana vipi na msongo wa mawazo?

1. Kwa kuzungumza kuhusu tatizo
2. Kwa kuliepuka
3. Ushauri nasaha
4. Kutumia pombe/dawa ili kupumzika
5. Nyingine……

III. Je, kuna mwanafamilia (wa karibu au wa ukoo) mwenye tatizo la matumizi ya dawa?

1. Ndiyo
2. Hapana

IV. Je, ulitumia pombe au dawa nyingine ulipokuwa kijana?

1. Ndiyo
2. Hapana

V. Usingizi wako katika mwezi mmoja uliopita ulikuwaje?

1. Wa kawaida
2. Mbaya
3. Kupita kiasi
   Eleza……

VI. Je, umewahi kupitia hasara kubwa maishani?

1. Kifo
2. Kupoteza mali
3. Kupoteza marafiki
4. Kupoteza uwezo wa mwili
5. Nyingine……

VII. Je, una maumivu kwa zaidi ya miezi mitatu? (misuli, viungo, kichwa n.k.)

1. Ndiyo
2. Hapana
   Eleza……

VIII. Je, unasumbuliwa na kisukari, shinikizo la damu au ugonjwa mwingine sugu?

1. Ndiyo
2. Hapana
   Eleza……

IX. Katika miezi 12 iliyopita, ulikuwa unafanya kazi ya kulipwa muda wote au muda wa nusu?

1. Hapana – sifanyi kazi
2. Ndiyo – muda wa nusu
3. Ndiyo – muda wote
4. Nimestaafu

X. Ikiwa umestaafu, kustaafu kwako kulikuwaje?

1. Kwa hiari
2. Bila hiari
3. Kulazimishwa
4. Bila kutarajia
5. Nyingine……

XI. Unaishi na nani?

1. Mwenzi
2. Watoto
3. Mwenzi na watoto
4. Ndugu
5. Mfanyakazi wa nyumbani
6. Peke yangu
7. Nyingine……

SEHEMU D: HATUA ZA KUPUNGUZA MATUMIZI YA DAWA MIONGONI MWA WATU WAZIMA

Sehemu hii inalenga kupata maoni yako kuhusu nini kifanyike kupunguza au kuzuia matumizi ya dawa miongoni mwa watu wazima. Jibu “Ndiyo” ikiwa unaamini hatua hiyo itasaidia, na “Hapana” ikiwa unaamini haitasaidia.

Hatua	**Ndiyo**	**Hapana**
Ukarabati wa kuishi kituoni (Residential Rehabilitation)		
Ushauri wa daktari kuhusu athari za matumizi ya dawa wakati wa kliniki		
Ushauri nasaha wa kitaalamu wa muda mrefu (zaidi ya wiki sita – CBT na STM)		
Ushauri wa kidini		
Kikundi cha usaidizi wa rika (Peer Support Group)		
Matibabu kwa dawa (Pharmacological treatment)		
Kuelezwa kuhusu matatizo ya matumizi ya dawa kwa rika (Normative feedback)		

Nyingine (tafadhali eleza):

……

Appendix III WHO – ASSIST

INTERVIEWER ID _____ COUNTRY _____ **CLINIC** _____

PATIENT ID _____ **DATE** _____

INTRODUCTION (Please read to patient)

Thank you for consenting to this quick interview regarding alcohol, tobacco, and other substances. I'm going to ask you a few questions regarding your use of these substances throughout your life and in the last three months. These chemicals can be smoked, ingested, snorted, inhaled, injected, or taken orally. Some of the above substances may be prescribed by doctors (like amphetamines, sedatives, pain medications). We will not record medications taken as prescribed by your doctor during this interview. Please let me know if you have used such drugs for reasons apart from prescription, or if you have taken them too frequently or at larger concentrations than advised. While we are interested in learning about your use different illegal drugs, you can rest assured that any such information will be kept totally confidentially (show drug card).

NOTE: BEFORE ASKING QUESTIONSS, GIVE ASSIST RESPONSE CARD TO PATIENT

Question 1

(if completing follow-up please cross check the patient's answers with the answers given for Q1 at baseline. Any differences on this question should be queried)

In your life, which of the following substances have you <u>ever used</u>? *(NON--MEDICAL USE ONLY)*	No	Yes
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	**0**	**3**
b. Alcoholic beverages (beer, wine, spirits, etc.)	**0**	**3**
c. Cannabis (marijuana, pot, grass, hash, etc.)	**0**	**3**
d. Cocaine (coke, crack, etc.)	**0**	**3**
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	**0**	**3**
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	**0**	**3**
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	**0**	**3**
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	**0**	**3**
i. Opioids (heroin, morphine, methadone, codeine, etc.)	**0**	**3**
j. Other - specify:	**0**	**3**

If "Never" to all items in Question 2, skip to Question 6.

If any substances in Question 2 were used in the previous three months, continue with Questions 3, 4 & 5 for each substance used.

Question 2

In the past three months, how often have you used the substances you mentioned *(FIRST DRUG, SECOND DRUG, ETC)*?	**Never**	**Once or Twice**	**Monthly**	**Weekly**	**Daily or Almost Daily**
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	**0**	**2**	**3**	**4**	**6**
b. Alcoholic beverages (beer, wine, spirits, etc.)	**0**	**2**	**3**	**4**	**6**
c. Cannabis (marijuana, pot, grass, hash, etc.)	**0**	**2**	**3**	**4**	**6**
d. Cocaine (coke, crack, etc.)	**0**	**2**	**3**	**4**	**6**
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	**0**	**2**	**3**	**4**	**6**
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	**0**	**2**	**3**	**4**	**6**
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	**0**	**2**	**3**	**4**	**6**
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	**0**	**2**	**3**	**4**	**6**
i. Opioids (heroin, morphine, methadone, codeine, etc.)	**0**	**2**	**3**	**4**	**6**
j. Other - specify:	**0**	**2**	**3**	**4**	**6**

Question 3

During the past three months, how often have you had a strong desire or urge to use *(FIRST DRUG, SECOND DRUG, ETC)*?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	3	4	5	6
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	3	4	5	6
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	3	4	5	6
d. Cocaine (coke, crack, etc.)	0	3	4	5	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	3	4	5	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3	4	5	6
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	3	4	5	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	3	4	5	6
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	3	4	5	6
j. Other - specify:	0	3	4	5	6

Question 4

During the past three months, how often has your use of *(FIRST DRUG, SECOND DRUG, ETC)* led to health, social, legal or financial problems?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	4 5	6		7
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	4 5	6		7
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	4 5	6		7
d. Cocaine (coke, crack, etc.)	0	4 5	6		7
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	4 5	6		7
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	4 5	6		7
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	4 5	6		7
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	4 5	6		7
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	4 5	6		7
j. Other - specify:	0	4 5	6		7

Question 5

During the past three months, how often have you failed to do what was normally expected of you because of your use of *(FIRST DRUG, SECOND DRUG, ETC*)?	**Never**	**Once or Twice**	**Monthly**	**Weekly**	**Daily or Almost Daily**
a. Tobacco products					
b. Alcoholic beverages (beer, wine, spirits, etc.)	**0**	**5**	**6**	**7**	**8**
c. Cannabis (marijuana, pot, grass, hash, etc.)	**0**	**5**	**6**	**7**	**8**
d. Cocaine (coke, crack, etc.)	**0**	**5**	**6**	**7**	**8**
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	**0**	**5**	**6**	**7**	**8**
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	**0**	**5**	**6**	**7**	**8**
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	**0**	**5**	**6**	**7**	**8**
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	**0**	**5**	**6**	**7**	**8**
i. Opioids (heroin, morphine, methadone, codeine, etc.)	**0**	**5**	**6**	**7**	**8**
j. Other - specify:	**0**	**5**	**6**	**7**	**8**

Ask Questions 6 & 7 for all substances ever used (i.e. those endorsed in Question 1)

Question 6

Has a friend or relative or anyone else ever expressed concern about your use of *(FIRST DRUG, SECOND DRUG, ETC.)?*	No, Never	Yes, in the past 3 months	Yes, but not in the past 3 months
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	6	3
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	6	3
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	6	3
d. Cocaine (coke, crack, etc.)	0	6	3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	6	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6	3
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	6	3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	6	3
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	6	3
j. Other – specify:	0	6	3

Questions 7

Have you <u>ever</u> tried and failed to control, cut down or stop using ***(FIRST DRUG, SECOND DRUG, ETC.)?***		No, Never	Yes, in the past 3 months
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	**0**	**6**	**3**
b. Alcoholic beverages (beer, wine, spirits, etc.)	**0**	**6**	**3**
c. Cannabis (marijuana, pot, grass, hash, etc.)	**0**	**6**	**3**
d. Cocaine (coke, crack, etc.)	**0**	**6**	**3**
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	**0**	**6**	**3**
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	**0**	**6**	**3**
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	**0**	**6**	**3**
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	**0**	**6**	**3**
i. Opioids (heroin, morphine, methadone, codeine, etc.)	**0**	**6**	**3**
j. Other – specify:	**0**	**6**	**3**

QUESTION 8

	No, Never	**Yes, in the past 3 months**	**Yes, but not in the past 3 months**
Have you <u>ever</u> used any drug by injection? ***(NON- MEDICAL USE ONLY)***	**0**	**2**	**1**

IMPORTANT NOTE:

Patients who have injected drugs in the last 3 months should be asked about their pattern of injecting during this period, to determine their risk levels and the best course of intervention.

PATTERN OF INJECTING **INTERVENTION GUIDELINES**

Once weekly or less or Fewer than 3 days in a row

More than once per week or 3 or more days in a row → **Further assessment and more intensive treatment***

HOW TO CALCULATE A SPECIFIC SUBSTANCE INVOLVEMENT SCORE

For each substance (labelled a. to j.) add up the scores received for questions 2 through 7 inclusive. Do not include the results from either Q1 or Q8 in this score. For example, a score for cannabis would be calculated as: Q2c + Q3c + Q4c + Q5c + Q6c + Q7c

Note that Q5 for tobacco is not coded, and is calculated as: Q2a + Q3a + Q4a + Q6a + Q7a

THE TYPE OF INTERVENTION IS DETERMINED BY THE PATIENT'S SPECIFIC SUBSTANCE INVOLVEMENT SCORE

	Record specific substance score	no intervention	receive brief intervention	more intensive treatment *
a. tobacco		**0 - 3**	**4 - 26**	**27 +**
b. alcohol		**0 - 10**	**11 - 26**	**27 +**
c. cannabis		**0 - 3**	**4 - 26**	**27 +**
d. cocaine		**0 - 3**	**4 - 26**	**27 +**
e. amphetamine		**0 - 3**	**4 - 26**	**27 +**
f. inhalants		**0 - 3**	**4 - 26**	**27 +**
g. sedatives		**0 - 3**	**4 - 26**	**27 +**
h. hallucinogens		**0 - 3**	**4 - 26**	**27 +**
i. opioids		**0 - 3**	**4 - 26**	**27 +**
j. other drugs		**0 - 3**	**4 - 26**	**27 +**

NOTE: *FURTHER ASSESSMENT AND MORE INTENSIVE TREATMENT may be provided by the health professional(s) within your primary care setting, or, by a specialist drug and alcohol treatment service when available.

WHO – ASSIST (Zana ya Uchunguzi wa Matumizi ya Pombe, Tumbaku na Dawa Nyingine)

MHOJIJI ID _____ NCHI _____ KLINIKI _____

KITAMBULISHO CHA MGONJWA _____ TAREHE _____

UTANGULIZI (Soma kwa mgonjwa)

Asante kwa kukubali kushiriki katika mahojiano haya mafupi kuhusu matumizi ya pombe, tumbaku na dawa nyingine. Nitakuuliza maswali machache kuhusu matumizi yako ya vitu hivi katika maisha yako yote na katika miezi mitatu iliyopita. Vitu hivi vinaweza kuvutwa, kunywewa, kunuswa, kuvutwa hewani, kudungwa sindano au kumezwa.

Baadhi ya dawa zilizotajwa zinaweza kuandikwa na daktari (kama vile amfetamini, dawa za kutuliza au za maumivu). Hatutarekodi dawa ulizotumia kulingana na maagizo ya daktari wako. Tafadhali nijulishe kama uliwahi kutumia dawa hizo kwa sababu zisizo za kitabibu, au kama ulizitumia mara nyingi zaidi au kwa kiwango kikubwa kuliko ulivyoelekezwa.

Ingawa tunataka kujua kuhusu matumizi ya dawa haramu, uwe na uhakika kuwa taarifa zote utakazotoa zitahifadhiwa kwa siri kabisa. (Onyesha kadi ya dawa).

KUMBUKA: Kabla ya kuuliza maswali, mpe mgonjwa kadi ya majibu ya ASSIST.

Swali la 1

(Kama ni ufuatiliaji, hakiki majibu ya Swali la 1 ya awali. Tofauti zozote zifuatiliwe.)

Katika maisha yako, ni dawa zipi kati ya zifuatazo umewahi kutumia?
(MATUMIZI YASIYO YA KITABIBU PEKEE)

Dawa	Hapana (0)	Ndiyo (3)
a. Bidhaa za tumbaku (sigara, tumbaku ya kutafuna, sigara kubwa n.k.)	0	3
b. Vileo (bia, divai, pombe kali n.k.)	0	3
c. Bangi (marijuana, hash n.k.)	0	3
d. Kokeni (coke, crack n.k.)	0	3
e. Vichocheo aina ya amfetamini (speed, vidonge vya kupunguza uzito, ecstasy n.k.)	0	3
f. Vimumunyisho (gundi, petroli, rangi n.k.)	0	3
g. Dawa za kutuliza/usingizi (Valium, Rohypnol n.k.)	0	3
h. Dawa za kuona ndoto/halusinijeni (LSD, mushrooms n.k.)	0	3
i. Opioidi (heroini, morphine, methadone, codeine n.k.)	0	3
j. Nyingine – taja:	0	3

Ikiwa “Hapana” kwa zote, ruka hadi Swali la 6.
Ikiwa yoyote imetumika katika miezi mitatu iliyopita, endelea na Maswali 2–5 kwa kila dawa.

Swali la 2

Katika miezi mitatu iliyopita, umetumia mara ngapi dawa ulizotaja?

Kiwango	Hapana	Mara 1-2	Kila mwezi	Kila wiki	Kila siku/Karibu kila siku
(Tumbaku, Pombe, Bangi, n.k.)	0	2	3	4	6

Swali la 3

Katika miezi mitatu iliyopita, mara ngapi ulipata hamu kubwa au msukumo wa kutumia dawa?

Hapana Mara 1-2 Kila mwezi Kila wiki Kila siku
0 3 4 5 6

Swali la 4

Katika miezi mitatu iliyopita, mara ngapi matumizi yako yalisababisha matatizo ya kiafya, kijamii, kisheria au kifedha?

Hapana Mara 1-2 Kila mwezi Kila wiki Kila siku
0 4 5 6 7

Swali la 5

Katika miezi mitatu iliyopita, mara ngapi umeshindwa kutekeleza majukumu yako ya kawaida kwa sababu ya matumizi ya dawa?

Hapana Mara 1-2 Kila mwezi Kila wiki Kila siku
0 5 6 7 8
(Kwa tumbaku, Swali la 5 halijumlishwi katika hesabu ya alama.)

Swali la 6

Je, rafiki, ndugu au mtu mwingine yeyote amewahi kuonyesha wasiwasi kuhusu matumizi yako ya dawa?

| Hapana, Kamwe (0) | Ndiyo, miezi 3 iliyopita (6) | Ndiyo, lakini si miezi 3 iliyopita (3) |

Swali la 7
Je, umewahi kujaribu na kushindwa kupunguza au kuacha kutumia dawa?

| Hapana, Kamwe (0) | Ndiyo, miezi 3 iliyopita (6) | Ndiyo, lakini si miezi 3 iliyopita (3) |

Swali la 8

Je, umewahi kutumia dawa kwa kujidunga sindano?
(MATUMIZI YASIYO YA KITABIBU PEKEE)

| Hapana (0) | Ndiyo, miezi 3 iliyopita (2) | Ndiyo, lakini si miezi 3 iliyopita (1) |

MUHIMU

Wagonjwa waliodunga dawa katika miezi 3 iliyopita wanapaswa kuulizwa kuhusu namna walivyokuwa wakidunga ili kutathmini kiwango cha hatari na aina bora ya msaada.

JINSI YA KUHESABU ALAMA YA MATUMIZI YA KILA DAWA

Kwa kila dawa (a–j), jumlisha alama za Maswali 2 hadi 7.
Usijumlishe Swali la 1 au Swali la 8.

Kwa mfano:
Alama ya bangi = Q2c + Q3c + Q4c + Q5c + Q6c + Q7c
(Kwa tumbaku: Q2a + Q3a + Q4a + Q6a + Q7a)

AINA YA UINGILIAJI KULINGANA NA ALAMA

Dawa	Hakuna uingiliaji	Ushauri mfupi	Matibabu ya kina
Tumbaku	0–3	4–26	27+
Pombe	0–10	11–26	27+
Bangi	0–3	4–26	27+
Kokeni	0–3	4–26	27+
Amfetamini	0–3	4–26	27+
Vimumunyisho	0–3	4–26	27+
Dawa za kutuliza	0–3	4–26	27+
Halusinijeni	0–3	4–26	27+
Opioidi	0–3	4–26	27+
Dawa nyingine	0–3	4–26	27+

Matibabu ya kina yanaweza kutolewa katika kituo cha huduma ya afya au rufaa kwa huduma maalum za matibabu ya dawa za kulevya pale zinapopatikana.

Appendix IV: Eligibility Requirements survey.

RECRUITMENT ELIGIBILITY SURVEY

Please answer the following questions which will help us determine whether you are eligible to participate in the study

1. How old are you now ……
2. Can you speak in English or Swahili? .....

UCHUNGUZI WA USTAHIKI WA USHIRIKI

Tafadhali jibu maswali yafuatayo ili kubaini kama unastahili kushiriki katika utafiti huu:

1. Una umri gani kwa sasa? _____
2. Je, unaweza kuzungumza kwa Kiingereza au Kiswahili? _____

Appendix V: Capacity to consent Form.

QUESTION.	SCORE
1. What is the purpose of the study that was just described to you? Response (2=Study substance use among older adults)	0 1 2
2. What makes you want to consider participating in this study? Response (2=I use substance, help others)	0 1 2
3. Do you believe this is primarily research or primarily treatment? Response (2=Research)	0 1 2
4. Do you have to be in this study if you do not want to participate? Response (2=No)	0 1 2
5. If you withdraw from this study, will you still be able to receive regular treatment Response (2=Yes)	0 1 2
6. If you participate in this study, what are some of the things that you will be asked to do? Response (2= answer questions, fill a questionnaire)	0 1 2
7. Are there risks that people may experience if they participate in this study. Response (2=there are no known risks)	0 1 2
8. Please describe some of the possible benefits of this study. Response (2=Societal and/or personal benefits)	0 1 2
9. Is it possible that being in this study will not have any benefit to you? Response (2=Yes)	0 1 2

UCSD Brief Assessment of Capacity to Consent (UBACC)

Each item is scored on a scale of 0 to 2 points, with 0 reflecting a clearly incapable response and 2 indicating a clearly capable. An intermediate score of 1 may be used for partially appropriate responses or uncertainty even after re-explanation and additional probing. The total.

FOMU YA UWEZO WA KUTOA RIDHAA

SWALI ALAMA

1. Madhumuni ya utafiti uliyoelezewa kwako ni yapi?
   Jibu (2 = Kuchunguza matumizi ya dawa za kulevya miongoni mwa watu wazima wenye umri mkubwa)
   0
   1
   2
2. Ni nini kinakufanya ufikirie kushiriki katika utafiti huu?
   Jibu (2 = Natumia dawa za kulevya / Kusaidia wengine)
   0
   1
   2
3. Unaamini huu ni utafiti au ni matibabu?
   Jibu (2 = Utafiti)
   0
   1
   2
4. Je, ni lazima ushiriki katika utafiti huu kama hutaki?
   Jibu (2 = Hapana)
   0
   1
   2
5. Ukijiondoa katika utafiti huu, bado utaweza kupata matibabu ya kawaida?
   Jibu (2 = Ndiyo)
   0
   1
   2
6. Ukikubali kushiriki katika utafiti huu, ni mambo gani utakayotakiwa kufanya?
   Jibu (2 = Kujibu maswali / Kujaza dodoso)
   0
   1
   2
7. Je, kuna hatari zozote ambazo washiriki wanaweza kukumbana nazo kwa kushiriki katika utafiti huu?
   Jibu (2 = Hakuna hatari zinazojulikana)
   0
   1
   2
8. Tafadhali eleza baadhi ya faida zinazoweza kupatikana kutokana na utafiti huu.
   Jibu (2 = Faida kwa jamii na/au binafsi)
   0
   1
   2

9. Je, inawezekana kwamba kushiriki katika utafiti huu hakutakuwa na faida yoyote kwako binafsi?
   Jibu (2 = Ndiyo)
   0
   1
   2

Tathmini Fupi ya Uwezo wa Kutoa Ridhaa ya UCSD (UBACC)

Kila kipengele hupimwa kwa alama kati ya 0 hadi 2, ambapo:

- **0** inaonyesha jibu lisilo sahihi kabisa au kutokuwepo kwa uwezo wa kuelewa,
- **2** inaonyesha jibu sahihi na uelewa wa wazi,
- **1** hutolewa kwa jibu lililo sahihi kwa sehemu au pale ambapo kuna mashaka hata baada ya maelezo ya ziada au kuulizwa maswali ya ufafanuzi.

Jumla ya alama huhesabiwa kwa kujumlisha alama za vipengele vyote.

Appendix VI: IREC Approval

INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE (IREC)

MOI TEACHING AND REFERRAL HOSPITAL
P.O. BOX 3
ELDORET
Tel: 33471/2/3

MOI UNIVERSITY
COLLEGE OF HEALTH SCIENCES
P.O. BOX 4606
ELDORET
Tel: 33471/2/3

Reference: IREC/2020/175
Approval Number: 0003699

29th October, 2020

Ms. Winnie Chemutai,
Moi University,
School of Medicine,
P.O. Box 4606-30100,
ELDORET-KENYA.

INSTITUTIONAL RESEARCH & ETHICS COMMITTEE
29 OCT 2020
APPROVED
P. O. Box 4606 - 30100 ELDORET

Dear Ms. Chemutai,

SUBSTANCE USE AMONG OLDER ADULTS ATTENDING THE OUTPATIENT CLINICS AT THE MOI TEACHING AND REFERRAL HOSPITAL ELDORET, KENYA

This is to inform you that ***MU/MTRH-IREC*** has reviewed and approved your above research proposal. Your application approval number is ***FAN: 0003699***. The approval period is ***29th October, 2020 – 28th October, 2021.***

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by ***MU/MTRH-IREC***.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to ***MU/MTRH-IREC*** within 72 hours of notification.
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to ***MU/MTRH-IREC*** within 72 hours.
v. Clearance for export of biological specimens must be obtained from relevant institutions.
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 to ***MU/MTRH-IREC***.

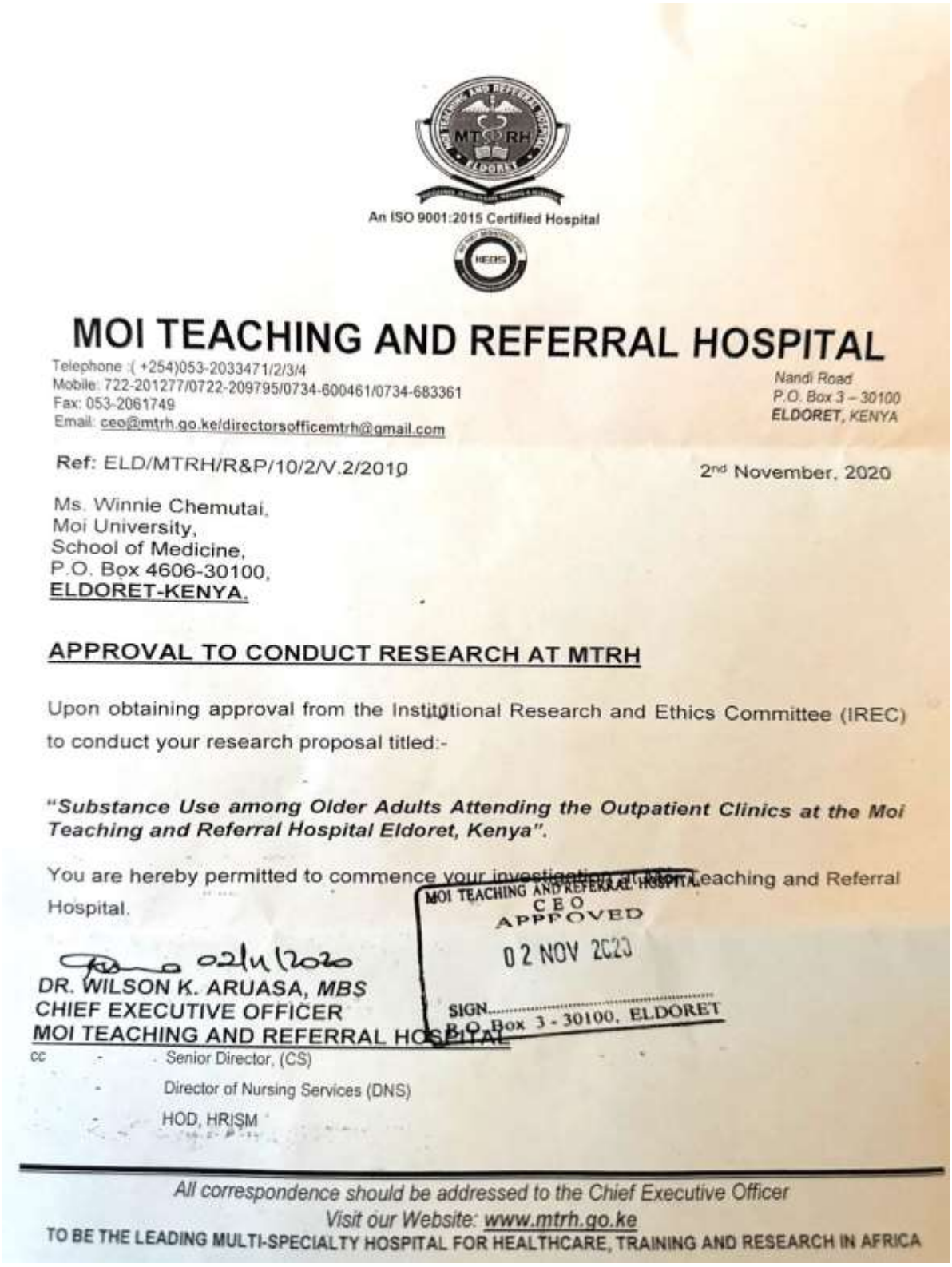
Prior to commencing your study; you will be required to obtain a research license from the National Commission for Science, Technology and Innovation (NACOSTI) https://ons.nacosti.go.ke and other relevant clearances. Further, a written approval from the CEO-MTRH is mandatory for studies to be undertaken within the jurisdiction of Moi Teaching & Referral Hospital (MTRH), which includes 22 Counties in the Western half of Kenya.

Sincerely,

DR. S. NYABERA
DEPUTY-CHAIRMAN
INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE

cc CEO - MTRH Dean - SOP Dean - SOM
Principal - CHS Dean - SON Dean - SOD

Appendix VII: MTRH Permission Letter



An ISO 9001:2015 Certified Hospital

MOI TEACHING AND REFERRAL HOSPITAL

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Mobile: 722-201277/0722-209795/0734-600461/0734-683361
Fax: 053-2061749
Email: ceo@mtrh.go.ke/directorsofficemtrh@gmail.com

Nandi Road
P.O. Box 3 – 30100
ELDORET, KENYA

Ref: ELD/MTRH/R&P/10/2/V.2/2019

2nd November, 2020

Ms. Winnie Chemutai,
Moi University,
School of Medicine,
P.O. Box 4606-30100,
ELDORET-KENYA.

APPROVAL TO CONDUCT RESEARCH AT MTRH

Upon obtaining approval from the Institutional Research and Ethics Committee (IREC) to conduct your research proposal titled:-

"Substance Use among Older Adults Attending the Outpatient Clinics at the Moi Teaching and Referral Hospital Eldoret, Kenya".

You are hereby permitted to commence your investigations at Moi Teaching and Referral Hospital.

MOI TEACHING AND REFERRAL HOSPITAL
CEO
APPROVED
02 NOV 2020
SIGN.....
P.O Box 3 - 30100, ELDORET

02/11/2020
DR. WILSON K. ARUASA, *MBS*
CHIEF EXECUTIVE OFFICER
MOI TEACHING AND REFERRAL HOSPITAL

cc - Senior Director, (CS)
- Director of Nursing Services (DNS)
- HOD, HRISM

All correspondence should be addressed to the Chief Executive Officer
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