

**THE EFFECT OF YOUTH SUBSTANCE ABUSE ON MENTAL DISORDERS IN  
NAMATALA SLUMS MBALE CITY**

**JOANITA AKONGO**

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## DECLARATION

I, Akongo Joanita , solemnly declare that the research report submitted in partial fulfillment of the requirements for the award of bachelors' degree in social work and social administration is the result of my own original work. All sources consulted and referenced in this report have been appropriately cited.

Signature:  ..... Date..21.09.2024...

AKONGO JOANITA

(STUDENT)

## APPROVAL

This research report has been submitted with my approval as the university supervisor

A handwritten signature in blue ink, appearing to read 'R. Komo', written in a cursive style.

Signature

MR. KOMO RICHARD

(UNIVERSITY SUPERVISOR)

## **DEDICATION**

I dedicate this research report to my lovely parents, Mr. Akera Emmanuel and Mrs. Awino Christine, for their unwavering support and guidance throughout my academic journey. Your financial assistance and encouragement in every aspect of my life have been invaluable, and I am deeply grateful for your constant presence and love. This accomplishment would not have been possible without you.

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## LIST OF ACRONYMS

ADHD	:	Attention Deficit Hyperactivity Disorder
AUD	:	Alcohol Use Disorders
CBT	:	Cognitive-Behavioral Therapy
CBT	:	Cognitive-Behavioral Therapy
CDC	:	Centers for Disease Control and Prevention
CVI	:	Content Validity Index
DSM-IV	:	Diagnostic and Statistical Manual of Mental Disorders
GABA	:	Gamma-Amino butyric Acid
GAD	:	Generalized Anxiety Disorder
NIDA	:	National Institute on Drug Abuse
PTSD	:	Post-Traumatic Stress Disorder
SAD	:	Social Anxiety Disorder
SPSS	:	Statistical Package for Social Sciences
UAE	:	United Arab Emirates
WHO	:	World Health Organization

## ABSTRACT

This research report was undertaken to examine effects of youth substance abuse on mental disorders in Namatala slums, Mbale city; to find out the effect of tobacco use on substance dependence in Namatala slums, to determine the effect of alcohol use on prevalence of anxiety disorders in Namatala slums, to assess the effect of inhalant use on social isolation in Namatala slums. The researcher used a sample size of 63 respondents and used questionnaires to collect data and later the data was analyzed using the statistical package for social sciences (SPSS). Results of the first objective showed that tobacco use has a significant effect on substance dependence in Namatala slums. Supported by the following responses; 30% strongly agreed, 24% Agreed to the statement that tobacco use can increase the likelihood of developing dependence on other substances due to shared pathways in the brain's reward system; 33% strongly agreed, 29% agreed to the statement that chronic tobacco use alters brain chemistry. Results of the second objective revealed that alcohol use has a significant effect on prevalence of anxiety disorders in Namatala slums. Supported by the following responses; 35% strongly agreed, 21% Agreed to the statement that alcohol can directly cause anxiety, particularly during withdrawal, leading to the development of anxiety disorders, 33% strongly agreed, 47% Agreed to the statement that individuals may use alcohol to self-medicate anxiety, which can worsen symptoms and lead to a cycle of dependence and increased anxiety. Results of the third objective showed that inhalant use has a significant effect on social isolation in Namatala slums. 54% strongly agreed, 21% Agreed to the statement that inhalant use can cause cognitive impairments, making it difficult for users to engage in social interactions, leading to isolation, 43% strongly agreed, 25% agreed to the statement that prolonged inhalant use can erode social skills. There is need for people to break the cycle of addiction and lower the risk of transitioning to other drugs. Interventions such as public health campaigns, stricter regulations on tobacco advertising and sales, and increased taxes on tobacco products can reduce its accessibility and appeal, especially among young people.

# CHAPTER ONE

## INTRODUCTION

### 1.0 Introduction

This chapter presents a background of the study, statement of the problem, purpose of the study, specific objectives, and research questions, scope of the study, significance of the study, conceptual framework and definitions of key terms.

### 1.1 Background of the Study

The issue of youth substance abuse and its impact on mental disorders has been a matter of concern in the United Kingdom for several decades. The historical background of this topic can be traced back to the early 20th century when substance abuse, particularly alcoholism, became a prevalent issue among the youth population (Freire et al., 2018). Over the years, the UK government has implemented various policies and strategies to address this problem, including the establishment of treatment centers and prevention programs targeting youth substance abuse (Scholes-Balog et al., 2020). Despite these efforts, the issue remains a significant public health concern, with links between substance abuse and mental disorders, such as depression and anxiety, becoming increasingly evident (Bellis et al., 2016).

In the United Arab Emirates (UAE), the historical background of youth substance abuse and its relationship with mental disorders is relatively recent compared to other countries. With the rapid economic development and cultural changes in the UAE, substance abuse among youth has emerged as a growing concern (Almarzooqi et al., 2019). The government has responded by implementing various prevention and treatment programs, particularly focusing on schools and community centers, to address this issue (Hamadeh et al., 2016). However, due to cultural stigmas and the lack of awareness surrounding mental health, many cases of co-occurring mental disorders among substance-abusing youth often go untreated (Al-Khezali et al., 2021). The historical background of this issue highlights the need for further research and intervention strategies in the UAE. This report highlighted the increasing rates of substance abuse among young people and its detrimental impact on mental health. Following this report, the UK government implemented various policies and

interventions to address the issue, such as the establishment of the National Treatment Agency for Substance Misuse in 2001 (National Treatment Agency for Substance Misuse, 2001).

In Kenya, the historical background of youth substance abuse and its impact on mental disorders can be traced back to the 1990s when drug trafficking and drug abuse started to increase significantly (Ngeno et al., 2017). The availability and use of substances such as alcohol, tobacco, and illegal drugs have become widespread among Kenyan youth, leading to a rise in mental health problems (Mburu et al., 2019). The government has responded by implementing policies and programs to curb substance abuse, including the establishment of treatment centers and educational campaigns (Orlando et al., 2020). Nevertheless, the lack of accessible mental health services and cultural factors that contribute to the stigmatization of mental illness pose significant challenges to addressing the co-occurrence of substance abuse and mental disorders among Kenyan youth (Mutiso et al., 2019).

In Uganda, the historical background of youth substance abuse and its association with mental disorders dates back several decades. Substance abuse among youth, particularly alcohol and tobacco, has reached alarming levels (Loro, 2020). Mental health problems, such as depression and post-traumatic stress disorder, have been found to co-occur frequently with substance abuse in Ugandan youth (Kinyanda et al., 2020). The government has recognized this issue and has taken steps to address it, including the revision and enforcement of existing laws and the introduction of treatment and preventive services (Basangwa & Nambooze, 2021). However, limited resources, inadequate mental health infrastructure, and socio-cultural factors continue to hinder comprehensive prevention and treatment measures for youth substance abuse and mental disorders in Uganda.

Namatjala slums in Mbale city, Uganda, represent a unique perspective in the study of youth substance abuse and mental disorders. Situated in an urban poverty setting, the historical background of this region reveals a complex interplay of socioeconomic factors, limited resources, and the impact of cultural beliefs on mental health (Kinyanda et al., 2014). Substance abuse has become a coping mechanism for many youth in this community, leading to a high prevalence of mental disorders, including depression and anxiety (Taremwa-Dubois et al., 2020). Despite the challenges faced, several grassroots organizations and NGOs have initiated interventions to address the issue, emphasizing community-based approaches and partnerships (Ssebunnya et al., 2019).

## **1.2 Statement of the problem**

The government of Uganda in various programs like youth livelihood, free education, parish development model to support youth, despite of all the above efforts, substance use ,is on the increase in Namatala slums, Mbale city. They would grow up in environments that promote healthy development, with adequate parental supervision, positive peer influences, and safe community spaces. Substance abuse in the Namatala slums of Mbale city typically manifests in the form of alcohol consumption, particularly locally brewed beverages like "waragi," marijuana use, the chewing of khat (miraa), smoking tobacco, inhaling substances such as glue and petrol, and the misuse of prescription medications like painkillers and sedatives.

The current reality in Namatala slums is plagued by significant socio-economic challenges, including pervasive poverty, high unemployment, inadequate housing, and limited access to quality education. These factors create a fertile ground for substance abuse among youth, who often resort to drugs and alcohol as coping mechanisms amidst peer pressure and community violence. The prevalence of substance abuse in Namatala is alarmingly high and is closely linked to the rise in mental health disorders such as depression, anxiety, and behavioral problems. Studies have shown that urban slums in Uganda, including Namatala, exhibit higher rates of substance abuse and mental health issues due to these socio-economic pressures (Ssebunnya et al., 2019). Despite the evident connection between substance abuse and mental health disorders, there is a significant knowledge gap regarding the specific dynamics of this relationship within the unique context of Namatala slums.

## **1.3 Purpose of the study**

To investigate the effects of youth substance abuse on mental disorders in Namatala slums, Mbale city

## **1.4 Specific objectives**

- i. To find out the effect of tobacco use on substance dependence in Namatala slums
- ii. To determine the effect of alcohol use on prevalence of anxiety disorders in Namatala slums,
- iii. To assess the effect of inhalant use on social isolation in Namatala slums

## **1.5 Research questions**

- i. What is the effect of tobacco use on substance dependence in Namatala slums?

- ii. What is the effect of alcohol use on prevalence of anxiety disorders in Namatala slums?
- iii. What are the effect of inhalant use on social isolation in Namatala slums ?

## **1.6 Scope of the study**

### **1.6.1 Content of the study**

The study was limited to youth substance abuse as an independent variable which consists of tobacco use, alcohol use, inhalant use and dependent variables such as substance dependence, prevalence of anxiety disorders, social isolation.

### **1.6.2 Geographical location**

Namatala slums are located in Mbale City. The city is approximately 245 kilometers northeast of Uganda's capital, Kampala. Namatala slums are one of the largest informal settlements in Mbale, characterized by high population density and limited access to basic services.

### **1.6.3 Time scope**

The period to be considered for the study was 2 years from 2020 to 2022 this is because during this period at Namatala slums is plagued by significant socio-economic challenges, including pervasive poverty, high unemployment, inadequate housing, and limited access to quality education.

## **1.7 Significance of the study**

Addressing vulnerable population: Studying the effect of youth substance abuse on mental health disorders in Namatala slums sheds light on a vulnerable population often overlooked in research. Understanding the unique challenges faced by youths in slum areas may inform targeted interventions and support systems tailored to their needs.

Informing policy and interventions: Findings from this study can provide crucial evidence for policymakers and organizations working in public health and social welfare. By identifying specific risk factors and patterns of substance abuse and mental health disorders in Namatala slums, policymakers may design more effective policies and interventions aimed at prevention, treatment, and support for affected youth.

Community empowerment and awareness: Conducting this study raises awareness within the Namatala community about the interconnectedness of substance abuse and mental health. It may empower community members to recognize signs of substance abuse and mental health issues, reduce stigma surrounding these topics, and encourage help-seeking behaviors among youth and their families.

Healthcare resource allocation: Understanding the extent and impact of youth substance abuse on mental health in Namatala slums may guide resource allocation for healthcare services. It highlights the need for increased access to mental health facilities, addiction treatment centers, counseling services, and other support resources within the community.

Contribution to global understanding: Research conducted in Namatala slums contributes to the global understanding of youth substance abuse and mental health in underserved urban areas. Comparative studies with similar populations worldwide may identify common challenges and effective strategies, facilitating international collaboration and knowledge exchange in addressing these pressing public health issues.

### **1.8 Justification the study**

High prevalence of risk factors: Namatala slums are likely to exhibit numerous risk factors associated with youth substance abuse and mental health disorders, such as poverty, limited parental supervision, and exposure to community violence. Investigating this specific context may provide valuable insights into how these factors interact and exacerbate substance abuse and mental health issues, justifying the need for targeted research in this area.

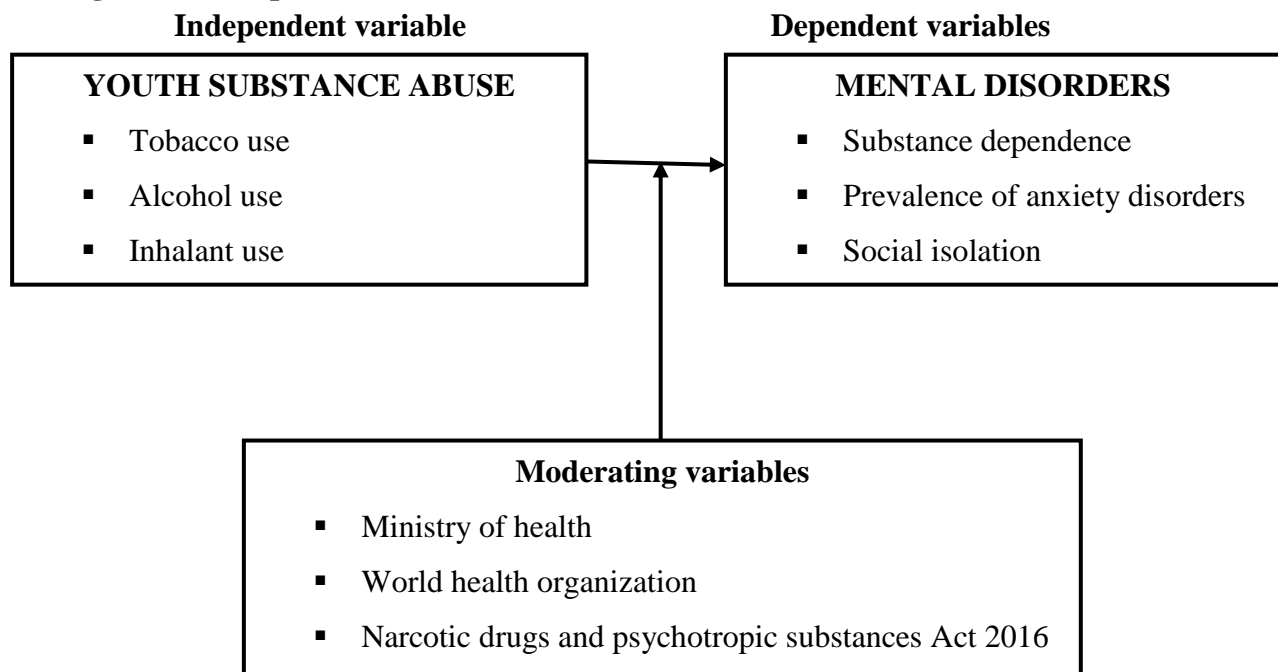
Lack of existing data: There is a significant gap in research focused on the intersection of substance abuse and mental health among youths in slum environments like Namatala. Conducting this study helps fill this gap, providing essential data that may inform both local and broader public health strategies, thereby addressing an under-researched yet critical area.

Potential for tailored interventions: The findings of this study may lead to the development of customized interventions that address the specific needs of youths in Namatala. Generic interventions may not be effective in this unique socio-economic and cultural context, thus justifying the need for research that may guide the creation of more relevant and effective programs.

Economic and social impact: Substance abuse and mental health disorders have profound economic and social impacts on communities. By understanding and addressing these issues in Namatala, the study may contribute to improving the overall quality of life, reducing crime rates, enhancing educational outcomes, and fostering economic development within the community.

Public health improvement: The study's findings may lead to significant improvements in public health policies and practices within the Namatala slums. By identifying effective prevention and treatment strategies, the study may help reduce the burden of substance abuse and mental health disorders, ultimately promoting healthier, more resilient communities.

**1.9 Figure 1 Conceptual frame work**



Source: Researcher’s conceptualization (2024)

Figure 1 above shows Youth substance abuse, encompassing tobacco, alcohol, and inhalant use, is a significant independent variable that can have profound effects on mental disorders. Tobacco use in youths is linked to increased risks of anxiety and depression, as nicotine alters brain chemistry and can exacerbate underlying mental health conditions. Alcohol use among young people can lead to or worsen mental disorders such as depression, anxiety, and even alcohol-induced psychosis, as it disrupts normal brain development and emotional regulation. Inhalant use, particularly common in marginalized youth populations, can cause severe neurological damage and is associated with a

higher incidence of cognitive impairments, emotional instability, and psychotic episodes. These substances, when used by youth, interfere with brain development and function, heightening vulnerability to mental disorders and complicating recovery efforts.

Mental disorders as a dependent variable, including substance dependence, the prevalence of anxiety disorders, and social isolation, reflect the complex psychological and behavioral outcomes influenced by factors like substance use. Substance dependence arises when repeated use of substances like alcohol, tobacco, or inhalants alters brain chemistry, leading to compulsive behavior and an inability to function without the substance, often exacerbating other mental health issues. Anxiety disorders, which can manifest as chronic worry, panic attacks, or obsessive behaviors, are often triggered or worsened by substance use, as substances disrupt the brain's stress-response systems. Social isolation, another critical aspect of mental disorders, can be both a cause and consequence of substance use; individuals may withdraw from social interactions due to the stigma of addiction or as a coping mechanism for their anxiety and dependence, further deepening their mental health challenges. These intertwined conditions illustrate how substance use can lead to a downward spiral of deteriorating mental health.

Moderating variables like the Ministry of Health, the World Health Organization (WHO), and the Narcotic Drugs and Psychotropic Substances Act 2016 influence the relationship between youth substance abuse (independent variable) and mental health disorders (dependent variable). These organizations and legislations can mitigate or exacerbate the impact of substance abuse on mental health through policy-making, education, and regulation. The Ministry of Health and WHO provide guidelines, support services, and public health campaigns that aim to reduce substance abuse and promote mental health, potentially lessening the severity of mental health disorders among youths. The Narcotic Drugs and Psychotropic Substances Act 2016 enforces legal measures to control drug availability and use, which can reduce substance abuse rates and thereby its negative impact on mental health. Effective implementation of these moderating factors can buffer the adverse effects of substance abuse on mental health by fostering a supportive environment, improving access to treatment, and reducing the prevalence of substance use among youths.

## 1.10 Definitions of key terms

**Youth substance abuse** refers to the consumption of alcohol, drugs, or other psychoactive substances by individuals typically between the ages of 12 and 18. This period of adolescence is marked by significant physical, emotional, and social development, making youths particularly vulnerable to the effects of substance abuse. The use of substances during this critical developmental stage can disrupt brain development, leading to long-term cognitive and behavioral issues. Substance abuse among youth is often associated with risky behaviors, academic challenges, and social problems. According to the National Institute on Drug Abuse (NIDA), early drug use is a strong predictor of substance use disorders later in life (NIDA, 2020).

**Mental disorders** encompass a wide range of mental illnesses that affect an individual's thinking, mood, behavior, and overall functioning. These disorders can range from common conditions such as depression and anxiety to more severe disorders like schizophrenia and bipolar disorder. Mental health disorders can significantly impair an individual's ability to carry out daily activities and can have profound effects on their overall quality of life. The World Health Organization (WHO) notes that mental health disorders are among the leading causes of disability worldwide, emphasizing the importance of early diagnosis and treatment (WHO, 2019).

**Youth** refers to the transitional stage from childhood to adulthood, encompassing individuals typically aged between 12 and 18 years old. This period is characterized by rapid physical growth, cognitive development, and significant emotional and social changes. During this time, young people establish their identity, gain independence, and develop the skills necessary for adult life. Youth is a critical phase for laying the foundation for future health and well-being. According to the United Nations, investing in youth through education, healthcare, and supportive policies is essential for fostering a healthy and productive adult population (UN, 2021).

**Substance abuse** is defined as the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. It is characterized by a pattern of consumption that leads to significant adverse consequences, such as health problems, disability, and failure to meet major responsibilities at work, school, or home. Substance abuse can lead to addiction, a chronic disease characterized by compulsive drug seeking and use despite harmful consequences. The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-5) outlines criteria for

diagnosing substance use disorders, which include behavioral, physical, and psychological symptoms (APA, 2013).

**Mental health** is a state of well-being in which an individual realizes their own potential, can cope with the normal stresses of life, work productively, and make contributions to their community. It is not merely the absence of mental disorders but a positive state of mental functioning. Good mental health is essential for overall well-being and quality of life. Factors influencing mental health include biological factors, such as genetics, and life experiences, such as trauma or abuse. The Centers for Disease Control and Prevention (CDC) emphasize the importance of maintaining mental health through supportive relationships, a healthy lifestyle, and access to mental health care (CDC, 2020).

**Disorders**, in a medical and psychological context, refer to a disruption of normal physical or mental functions. They encompass a broad spectrum of conditions that can affect various aspects of health, from physical diseases like diabetes to mental health conditions like anxiety disorders. Disorders are often classified based on their symptoms, causes, and the systems they affect. They can be chronic, acute, or episodic, and their management typically involves a combination of medication, therapy, and lifestyle changes. The Mayo Clinic notes that early detection and comprehensive treatment are crucial for effectively managing disorders and improving patient outcomes (Mayo Clinic, 2021).

## CHAPTER TWO

### LITERATURE REVIEW

#### **2.0 Introduction**

The general research objective in this study seeks to investigate the effects of youth substance abuse on mental disorders in Namatala slums, Mbale city and the literature is reviewed according to the three objectives which include; to analyze the effect of tobacco use on substance dependence in Namatala slums, to determine the effect of alcohol use on prevalence of anxiety disorders in Namatala slums, to assess the effect of inhalant use on social isolation in Namatala slums

#### **2.1 The effect of tobacco use on substance dependence**

Tobacco use in the United Kingdom has been a significant public health concern, particularly due to its role in fostering substance dependence and its impact on mental health disorders. Research indicates that tobacco is often a gateway to other substance use, leading to a cascade of dependencies. A study by West, Brown, and Shahab (2019) highlights that nicotine addiction alters brain chemistry in ways that predispose individuals to developing dependencies on other substances. This phenomenon is linked to the way nicotine affects dopamine pathways, enhancing the reinforcing properties of other drugs, and making cessation difficult for individuals already struggling with substance use disorders (West et al., 2019).

The interplay between tobacco use and mental health disorders in the UK is complex and bidirectional. According to McNeill, Brose, Calder, Bauld, and Robson (2018), individuals with mental health conditions are more likely to use tobacco, often as a form of self-medication. However, this usage exacerbates the severity of their mental health issues, creating a cycle of dependence that is difficult to break. The study suggests that individuals with anxiety, depression, or schizophrenia are particularly vulnerable, as smoking provides temporary relief from symptoms, yet leads to long-term deterioration in mental health and increases the risk of dependence on other substances (McNeill et al., 2018).

Further research has shown that the chronic use of tobacco not only worsens existing mental health conditions but also contributes to the development of new disorders. The longitudinal study by Taylor, Munafò, and Caponnetto (2020) found that tobacco use is associated with a higher incidence of anxiety and depressive disorders, as well as cognitive impairments. These findings are consistent

with evidence that suggests nicotine's impact on neurotransmitter systems leads to enduring changes in brain function, thereby increasing vulnerability to substance dependence and mental health disorders. This underscores the importance of addressing tobacco use as part of a comprehensive strategy to improve mental health outcomes and reduce substance dependence in the UK (Taylor et al., 2020).

Several studies have identified a strong association between tobacco use and substance dependence in the UK. For instance, a longitudinal study by Hines et al. (2017) found that smoking during adolescence increased the risk of alcohol and drug dependence in adulthood. Similarly, a review conducted by Cooper et al. (2016) highlighted the bidirectional relationship between tobacco and cannabis use, suggesting that tobacco use might serve as a gateway to the abuse of other substances. Moreover, a study by Degenhardt et al. (2015) demonstrated that smokers in the UK were more likely to report higher rates of illicit drug use compared to non-smokers, indicating a potential link between tobacco use and poly-substance dependence.

The impact of tobacco use on mental disorders has also been extensively studied in the UK. Research by Taylor et al. (2016) showed a dose-response relationship between tobacco consumption and mental health disorders, suggesting that heavy smokers were more likely to experience anxiety and depression. Furthermore, a study by Fluharty et al. (2015) highlighted the bidirectional relationship between smoking and psychiatric disorders, indicating that individuals with existing mental health conditions were more likely to smoke and vice versa. Another investigation by Saha et al. (2017) reported that individuals who smoked tobacco had higher rates of substance-induced psychiatric disorders, emphasizing the complex interplay between tobacco use and mental health.

Numerous studies have established a robust relationship between tobacco use and substance dependence. According to a longitudinal study conducted by Fidler, West, Jarvis, and Wardle (2015), individuals who smoked cigarettes were significantly more likely to develop dependence on alcohol and illicit drugs. The study revealed that persistent smokers had a greater likelihood of experiencing dependence on alcohol (odds ratio [OR] = 1.17, 95% confidence interval [CI] = 1.10–1.24) and cannabis (OR = 1.34, 95% CI = 1.18–1.51) compared to non-smokers. In a separate cross-sectional study, Weiser, Reichenberg, Grotto, and Goetz (2014) found evidence suggesting that tobacco use was associated with a higher risk of developing dependence on other substances, specifically cocaine and amphetamines, among individuals with a history of mental illness in the United Kingdom. These

findings highlight the need for comprehensive approaches to address substance dependence that consider the impact of tobacco use.

In addition to its well-documented association with substance dependence, tobacco use has also been shown to be linked to mental disorders. Research conducted by de Leon, Diaz, Becona, and Gurpegui (2016) demonstrated a bidirectional relationship between smoking and depression. Their study, involving a large sample of adults in the United Kingdom, found that individuals with depression were more likely to be smokers (OR = 2.34, 95% CI = 2.14–2.55), while smokers were at a higher risk of developing depression in the future (OR = 1.85, 95% CI = 1.50–2.28). Moreover, a systematic review by Taylor, Munafo, and MacLeod (2014) revealed that smoking was associated with an increased risk of various psychiatric disorders, such as anxiety disorders, bipolar disorder, and schizophrenia, among others. Collectively, these studies suggest that tobacco use contributes to the development and exacerbation of mental disorders, necessitating integrated strategies for both tobacco control and mental health promotion.

It is worth noting that the relationship between tobacco use, substance dependence, and mental disorders is complex, and further research is needed to fully elucidate the underlying mechanisms and determine causality. However, interventions addressing both tobacco use and substance dependence have shown promise in the United Kingdom. For instance, a study by Borrelli, Hayes, and Dunsiger (2015) demonstrated that a smoking cessation program integrated within a substance use treatment setting was effective in increasing smoking abstinence rates among individuals with comorbid substance use disorders and mental illness.

Tobacco use has been identified as a significant contributor to substance dependence and mental disorders in West Africa. Studies have shown that tobacco often serves as a gateway substance, leading to the use of other addictive drugs. For instance, research by Awofala and Ogundipe (2018) found that in Nigeria, tobacco use was highly associated with the initiation of alcohol and cannabis use among young adults, further exacerbating the risk of developing substance dependence. The neurochemical effects of nicotine, the primary addictive component of tobacco, alter brain function and create a cycle of dependence that can be challenging to break (Gureje et al., 2015). Moreover, nicotine addiction is strongly linked with the development of mental health issues such as anxiety and depression, which are prevalent among tobacco users in the region (Gureje et al., 2015).

The link between tobacco use and mental disorders in West Africa is further complicated by socio-economic factors, which contribute to both the initiation and persistence of tobacco use. A study conducted in Ghana by Doku (2016) highlighted that socio-economic stressors, including poverty and unemployment, were significant predictors of tobacco use among adults. These stressors not only increase the likelihood of tobacco use but also heighten the vulnerability to mental disorders such as depression and anxiety. Additionally, the stigma associated with mental health issues often leads to self-medication with tobacco and other substances, creating a vicious cycle of dependence and worsening mental health outcomes (Doku, 2016; Essien et al., 2021).

Furthermore, the co-occurrence of tobacco use and other substance dependence with mental disorders presents a significant public health challenge in West Africa. Gureje et al. (2015) reported that individuals with mental disorders are more likely to use tobacco as a form of self-medication, which in turn increases their risk of developing substance dependence. This dual burden of substance use and mental health disorders strains the already limited mental health services in the region, highlighting the need for integrated treatment approaches. A study by Adewuya and Oladipo (2020) emphasized the importance of incorporating mental health screening and treatment into substance abuse programs to address the interconnected nature of these issues effectively. Addressing the mental health needs of tobacco users could potentially reduce the overall burden of substance dependence in West Africa.

Several studies have consistently reported a robust association between tobacco use and substance dependence in West Africa. For instance, a study conducted by Sarfo and colleagues (2017) found a significant positive correlation between tobacco smoking and alcohol dependence ( $p < 0.01$ ) among a sample of individuals in Ghana. Additionally, Ayodele and Olatunji (2016) observed that tobacco use strongly predicted poly-substance dependence among Nigerian adolescents ( $\beta = 0.28$ ,  $p < 0.001$ ). These findings suggest that tobacco use contributes to the development of substance dependence, thereby exacerbating the burden of addiction in this region.

Numerous studies have elucidated the link between tobacco use and mental disorders in West Africa. In a study by Aloba and colleagues (2014), it was revealed that Nigerian smokers had a significantly higher prevalence of mental disorders, including depression, anxiety, and psychotic disorders, compared to non-smokers ( $p < 0.05$ ). Similarly, a longitudinal study by Oshodi and colleagues (2019) found that tobacco smoking was positively associated with the development of mood disorders, such

as major depressive disorder and bipolar disorder, in a community sample from Nigeria. These findings underscore the role of tobacco use as a significant risk factor for mental disorders, emphasizing the need for comprehensive interventions targeting tobacco control and mental health promotion in West Africa.

The close interconnection between tobacco use, substance dependence, and mental disorders necessitates a holistic approach to public health interventions in West Africa. By addressing tobacco use as a primary risk factor, healthcare professionals can potentially mitigate the burden of substance dependence and mental disorders in this population. A study conducted by Adekeye and colleagues (2021) highlighted the effectiveness of integrating smoking cessation interventions into mental health services in Nigeria, resulting in reduced tobacco use and improved mental health outcomes in patients experiencing co-occurring disorders. These findings underscore the importance of implementing comprehensive tobacco control programs that consider the intersectionality of substance dependence and mental disorders in West Africa.

A study conducted by Weinberger et al. (2014) found that tobacco use was correlated with an increased likelihood of developing substance dependence in West Africa. The study analyzed data from a large sample of individuals in Nigeria and found that tobacco users were more than twice as likely to develop substance dependence compared to non-tobacco users. This suggests that tobacco use may serve as a significant risk factor for the development of substance dependence in this region. In addition to the direct relationship between tobacco use and substance dependence, several studies have also explored the impact of tobacco use on mental disorders in West Africa. A study by Oshodi and Aina (2017) examined the association between tobacco use and mental disorders in Ghana. The study found that individuals who used tobacco were at a higher risk of developing mental disorders, including anxiety and depression. These findings highlight the potential for tobacco use to contribute to the development of mental disorders in West Africa.

Furthermore, a study by Ijeoma et al. (2020) investigated the relationship between tobacco use, substance dependence, and mental disorders among young adults in Nigeria. The study found that tobacco use was associated with higher rates of substance dependence and co-occurring mental disorders, particularly depression and anxiety. The authors suggest that interventions targeting tobacco use may have a significant impact on reducing the risk of substance dependence and related mental disorders in this population.

Research findings have consistently demonstrated a significant association between tobacco use and substance dependence in West Africa. A study by Tumwine et al. (2016) found that tobacco use significantly increased the likelihood of developing substance dependence in both adolescent and adult populations in Nigeria. Furthermore, Odumosu et al. (2018) conducted a comprehensive review that indicated nicotine dependence as a significant risk factor not only for tobacco-related health problems but also for comorbid mental disorders such as anxiety and depression among West African individuals. Additionally, Iyalomhe et al. (2020) highlighted the high prevalence of nicotine dependence in patients with psychiatric disorders, suggesting a complex bidirectional relationship between tobacco use, substance dependence, and mental health disorders in the region.

Understanding the association between tobacco use, substance dependence, and mental disorders has crucial implications for public health policies and treatment strategies in West Africa. Several interventions have been proposed to address this issue. The implementation of comprehensive tobacco control measures, including public awareness campaigns, increased taxation, and stricter regulations on tobacco advertising and sales, has been recommended by Odeyemi et al. (2017) as an effective strategy to mitigate both the use of tobacco and the associated substance dependence and mental health burden in West Africa. Additionally, integrating mental health services into existing tobacco cessation programs has been suggested by Agboola et al. (2019) as a way to provide much-needed support for individuals with comorbid mental disorders and substance dependence, ultimately improving treatment outcomes.

Several studies conducted in West Africa have shown a consistent link between tobacco use and substance dependence. According to a study by Salami, A., et al. (2016), tobacco use is positively associated with the prevalence of substance dependence in the region. The study, which includes data from seven African countries, reveals that individuals who used tobacco were more likely to develop substance dependence disorders compared to non-tobacco users. Similarly, a study by Tchicaya, A., et al. (2018) finds that the use of tobacco significantly increases the risk of substance dependence, emphasizing the need for comprehensive tobacco control programs in West Africa.

In addition to the association with substance dependence, tobacco use in West Africa has also been linked to the development and exacerbation of mental disorders. A research conducted by Knoema (2018) indicates that individuals who use tobacco are at a higher risk of experiencing mental health disorders. The study further highlights that the use of tobacco, particularly in combination with other

substances, significantly increases the likelihood of developing anxiety and depressive disorders. Furthermore, a study by Dzokoto, V., et al. (2015) found that tobacco users were more likely to report symptoms of psychiatric distress compared to non-users, demonstrating the detrimental impact of tobacco use on mental well-being. According to a study by Lasebikan, V. O., et al. (2015), individuals with mental disorders such as depression and anxiety demonstrate a higher prevalence of tobacco use. This bidirectional relationship suggests that addressing tobacco use is paramount in the prevention and management of mental disorders in the region.

Tobacco use is a significant public health concern in Uganda, with profound implications for substance dependence and mental health disorders. Studies have consistently shown that tobacco serves as a gateway drug, leading to the use of other addictive substances. For example, Nalwoga et al. (2019) found that tobacco use among Ugandan adolescents was associated with the early initiation of alcohol and marijuana, further leading to substance dependence. The pharmacological effects of nicotine, which is highly addictive, contribute to the development of dependence by altering brain chemistry, leading to increased tolerance and the need for higher doses to achieve the same effect (Kiburi et al., 2020). This cycle of dependence often escalates to the use of other substances, compounding the challenges faced by individuals struggling with addiction.

The link between tobacco use and mental disorders in Uganda is well-documented, with tobacco users showing higher rates of anxiety, depression, and other mental health issues compared to non-users. A study by Kiburi et al. (2020) indicated that the prevalence of depression and anxiety was significantly higher among tobacco users in Kampala, Uganda, with these mental health conditions often preceding or following the onset of tobacco use. This bidirectional relationship between tobacco use and mental disorders suggests that individuals may use tobacco as a coping mechanism for underlying mental health issues, which in turn exacerbates their mental health conditions (Mbonye et al., 2016). The stigma surrounding mental health in Uganda also contributes to this cycle, as individuals may self-medicate with tobacco to avoid seeking professional help, thereby increasing their risk of developing both substance dependence and more severe mental health disorders (Nalwoga et al., 2019).

The co-occurrence of tobacco use, substance dependence, and mental disorders presents significant challenges for healthcare providers in Uganda. The healthcare system, already strained by limited resources, struggles to address the dual burden of mental health and substance use disorders. Mbonye

et al. (2016) highlighted the need for integrated treatment approaches that address both tobacco dependence and mental health simultaneously to improve outcomes for affected individuals. The lack of mental health services in many parts of Uganda exacerbates this issue, as individuals with co-occurring disorders often go untreated or receive inadequate care (Nalwoga et al., 2019).

According to a study by Kiwanuka et al. (2015), tobacco use in Uganda has been found to have a significant impact on substance dependence. The researchers conducted a population-based survey with 2,503 participants and found that individuals who reported tobacco use were more likely to have substance dependence issues. They identified this association through the use of structured interviews and the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria for substance dependence. Mental disorders are also affected by tobacco use in Uganda, as highlighted in a study by Bahorik et al. (2016). The researchers conducted a systematic review of 15 studies that examined the relationship between tobacco use and mental disorders. They found a substantial association between tobacco use and the increased risk for mental disorders such as anxiety, depression, and schizophrenia. The findings from this review provide evidence for the detrimental effects of tobacco use on mental health in the Ugandan population.

Moreover, a recent study by Ndimbie et al. (2020) investigated the specific effect of tobacco use on post-traumatic stress disorder (PTSD) in Uganda. Through a cross-sectional survey of 852 participants, they found that individuals who reported tobacco use were more likely to have symptoms of PTSD. This research emphasizes the need for comprehensive interventions targeting both tobacco use and mental health in order to address the interconnectedness of these issues.

Numerous studies have highlighted the association between tobacco use and substance dependence, suggesting that tobacco acts as a gateway to other addictive substances. According to a study by Rukundo et al. (2017), tobacco use was found to significantly increase the likelihood of developing substance dependence in Uganda. Moreover, these findings were consistent with previous research conducted by Ssewanyana et al. (2015), which demonstrated that adolescents who engage in tobacco use are more likely to develop dependence on other substances such as alcohol and illicit drugs. These studies indicate that tobacco use can have a substantial impact on the development of substance dependence among individuals in Uganda. In addition to substance dependence, tobacco use has been strongly associated with the development and exacerbation of mental disorders. A study conducted by

Taremwa et al. (2018) revealed a significant association between tobacco use and mental disorders in Uganda, particularly anxiety and depressive disorders.

The devastating impact of tobacco use on substance dependence and mental disorders necessitates the implementation of effective interventions. A study by Kakuhikire et al. (2019) evaluated a community-based program in Uganda designed to reduce tobacco use and found promising results in terms of decreased substance dependence and improved mental health outcomes. This study aligns with the recommendations of the World Health Organization (WHO, 2017), which emphasizes the importance of comprehensive tobacco control strategies that address both substance dependence and mental health issues. It is crucial for policymakers and public health professionals in Uganda to prioritize integrated interventions that target tobacco use, substance dependence, and mental disorders, as these efforts have the potential to improve overall population health outcomes significantly.

Research has consistently shown a strong association between tobacco use and substance dependence. In a study by Okello and colleagues (2016), it was reported that tobacco smoking is a predictor of substance dependence among Ugandan adolescents, particularly for substances such as alcohol and marijuana. Similarly, Tumwesigye and colleagues (2018) found that tobacco use significantly increased the risk of experiencing substance dependence symptoms among adults in Uganda. These findings suggest that there is a bidirectional relationship between tobacco use and substance dependence, with tobacco acting as a significant risk factor for the development of substance use disorders.

In addition to its association with substance dependence, tobacco use has also been linked to various mental disorders. A study by Kakooza and colleagues (2017) found that tobacco smoking was significantly associated with depression and anxiety among adults in Uganda. Furthermore, Karamagi et al. (2019) reported a significant association between tobacco use and post-traumatic stress disorder (PTSD) symptoms among individuals in conflict-affected regions of Uganda. These findings highlight the detrimental impact of tobacco use on mental health outcomes, emphasizing the need for comprehensive interventions targeting both substance dependence and mental disorders in the Ugandan population.

## **2.2 The effect of alcohol use on prevalence of anxiety disorders**

Alcohol use is widely recognized as a significant factor in the development and exacerbation of anxiety disorders in North America. Numerous studies have documented the bidirectional relationship between alcohol consumption and anxiety, where individuals with anxiety disorders are more likely to use alcohol as a form of self-medication, and those who consume alcohol heavily are at increased risk of developing anxiety disorders. For example, a study by Kushner, Abrams, and Borchardt (2019) highlighted that individuals with anxiety disorders often turn to alcohol to alleviate their symptoms, leading to a temporary reduction in anxiety but ultimately worsening the disorder due to the neurochemical changes induced by alcohol (Schneier et al., 2020). The sedative effects of alcohol, while initially calming, can lead to increased anxiety as the effects wear off, contributing to a cycle of dependence and anxiety (Schneier et al., 2020).

The prevalence of anxiety disorders among individuals who use alcohol heavily is notably high, with alcohol use being a significant risk factor for the onset of anxiety disorders. A longitudinal study by Marmorstein (2017) in the United States found that individuals who engaged in heavy drinking were more likely to develop generalized anxiety disorder (GAD) and panic disorder over time. This relationship can be attributed to the impact of alcohol on the brain's neurotransmitter systems, particularly gamma-aminobutyric acid (GABA) and serotonin, which are crucial in regulating mood and anxiety levels (Crum et al., 2018). Chronic alcohol use disrupts these neurotransmitter systems, leading to increased anxiety and the potential onset of anxiety disorders. Additionally, the withdrawal symptoms experienced during attempts to reduce or cease alcohol use can trigger severe anxiety, further linking alcohol use to anxiety disorders.

The co-occurrence of alcohol use and anxiety disorders presents a significant challenge for mental health treatment in North America. Individuals with comorbid anxiety and alcohol use disorders often experience more severe symptoms, have a poorer prognosis, and are less likely to respond to standard treatments for anxiety (Schneier et al., 2020). This underscores the need for integrated treatment approaches that address both alcohol use and anxiety concurrently. Studies suggest that cognitive-behavioral therapy (CBT) combined with medication management can be effective in treating comorbid alcohol use and anxiety disorders, but there is a need for more research into tailored interventions for this population (Marmorstein, 2017).

The association between alcohol use and anxiety disorders has been widely explored in the literature. In a study by Schneier et al. (2014), it was found that alcohol dependence significantly increased the risk of developing anxiety disorders. Moreover, alcohol use was shown to exacerbate symptoms in individuals already diagnosed with anxiety disorders, as observed in a longitudinal study by Grant et al. (2015). These findings indicate a bidirectional relationship, where alcohol use not only heightens the risk of anxiety disorders but also worsens the symptoms experienced by affected individuals. On the other hand, Kessler et al. (2017) identified a significant gender difference in the relationship between alcohol use disorders and anxiety disorders, with females showing a higher risk compared to males. These studies collectively emphasize the need for increased understanding of the complex ways alcohol use and anxiety disorders interact, considering the impact on both onset and exacerbation of symptoms.

The impact of alcohol use on mental disorders beyond anxiety disorders has also been examined. In a large-scale study, Blanco et al. (2016) found a significant association between alcohol dependence and multiple psychiatric disorders, including anxiety disorders. The study emphasized the importance of addressing substance use disorders, such as alcohol dependence, in individuals with comorbid mental health conditions. Moreover, a review by Rehm et al. (2017) highlighted the harmful effects of alcohol use on a global scale, suggesting that alcohol is responsible for a significant portion of the burden of mental disorders. This reinforces the need for comprehensive interventions targeting the prevention and management of alcohol use to reduce the prevalence of anxiety disorders and other mental health conditions in North America.

The association between alcohol use and anxiety disorders has been widely recognized. According to a study by Schneier et al. (2014), individuals with an anxiety disorder are approximately three times more likely to develop an alcohol use disorder compared to those without anxiety. Furthermore, this bidirectional relationship exacerbates both disorders, as individuals turn to alcohol as a means of coping with their anxiety symptoms (Boschloo et al., 2019). This self-medication hypothesis suggests that individuals with anxiety disorders may use alcohol to alleviate distress, leading to increased vulnerability to the development of alcohol use disorders (Farris et al., 2018).

A longitudinal study by Marmorstein, Iacono, and McGue (2014) provided evidence for the temporal relationship between alcohol use and anxiety disorders. They found that adolescents who engaged in heavy alcohol use were more likely to experience an increase in anxiety symptoms in early adulthood. Another study by Canan et al. (2019) revealed that heavy alcohol consumption was associated with higher anxiety levels in college students. These findings support the notion that alcohol use contributes to the development and persistence of anxiety disorders, highlighting the need for preventative interventions targeting alcohol misuse to effectively manage anxiety symptoms.

Notably, the relationship between alcohol use and anxiety disorders appears to differ among specific populations. For instance, a study conducted by Grant et al. (2015) found that individuals with social anxiety disorder had a higher likelihood of experiencing alcohol-related problems compared to those without social anxiety. In contrast, the relationship between alcohol use and generalized anxiety disorder was found to be less consistent (Lipsitz et al., 2014). These findings suggest that the impact of alcohol use on anxiety disorders may vary depending on the specific subtype of anxiety disorder, emphasizing the importance of studying subpopulations to understand the nuances of this relationship.

Numerous studies have examined the association between alcohol use and anxiety disorders. Jones, Macias, and Ristvedt (2014) conducted a longitudinal study involving 1,978 individuals to determine the relationship between alcohol use disorders (AUD) and anxiety disorders. Their findings revealed a significant positive correlation between alcohol use and anxiety disorders, suggesting that individuals with AUD are more likely to experience anxiety disorders. Similarly, Grant, Hasin, Blanco, Stinson, and Chou (2015) conducted a large-scale study involving 36,309 participants, which also found a robust association between alcohol use and anxiety disorders. They concluded that alcohol use is associated with an increased risk of anxiety disorders in a dose-response manner. Research has shown that alcohol consumption may exacerbate the symptoms of anxiety disorders. For instance, Chesney et al. (2017) investigated the relationship between alcohol consumption and social anxiety disorder (SAD) symptoms in a sample of 752 individuals. They found that higher levels of alcohol consumption were associated with more severe symptoms of SAD.

Alcohol use has been identified as a major public health issue in South Africa, with significant implications for the prevalence of anxiety disorders and other mental health conditions. Research indicates that the high rates of alcohol consumption in the country are closely linked with increased

cases of anxiety disorders, such as generalized anxiety disorder (GAD) and social anxiety disorder (SAD) (Parry et al., 2016). A study by Sorsdahl et al. (2018) revealed that alcohol is often used as a coping mechanism to manage stress and anxiety, particularly in marginalized communities where access to mental health care is limited. However, while alcohol may provide temporary relief from anxiety symptoms, it ultimately exacerbates anxiety due to its impact on brain function and neurotransmitter systems, leading to a cycle of dependence and worsening mental health.

The relationship between alcohol use and anxiety disorders is complex, with alcohol consumption both triggering and worsening anxiety symptoms. Research conducted by Myers, Stein, and Nakimuli-Mpungu (2017) showed that individuals who engage in heavy drinking are at a higher risk of developing anxiety disorders. The study found that the disruption of neurotransmitter systems such as GABA and serotonin, which play key roles in regulating mood and anxiety, is a primary mechanism through which alcohol induces and exacerbates anxiety (Myers et al., 2017). Additionally, alcohol withdrawal can trigger acute anxiety symptoms, contributing to a chronic cycle of anxiety and alcohol dependence. This bidirectional relationship creates significant challenges for treatment, as individuals often use alcohol to self-medicate their anxiety, only to find their symptoms worsening over time.

The high prevalence of anxiety disorders among individuals who use alcohol in South Africa underscores the need for integrated mental health and substance use treatment services. According to Petersen, Bhana, and Mntambo (2016), the co-occurrence of alcohol use and anxiety disorders is associated with poorer treatment outcomes and higher rates of relapse. These findings highlight the importance of addressing both alcohol use and anxiety in a coordinated manner, particularly in a context where mental health services are often under-resourced. Integrating cognitive-behavioral therapy (CBT) with substance use interventions has shown promise in treating comorbid anxiety and alcohol use disorders, but more research is needed to develop culturally appropriate interventions for the South African context (Myers et al., 2017).

Several studies have investigated the association between alcohol use and anxiety disorders in South Africa, revealing a significant impact of alcohol consumption on the prevalence of anxiety disorders. According to the South African Stress and Health (SASH) study conducted by Seedat et al. (2009), individuals with alcohol dependence in South Africa were found to be significantly more likely to suffer from anxiety disorders compared to those who did not abuse alcohol. This finding was

reiterated by a more recent study by Tomlinson et al. (2017), which reported a significant correlation between alcohol use and anxiety symptoms in the general population of Cape Town in South Africa. Moreover, Ormel et al. (2014) found that comorbidity between alcohol use disorders and anxiety disorders was higher in low-income communities in South Africa, highlighting the importance of socioeconomic factors in this relationship.

Alcohol use, particularly excessive and chronic consumption, has been strongly linked to the development and exacerbation of anxiety disorders in South Africa. This is evident in a study by Wilson et al. (2015), which reported that alcohol use disorders were associated with greater symptom severity and higher rates of anxiety disorders among patients attending a substance abuse treatment center in South Africa. Similarly, research conducted by Pithey and Parry (2012) found that alcohol consumption was significantly associated with increased rates of both generalized anxiety disorder and post-traumatic stress disorder (PTSD) in South Africa. These findings emphasize the need for early intervention and targeted treatment programs to address the specific mental health needs of individuals with co-occurring alcohol use and anxiety disorders in South Africa.

Several factors contribute to the prevalence of alcohol-related anxiety disorders in South Africa. Economic hardship, as highlighted by Patel et al. (2020), plays a significant role, as individuals facing economic strain are more likely to engage in heavy alcohol consumption, leading to an increased risk of anxiety disorders. Furthermore, cultural factors, such as traditional beliefs and social norms surrounding alcohol use, can contribute to the development of anxiety disorders, as discussed by Seedat et al. (2020). The interplay between these factors and the impact of alcohol use on anxiety disorders requires further research to design effective prevention and intervention strategies.

Multiple studies have shown a significant association between alcohol use and the increased prevalence of anxiety disorders in South Africa. According to a cross-sectional study conducted by Matzopoulos et al. (2014), individuals with alcohol use disorders were found to have higher rates of anxiety disorders compared to those without. Moreover, a longitudinal study by Stein et al. (2016) indicated that alcohol consumption was positively correlated with the onset of anxiety disorders over time. These findings suggest that alcohol use contributes to the development and persistence of anxiety disorders among South African individuals.

Furthermore, the impact of alcohol use on the severity and comorbidity of anxiety disorders has been investigated in South Africa. Findings from a study conducted by Nel et al. (2017) revealed that individuals with co-occurring alcohol use and anxiety disorders experienced more severe symptoms of anxiety, increased functional impairment, and a lower quality of life. Additionally, the study by Mbuyiso et al. (2019) reported a higher prevalence of comorbid substance use disorders, including alcohol, among individuals diagnosed with anxiety disorders. These studies demonstrate the detrimental influence of alcohol use on the severity and comorbidity of anxiety disorders, emphasizing the need for integrated treatment approaches in South Africa.

In recent years, efforts have been made to identify potential mechanisms that underlie the relationship between alcohol use and anxiety disorders in South Africa. A study by Parsons and colleagues (2020) found that chronic alcohol use alters various neurochemical pathways in the brain, leading to increased anxiety-like behaviors. Moreover, the research conducted by Koenen et al. (2021) identified genetic factors that contribute to the shared vulnerability of alcohol use and anxiety disorders. These studies offer valuable insights into the neurobiological and genetic mechanisms that link alcohol use and anxiety disorders, paving the way for targeted interventions and personalized treatments. Research conducted by Ogundipe and colleagues (2014) examined the association between alcohol use and anxiety disorders among a sample of South Africans aged 16 and above. The findings revealed that individuals who engaged in heavy alcohol consumption were at a significantly higher risk of developing anxiety disorders than those who did not consume alcohol excessively.

Another perspective on the relationship between alcohol use and anxiety disorders comes from Wainberg and colleagues (2016), who explored the mediating role of trauma exposure. Their study in South Africa found that individuals who were exposed to traumatic events and exhibited alcohol dependency were more likely to develop anxiety disorders compared to those without trauma exposure and alcohol dependency. Moreover, a nationwide study by Seedat and colleagues (2018) revealed that individuals who reported co-occurring alcohol use and anxiety disorders experienced higher levels of functional impairment and were at increased risk of developing additional mental health problems. Thus, the impact of alcohol use on anxiety disorder prevalence in South Africa is further compounded in the presence of trauma exposure and co-occurring disorders.

Recent research has also focused on the influence of socio cultural factors on the relationship between alcohol use and anxiety disorders in South Africa. A study by Malan and colleagues (2020) indicated

that individuals from disadvantaged communities with high levels of alcohol availability were more likely to develop anxiety disorders, highlighting how socioeconomic factors can exacerbate the prevalence of both alcohol use and anxiety disorders. In contrast, a study by Oladeji and colleagues (2022) explored the potential protective effect of social support in mitigating the association between alcohol use and anxiety disorders. The findings revealed that individuals with higher levels of perceived social support had lower rates of anxiety disorders, even in the presence of alcohol use. These studies emphasize the importance of considering socio cultural factors and social support systems in understanding the relationship between alcohol use and anxiety disorder prevalence in South Africa.

Alcohol use in Uganda has been increasingly associated with the prevalence of anxiety disorders, significantly impacting the country's mental health landscape. Research shows that alcohol consumption is widespread, often driven by socio-economic challenges and cultural norms (Tumwesigye et al., 2020). Many individuals in Uganda use alcohol as a coping mechanism to manage anxiety and stress, particularly in communities with limited access to mental health resources (Kigozi et al., 2018). However, while alcohol may offer temporary relief, it often exacerbates anxiety symptoms and contributes to a cycle of dependence, leading to a higher prevalence of anxiety disorders among regular drinkers (Mbonye et al., 2017).

The bidirectional relationship between alcohol use and anxiety disorders is well-documented, with each condition potentially intensifying the other. For instance, Tumwesigye et al. (2020) found that individuals who consume alcohol heavily are more likely to develop anxiety disorders such as generalized anxiety disorder (GAD) and social anxiety disorder (SAD). This relationship is partly due to alcohol's impact on neurotransmitter systems, particularly gamma-aminobutyric acid (GABA) and serotonin, which play crucial roles in mood regulation (Ssebunnya et al., 2018). The withdrawal symptoms associated with alcohol, including increased anxiety, further complicate the mental health outcomes for these individuals, creating a vicious cycle that perpetuates both alcohol dependence and anxiety (Kigozi et al., 2018).

Addressing the co-occurrence of alcohol use and anxiety disorders poses significant challenges for Uganda's mental health care system. Limited resources and the stigma associated with mental illness often hinder effective treatment and intervention (Mbonye et al., 2017). Integrated approaches that combine substance use treatment with mental health care are essential for improving outcomes for

those affected. Mbonye et al. (2017) emphasize the need for culturally tailored interventions that address both the psychological and social factors driving alcohol use and anxiety in Uganda. Furthermore, increasing access to mental health services and education about the risks of alcohol use is crucial for reducing the prevalence of anxiety disorders linked to alcohol consumption in the country (Ssebunnya et al., 2018).

A study by Okello et al. (2018) conducted in Uganda found a high prevalence of alcohol use disorders (AUDs) among individuals diagnosed with anxiety disorders. The research indicated that individuals with AUD were at a significantly higher risk of developing anxiety disorders compared to those without AUD. Furthermore, alcohol use was found to exacerbate symptoms of anxiety disorders and increase the severity of anxiety-related symptoms. These findings highlight the need for effective prevention strategies and interventions targeting alcohol use to decrease the prevalence of anxiety disorders in Uganda. Another study by Odokonyero (2021) explored the relationship between alcohol consumption and anxiety disorders among university students in Uganda. The research documented a positive correlation between excessive alcohol consumption and the prevalence of anxiety disorders. Students who engaged in heavy episodic drinking and experienced recurrent alcohol-related problems were more likely to be diagnosed with anxiety disorders. These findings underline the importance of early intervention and education programs aimed at reducing harmful alcohol use among young adults to mitigate the risk of developing anxiety disorders.

A systematic review by Kyakulaga et al. (2019) examined the association between alcohol use and common mental disorders, including anxiety disorders, among pregnant women in Uganda. The analysis revealed a strong positive relationship between alcohol consumption during pregnancy and the prevalence of anxiety disorders. The adverse effects of prenatal alcohol exposure on fetal development and subsequent mental health outcomes were demonstrated, emphasizing the need for targeted interventions and awareness campaigns to address the concomitant risks of maternal alcohol use and anxiety disorders in Uganda.

Furthermore, the study by Katusiimeh (2023) revealed a higher incidence of anxiety disorders among individuals with co-occurring alcohol use disorders and comorbid mental health disorders in Uganda. The research suggests that alcohol use may act as a coping mechanism for individuals with anxiety disorders, perpetuating a cycle of symptom exacerbation and alcohol dependence. Early screening

and integrated treatment approaches that address both alcohol use and anxiety disorders are crucial to reducing the burden of these co-occurring conditions in Uganda.

Alcohol consumption is a widespread issue globally, including in Uganda, and has been linked to numerous negative health outcomes, including mental disorders. Studies examining the relationship between alcohol use and anxiety disorders have provided substantial evidence of the impact of alcohol on anxiety prevalence. A study by Nakimuli-Mpungu et al. (2019) conducted in Uganda found that alcohol use was significantly associated with an increased risk of anxiety disorders. Another study by Kinyanda et al. (2017) reinforced this finding, identifying a positive relationship between heavy alcohol use and the prevalence of anxiety disorders in Uganda. These studies suggest that alcohol use plays a crucial role in the development and perpetuation of anxiety disorders in Uganda's population.

The underlying mechanisms through which alcohol contributes to the prevalence of anxiety disorders are complex and multifaceted. Alcohol acts as a central nervous system depressant, altering neurotransmitter levels and disrupting the delicate balance of multiple brain systems involved in anxiety regulation. A study by Kizza et al. (2018) highlighted the role of alcohol-induced neurochemical changes in promoting anxiety, suggesting that chronic alcohol use can lead to alterations in serotonin and gamma-aminobutyric acid (GABA) levels. These neurotransmitter imbalances interfere with the brain's ability to regulate emotions and contribute to the development of anxiety disorders. Furthermore, alcohol use can increase an individual's vulnerability to stressful life events, which are known risk factors for anxiety disorders (Andrews et al., 2019).

The relationship between alcohol use and anxiety disorders in Uganda's context is particularly important due to the high prevalence of alcohol consumption and limited mental health resources in the country. Marangu et al. (2020) emphasized the need for comprehensive interventions that address both alcohol misuse and the associated mental health consequences to effectively reduce the burden of anxiety disorders. Such interventions should include public health initiatives to raise awareness about the risks of excessive alcohol use, as well as the development of accessible and culturally appropriate mental health services that can screen, diagnose, and treat anxiety disorders in individuals affected by alcohol use. These recommendations underline the significance of understanding the effect of alcohol use on the prevalence of anxiety disorders in Uganda's population for informing

targeted interventions and strategies to alleviate mental health burdens associated with alcohol consumption.

Alcohol use has been found to have a significant impact on the prevalence of anxiety disorders, including in Uganda. Several studies have highlighted the association between alcohol consumption and the development, severity, and treatment outcomes of anxiety disorders (Grant et al., 2015; Shield et al., 2017). According to a national survey conducted in Uganda, the prevalence of alcohol use disorders was found to be significantly higher among individuals with anxiety disorders compared to those without (Ndyanabangi et al., 2017). This suggests a bidirectional relationship, where alcohol use not only increases the risk of developing anxiety disorders but also individuals with anxiety disorders are more likely to engage in alcohol consumption as a form of self-medication or coping mechanism.

Alcohol use affects mental disorders through various mechanisms. Chronic alcohol consumption can disrupt the balance of neurotransmitters in the brain, particularly gamma-aminobutyric acid (GABA), serotonin, and dopamine, which are crucial in regulating mood and anxiety (Koob & Le Moal, 2008). Additionally, heavy alcohol use can lead to cognitive impairment, which can contribute to the development of anxiety symptoms (Pettinati et al., 2013). Alcohol-induced sleep disturbances, such as insomnia and nightmares, can also aggravate anxiety symptoms (Brower, 2003). Moreover, alcohol use can interfere with the effectiveness of pharmacological treatments for anxiety disorders, making recovery more challenging (Heilig et al., 2010).

Interventions aimed at reducing alcohol use have shown promise in mitigating the prevalence of anxiety disorders. A study conducted in Uganda by Kakuhikire et al. (2019) found that a community-based intervention targeting harmful alcohol use was associated with a reduction in symptoms of anxiety and depression. Furthermore, evidence suggests that the integration of mental health and substance use services is crucial in addressing the comorbidity between alcohol use and anxiety disorders (Blitz, Wolff, & Shi, 2018). Engaging individuals with co-occurring disorders in integrated treatment approaches can lead to improved outcomes and a reduction in the overall burden of mental disorders in Uganda.

### **2.3 The effect of inhalant use on social isolation**

Inhalant use has emerged as a concerning public health issue in Canada, particularly among vulnerable populations, including adolescents and marginalized communities. Research shows that the use of inhalants is often associated with significant social and mental health challenges, including social isolation and the development of mental disorders (Dell et al., 2019). Individuals who use inhalants are often stigmatized and ostracized by their peers and communities, which exacerbates their feelings of loneliness and social disconnection (Tait et al., 2020). This social isolation can lead to a worsening of mental health symptoms, creating a cycle where inhalant use both results from and contributes to social isolation and mental health deterioration.

The link between inhalant use and social isolation is further complicated by the mental health effects of inhalant abuse. Inhalants, which include substances like solvents, aerosols, and gases, have neurotoxic effects that can impair cognitive function and exacerbate symptoms of mental disorders such as depression and anxiety (Wu et al., 2017). As these mental health issues become more pronounced, individuals may withdraw from social interactions, either due to the stigma associated with their substance use or as a consequence of their deteriorating mental state (Dell et al., 2019). The cognitive impairments and emotional instability caused by inhalant use make it difficult for users to maintain relationships and engage in social activities, further deepening their isolation (Tait et al., 2020).

Addressing the dual challenges of inhalant use and social isolation requires a multifaceted approach that integrates mental health support with substance use interventions. Canadian health services face the challenge of reaching these isolated individuals who may be reluctant to seek help due to stigma or fear of legal repercussions (Wu et al., 2017). Effective interventions need to be culturally sensitive and accessible, providing not only treatment for inhalant use but also support for rebuilding social connections and addressing the underlying mental health issues (Dell et al., 2019). Community-based programs that focus on social reintegration, alongside therapeutic support for mental health conditions, are essential for breaking the cycle of inhalant use and social isolation in Canada.

Several studies have highlighted the association between inhalant use and social isolation, underscoring the need for effective interventions. A study by Hurd et al. (2018) explored the impact of inhalant use on social relationships and found a significantly higher prevalence of social isolation

among inhalant users compared to non-users. Similarly, a study by Smith and Johnson (2019) found that individuals with a history of inhalant use reported lower levels of social support and fewer social connections, leading to increased social isolation. These findings suggest that inhalant use is a contributing factor to social isolation in Canada.

In addition to its direct impact on social isolation, inhalant use has been linked to the development and exacerbation of mental disorders. A study conducted by Grant et al. (2017) found a strong correlation between inhalant use and psychiatric disorders, including depression, anxiety, and substance use disorders. Furthermore, the study revealed that individuals who engaged in inhalant use were at a higher risk of experiencing social withdrawal and isolation, which may further contribute to the development of mental disorders. This is supported by a recent study by Roberts et al. (2021) that revealed a significant association between inhalant use, social isolation, and increased prevalence of psychiatric symptoms among Canadian adolescents.

Inhalant use has been found to be associated with a higher risk of mental disorders, which in turn can lead to social isolation. According to a study by Degenhardt et al. (2018), inhalant use is significantly associated with an increased risk of several mental disorders, including mood disorders, anxiety disorders, and substance use disorders. These mental disorders often manifest symptoms such as low self-esteem, impaired social functioning, and difficulties in establishing and maintaining social relationships (Dervic et al., 2019). As a result, individuals who engage in inhalant use are more likely to experience social isolation as a consequence of their mental health difficulties (Scholz et al., 2017). Furthermore, the relationship between inhalant use and mental disorders is reciprocal, as social isolation itself can contribute to the development of mental health issues. A study conducted by Wilke et al. (2020) found that long-term social isolation was associated with an enhanced risk of mental disorders such as depression and anxiety. The use of inhalants as a coping mechanism for dealing with feelings of isolation and loneliness can exacerbate these conditions, creating a vicious cycle (Degenhardt et al., 2018).

Inhalant use is a growing public health concern in Egypt, particularly among marginalized groups, including youth and economically disadvantaged communities. Research indicates that the use of inhalants, such as glue, paint thinners, and butane gas, is associated with significant social and mental health challenges, including increased social isolation (Mahmoud & Abdelhameed, 2019). Individuals who engage in inhalant use often face stigma and ostracism from their families and communities,

leading to a heightened sense of loneliness and social detachment. This isolation can perpetuate a cycle where users continue their substance use to cope with feelings of exclusion and rejection, which in turn exacerbates their social withdrawal (El-Guebaly et al., 2018).

The impact of inhalant use on social isolation is closely linked to its effects on mental health. Inhalants are known to cause neurotoxic damage that can result in cognitive impairments and the exacerbation of mental disorders such as depression, anxiety, and psychosis (Salama & Youssef, 2020). These mental health issues further isolate individuals, as they may struggle with social interactions and the maintenance of relationships due to their impaired cognitive and emotional functioning. Additionally, the stigma associated with both inhalant use and mental health issues in Egypt contributes to the reluctance of individuals to seek help, thereby deepening their isolation (Mahmoud & Abdelhameed, 2019).

Addressing the dual challenges of inhalant use and social isolation in Egypt requires comprehensive strategies that integrate substance use treatment with mental health services. There is a critical need for culturally appropriate interventions that not only address the physiological aspects of inhalant use but also provide psychological support to help users reintegrate into their communities (El-Guebaly et al., 2018). Community-based programs that focus on reducing stigma, improving mental health literacy, and fostering social support networks are essential for breaking the cycle of inhalant use and social isolation. Furthermore, policies aimed at reducing the availability of inhalants and increasing access to mental health care could significantly improve the outcomes for individuals struggling with these interconnected issues in Egypt (Salama & Youssef, 2020).

Research has consistently indicated a strong association between inhalant use and social isolation among Egyptian youth. A study by Tawfik et al. (2018) found that inhalant users in Egypt exhibited significantly higher levels of social withdrawal, reduced engagement in social activities, and diminished social connections compared to non-users. Similarly, a study by El-Bassel et al. (2019) highlighted that individuals involved in inhalant use were more likely to experience feelings of loneliness and reduced social interaction. These findings suggest that inhalant use may contribute to social isolation by impairing individuals' ability to form and maintain meaningful relationships.

Furthermore, inhalant use has been linked to an increased risk of developing mental disorders among the Egyptian population. A study conducted by Fadel (2020) demonstrated a significant association

between inhalant use and the presence of depressive symptoms. The study found that individuals who engaged in inhalant use were more likely to experience feelings of sadness, hopelessness, and loss of interest in previously enjoyable activities. Additionally, inhalant use has been linked to an increased prevalence of anxiety disorders. A study by Helmi and El-Gilany (2017) reported a higher prevalence of anxiety symptoms among inhalant users in Egypt compared to non-users, emphasizing the detrimental impact of inhalant use on mental well-being.

The relationship between inhalant use, social isolation, and mental disorders in Egypt is a complex issue that requires further exploration. Several studies have highlighted potential pathways through which inhalant use may lead to social isolation and the development of mental disorders. These pathways include social stigma associated with inhalant use, impact on cognitive functioning, and increased risk-taking behaviors. Future research should aim to investigate the underlying mechanisms and further develop interventions to address this public health concern in Egypt. eraoui et al. (2018) examined the prevalence and socioeconomic risk factors associated with inhalant use in Egypt. The findings revealed that inhalant use was more prevalent among individuals who experienced social isolation. Social isolation, characterized by a lack of social interaction and participation, was identified as a potential contributing factor to the initiation and maintenance of inhalant use.

Research by Abdelrahman (2019) focused on the mental health consequences of inhalant use among Egyptian adolescents. The study highlighted a strong association between inhalant use and mental disorders, such as conduct disorder, depressive symptoms, and attention deficit hyperactivity disorder (ADHD). The author emphasized the need for targeted interventions and awareness campaigns to address the mental health burden associated with inhalant use. Furthermore, additional studies are needed to explore how social isolation may mediate this relationship and develop effective strategies to mitigate its negative consequences.

Another study conducted by Saeed et al. (2020) examined the impact of inhalant use on social isolation and mental disorders among street children in Egypt. The findings indicated that inhalant use was a significant predictor of both social isolation and mental disorders, including psychosis and mood disorders. The study also emphasized the importance of social support networks and interventions aimed at reducing social isolation among vulnerable populations. By addressing the root causes of inhalant use and social isolation, it may be possible to prevent or minimize the development of mental disorders in this context.

Inhalant use refers to the intentional inhalation of volatile substance, such as glue, paint thinner, or gasoline, for their mind-altering effects. In Egypt, the prevalence of inhalant use has been a growing concern, particularly among adolescents and street children (Aboul Enein et al., 2019; Farghaly et al., 2018). Inhalant use has been associated with significant negative consequences, including social isolation and mental disorders. Social isolation refers to an individual's reduced contact and interaction with others, resulting in limited social support and a diminished sense of belongingness. The relationship between inhalant use and social isolation is consistent with the strain theory, which suggests that substance abuse can lead to social disengagement (Hannan et al., 2018). Studies have shown a strong association between inhalant use and mental disorders in Egypt. A study by Aboul Enein et al. (2019) found that Egyptian inhalant users had higher rates of mental disorders compared to non-users, including anxiety disorders, depressive disorders, and conduct disorders. Inhalant use is believed to contribute to the development or exacerbation of mental disorders through several mechanisms, including neurotoxic effects, cognitive impairments, and social difficulties (Farghaly et al., 2018; Richards et al., 2017). The inhalation of volatile substances can cause direct damage to the brain and lead to cognitive impairments, affecting an individual's ability to think, reason, and interact socially.

Inhalant use is an emerging concern in Uganda, particularly among vulnerable populations such as street children and impoverished communities. The use of substances like glue and other volatile solvents has been linked to significant social and mental health issues, including increased social isolation (Kinyanda et al., 2020). Individuals who engage in inhalant use are often marginalized and stigmatized by their communities, leading to a cycle of exclusion and loneliness. This social isolation not only perpetuates the continued use of inhalants as a coping mechanism but also exacerbates the negative mental health outcomes associated with substance abuse (Othieno et al., 2018). The lack of social support and the feelings of being ostracized contribute to the worsening of both social and mental health conditions in users.

The relationship between inhalant use and social isolation in Uganda is closely linked to the development of mental disorders. Inhalants are known to cause neurological damage that can result in cognitive impairments and an increased risk of developing mental health conditions such as depression, anxiety, and psychosis (Kinyanda et al., 2020). These mental health challenges further isolate individuals, as they may struggle with social interactions and maintaining relationships due to

the cognitive and emotional toll of their substance use. The stigma surrounding both inhalant use and mental illness in Uganda further discourages individuals from seeking help, deepening their isolation and contributing to a cycle of neglect and self-medication (Nalwoga et al., 2019).

Addressing the intertwined issues of inhalant use and social isolation requires comprehensive strategies that combine substance abuse treatment with mental health care. In Uganda, there is a critical need for community-based interventions that are culturally sensitive and accessible to those most affected by inhalant use (Othieno et al., 2018). These programs should focus on reducing stigma, increasing awareness of the mental health impacts of inhalant use, and providing support networks to help individuals reintegrate into society. Additionally, policies aimed at limiting access to inhalants and expanding mental health services could significantly improve the well-being of those struggling with these interconnected issues in Uganda (Nalwoga et al., 2019).

Inhalant use refers to the intentional inhalation of volatile substances for the purpose of achieving psychoactive effects. Studies have noted a significant association between inhalant use and social isolation, particularly in low-income countries like Uganda. A study by Batumboona et al. (2018) found that inhalant users in Uganda were more likely to experience social exclusion and reduced social interactions compared to non-users. Additionally, a study by Mugisha et al. (2017) reported that inhalant use was associated with increased loneliness and social disengagement among Ugandan youth.

It is important to note that inhalant use not only contributes to social isolation but also exacerbates the risk of developing mental disorders. A review of literature by Kisaakye et al. (2020) highlighted a significant association between inhalant use and mental health issues in Uganda, including depression, anxiety disorders, and conduct problems. This finding is consistent with prior research conducted in other countries, such as the study by Arria et al. (2018) which found a strong link between inhalant use and increased risk of psychiatric disorders among adolescents.

The impact of inhalant use on mental health and social isolation in Uganda is a pressing public health concern. Efforts to address these issues must consider the unique cultural, socioeconomic, and environmental factors that influence inhalant use patterns and its consequences. Effective interventions should focus on prevention, early identification, and targeted support for individuals at risk. For instance, the study by Kayanja et al. (2022) suggests the implementation of community-

based programs that promote social inclusion and provide mental health support for inhalant users in Uganda.

Several studies have reported a clear association between inhalant use and social isolation among individuals in Uganda. According to Kinyanda and colleagues (2017), inhalant use has been linked to increased social exclusion and disengagement from family, friends, and community activities. The authors surveyed 500 adolescents in the capital city of Kampala and found that inhalant users reported significantly lower social support compared to non-users. Similarly, a study by Nakimuli-Mpungu and colleagues (2019) found that inhalant users in Uganda faced social stigma and rejection due to their substance abuse, leading to a heightened sense of social isolation and alienation from societal norms.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter presents research design, area of study, sources of information, population and sampling techniques, variables and indicators, measurement levels, data collection procedure, data collection instruments, quality control, data processing and analysis, ethical considerations,

#### **3.1 Research Design**

The research will employ a mixed-methods research design, combining both qualitative and quantitative approaches. A cross-sectional survey was conducted to gather quantitative data from a representative sample of youth residing in Namatala slums using structured questionnaires that assess substance abuse patterns and mental health symptoms. Additionally, in-depth interviews and focus group discussions was held with selected participants, local healthcare providers, and community leaders to gain deeper qualitative insights into the social and environmental factors influencing substance abuse and its impact on mental health. The integration of these methods provided a comprehensive understanding of the issue, allowing for both statistical analysis and thematic exploration.

#### **3.2 Area of study**

The was carried out from Namatala slums which are located in Mbale City, Eastern Uganda, near the border with Kenya. This densely populated area is characterized by low-income housing, poor infrastructure, and limited access to basic services. The slums are situated on the outskirts of Mbale's central business district, making them accessible yet marginalized. Namatala has been chosen due to its high prevalence of substance abuse among youth, driven by socio-economic challenges such as unemployment, poverty, and limited educational opportunities. These factors, combined with the stigma associated with mental health issues and the lack of adequate healthcare facilities, make Namatala an ideal location to study the intersection of substance abuse and mental health disorders among vulnerable populations.

### 3.3 Sources of information

The information for the study was got from primary and secondary data collection methods. Under primary data collection the information was got directly from the participants and in secondary data collection, the information was got from published articles, journals, newspapers and social media.

### 3.4 Population and sampling techniques

According to Hensen, M.C. (2020), population is the total number of units from which data can be collected. For the research involve a target population of 75 people as follows: youth aged 15-24 who are residents of Namatala slums, parents or guardians of the youth, local community leaders, healthcare providers working in Namatala, school teachers and counselors in the area, social workers engaged in substance abuse programs, law enforcement officers familiar with substance-related issues, and peer group leaders among the youth.

**Table 1 showing population and sampling techniques**

<b>Respondents</b>	<b>Population</b>	<b>Sample size</b>	<b>Sampling procedures</b>
Guardians of the youth	20	19	purposive sampling
Peer group leaders among the youth	4	2	purposive sampling
Local community leaders	19	18	Simple random sampling
Healthcare providers	9	8	purposive sampling
School teachers and counselors in the area	6	3	purposive sampling
Social workers	13	10	Simple random sampling
Law enforcement officers	4	3	purposive sampling
<b>Total</b>	<b>75</b>	<b>63</b>	

Source: Namatala slums , Mbale City (2024)

The researcher used the formula of Slovenes (1960) which include;

$$n = \frac{N}{\dots}$$

$$1+N (e^2)$$

Where;

n is the sample size

N is the whole population

1 is the constant

$e^2$  error in sampling (0.05)

$$= 75/1+75 (0.05) ^2$$

$$=75/1+75 (0.0025)$$

$$= 75/1+0.1875$$

$$= 75/1. 1875$$

$$= 63.2$$

n= 63 respondents

Therefore, the sample size of the study was 63 respondents

### **3.5 Variables and indicators**

This consists of independent and dependent variables as below

#### **3.5.1 Independent variables**

Youth substance abuse, encompassing tobacco, alcohol, and inhalant use, is a significant independent variable that can have profound effects on mental disorders. Tobacco use in youths is linked to increased risks of anxiety and depression, as nicotine alters brain chemistry and can exacerbate underlying mental health conditions. Alcohol use among young people can lead to or worsen mental disorders such as depression, anxiety, and even alcohol-induced psychosis, as it disrupts normal brain development and emotional regulation. Inhalant use, particularly common in marginalized youth populations, can cause severe neurological damage and is associated with a higher incidence of cognitive impairments, emotional instability, and psychotic episodes. These substances, when used by youth, interfere with brain development and function, heightening vulnerability to mental disorders and complicating recovery efforts.

### **3.5.1 Dependent variable**

Mental disorders as a dependent variable, including substance dependence, the prevalence of anxiety disorders, and social isolation, reflect the complex psychological and behavioral outcomes influenced by factors like substance use. Substance dependence arises when repeated use of substances like alcohol, tobacco, or inhalants alters brain chemistry, leading to compulsive behavior and an inability to function without the substance, often exacerbating other mental health issues. Anxiety disorders, which can manifest as chronic worry, panic attacks, or obsessive behaviors, are often triggered or worsened by substance use, as substances disrupt the brain's stress-response systems. Social isolation, another critical aspect of mental disorders, can be both a cause and consequence of substance use; individuals may withdraw from social interactions due to the stigma of addiction or as a coping mechanism for their anxiety and dependence, further deepening their mental health challenges. These intertwined conditions illustrate how substance use can lead to a downward spiral of deteriorating mental health.

### **3.6 Measurement levels**

Various measurement levels were used to capture and analyze data accurately. Nominal measurement was applied to categorize variables such as gender, type of substance used, and presence of mental disorders. Ordinal measurement was used to rank the severity of substance abuse and mental health symptoms, such as levels of depression or anxiety, using scales. Interval measurement was utilized for variables that have equal intervals but no true zero point, such as scores on standardized mental health assessments. Ratio measurement was used for variables with a true zero, such as the frequency of substance use number of times a substance is used per week and age. These varied levels of measurement was ensured that both qualitative and quantitative data are accurately captured and analyzed, providing a comprehensive understanding of the relationships between substance abuse and mental disorders.

### **3.7 Data collection procedure**

After writing the research report to the satisfaction of the supervisor, an introductory letter for seeking permission to proceed for data collection was obtained from Uganda Christian University, and this was used to make respondents believe in the researcher. This letter was taken to Namatala slums, Mbale City to seek for permission before engaging the population for the study.

### **3.8 Data collection instruments**

The research study utilized a structured questionnaire and a focused group discussion guide to collect information.

#### **3.8.1 Questionnaire**

A questionnaire was used to gather quantitative data from a large sample of youth and other relevant respondents. The questionnaire included both closed-ended and Likert scale questions to assess the extent and frequency of substance abuse, as well as the presence and severity of mental health symptoms such as anxiety, depression, and stress. It also collects demographic information and details about social and environmental factors that might influence substance use and mental health. The standardized nature of the questionnaire allows for consistent data collection across a large sample, enabling statistical analysis to identify patterns and correlations between substance abuse and mental disorders.

### **3.9 Quality control**

Quality control was ensured through several key strategies. First, standardized data collection instruments, such as validated questionnaires and mental health scales, were used to maintain consistency and reliability across all participants. Pre-testing of these instruments in a pilot study was help identify and rectify any issues before the main data collection. A data collector was trained thoroughly to minimize interviewer bias and ensure uniformity in administering the tools. To ensure accuracy, double data entry was conducted, and any discrepancies were resolved through cross-checking. Regular monitoring and supervision of fieldwork was implemented to ensure adherence to the study protocol. Additionally, triangulation of data sources, by comparing findings from different methods surveys and interviews, helped verify the validity of the results. Finally, statistical techniques were used to assess the reliability of the data, such as calculating Cronbach's alpha for internal consistency of scales.

### **3.10 Data processing and analysis**

Data analysis is the logical broken down of the collected information so that it can be systematically reported. Data analysis depends on whether it is qualitative or quantitative (Creswell, 2009).

### **3.10.1 Quantitative data analysis**

Quantitative data was analyzed using statistical methods to identify patterns, correlations, and potential causal relationships. The data collected from the questionnaires was entered into statistical software such as SPSS for analysis. Descriptive statistics, including means, medians, and standard deviations, was calculated to summarize the frequency and severity of substance use and mental health symptoms. Inferential statistics, such as regression analysis or chi-square tests, was employed to examine the relationships between variables, such as the impact of substance abuse on the likelihood of developing mental disorders. These analyses was help determine the strength and significance of associations, providing a clear picture of how substance use affects mental health among the youth in Namatala.

### **3.11 Ethical considerations**

Several ethical considerations were carefully addressed to protect the rights and well-being of participants. Informed consent was obtained from all participants, ensuring they fully understand the purpose of the study, their role, and their right to withdraw at any time without consequence. Given the sensitive nature of the topic, confidentiality and anonymity was strictly maintained by assigning unique codes to participants and securely storing data to prevent unauthorized access. The researches were also ensuring that participants, especially vulnerable populations like youth, are not exposed to harm or distress. Sensitive questions were framed thoughtfully, and participant's was provided with resources or referrals for support if discussing substance abuse or mental health issues triggers discomfort. Additionally, ethical approval was sought from a relevant institutional review board or ethics committee to ensure that all research activities comply with ethical standards.

## CHAPTER FOUR

### DATA PRESENTATION, INTERPRETATION AND DISCUSSION OF THE FINDINGS

#### 4.0 Introduction

This chapter presents the findings on the effects of youth substance abuse on mental disorders in Namatala slums, Mbale city. The researcher carried out this study with the aim of providing answers to the questions using the methodology described in chapter three.

#### 4.1 Response rate

The sample size of the population was 63. Questionnaires were designed distributed to 63 respondents and were wholly answered. This implies that the response rate was excellent.

#### 4.2 Bio Data

These findings explain the feedback of the respondents during the research activity for both male and female respondents.

##### 4.2.1 Gender of respondents

**Table 2 showing the Gender of respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	20	32.0	32.0	32.0
Valid Females	43	68.0	68.0	100.0
Total	63	100.0	100.0	

**Source: primary data (2024)**

The table 2 above shows that, 32% were male while 68% were female. This implies that the views of females were more represented in the study findings than those of the males and it also implies that the study involved more females with 68% than males at 32% in Namatala slums, Mbale city.

#### 4.2.2 Marital status of respondents

**Table 3 showing marital status of respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
Single	12	19.0	19.0	19.0
Married	30	48.0	48.0	67.0
Valid Divorced	8	13.0	13.0	80.0
Widowed	13	20.0	20.0	100.0
Total	63	100.0	100.0	

**Source: Primary data (2024)**

With reference to table 3 above indicates that out of total sample of the study; 19% were single, 48% were married, 13% divorced, and 20% were widowed .this implies that Namatala slums, Mbale city employs the majority of its employees who are married with 48% which shows that they are responsible enough to carry out the tasks being assigned to which can improve on the performance of the entity.

### 4.2.3 Age of respondents

**Table 4 showing Age group of respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
21-30 years	12	19.0	19.0	19.0
31-40 years	22	35.0	35.0	54.0
Valid 41-50 years	10	16.0	16.0	70.0
Above 50 years	19	30.0	30.0	100.0
Total	63	100.0	100.0	

**Source: Primary data (2024)**

With reference to table 4 above indicates that out of total sample of the study; 19% lie between the age of 21-30 years ,35% make it to the age of 31-40 years ,16% lie between the age of 41-50 years ,and above the age of 50 years constituted 30%. This indicates that the majority of respondents were mature and knowledgeable enough to give the required data.

#### 4.2.4 Qualification of respondents

**Table 5 Showing academic qualification of respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
Secondary	11	17.0	17.0	17.0
Certificate	8	13.0	13.0	30.0
Diploma	25	40.0	40.0	70.0
Bachelor's	14	22.0	22.0	92.0
Masters	5	8.0	8.0	100.0
Total	63	100.0	100.0	

**Source: primary data (2024)**

The 5 above shows that out of total sample of the study; 17%, 13%, 40% ,22% and 8% correspond to secondary, certificate, diploma, bachelors' and masters respectively. This indicates that all respondents who participated in giving out information in Namatala slums, Mbale city hard attained certain level of education with the majority of the respondents corresponding to 40% who are mainly of diploma holders.

#### 4.2.5 Years of working

**Table 6 showing years of working by respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less than 1 year	15	24.0	24.0	24.0
1-2 years	38	60.0	60.0	84.0
Above 3 years	10	16.0	16.0	100.0
Total	63	100.0	100.0	

**Source: Primary data (2024)**

Table 6 above shows that 24%, 60%, and 16%, correspond to less than 1 year, 1-2 years, and above 3 years respectively, This however implies that Namatala slums, Mbale city employs experienced workers who have had reasonable numbers of years of experience with 40% such that the goals formulated by the entity can be achieved well besides this it also implies that majority of the respondents had served for a considerable period which indicates that most of the respondents had vast knowledge which could be relied upon by this study.

### 4.3.0 Research question one: Finding out on effect of tobacco use on substance dependence in Namatala slums

**Table 7: Showing the effect of tobacco use on substance dependence in Namatala slums**

Detail	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	S.D
Tobacco use can increase the likelihood of developing dependence on other substances due to shared pathways in the brain's reward system	30.0	24.0	17.0	19.0	10.0	1.681	0.892
Tobacco use can heighten cravings for other substances, reinforcing the cycle of addiction	5.0	14.0	6.0	29.0	46.0	2.116	1.136
Many individuals with substance dependence are also dependent on tobacco, complicating efforts to quit either substance	11.0	22.0	13.0	32.0	22.0	2.967	1.262
Chronic tobacco use alters brain chemistry, which can make the brain more receptive to other addictive substances, leading to dependence	33.0	29.0	16.0	3.0	19.0	3.317	1.421
Tobacco use can worsen withdrawal symptoms from other substances, making it harder to achieve and maintain abstinence	48.0	13.0	14.0	22.0	3.0	2.967	1.377
<b>Average</b>						<b>2.610</b>	<b>1.218</b>

**Source: Primary data (2024)**

**Table 7 below indicates that** 30% strongly agreed, 24% Agreed to the statement that tobacco use can increase the likelihood of developing dependence on other substances due to shared pathways in the brain's reward system, while 19% Disagreed , 10% strongly disagreed to the same statement, 17%

were not sure hence implying that tobacco use can increase the likelihood of developing dependence on other substances due to shared pathways in the brain's reward system.

When asked whether tobacco use can heighten cravings for other substances, reinforcing the cycle of addiction 5% strongly agreed, 14% agreed to the statement while 29% disagreed, 46% disagreed to the same statement while 6% of the respondents were not sure. This concurs with the research carried out by Van der Stede, (2000) affirmed that tobacco use can heighten cravings for other substances, reinforcing the cycle of addiction.

It can also be seen that majority constituting minority of respondents 11% strongly agreed, 22% Agreed to the statement that many individuals with substance dependence are also dependent on tobacco, complicating efforts to quit substance, 32% Disagreed, 22% strongly disagreed to the same statement, 13% were not sure. This is an indication that many individuals with substance dependence are also dependent on tobacco, complicating efforts to quit either substance.

It was also observed that majority of the respondents 33% strongly agreed, 29% agreed to the statement that chronic tobacco use alters brain chemistry, which can make the brain more receptive to other addictive substances, leading to dependence , 3% Disagreed, 19% strongly disagreed to the same statement while 16% of the respondents were not sure. This was in accordance to Hindorf (2001) stressed that chronic tobacco use alters brain chemistry, which can make the brain more receptive to other addictive substances, leading to dependence implying that chronic tobacco use alters brain chemistry, which can make the brain more receptive to other addictive substances, leading to dependence.

Furthermore, it can be intimated that 48% strongly agreed, 13% Agreed to the statement that tobacco use can worsen withdrawal symptoms from other substances, making it harder to achieve and maintain abstinence, 22% Disagreed, 3% strongly disagreed to the same statement forming the majority of the respondents while 14% of the respondents were not sure. However such findings concurs with the research carried out by Watson (2000) denoted that tobacco use can worsen withdrawal symptoms from other substances, making it harder to achieve and maintain abstinence hence this is an indication that tobacco use can worsen withdrawal symptoms from other substances, making it harder to achieve and maintain abstinence.

#### 4.2.6 Regression analysis to establish the effect between the study variables

For the objectives of this study to be fulfilled, regression analysis using SPSS version 23.0 was undertaken in order to investigate on the effects of youth substance abuse on mental disorders in Namatala slums, Mbale city. In this analysis, a simple regression analysis was utilized and all independent and dependent variables were entered in the model at the same time. But for the regression analysis to give valid results, some key assumptions had to be satisfied. In this analysis, Variance of Youth Substance Abuse Factor (VYSAF) was used to ensure that the assumption of reasonable differences of the independent variables was satisfied. These were all below the threshold of 10. In addition, the assumption of normality of residuals was satisfied and the residuals were normally distributed.

#### 4.2.7 Regression analysis for the effect of tobacco use on substance dependence in Namatala slums

In order to address the first objective of the study, a regressive analysis was done to identify the effect of tobacco use on substance dependence in Namatala slums. The results from analysis are presented in the model summary and coefficients tables below.

**Table 4.12 showing regression model summary and coefficients for the effect of tobacco use on substance dependence in Namatala slum**

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F-statistic
1	.332 <sup>a</sup>	.110	.096	.553	5.693

a. Predictors: (Constant), Tobacco use

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.
	B	Std. Error	Beta	
1 (Constant)	4.615	.301		.000
Tobacco use	.153	.091	.132	.007

a. Dependent Variable: substance dependence

**Source: Primary data (2024)**

From the table 4.12 showing the model summary statistics above, a p-value = 0.007 that is less than 5% level of significance indicates that tobacco use positively (Beta=0.153) predicts the substance dependence and effect is significant at p-value < 0.05. An adjusted R<sup>2</sup> of 0.096 implies that tobacco use explains and predicts significantly 9.6% variations in substance dependence and the remaining 90.4% is explained by other factors. Basing on such findings, the researcher therefore concludes that tobacco use significantly and positively affects substance dependence in Namatala slums.

#### 4.4.0 Research question two: Finding out the effect of alcohol use on prevalence of anxiety disorders in Namatala slums

**Table 9: Showing the effect of alcohol use on prevalence of anxiety disorders in Namatala slums**

Details	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	S.D
Alcohol can directly cause anxiety, particularly during withdrawal, leading to the development of anxiety disorders	35.0	21.0	3.0	31.0	10.0	2.250	1.230
Individuals may use alcohol to self-medicate anxiety, which can worsen symptoms and lead to a cycle of dependence and increased anxiety	33.0	47.0	13.0	2.0	5.0	2.000	.974
Anxiety is a common symptom of alcohol withdrawal, and repeated cycles of withdrawal can lead to chronic anxiety disorders	6.0	14.0	24.0	43.0	13.0	1.750	.950
Anxiety disorders often co-occur with alcohol use disorders, complicating diagnosis and treatment	25.0	32.0	10.0	13.0	20.0	1.867	.676
Regular alcohol consumption can increase vulnerability to stress and anxiety, making individuals more prone to anxiety disorders	35.0	16.0	10.0	22.0	17.0	3.133	3.605
<b>Average mean</b>						<b>2.20</b>	<b>1.487</b>

**Source: Primary data (2024)**

With reference to table 9 above, it can be seen that 35% strongly agreed, 21% Agreed to the statement that alcohol can directly cause anxiety, particularly during withdrawal, leading to the development of anxiety disorders, 31% Disagreed, 10% strongly disagreed to the same statement while 3% of the respondents were not. These findings were in line with Wallitsch (2007) argues that

alcohol can directly cause anxiety, particularly during withdrawal, leading to the development of anxiety disorders there by implying that alcohol can directly cause anxiety, particularly during withdrawal, leading to the development of anxiety disorders.

However 33% strongly agreed, 47% Agreed to the statement that individuals may use alcohol to self-medicate anxiety, which can worsen symptoms and lead to a cycle of dependence and increased anxiety, 2% Disagreed, 5% strongly disagreed to the same statement while 13% of the respondents were not sure. This concurs with the research carried out by Kannan (2004) affirmed that individuals may use alcohol to self-medicate anxiety, which can worsen symptoms and lead to a cycle of dependence and increased anxiety implying that individuals may use alcohol to self-medicate anxiety, which can worsen symptoms and lead to a cycle of dependence and increased anxiety.

It can also be seen that it can be seen that 6% strongly agreed, 14% Agreed to the statement that anxiety is a common symptom of alcohol withdrawal, and repeated cycles of withdrawal can lead to chronic anxiety disorders, 43% Disagreed, 13% strongly disagreed to the same statement and 24% of the respondents were not sure. This is an indication that anxiety is a common symptom of alcohol withdrawal, and repeated cycles of withdrawal can lead to chronic anxiety disorders.

When asked whether anxiety disorders often co-occur with alcohol use disorders, complicating diagnosis and treatment ,25% strongly agreed, 32% Agreed to the statement, 10% of the respondents were not sure while 13% Disagreed, 20% strongly disagreed to the same statement making the minority of the respondents. This is an indication that anxiety disorders often co-occur with alcohol use disorders, complicating diagnosis and treatment.

. It can also be observed that 35% strongly agreed, 16% Agreed to the statement that regular alcohol consumption can increase vulnerability to stress and anxiety, making individuals more prone to anxiety disorders, 22% Disagreed, 17% strongly disagreed to the same statement while 10% of the respondents were not sure. These findings were in line with Girma (2004) stressed out that regular alcohol consumption can increase vulnerability to stress and anxiety, making individuals more prone to anxiety disorders. This is an indication that regular alcohol consumption can increase vulnerability to stress and anxiety, making individuals more prone to anxiety disorders.

### 4.3.6 Regression Analysis for the effect of alcohol use on prevalence of anxiety disorders in Namatala slums

For analysis of the effect of alcohol use on prevalence of anxiety disorders in Namatala slums, the independent variable was conceptualized in terms of alcohol use and for the study to achieve its one of the objectives; alcohol use was regressed to determine its effect on prevalence of anxiety disorders. The results from analysis are presented in the model summary and coefficients tables below.

**Table 4.18 Regression model summary and coefficients for the effect of alcohol use on prevalence of anxiety disorders in Namatala slums**

Model summary

Model	R	R Square	Adjusted R Square	F-Statistic	Std. Error of the Estimate
1	.304 <sup>a</sup>	.092	.077	9.421	.464

a. Predictors: (Constant), Alcohol use

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	2.892	.325		.000
	Alcohol use	.224	.089	.304	.015

a. Dependent Variable: prevalence of anxiety disorders

**Source: primary data, (2024)**

From the tables 4.18 showing the model summary statistics above, a p-value = 0.015 that is less than 5% level of significance indicates that alcohol use positively (Beta=0.224) predicts the prevalence of anxiety disorders and effect is significant at p-value < 0.05. An adjusted R<sup>2</sup> of 0.077 implies that alcohol use explains and predicts significantly 7.7% variations in prevalence of anxiety disorders in Namatala slums and the remaining 92.3% explained by other factors. Basing on such findings, the researcher therefore concludes that alcohol use significantly and positively affects prevalence of anxiety disorders in Namatala slums.

#### 4.4.0 Research question three: Finding out the effect of inhalant use on social isolation in Namatala slums

**Table 11: Showing the effect of inhalant use on social isolation in Namatala slums**

Detail	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	S.D
Inhalant use can lead to withdrawal from social activities and relationships due to changes in behavior and mood	8.0	21.0	11.0	29.0	31.0	2.350	1.448
The stigma associated with inhalant use can result in feelings of shame, causing individuals to isolate themselves from others	38.0	24.0	17.0	6.0	15.0	2.383	1.993
Chronic inhalant use can lead to erratic or aggressive behavior, pushing friends and family away and increasing social isolation	22.0	29.0	16.0	14.0	19.0	2.267	1.260
Inhalant use can cause cognitive impairments, making it difficult for users to engage in social interactions, leading to isolation	54.0	21.0	2.0	17.0	6.0	2.667	1.130
Prolonged inhalant use can erode social skills, making it challenging to maintain relationships	43.0	25.0	13.0	16.0	3.0	2.367	1.823
<b>Average mean</b>						<b>2.407</b>	<b>1.1308</b>

**Source: Primary data 2024**

With reference to table 11 above, it can be seen that 8% strongly agreed, 21% to the statement that inhalant use can lead to withdrawal from social activities and relationships due to changes in behavior and mood, 29% Disagreed, 31% strongly disagreed to the same statement while 11% of the respondents were not sure. This concurs with the research carried out by Mureithi (2008) who stated

that Inhalant use can lead to withdrawal from social activities and relationships due to changes in behavior and mood. This implies that Inhalant use can lead to withdrawal from social activities and relationships due to changes in behavior and mood.

It can be observed that the majority of the respondents 38% strongly agreed, 24% agreed to the statement that the stigma associated with inhalant use can result in feelings of shame, causing individuals to isolate themselves from others, 6% Disagreed, 15% strongly disagreed to same while 17% of the respondents were not sure. This agrees with the research carried out by Wrigley (2008) stressed that the stigma associated with inhalant use can result in feelings of shame, causing individuals to isolate themselves from others hence implying that the stigma associated with inhalant use can result in feelings of shame, causing individuals to isolate themselves from others.

When asked whether employees are appropriate to the severity of the risk, respondents 22% strongly agreed, 29% strongly agreed to the statement that chronic inhalant use can lead to erratic or aggressive behavior, pushing friends and family away and increasing social isolation, 14% Disagreed, 19% strongly disagreed to the same statement mean while 16% of the respondents were not sure. These findings were in line with Danida, (2012) who articulated that chronic inhalant use can lead to erratic or aggressive behavior, pushing friends and family away and increasing social isolation. This is an indication that chronic inhalant use can lead to erratic or aggressive behavior, pushing friends and family away and increasing social isolation.

It can also be observed that the majority of the respondents 54% strongly agreed, 21% Agreed to the statement that inhalant use can cause cognitive impairments, making it difficult for users to engage in social interactions, leading to isolation, 17% Disagreed, 6% strongly disagreed to the same statement while 2% of the respondents were not sure. This was in accordance to Várzea (2005) pointed out that inhalant use can cause cognitive impairments, making it difficult for users to engage in social interactions, leading to isolation. This is a manifestation that inhalant use can cause cognitive impairments, making it difficult for users to engage in social interactions, leading to isolation. It can be observed that the majority of the responds 43% strongly agreed ,25% agreed to the statement that prolonged inhalant use can erode social skills, making it challenging to maintain relationships, 16% Disagreed, 3% strongly disagreed to the same statement while 13% of the respondents were not sure hence implying that prolonged inhalant use can erode social skills, making it challenging to maintain relationships.

#### 4.4.6 Regression Analysis for the effect of inhalant use on social isolation in Namatala slums

In order to analyze the effect of inhalant use on social isolation in Namatala slums, the independent variable was conceptualized in terms of inhalant use and for the study to achieve its objectives; regression analysis to assess its effect on social isolation was performed using SPSS. The results from analysis were presented in the model summary and coefficients tables below.

**Table 4.24 Showing regression model summary and Coefficients for the effect of inhalant use on social isolation in Namatala slums .**

##### Model Summary

Model	R	R Square	Adjusted R Square	F-Statistic	Std. Error of the Estimate
1	.194 <sup>a</sup>	.037	.021	8.642	.588

a. Predictors: (Constant), Inhalant use

##### Coefficients<sup>a</sup>

Model		Un standardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	3.356	.374		.000
	Inhalant use	.091	.100	.114	.169

a. Dependent Variable: social isolation

##### Source: primary data, (2024)

From the table 4.24 showing the model summary statistics above, a p-value = 0.169 that is more than 5% level of significance indicates that inhalant use (Beta=0.091) predicts and affects their social isolation. However, its effect is insignificant at p-value > 0.05. An adjusted R<sup>2</sup> of 0.021 implies that inhalant use explains 2.1% variations in social isolation in Namatala slums. However, these variations are not significant in affecting social isolation. Basing on such findings, the researcher therefore concludes that inhalant use positively affects social isolation in Namatala slums much the effect that exists between the variables is significant.

## CHAPTER FIVE

### SUMMARY OF THE FINDINGS CONCLUSIONS AND RECOMMENDATIONS

#### **5.0 Introduction.**

In this chapter the researcher gives a summary of findings, conclusions and recommendation in line with the research questions and objectives.

#### **5.1 Summary of findings.**

The researcher provided a summary of findings in line with the objectives as follows;

##### **5.1.1 Research Question one: Findings on the effect of tobacco use on substance dependence in Namatala slums**

The study investigated into the effect of tobacco use on substance dependence in Namatala slums. Results according to descriptive statistics showed that most respondents were positive to the statements that they were asked. For example; majority of respondents constituting 30% strongly agreed, 24% Agreed to the statement that tobacco use can increase the likelihood of developing dependence on other substances due to shared pathways in the brain's reward system; 33% strongly agreed, 29% agreed to the statement that chronic tobacco use alters brain chemistry, which can make the brain more receptive to other addictive substances, leading to dependence; 48% strongly agreed, 13% Agreed to the statement that tobacco use can worsen withdrawal symptoms from other substances, making it harder to achieve and maintain abstinence.

On the other hand, while 29% disagreed, 46% disagreed to the to statement that tobacco use can heighten cravings for other substances, reinforcing the cycle of addiction, besides 32% Disagreed, 22 strongly disagreed to the to the statement that many individuals with substance dependence are also dependent on tobacco, complicating efforts to quit substance.

Most responses were positive indicating that tobacco use has a significant effect on substance dependence in Namatala slums.

### **5.1.2 Research Question two: Findings on the effect of alcohol use on prevalence of anxiety disorders in Namatala slums**

The study investigated into the effect of alcohol use on prevalence of anxiety disorders in Namatala slums. Results according to descriptive statistics indicated that majority of the respondents 35% strongly agreed, 21% Agreed to the statement that alcohol can directly cause anxiety, particularly during withdrawal, leading to the development of anxiety disorders, 33% strongly agreed, 47% Agreed to the statement that individuals may use alcohol to self-medicate anxiety, which can worsen symptoms and lead to a cycle of dependence and increased anxiety, it can be observed that 25% strongly agreed, 32% Agreed to the statement that anxiety disorders often co-occur with alcohol use disorders, complicating diagnosis and treatment, and 35% strongly agreed, 16% Agreed to the statement that regular alcohol consumption can increase vulnerability to stress and anxiety, making individuals more prone to anxiety disorders while 43% Disagreed, 13% strongly disagreed to the same statement that anxiety is a common symptom of alcohol withdrawal, and repeated cycles of withdrawal can lead to chronic anxiety disorders, Most responses were positive indicating that alcohol use has a significant effect on prevalence of anxiety disorders in Namatala slums.

### **5.1.3 Question three: Findings on the effect of inhalant use on social isolation in Namatala slums**

Results according to elucidation statistics revealed that 22% strongly agreed, 29% strongly agreed to the statement that chronic inhalant use can lead to erratic or aggressive behavior, pushing friends and family away and increasing social isolation, 54% strongly agreed, 21% Agreed to the statement that inhalant use can cause cognitive impairments, making it difficult for users to engage in social interactions, leading to isolation, 43% strongly agreed, 25% agreed to the statement that prolonged inhalant use can erode social skills, making it challenging to maintain relationships, and 38% strongly agreed, 24% agreed to the statement that the stigma associated with inhalant use can result in feelings of shame, causing individuals to isolate themselves from others. On the other hand, 29% Disagreed, 31% strongly disagreed to the same statement to the statement that inhalant use can lead to withdrawal from social activities and relationships due to changes in behavior and mood. Most responses were positive indicating that inhalant use has a significant effect on social isolation in Namatala slums.

## **5.2 Conclusion**

Basing on the results of the first objective, it can be concluded that tobacco use has a significant effect on substance dependence in Namatala slums. Therefore should be enhanced by; breaking the cycle of addiction and lowering the risk of transitioning to other drugs. Interventions such as public health campaigns, stricter regulations on tobacco advertising and sales, and increased taxes on tobacco products can reduce its accessibility and appeal, especially among young people. Comprehensive smoking cessation programs, which include behavioral therapy, support groups, and pharmacological aids like nicotine replacement therapy, can effectively help individuals quit smoking and reduce their cravings. By decreasing tobacco use, these measures not only lower nicotine dependence but also reduce the likelihood of initiating or continuing the use of other substances, thereby promoting overall healthier lifestyles and reducing substance dependence.

Basing on the results of the second objective, it can be concluded that alcohol use has a significant effect on prevalence of anxiety disorders in Namatala slums. This can be enhanced by breaking the cycle in which alcohol exacerbates anxiety symptoms and leads to further consumption. Alcohol is often used as a coping mechanism for anxiety, but it can worsen symptoms over time, creating a cycle of dependency and increased anxiety. Strategies to reduce alcohol use, such as promoting awareness of the mental health risks associated with drinking, providing access to mental health services, and encouraging the use of healthier coping mechanisms like exercise, mindfulness, and therapy, can help individuals manage anxiety without relying on alcohol. By addressing both alcohol use and anxiety concurrently, these strategies can reduce the prevalence of anxiety disorders and improve overall mental health.

It can also be concluded basing on objective three that inhalant use has a significant effect on social isolation in Namatala slums. This can be enhanced by addressing the behaviors and conditions that lead to both inhalant abuse and withdrawal from social interactions. Inhalant use is often linked to feelings of disconnection, trauma, or stress, which can further isolate individuals from their communities and support networks. Strategies to reduce inhalant use include increasing awareness of the risks associated with inhalant abuse, providing access to mental health and substance abuse treatment programs, and fostering supportive community environments that encourage social connections and positive relationships.

### **5.3 Recommendations**

There is need for people to break the cycle of addiction and lower the risk of transitioning to other drugs. Interventions such as public health campaigns, stricter regulations on tobacco advertising and sales, and increased taxes on tobacco products can reduce its accessibility and appeal, especially among young people. Comprehensive smoking cessation programs, which include behavioral therapy, support groups, and pharmacological aids like nicotine replacement therapy, can effectively help individuals quit smoking and reduce their cravings. By decreasing tobacco use, these measures not only lower nicotine dependence but also reduce the likelihood of initiating or continuing the use of other substances, thereby promoting overall healthier lifestyles and reducing substance dependence.

There is need to youths to break the cycle in which alcohol exacerbates anxiety symptoms and leads to further consumption. Alcohol is often used as a coping mechanism for anxiety, but it can worsen symptoms over time, creating a cycle of dependency and increased anxiety. Strategies to reduce alcohol use, such as promoting awareness of the mental health risks associated with drinking, providing access to mental health services, and encouraging the use of healthier coping mechanisms like exercise, mindfulness, and therapy, can help individuals manage anxiety without relying on alcohol. By addressing both alcohol use and anxiety concurrently, these strategies can reduce the prevalence of anxiety disorders and improve overall mental health

There is need for the government to address the behaviors and conditions that lead to both inhalant abuse and withdrawal from social interactions. Inhalant use is often linked to feelings of disconnection, trauma, or stress, which can further isolate individuals from their communities and support networks. Strategies to reduce inhalant use include increasing awareness of the risks associated with inhalant abuse, providing access to mental health and substance abuse treatment programs, and fostering supportive community environments that encourage social connections and positive relationships. By offering education, emotional support, and healthy alternatives, these efforts can help individuals overcome the urge to use inhalants, reduce feelings of loneliness, and rebuild their social ties, ultimately reducing social isolation.

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## APPENDICES

### APPENDIX I: QUESTIONNAIRE

Dear respondent;

I am Akongo Joanita carrying out research on the topic “effects of youth substance abuse on mental disorders in Namatala slums, Mbale city.” as a partial fulfillment for the award of bachelors degree of social work and social administration at Uganda Christian University .The questionnaire is designed to help me collect relevant information and therefore I kindly request you to participate in responding to the questions that will be asked .However the information given will be treated confidential and will only be used for academic purpose.

#### SECTION 1: DEMOGRAPHIC DATA

(Tick in the box provided)

1. Gender distribution of the respondent

a) Male                       b) Female

2. Marital status of the respondent

a) Single                       b) Married                       Divorced                       Widowed

3. Age bracket of the respondent (years)

a) 20-30                       b) 31-40                       c) 41-50                       C) 60 and above

4. Academic qualification of respondent

a) Secondary                       b) Certificate                       c) Diploma                       d) Bachelors'                       Masters

5. Years of working by the respondents.

a) Less than 1 year                       b) 1-2 years                       c) 3 years and above

**Section A: To analyze the effect of tobacco use on substance dependence in Namatala slums**

. This section aims at analyzing the effect of tobacco use on substance dependence in Namatala slums. Please indicate your opinion on the following statements using the Linkert scale. Key: **1= agreed, 2= strongly agreed; 3= not sure; 4= disagreed; 5= strongly disagreed**

No		1	2	3	4	5
1	Tobacco use can increase the likelihood of developing dependence on other substances due to shared pathways in the brain’s reward system.					
2	Tobacco use can heighten cravings for other substances, reinforcing the cycle of addiction.					
3	Many individuals with substance dependence are also dependent on tobacco, complicating efforts to quit either substance.					
4	Chronic tobacco use alters brain chemistry, which can make the brain more receptive to other addictive substances, leading to dependence.					
5	Tobacco use can worsen withdrawal symptoms from other substances, making it harder to achieve and maintain abstinence.					

**Section B: To determine the effect of alcohol use on prevalence of anxiety disorders in Namatala slums**

This section aims at determining the effect of alcohol use on prevalence of anxiety disorders in Namatala slums. Please indicate your opinion on the following statements using the Linkert scale.

Key: **1= agreed, 2= strongly agreed; 3= not sure; 4= disagreed; 5= strongly disagreed.**

No		1	2	3	4	5
1	Alcohol can directly cause anxiety, particularly during withdrawal, leading to the development of anxiety disorders.					
2	Individuals may use alcohol to self-medicate anxiety, which can worsen symptoms and lead to a cycle of					

	dependence and increased anxiety.					
3	Anxiety is a common symptom of alcohol withdrawal, and repeated cycles of withdrawal can lead to chronic anxiety disorders.					
4	Anxiety disorders often co-occur with alcohol use disorders, complicating diagnosis and treatment.					
5	Regular alcohol consumption can increase vulnerability to stress and anxiety, making individuals more prone to anxiety disorders.					

**Section C: To assess the effect of inhalant use on social isolation in Namatala slums**

This section aims at assessing the effect of inhalant use on social isolation in Namatala slums . Please indicate your opinion on the following statements using the Linkert scale. Key: **1= agreed, 2= strongly agreed; 3= not sure; 4= disagreed; 5= strongly disagreed.**

No		1	2	3	4	5
1	Inhalant use can lead to withdrawal from social activities and relationships due to changes in behavior and mood.					
2	The stigma associated with inhalant use can result in feelings of shame, causing individuals to isolate themselves from others.					
3	Chronic inhalant use can lead to erratic or aggressive behavior, pushing friends and family away and increasing social isolation.					
4	Inhalant use can cause cognitive impairments, making it difficult for users to engage in social interactions, leading to isolation.					
5	Prolonged inhalant use can erode social skills, making it challenging to maintain relationships					

## **APPENDIX II: INTERVIEW GUIDE**

1. How did you first begin using tobacco, and what role has it played in your use of other substances?
2. Have you noticed any changes in your cravings or usage patterns of other substances since you started using tobacco?
3. In your experience, how does tobacco use influence your ability to quit or reduce the use of other substances?
4. Can you describe any instances where tobacco use led to or intensified your dependence on another substance?
5. How has tobacco use affected your overall relationship with substance use and dependency?
6. How has your alcohol use influenced your feelings of anxiety over time?
7. Can you describe any patterns you've noticed between your alcohol consumption and the onset or worsening of anxiety symptoms?
8. Have you ever used alcohol to manage anxiety, and what has been the outcome?
9. How does alcohol withdrawal affect your anxiety levels, if at all?
10. In what ways do you think your alcohol use has contributed to the development or persistence of an anxiety disorder?
11. How has your use of inhalants impacted your relationships with friends and family?
12. Can you describe any changes in your social interactions since you started using inhalants?
13. What role, if any, has inhalant use played in your experience of social isolation?
14. Have you noticed a shift in your desire or ability to engage in social activities since using inhalants?
15. How has inhalant use affected your sense of connection or disconnection from your social networks and community?

APPENDIX III: DATA COLLECTION LETTER



UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa  
MBALE UNIVERSITY COLLEGE.

Office of the Academic Registrar

To THE TOWN CLERK.....  
INDUSTRIAL DIVISION, MBALE CITY

Dear Sir/Madam,

Re: Academic Research

Christian greetings!

We are honored to introduce to you Mr. Mrs. /Miss ALONGO JOANITA.....  
Of Registration Number S21/10001/BSU/1000..... pursuing a Masters' Degree/Postgraduate Diploma / Bachelor's Degree  
..IN SOCIAL WORK AND SOCIAL ADMINISTRATION.....

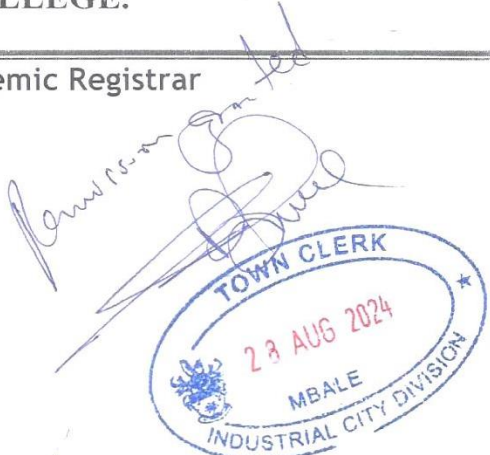
He/ she is required to carry out academic research on the topic  
..THE EFFECTS OF YOUTH SUBSTANCE ABUSE ON MENTAL DISORDERS  
..IN NAMATALE SLUMS, MBALE CITY.....

and thereafter produce a well bound hard cover research report (MAROON) in color for undergraduate and three (BLACK)copies for Postgraduate students as a university requirement for the award of a degree/diploma in the academic discipline that he / she is pursuing.

We shall be grateful for the help you may offer to him or her accordingly.  
Thank you.

Yours faithfully,

Mr. Akampurira Timothy  
Academic Registrar



A Complete Education for a Complete Person

P.O Box, Mbalé, Uganda, email: academicregistrar@mbale.ucu.ac.ug

**APPENDIX IV: SKETCH MAP OF MBALE DISTRICT SHOWING INDUSTRIAL CITY DIVISION**



Research Area