

ASSESSMENT OF FAMILY DYSFUNCTION AND SUBSTANCE USE DISORDER:  
CASE OF INPATIENTS AT THE PORT REITZ SUBCOUNTY HOSPITAL,  
MOMBASA COUNTY, KENYA

by

Jane Mibei

A Thesis presented to the School of Psychology

of

Daystar University  
Nairobi, Kenya

In partial fulfillment of the requirements for the degree of

MASTERS  
in Clinical Psychology

October 2025

DECLARATION

DECLARATION

ASSESSMENT OF FAMILY DYSFUNCTION AND SUBSTANCE USE DISORDER:  
CASE OF INPATIENTS AT THE PORT REITZ SUBCOUNTY HOSPITAL,  
MOMBASA COUNTY, KENYA

I declare that this Thesis is my original work and has not been submitted to any other college or university for academic credit.

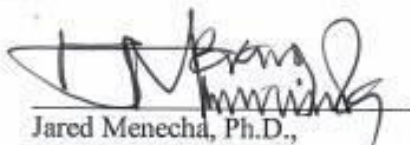
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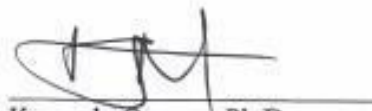
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## APPROVAL

ASSESSMENT OF FAMILY DYSFUNCTION SUBSTANCE USE DISORDER: CASE  
OF INPATIENTS AT THE PORT REITZ SUBCOUNTY HOSPITAL,  
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I begin by sincerely thanking the Almighty God for granting me the strength, wisdom, and resilience to undertake and complete this academic journey. I am equally grateful to the entire Daystar University community for providing a supportive and enabling environment that has nurtured my pursuit of higher education.

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## DEDICATION

I dedicate this work to all individuals courageously struggling with substance use disorders (SUDs). May this study serve as a source of hope, understanding, and encouragement on their journey toward recovery.

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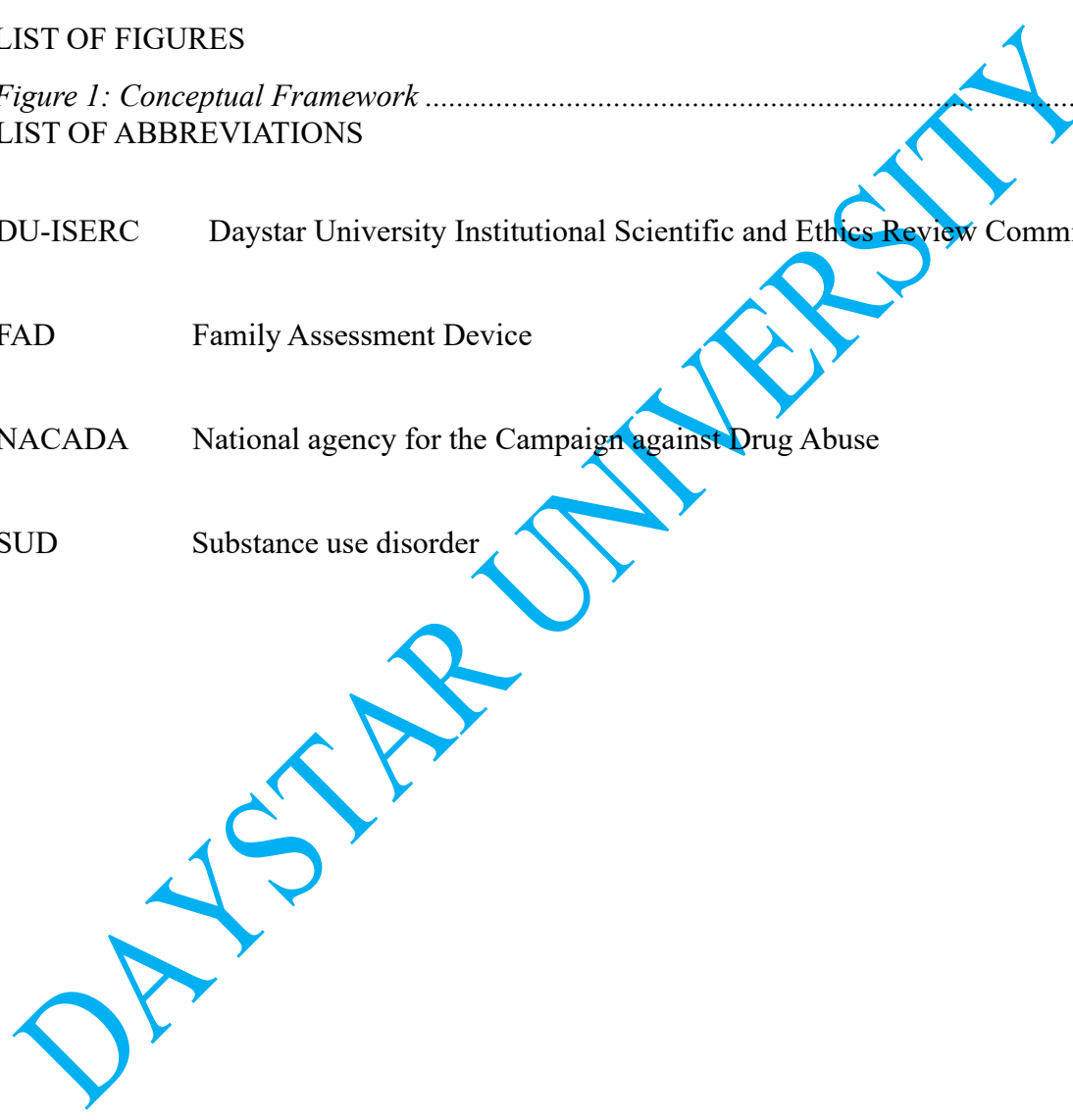
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LIST OF ABBREVIATIONS

DU-ISERC	Daystar University Institutional Scientific and Ethics Review Committee
FAD	Family Assessment Device
NACADA	National agency for the Campaign against Drug Abuse
SUD	Substance use disorder



## ABSTRACT

Substance Use Disorder (SUD) remains a significant public health challenge globally, regionally, and nationally. In Kenya, the problem is more pronounced in urban areas, with the coastal region identified as one of the most affected. Existing research highlights a complex interplay between substance use and family dysfunction; however, there is a notable gap in empirical studies examining this relationship within clinical settings in coastal Kenya. This study sought to assess the association between substance use disorder and family dysfunction among adult inpatients receiving treatment at Port Reitz Mental Hospital, Mombasa. The research was guided by Bowen's Family Systems Theory (1978), which posits that individuals cannot be fully understood in isolation from their family unit, as dysfunction in one member often reflects broader systemic issues. A descriptive cross-sectional research design was adopted, targeting 75 adult patients clinically diagnosed with SUD. Data were collected using the McMaster Family Assessment Device (FAD) to measure perceived family functioning across multiple domains, alongside a structured clinical records review form to capture socio-demographic characteristics and substance use history. The study explored how family dysfunction influences patterns of substance use, severity, and risk of relapse. Descriptive and inferential statistical analyses were conducted using SPSS version 27.0. The findings revealed a high prevalence of substance use disorder characterized by early onset, chronic use patterns, and widespread polysubstance involvement. The most commonly abused substances were cannabis (79.7%), khat (75.7%), and alcohol (54.1%). The results also indicated that a vast majority of participants (87.8%) came from dysfunctional or severely dysfunctional family systems, marked by breakdowns in communication, role clarity, affective involvement, problem solving, and behavioral control. Socio-demographic vulnerabilities—including youth, male gender, unemployment, and low educational attainment—were strongly associated with both substance use and family dysfunction. Furthermore, the relationship between substance use severity and family dysfunction was found to be substance- and domain-specific, underscoring the complexity of interactions between individual behavior and family systems. This study contributes to the growing body of knowledge on mental health and addiction in Kenya by providing empirical evidence from a clinical setting. The findings have practical implications for policymakers, clinicians, and rehabilitation practitioners, emphasizing the need for integrated treatment models that address both substance use and family dynamics. Strengthening family-centered interventions and socio-economic support systems can enhance recovery outcomes and inform more effective mental health strategies in Kenya's coastal region.

## CHAPTER ONE

## INTRODUCTION AND BACKGROUND TO THE RESEARCH PROBLEM

## Introduction

Substance use disorder (SUD) remains a pressing global health concern, with farreaching psychological, social, and economic consequences (Mutiso et al., 2022). Characterized by the compulsive and harmful use of substances despite adverse outcomes, SUD significantly impairs individual functioning and can destabilize family structures (Njoki et al., 2021). In many developing countries, including Kenya, the growing burden of substance use has been linked to deteriorating mental health outcomes and increased strain on healthcare systems and social support networks (Mutiso et al., 2022). Among the most critical outcomes of SUD is family dysfunction, a condition marked by breakdowns in communication, emotional bonding, role fulfillment, and problem-solving within the family unit (Njoki et al., 2021).

Family dysfunction not only exacerbates the psychological toll on individuals struggling with substance use but also perpetuates cycles of addiction and intergenerational trauma (Akande et al., 2023). Families serve as both potential buffers against and risk factors for substance-related disorders (Guliyev et al., 2021). Dysfunctional family environments may contribute to the onset and maintenance of substance use, while substance dependency can intensify conflict, neglect, and instability within the household (Saqib et al., 2020). This bidirectional relationship underscores the urgent need to study both phenomena in tandem, particularly in healthcare settings where patients present complex biopsychosocial challenges (Nawi et al., 2021). Kenya has witnessed an alarming

rise in substance abuse, especially among youth and economically vulnerable populations (Mutiso et al., 2022).

Port Reitz Mental Hospital, located in Mombasa County, a region known for high rates of drug use due to its coastal location and socioeconomic dynamics, serves as a key treatment and rehabilitation center for individuals affected by substance-related disorders (Khan et al., 2022). However, empirical data linking substance use disorders to patterns of family dysfunction within this hospital context remains limited (Rashid et al., 2019). Understanding this relationship is essential for informing targeted interventions that address both clinical recovery and family system rehabilitation (Mahsoon et al., 2023).

### Background to the Research Problem

Substance Use Disorder (SUD) remains a pervasive public health challenge worldwide, with profound implications for individual well-being, family stability, and societal development (Jaguga & Kwobah, 2020). According to the World Health Organization (WHO), over 275 million people globally used illicit drugs in the past year, and more than 35 million suffer from drug use disorders (Jaguga & Kwobah, 2020).

The burden is not only medical but also social, as substance use often leads to strained family relationships, reduced productivity, mental health challenges, and increased healthcare costs (Mohammadnezhad et al., 2020). In Sub-Saharan Africa, the prevalence of substance use is escalating due to urbanization, unemployment, poverty, and limited access to mental health services (Jaguga & Kwobah, 2020). The African Union highlights that the continent is facing a surge in drug trafficking and abuse, with youth and low-income communities being disproportionately affected (Jaguga & Kwobah, 2020).

In Kenya, the National Authority for the Campaign Against Alcohol and Drug Abuse (NACADA) reports that nearly one in every ten Kenyans has used an illicit substance, with alcohol, bhang (cannabis), and heroin being the most common substances (Musyoka et al., 2020). Coastal regions, especially Mombasa County, have been identified as hotspots for drug abuse due to their strategic location for trafficking and tourism-related vulnerabilities (Musyoka et al., 2020).

Amid this crisis, families play a critical role in both the onset and mitigation of substance use behaviors. Dysfunctional family environments, characterized by poor communication, neglect, conflict, and lack of emotional support, are known contributors to substance use, and conversely, substance use often exacerbates family dysfunction. Empirical evidence points to a bidirectional relationship between substance use and family breakdown (Lander et al., 2013). However, while several studies have explored the prevalence of SUD and its psychological or social effects in Kenya, few have delved deeply into how family dysfunction and SUD interact as mutually reinforcing problems, particularly at the household level.

### Statement of the Problem

Existing research tends to generalize findings across populations or regions, often neglecting the unique socio-cultural and economic dynamics in high-risk areas like Mombasa. Moreover, there is limited data that integrates both quantitative and qualitative insights into the lived realities of individuals and families affected by substance use. This gap is especially pronounced in institutional settings like Port Reitz Mental Hospital, a key public mental health facility serving a highly vulnerable population.

Given the above context, there is an urgent need to assess the prevalence of SUD and the extent of family dysfunction among patients at Port Reitz Sub-County Hospital. Additionally, a better understanding of the socio-demographic correlates and the interplay between these two variables is crucial for informing holistic treatment interventions, community awareness, and policy formulation. Without such targeted and localized data, efforts to address substance abuse remain fragmented, reactive, and largely ineffective.

#### Purpose of the Study

This research aimed to assess the relationship between substance use disorder and family dysfunction among inpatients at Portreitz Mental Hospital, Mombasa County.

#### Objectives of the Study

The objectives of the study were;

- i. To establish the prevalence of substance use disorder among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya.
- ii. To assess the level of family dysfunction among inpatients diagnosed with substance use disorder at Port Reitz Mental Hospital, Mombasa County, Kenya.
- iii. To explore socio-demographic factors associated with substance use disorder and family dysfunction among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya.
- iv. To examine the relationship between substance, use disorder and family dysfunction among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya.

#### Research Questions

- i. What is the prevalence of substance use disorder among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya?
- ii. What are the levels of family dysfunction among inpatients diagnosed with substance use disorder at Port Reitz Mental Hospital, Mombasa County, Kenya?
- iii. What are the socio-demographic factors associated with substance use disorder and family dysfunction among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya?
- iv. What is the relationship between substance use disorder and family dysfunction among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya?

#### Hypothesis

##### Null Hypothesis( $H_0$ ):

There is no significant relationship between substance use disorder and family dysfunction among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya.

##### Alternative-Hypothesis( $H_1$ ):

There is a significant relationship between substance use disorder and family dysfunction among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya.

#### Justification of the Study

This study is justified as it addresses a critical public health issue, substance abuse disorder, and the relationship with family dysfunction. This is especially important because the study is based on the country's hotspot for drug abuse. The study is designed to provide knowledge based on the local context that can be beneficial to other scholars in Africa and globally.

### Significance of the Study

The findings of this study are expected to inform healthcare providers, social workers, and policymakers about the need for integrated treatment approaches. The study contributes to existing literature by contextualizing the link between family dynamics and substance use within the Kenyan healthcare setting.

### Assumptions

This study was based on several key assumptions. First, it was assumed that inpatients at Port Reitz Mental Hospital would be accessible and willing to participate in the research. Second, it was assumed that participants would provide honest and accurate responses. Third, the data collection instruments, including questionnaires and medical records, were presumed to be reliable and valid for capturing the variables under study. Finally, it was assumed that no major health policy changes or public health emergencies would occur during the study period that could significantly disrupt data collection.

### Scope of the Study

This study was limited to Mombasa County, specifically Port Reitz Mental Hospital. This site was selected because it is the only referral mental hospital in the coastal region and has a substantial capacity for inpatient care.

### Limitations and Delimitations of the Study

Several limitations were encountered in this study. The first limitation arose from self-report bias. Data were collected through questionnaires, and respondents may have underreported or exaggerated information regarding family relationships and substance

use, possibly due to stigma, shame, or misinterpretation of the questions. Second, since the study was conducted within a hospital setting and focused specifically on inpatients at Port Reitz Mental Hospital, the findings may not be fully generalizable to the broader population in Mombasa County or Kenya as a whole. The third limitation related to the research design: the cross-sectional approach captured data at a single point in time, thereby limiting the ability to establish causal relationships between family dysfunction and substance use disorder. Finally, ethical considerations restricted the inclusion of patients with severe psychiatric symptoms or cognitive impairments, thus excluding valuable insights from individuals who might have been most affected.

Delimitations refer to the boundaries or scope established by the researcher to make the study manageable. These parameters also introduced certain inherent constraints. First, the study was limited to a hospital setting—specifically Port Reitz Mental Hospital—and did not include community-based cases, school populations, or other rehabilitation centers within Mombasa. Second, the research focused exclusively on adults, excluding adolescents and children diagnosed with substance use disorders. Third, the study examined specific dimensions of family dysfunction, communication, roles, and emotional support—thereby omitting other potential influences such as peer pressure, socioeconomic status, and community factors. Finally, the reliance on structured questionnaires as the primary data collection tool limited the exploration of deeper personal, social, or cultural meanings that could have been captured through more qualitative methods such as interviews or focus groups.

#### Operational Definition of Terms

**Family Dysfunction:** Family dysfunction refers to persistent maladaptive patterns of interaction within a family system that hinder healthy emotional, cognitive, and behavioral development among its members. Dysfunctional patterns may include poor communication, emotional detachment, conflict escalation, rigid roles, and lack of problem-solving capacity (Beach et al., 2023).

For this study, inpatient status was confirmed through medical or hospital admission records indicating psychiatric hospitalization for one or more nights within the last 12 months. This status was used to assess treatment pathways, symptom severity, and associations with psychosocial variables such as family dysfunction and Substance Use Disorder (SUD).

Operationally, family dysfunction was measured using the Family Assessment Device (FAD), a validated instrument grounded in the McMaster Model of Family Functioning. Participants completed the General Functioning scale, and scores above the established clinical threshold indicated a dysfunctional family system. This variable was analyzed in relation to both the presence of SUD and inpatient psychiatric care utilization.

**Inpatient:** Inpatient refers to an individual who has been formally admitted to a hospital or psychiatric facility for at least 24 hours to receive psychiatric care, stabilization, or medical management. According to the World Health Organization (2023), inpatient psychiatric care is characterized by round-the-clock supervision, multidisciplinary treatment, and individualized care planning, typically used for acute or severe mental health conditions.

**Substance Use Disorder (SUD):** Substance Use Disorder is operationally defined in accordance with the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition,

Text Revision (DSM-5-TR) (American Psychiatric Association, 2022). It refers to a maladaptive pattern of substance use leading to clinically significant impairment or distress, manifested by two or more symptoms within a 12-month period. These symptoms may include impaired control over substance use, social or occupational impairment, risky behavior, and pharmacological effects such as tolerance and withdrawal.

### Chapter Summary

This chapter presented the background information of the study, outlining its precise aims and examining how similar objectives had been addressed in previous research. It identified existing gaps in the literature and articulated the research problem, emphasizing areas where knowledge remains limited. The justification and significance of the study were discussed to underscore the relevance and contribution of the research. Finally, the chapter delineated the scope and limitations of the study.

## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

The purpose of the study was to assess substance use disorders and family dysfunction among inpatients at Port Reitz Mental Hospital in Mombasa County. This

chapter reviewed literature relevant to the research problem and specifically aimed at addressing the study's research questions. Secondary data were obtained from books, journals, and scholarly articles to provide an understanding of previous studies on the topic. Additionally, the chapter presented the conceptual and theoretical frameworks that guided the study.

### Theoretical Framework

Developed by Bowen (1978), Family Systems theory posits that individuals cannot be understood in isolation from their family unit. Dysfunction in one member often reflects broader systemic issues. In the context of SUD, a user's behavior may emerge as a symptom of family instability, or their addiction may contribute to worsening family relations. Bandura's (1977) social learning Theory asserts that behavior is learned through observation and imitation. Children and adolescents in dysfunctional families may model the substance use behaviors of parents, siblings, or caregivers, especially in environments where drug use is normalized or used as a coping mechanism.

Attachment theory, originally developed by British Psychologist John Bowlby (1969,1973,1980), explains how early relationships between children and caregivers shape psychological development and interpersonal behavior throughout life. The theory emphasizes that the quality of the bond formed with primary caregivers during infancy and early childhood establishes patterns for how individuals relate to others, manage emotions, and cope with stress, which persists throughout their lives. According to Bowlby and later Mary Ainsworth (1978), secure attachment, characterized by trust, emotion, regulation, and healthy relations, leads to better coping mechanisms later in life. Insecure attachment, characterized by emotional distance and difficulty in trusting others, leads to poor coping

mechanisms later in life. People who experienced negative attachment in early childhood are more susceptible to drug abuse as a coping mechanism.

### General Literature Review

Substance Use Disorder (SUD) and family dysfunction are two interrelated issues that have attracted growing attention both globally and locally. The increasing prevalence of substance use among individuals, particularly youth and young adults, has been linked to a wide range of social, psychological, and familial factors. According to the World Health Organization (2022), more than 36 million people worldwide suffer from drug use disorders. In Africa, and particularly in Kenya, substance abuse has become a pressing public health concern, especially in coastal regions such as Mombasa County. The National Authority for the Campaign against Alcohol and Drug Abuse (NACADA, 2022) reported a significant rise in the use of alcohol, cannabis, heroin, and prescription drugs, particularly among youth in Mombasa. The unique sociocultural and economic dynamics of the coastal region, such as tourism, unemployment, and the presence of drug trafficking routes, have contributed to increased drug availability and consumption.

One of the most widely recognized risk factors for the development and persistence of SUD is family dysfunction. Families serve as the first and most enduring socializing institutions, and family structure, communication patterns, parenting styles, and emotional support play central roles in shaping individual behavior. Dysfunctional family environments characterized by neglect, abuse, conflict, poor communication, and role confusion are strongly associated with the initiation and continuation of substance use (McCrary & Epstein, 2013).

Family Systems Theory (Bowen, 1978) and Social Learning Theory (Bandura, 1977) provide conceptual frameworks for understanding the connection between SUD and family life. Bowen's theory posits that the behavior of one family member, such as substance use, reflects the functioning of the entire system. In contrast, Bandura's theory emphasizes that behaviors like drug use are learned through modeling and reinforcement, often beginning in the home environment. When parents or siblings use substances, children are more likely to emulate similar behaviors.

These frameworks are supported by a growing body of local research. Sospeter and Iteyo (2023) found a high prevalence of multi-substance use among both genders in Mombasa, identifying alcohol, cannabis, heroin, and methamphetamine as the most abused substances. The researchers attributed these patterns partly to family-related factors such as poor supervision and parental modeling. Similarly, Onsongo and Mwendwa (2024) identified weak parental communication and emotional neglect as significant predictors of substance abuse among youth in the coastal region.

SUD plays a dual role: it both contributes to and is exacerbated by family dysfunction. Individuals struggling with addiction often disrupt family cohesion, strain financial resources, and intensify interpersonal conflict. Ray et al. (2009) noted that families of individuals with substance use disorders experience significantly higher rates of psychological distress, health problems, and social dysfunction than families without exposure to substance abuse.

In a study of recovering alcoholics in Nairobi, Kibera (2024) found that individuals with higher levels of family resilience, defined by emotional support, adaptability, and

effective communication, had lower rates of relapse. This finding suggests that strong family systems serve as important protective factors in the recovery process. Moreover, Nafisa (2023) reported that patients enrolled in methadone treatment programs in Kisauni, Mombasa, often presented with co-occurring mental health disorders and lacked adequate family support. This underscores the importance of integrating family therapy into drug rehabilitation programs, particularly in coastal regions such as Mombasa, where family ties are strong but often strained.

#### Prevalence of Substance Use Disorder (SUD)

Globally, the World Health Organization (WHO, 2022) estimated that over 36 million individuals suffer from substance use disorders. The Global Burden of Disease Study (GBD, 2020) reported that substance abuse contributes significantly to disability-adjusted life years (DALYs), particularly in low- and middle-income countries. Regionally, South Africa has recorded high rates of alcohol and methamphetamine use, especially in urban settlements (Parry et al., 2019). In Ghana, cannabis and tramadol use among youth has increased significantly in recent years (Adu-Mireku et al., 2022). Locally, NACADA (2022) has documented a surge in the use of alcohol, cannabis, heroin, and prescription medications, particularly in Kenya's coastal counties such as Mombasa. Sospeter and Iteyo (2023) also reported high levels of polysubstance abuse across all socioeconomic classes in Mombasa, suggesting an urgent need for health system interventions.

#### Levels of Family Dysfunction Among Patients with SUD

The family was considered the most influential context in early human

development. McCrady and Epstein (2013) asserted that family dysfunction, characterized by poor communication, abuse, conflict, and lack of emotional support, is both a cause and consequence of SUD. Studies in the United States (Ray et al., 2009) and Europe (Orford et al., 2013) confirmed that individuals with SUD often come from homes with elevated levels of emotional neglect, rigid roles, and unresolved conflict. In South Africa, Morojele and Brook (2006) reported that family violence and poor parental monitoring were linked to adolescent substance abuse. In Kenya, Onsongo and Mwendwa (2024) found that weak family bonds, absent fathers, and domestic violence contributed to drug abuse among youth in the coastal region.

#### Socio-Demographic Factors Associated with SUD and Family Dysfunction

Demographic variables such as age, gender, educational level, and socioeconomic status have been widely studied in relation to both SUD and family functioning. In Nigeria, Adewuya et al. (2007) found that young males from low-income families were more likely to engage in substance abuse. In South Africa, gender and educational attainment influenced both SUD and perceived family cohesion (Ndeti et al., 2016). Locally, Juma (2024) showed that in Mombasa, peer pressure, unemployment, and low parental involvement significantly influenced substance use patterns among youth. Moreover, Nafisa (2023) observed that many patients undergoing methadone therapy in Kisauni had co-morbid mental disorders and lacked family support, which complicated recovery and increased vulnerability.

#### Relationship Between Substance Use Disorder and Family Dysfunction

Research showed a bidirectional relationship between SUD and family dysfunction. SUD contributed to broken family relationships, emotional distress, and financial instability.

Conversely, dysfunctional families often created the conditions under which substance abuse thrived. Bandura's Social Learning Theory (1977) and Bowen's Family Systems Theory (1978) both provided theoretical foundations for this relationship. In Nairobi, Kibera (2024) found that individuals with strong family support were more likely to complete Alcoholics Anonymous programs and had lower relapse rates. Similarly, Sospeter and Onkware (2023) noted that existing government policies focused more on enforcement than on strengthening families as a prevention strategy. This gap limited sustainable recovery and underscored the need to integrate family-focused interventions.

#### Empirical Literature Review

A growing body of research underscores a strong association between family dysfunction and substance use disorders (SUDs). Internationally, McCrady and Epstein (2013) found that substance use often develops within family systems marked by poor boundaries, emotional neglect, and unresolved interpersonal conflict. Their study, based largely on North American clinical populations, advanced the understanding of family dynamics in addiction but is limited in its generalizability to low-income or collectivist societies, where family structures and coping mechanisms may differ significantly.

In a European context, Schulte, Meier, and Stirling (2021) conducted a metaanalysis across multiple EU countries and found that adolescents from homes with high parental conflict and emotional distance exhibited significantly higher rates of alcohol and cannabis use. While the study employed a robust quantitative design, it lacked qualitative insights that could have illuminated the mechanisms behind these associations, such as how family communication patterns specifically influence youth decision-making about substances.

Regionally, in sub-Saharan Africa, Olowu and Ojo (2020) explored the impact of family cohesion and parenting styles on substance use among Nigerian youth. Their findings suggested that authoritarian parenting and inter-parental violence significantly increased the risk of drug initiation. However, the study's urban-centric sample may not fully represent rural realities, where traditional norms and kinship support systems may play a protective role. Similarly, Mawuko and Atindanbila (2022) in Ghana investigated the role of extended family systems in mitigating SUDs and concluded that supportive kinship ties buffered against relapse. Nevertheless, the study's reliance on self-reported data from recovering users raises questions of social desirability bias.

Turning to the Kenyan context, NACADA (2022) reports that family breakdown, neglect, and poor supervision are critical drivers of drug and alcohol abuse among adolescents and young adults. While the report provides a valuable macro-level overview, it lacks disaggregated data on how different types of family dysfunction, such as parental absence, domestic violence, or divorce, uniquely contribute to substance use vulnerability. Sospeter and Iteyo (2023), in a study based in Mombasa, documented the widespread use of multiple substances, including alcohol, cannabis, heroin, khat, and methamphetamine, across gender and socioeconomic divides. Their work effectively highlights the scale of the crisis, but it falls short in linking substance use patterns to specific familial or psychosocial variables, leaving a gap in causal understanding. A related study by Sospeter and Onkware (2023) evaluated national drug control policies and noted a systemic overemphasis on punitive law enforcement at the expense of family- or community-based interventions. While policy-focused, the study did not empirically assess the impact of such neglect on family-level outcomes or rehabilitation success rates. Juma (2024) made a valuable

contribution by examining the socio-cultural drivers of substance use among Mombasa youth. The study found that family modeling of drug use, inconsistent discipline, and lack of parental supervision significantly heightened the risk of early initiation. At the same time, parental warmth and open communication were identified as protective factors. Though insightful, the study was limited to a single coastal county and did not explore gender-based nuances in family influence.

In Nairobi's Kibera slum, Kibera (2024) discovered that individuals with higher family resilience were less likely to relapse after participating in Alcoholics Anonymous programs. This finding supports the idea that stable family structures facilitate long-term recovery. However, the study's small sample size and focus on a single recovery program limit the generalizability of its conclusions to the broader urban population or other recovery contexts.

In Western Kenya, Nyamoi et al. (2024) found that unresolved parental conflict and poor communication undermined the effectiveness of drug prevention programs in schools.

While the study integrates family dynamics into prevention discourse, it relies predominantly on teacher and school counselor reports, with minimal input from students or families themselves, thus narrowing its interpretive scope.

Lastly, Nafisa (2023) investigated psychiatric comorbidities among SUD patients at Methadone clinics in Kisauni, revealing high incidences of depression and anxiety. This study emphasizes the complex, biopsychosocial nature of addiction. Yet, it does not examine how family dysfunction may contribute to or exacerbate these co-occurring disorders, missing a potentially important relational dimension.

Taken together, these studies underscore the multidimensional relationship between family functioning and substance use disorders. While the literature provides compelling evidence for the centrality of the family in both the development and recovery from addiction, many studies suffer from methodological limitations, including narrow geographic focus, reliance on self-report data, and inadequate attention to moderating factors such as gender, age, and socioeconomic status. Future research should aim to use longitudinal designs, mixed-method approaches, and intersectional analysis to better understand how diverse family experiences interact with substance use trajectories across various contexts.

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Table 1: Summary of Knowledge Gaps

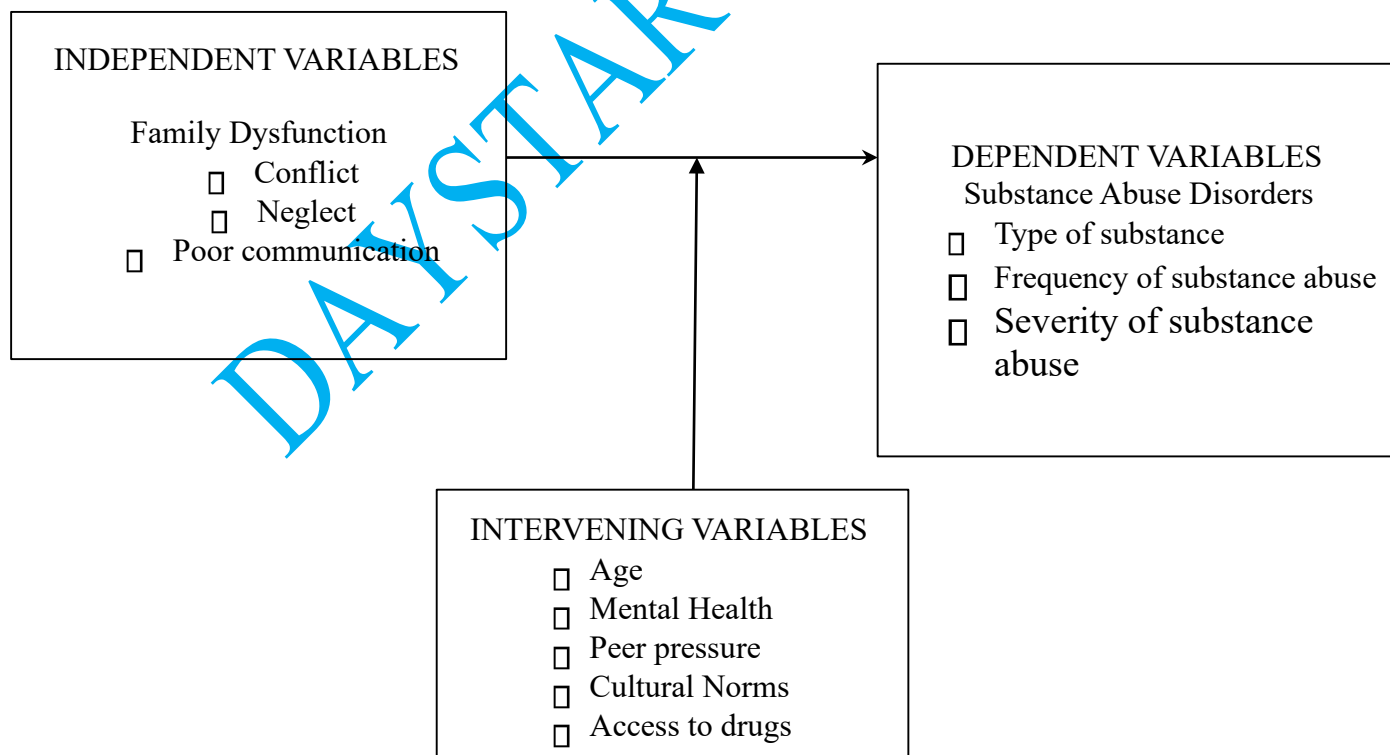
Author(s)	Area of Study	Key Findings	Identified Gaps	How the Current Study Address the Gaps
Ndetei et al. (2010)	Substance abuse and mental health in Kenya	Identified peer pressure and unemployment as major drivers of drug use. Highlighted structural weaknesses in public addiction treatment services.	Empirical and methodological gaps: Did not assess family functioning; relied on secondary data.	Investigates family dysfunction using validated family assessment tools to inform psychosocial interventions.
Gakunju et al. (2019)	Drug use among youth in urban Kenya	Linked psychiatric symptoms to substance use, especially among adolescents.	Applies Attachment Theory to understand family influence on substance use disorder.	Applies Attachment Theory to understand family influence on substance use disorder.
Mwangala et al. (2021)	Mental health service delivery in Mombasa County	Identified Gaps	Collects primary data directly from patients using a cross-sectional design focused on individual-family interactions.	Collects primary data directly from patients using a cross-sectional design focused on individual-family interactions.
Khasakhala et al. (2012)	Psychiatric morbidity among Kenyan patients	Theoretical gap: Did not consider family systems or attachment theory.	Uses primary data and standardized tools (e.g., FAD) to assess real-time family functioning.	Uses primary data and standardized tools (e.g., FAD) to assess real-time family functioning.
	Found a growing burden of SUDs in Kenya but limited	Methodological gap: Lack of patient-level data on psychosocial contributors to SUD.		

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The summary of the knowledge gaps revealed that while several studies in Kenya had addressed substance abuse, few had examined its relationship with family dysfunction, especially through the lens of psychological theories or validated instruments. Most existing studies either lacked theoretical grounding, used limited methodologies, or were contextually removed from the coastal mental health facilities. The current study addressed these gaps by using attachment theory and family systems theory as guiding frameworks. It utilized a validated tool (McMaster FAD) for measuring family functioning and collected patient-level primary data from a clinical setting (Port-Reitz Mental Hospital, Mombasa).

#### Conceptual Framework

The conceptual framework illustrated how family dysfunction contributed to the development of SUD and depicted the moderating factors.



*Figure 1: Conceptual Framework*

Source: Researcher (2025)

## Discussion of the Conceptual Framework

This study was anchored in a conceptual framework that explored the relationship between substance use disorders and family dysfunction, with an emphasis on the moderating effects of specific psychosocial and contextual factors. In this framework, family dysfunction was conceptualized as the independent variable, while substance use disorder (SUD) served as the dependent variable. A set of intervening or moderating variables including age, mental health status, peer pressure, cultural norms, and access to drugs were incorporated to account for the variability and complexity of this relationship.

Family dysfunction was defined as the presence of sustained relational instability within a household, characterized by unresolved conflict, emotional neglect, and poor communication. Existing literature suggested that such dysfunctional family environments often served as incubators for maladaptive coping mechanisms, including the onset and escalation of substance use (Beach et al., 2023). In the context of this study, family dysfunction is hypothesized to increase the likelihood of substance use initiation and progression by creating emotional distress and reducing the availability of healthy coping mechanisms.

The dependent variable, substance use disorder, referred to a pattern of maladaptive substance consumption that led to clinically significant impairment or distress, as defined by the DSM-5-TR criteria (American Psychiatric Association, 2022). This included factors such as the type of substance used, frequency of use, and the severity of the disorder, which collectively indicated the extent of the individual's addiction and its impact on functioning.

The severity of SUD was influenced not only by individual predispositions but also by environmental and relational factors such as family dynamics.

The relationship between family dysfunction and substance use was not necessarily linear or uniform across all individuals; thus, the framework incorporated several moderating variables to reflect the differential impact of this relationship. Age, for example, moderated vulnerability, with adolescents and young adults being particularly susceptible to familial influences due to developmental sensitivity. Mental health status was another critical factor; individuals with underlying psychological conditions such as depression, anxiety, or trauma-related disorders were more likely to have resorted to substance use as a form of self-medication (SAMHSA, 2023).

Peer pressure also played a salient role, especially during adolescence and early adulthood, when identity formation and social acceptance were prioritized. Furthermore, cultural norms regarding substance use can either buffer or exacerbate risk. In societies where substance use was stigmatized, individuals from dysfunctional families may have suppressed their use or delayed onset; conversely, permissive cultural attitudes may have normalized and thus accelerated the behavior. Lastly, access to drugs—whether through economic means or geographical availability—served as a structural moderator, influencing the ease with which individuals can initiate or maintain substance use behaviors.

The theoretical basis for this framework was drawn from Bronfenbrenner's Ecological Systems Theory (1979), which emphasizes the role of multiple environmental systems in shaping individual behavior, and Family Systems Theory, which posits that dysfunction in any part of a family unit affects the functioning of the entire system.

Together, these theories supported the notion that substance use behaviors emerge from the interaction of individual, familial, and environmental factors.

In summary, the conceptual framework that guided the study posited that family dysfunction (IV) contributed to the development of substance use disorders (DV), and that this relationship was moderated by age, mental health, peer influence, cultural context, and access to substances (intervening variables). Understanding these dynamics was essential for developing targeted prevention and intervention strategies that address not only the individual's behavior but also the broader family and societal contexts within which that behavior was embedded.

#### Chapter Summary

This chapter reviewed existing literature on the relationship between substance use disorder (SUD) and family dysfunction. It began by defining key concepts: Family dysfunction as a breakdown in communication, roles, and emotional support within the family. Theoretical frameworks such as social learning theory and Family Systems theory were explored to explain how family dynamics influence substance use behaviors.

Global and local statistics showed a worrying increase in substance abuse. Coastal Kenya, in particular, had a high level of drug abuse compared to other parts of the country. Studies carried out in Mombasa reported that dysfunctional family dynamics such as neglect, conflict, and communication breakdown were closely associated with high rates of substance abuse. The chapter concluded by identifying gaps in current knowledge. Most studies had been based on the community and schools; however, there was a need for clinical-level research that focuses on patients receiving treatment for SUD in hospital settings. This study therefore, addressed this gap by examining the relationship between

family dysfunction and substance use disorder among patients at Port-Reitz mental hospital, Mombasa.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### Introduction

This chapter outlined the research design and methodological procedures that were employed to conduct the study. It included the research design, study area, target population, sampling techniques, and sample size, data collection methods, data analysis procedures, and ethical considerations.

#### Philosophical Underpinnings

The primary philosophical stance underpinning this study was pragmatism. Pragmatism emphasizes the use of methods and approaches that are most practical and effective for answering the research questions (Creswell and Poth,2018). It supports the mixed methods where both quantitative and qualitative data were utilized to yield meaningful insights. In this study, the pragmatic approach justified the use of both clinical records and questionnaires to explore the complex, real-world relationships between substance use

disorder and family dysfunction. The goal was not only to understand the patterns but also to provide actionable knowledge that can inform clinical practice and policy.

Elements of positivism were evident in the study's reliance on objective measurement, statistical analysis, and generalizable findings. The use of structured questionnaires reflected a belief in the existence of measurable relationships between variables. From the point of view of positivism, substance use and family dysfunction were treated as observable variables that can be quantified, analyzed, and reported with objectivity and scientific rigor.

Interpretivism also played a secondary but important role given the psychological nature of substance use and family relationships. Interpretivism emphasizes understanding how individuals make meaning of their experiences (Bryman 2016). While the study primarily used structured tools, it recognized the unique context, cultural background, and personal stories that influenced both substance use and family dysfunction in Mombasa. This perspective was especially relevant when interpreting the subjective experiences of patients, including how they perceive family conflict, emotional neglect, or support during treatment.

### Research Design

This study adopted a descriptive cross-sectional research design, which was appropriate for assessing the relationship between substance use disorder and family dysfunction among inpatients at Port Reitz Mental Hospital, Mombasa. A descriptive cross-sectional design involves systematic collection and analysis of data at a single point in time from a specific population. It was particularly suited for studies aimed at establishing prevalence, identify patterns, and explore associations between variables without manipulating the study environment (Creswell & Creswell, 2018).

The choice of this design was justified on several grounds. First, it enabled the researcher to quantify the extent or prevalence of substance use disorders (SUDs) within the target inpatient population. By doing so, the study provided a snapshot of the current burden of SUDs among individuals receiving psychiatric care at Port Reitz, which was essential for informing both clinical practice and policy interventions. Second, the design allowed for the simultaneous examination of multiple variables, specifically the independent variable (family dysfunction) and the dependent variable (presence and severity of SUD). Through this approach, patterns of association between types of family dysfunction (e.g., conflict, neglect, poor communication) and substance abuse behaviors were explored and analyzed.

Moreover, the cross-sectional nature of the study facilitated efficiency in data collection and resource use. It proved cost-effective and time-efficient, especially in a clinical setting where patients were often transient or difficult to follow longitudinally. While the design did not permit causal inferences—given that it captured data at only one point in time—it remained valuable for identifying correlations that can inform future longitudinal or experimental studies (Levin, 2006). Lastly, given the sensitive nature of mental health and substance abuse, a descriptive cross-sectional design also allowed for the use of structured, ethically sound questionnaires and clinical records without requiring follow-up, thereby reducing potential psychological burden or distress on respondents.

#### Population of the Study

The target population for this study comprised adult inpatients at Port Reitz Mental Hospital in Mombasa County, Kenya. This facility is the major public mental health institution in the coastal region, offering specialized psychiatric and substance use disorder

(SUD) services. It serves a diverse group of patients drawn from Mombasa, Kilifi, Kwale, Taita Taveta, and even as far as Nairobi, reflecting a wide demographic and socio-cultural spread. The specific population of interest included inpatients aged 18 years and above who had been clinically diagnosed with substance use disorders, either as a primary diagnosis or as a co-occurring condition alongside other psychiatric disorders. These individuals were typically admitted due to the severity of their symptoms, lack of social support, relapse episodes, or the need for structured detoxification and therapeutic interventions.

According to internal records and recent Ministry of Health statistics (MoH, 2024), Port Reitz Mental Hospital accommodated an estimated 120 to 150 inpatients at any given time, with approximately 40–50% of them diagnosed with substance use disorders. This translated to an approximate target population of 50 to 75 inpatients who met the inclusion criteria for this study at any one time. The choice of this population was both practical and relevant. Inpatients offered a stable and accessible sample for data collection and were more likely to have undergone structured clinical assessments, making it possible to verify diagnoses and examine correlations with family dysfunction. Furthermore, focusing on inpatients allowed the study to explore the more severe end of the substance use spectrum, which was often associated with complex familial, psychological, and socio-economic factors.

#### Target Population

The target population for this study comprised adult patients aged 18 years and above who had been clinically diagnosed with a substance use disorder (SUD) and were receiving treatment at Port Reitz Mental Hospital, Mombasa. These patients included both men and women admitted as inpatients for substance-related mental health complications, including

co-occurring psychiatric conditions such as depression, bipolar disorder, schizophrenia, and anxiety disorders. Port Reitz Mental Hospital is a key referral facility for mental health services within the coastal region of Kenya, offering detoxification, pharmacological management, psychotherapy, and rehabilitation services for individuals struggling with substance dependence. The hospital admits individuals from a wide range of social, cultural, and economic backgrounds across counties in the Coast region and beyond, making it an ideal setting for this study due to the diversity of its patient population. The focus on this group was critical, as it included individuals who had reached clinical thresholds for intervention and who often presented with more advanced or chronic patterns of substance use. These patients provided rich data for exploring the nexus between family dysfunction and substance use disorder, particularly within institutional settings where psychosocial dynamics and recovery efforts could be closely examined.

Based on current hospital records and monthly patient intake reports (Port Reitz, 2024), the facility maintained an average inpatient load of 120–150 individuals, with an estimated 50 to 75 patients being actively treated for substance-related disorders at any given time. These figures were drawn from trends in admission registers and national mental health statistics that indicated a growing demand for inpatient care due to increased rates of drug and alcohol dependency, particularly among young adults and middle-aged men.

In this context, the target population was deliberately defined to reflect the clinical characteristics relevant to the study: patients with confirmed SUD diagnoses who were undergoing treatment in a structured, therapeutic environment. The selection ensured that the data collected were directly relevant to the study objectives, particularly in examining how patterns of family dysfunction—such as poor communication, domestic conflict,

neglect, or lack of cohesion—were associated with substance use severity, treatment engagement, and potential outcomes.

### Sample Size

The determination of an appropriate sample size was critical in ensuring the reliability, validity, and generalizability of research findings. For this study, a sample size of 75 patients was identified as adequate for both descriptive and correlational analyses, which were applied in behavioral health and clinical psychology research (Creswell & Creswell, 2018). This sample provided sufficient statistical power to detect significant relationships between variables, particularly between family dysfunction and substance use disorders (SUDs) among inpatients. To arrive at this figure, Yamane's (1967) formula for sample size calculation was applied. The formula is expressed as:

$n = N / (1 + N(e)^2)$  Where:

- $n$  = sample size
- $N$  = total population
- $e$  = margin of error (typically set at 0.05 for 95% confidence level)

Based on hospital records (Port Reitz, 2024), the average number of inpatients diagnosed with substance use disorders at any given time was approximately 75 individuals.

Substituting into Yamane's formula:

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

$$= 1.187575 \approx 63 \text{ This}$$

calculation yielded a minimum recommended sample size of approximately 63 participants.

However, to strengthen the robustness of the findings, minimize the risk of non-responses, and allow for subgroup analyses (e.g., by age, gender, or diagnosis type), the sample size was increased to 75 patients (an increase of about 10% to cater for drop out/attrition). This expanded sample enhanced both the internal and external validity of the study, ensuring a more

representative cross-section of  
individuals experiencing SUD  
within the institutional context  
of Port Reitz Mental Hospital.

Participants were selected  
based on predetermined  
inclusion and exclusion criteria  
to ensure relevance to the  
study objectives and to  
maintain ethical and  
methodological rigor. This  
approach ensured that the  
sample was not only  
statistically adequate but also  
clinically meaningful, thereby  
allowing for the drawing of

insightful conclusions that can inform both practice and policy in mental health care.

### Sampling Techniques

The study employed a purposive sampling technique to select participants from among inpatients at Port Reitz Mental Hospital who had been diagnosed with a substance use disorder (SUD). Purposive sampling, also referred to as judgmental or selective sampling, is a non-probability sampling method commonly used in qualitative and quantitative research where participants are selected based on specific characteristics that are aligned with the research objectives (Palinkas et al., 2015). This method was especially suitable for clinical studies where the researcher was interested in a particular subgroup within a population.

In this context, the purposive approach ensured that only individuals who were clinically relevant to the study, namely, those experiencing substance use disorders, were included. This sampling technique was justified by the need to gather data from participants who could meaningfully contribute to an exploration of the relationship between family dysfunction and substance use, a phenomenon that was best understood through individuals who were both diagnosed and currently undergoing treatment. The choice of purposive sampling not only increased the likelihood of recruiting a clinically homogeneous group but also enhanced the internal validity of the study by ensuring that the sample was reflective of the research problem being investigated (Etikan, Musa, & Alkassim, 2016).

Moreover, it allowed for a focused analysis of the psychosocial variables associated with substance use disorders within a controlled institutional setting.

#### Inclusion and Exclusion Criteria

To be eligible for inclusion in this study, participants were required to meet specific criteria to ensure both the integrity of the research and the protection of the individuals involved. Firstly, all participants had a confirmed clinical diagnosis of a substance use disorder (SUD), as formally documented by attending psychiatrists or clinical psychologists in accordance with the diagnostic criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Additionally, participants were admitted as inpatients at Port Reitz Mental Hospital and were actively receiving treatment specifically for substance-related conditions at the time data were collected.

In alignment with ethical research practices, only individuals who were 18 years of age or older were considered for participation. This ensured respect for autonomy and adherence to the ethical standards governing informed consent in adult populations. Moreover, participants were required to be cognitively capable of understanding the nature, purpose, and implications of the research, and had to demonstrate a clear willingness to provide informed consent. This cognitive capacity and consent readiness were assessed by both attending clinicians and members of the research team.

Exclusion criteria were equally critical in safeguarding the validity of the data and the well-being of the participants. Individuals exhibiting severe psychiatric instability, such as those experiencing acute psychosis, were excluded due to potential challenges in meaningful engagement with the research process. Additionally, minors (under the age of 18) and individuals under legal guardianship were not included in the study to avoid legal and ethical complications. Lastly, any individual who was unable or unwilling to provide

informed consent, whether due to cognitive impairments or significant language barriers, was excluded to maintain the ethical rigor of the research and the reliability of the data collected. Individual and group counseling sessions were offered during and after data collection to provide support to individuals who experienced distress during the process.

#### Data Collection Instruments

Data for this study were collected using two primary instruments: a researcher-developed questionnaire and a clinical records review form. These instruments were designed to comprehensively address the study's four main objectives, namely: to determine the prevalence of substance use disorder among inpatients at Port Reitz Mental Hospital in Mombasa County, to assess the level of family dysfunction among inpatients diagnosed with substance use disorder, to explore the socio-demographic factors associated with substance use disorder and family dysfunction, and to examine the relationship between substance use disorder and family dysfunction among the inpatients.

The researcher-developed questionnaire was structured into five sections. The first section collected socio-demographic information, including age, gender, marital status, education level, employment status, religious affiliation, and duration of hospitalization. These variables were essential in analyzing patterns and associations between demographic factors and the presence or severity of both substance use disorder and family dysfunction. The second section of the questionnaire focused on the substance use history of the participants. It included questions about the types of substances used—such as alcohol, cannabis, heroin, khat, and methamphetamine—the duration and frequency of use, age at onset, and history of relapse or treatment. This section helped establish the prevalence and characteristics of substance use disorders within the sample.

The third section gathered data on comorbid mental health conditions. Participants were asked whether they had been diagnosed with psychiatric disorders such as depression, anxiety, bipolar disorder, or psychosis. This information added clinical depth to the study and supported analysis of how co-occurring disorders might have influenced or interact with substance use and family dynamics. The fourth section of the questionnaire assessed family functioning using the FAD, a widely validated and internationally recognized tool for evaluating the structural and relational characteristics of family systems. The FAD includes 60 items distributed across seven subscales: problem-solving, communication, roles, affective responsiveness, affective involvement, behavior control, and general functioning. Participants rated items on a four-point Likert scale ranging from “strongly agree” to “strongly disagree.” Higher scores on the FAD indicated greater levels of family dysfunction. Given its demonstrated reliability and validity across various cultural contexts, including Africa, the FAD was considered suitable for this study's setting in Kenya.

The fifth section of the questionnaire explored participants’ perceptions and attitudes toward family support and recovery. This section included both closed-ended and open-ended questions designed to capture how participants viewed the role of their families in their recovery process, as well as any perceived barriers or facilitators related to family dynamics. In addition to the questionnaire, the study utilized a clinical records review form to collect supplementary data. Reviewing clinical records provided objective, clinically verified information, including the participant’s biodata, confirmed diagnosis of substance use disorder using DSM-5 criteria, presence of comorbid psychiatric conditions, substance use history, details of previous treatments or interventions, and any documented incidents of relapse or readmission. This clinical data served to validate self-reported responses and

offered a richer, triangulated understanding of the interplay between clinical and familial variables.

### Types of Data

This study utilized both primary and secondary data, incorporating both quantitative and qualitative elements to explore the relationship between substance use disorder and family dysfunction. Quantitative research assumes that the constructs under study can be measured. As such, quantitative research aims to process numerical data (or numbers) to identify trends and relationships and to verify the measurements made to answer questions like who, how much, what, where, when, how many, and how (Kotronoula et.al 2023). Qualitative data are data representing concepts that are not represented by numbers. The integration of different data types enhanced the depth and validity of the findings. Primary data referred to original data collected from participants during the data collection process. In this study, primary data were collected using FAD scores.

Secondary data were obtained from clinical records maintained at the Hospital. The clinical records contained the patient's bio data captured in the clinical intake section, it also included records from the other departments in the Hospital, including nursing report, psychiatrist notes, psychologist notes, occupational therapists' notes, and notes from the social work department.

### Data Collection Procedures

Prior to the commencement of data collection, the researcher sought formal authorization from the management of Port Reitz Mental Hospital in Mombasa. An official appointment was scheduled with the hospital administration to present the research proposal and obtain institutional clearance. This step was crucial for ensuring compliance with institutional policies, ethical standards, and access protocols, particularly since the study involved

vulnerable participants—patients receiving inpatient psychiatric care. Additionally, ethical approval was obtained from the relevant university research ethics committee, a research permit from the county government of Mombasa, and a research permit was secured from the National Commission for Science, Technology and Innovation (NACOSTI), required under Kenyan research regulations.

Once all ethical and administrative approvals were in place, data collection commenced. The process was structured to respect the rights, privacy, and well-being of participants. All participants were informed of the nature and purpose of the study and were assured of their confidentiality and anonymity. Participation was entirely voluntary, and participants were required to provide written informed consent before taking part in the study. For those with limited literacy or visual impairments, the consent process was verbally administered and witnessed, ensuring comprehension and voluntariness. Attending clinicians helped verify that participants were cognitively capable of understanding and consenting to the research.

Data collection was carried out in two parts: administration of a structured questionnaire and review of clinical records. A researcher-administered questionnaire was used to collect self-reported data from participants. The researcher and a trained research assistant guided participants through the questionnaire process. This interactive approach ensured that participants understood each question, particularly those using technical or psychological terminology. The questionnaire included the FAD, which contained 60 items divided into seven subscales. The presence of a research assistant helped minimize errors in data entry and clarify responses where necessary. Interviews were conducted in private

designated quiet area within the hospital, ensuring confidentiality and emotional safety for the participants.

In parallel, a structured review of clinical records was conducted. This involved examining participants' patient files to collect verified clinical information including the documented diagnosis of substance use disorder based on DSM-5 criteria, history of substance use, comorbid psychiatric diagnoses, current and past treatments, and any record of relapse or hospital readmission. Access to these records was granted upon receiving administrative consent and was strictly governed by confidentiality protocols. The researcher and assistant used a standardized data extraction tool to ensure consistency and reliability in the documentation of clinical data.

Throughout the data collection process, strict ethical standards were maintained. All data—both from the questionnaire and clinical records—were anonymized by assigning unique identification codes to each participant. The completed questionnaires and clinical review forms were securely stored in a locked cabinet accessible only to the research team. Electronic data were password-protected and stored on encrypted devices. All data were used solely for the purposes of the study and destroyed upon completion of the research and publication of findings, in accordance with data protection policies.

#### Pretesting

A pre-test of the FAD was conducted with a sample of patients who had been diagnosed with a SUD by the psychiatrists at the hospital, as per the Hospital Patients' records. A subset equivalent to 10% of the total sample size (10) was randomly selected for the pretest. This process helped to test the clarity of the questionnaire and ensured that all questions were well understood. Based on the feedback, the researcher addressed the identified gaps

by providing clarity to the questions to enhance reliability of the process before full-scale data collection.

### Validity and Reliability

Validity refers to the extent to which a research instrument measures what it is intended to measure, while reliability refers to the consistency and stability of the measurement tools over time and across different conditions. The internal consistency of the FAD was evaluated using Cronbach's Alpha. Cronbach's alpha is a statistic commonly quoted by authors to demonstrate that tests and scales that have been constructed or adopted for research projects are fit for purpose. (Tabel et.al, 2018). A benchmark alpha coefficient of  $\geq 0.70$  was considered acceptable. Previous studies had reported high internal consistency of FAD subscales ( $\alpha = 0.72-0.92$ ), which supported its reliability in clinical settings.

Research assistants were trained to uniformly administer the questionnaires and to offer assistance in the local language (Kiswahili). This helped to reduce the interviewer's bias or inconsistencies.

### Operationalization and Measurement of Study Variables

This section presents a matrix outlining how the key variables in the study were defined, measured, and analyzed. The matrix enhanced clarity and ensured the consistency of data collection and analysis.

*Table 2a: Operationalization of Study Variables Matrix*

Variable	Type	Operational definition	Measurement tool /Indicator	Scale measurement	of Method Analysis	of
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Substance use disorder	Dependent	Clinically diagnosed disorder involving harmful use of a substance/s	Clinical records	Nominal; Diagnosis yes/no	Frequencies, crosstabulations, correlations
Type of substance used	Sub-variable	Category of substance used(e.g alcohol, khat)	Clinical records	Nominal	Descriptive statistics
Frequency of use	Sub-variable	Number of times a substance is used within a specified time frame	Clinical records	Ordinal (once or twice weekly)	Descriptive statistics

*Table 2b: Operationalization of Study Variables Matrix*

Duration of use	Sub-variable	Length of Clinical time in records months or years the substance has been used		Ratio(In months years) deviations	Mean, or standard deviations
Family dysfunction	Independent	Dysfunction Assessment communicati roles etc	McMaster in Family roles: Device on, (FAD)	Interval Likert regression scale	Correlation, (FAD) analysis
Communication	Sub-variable	How clearly and directly information shared among family members		Interval	

Emotional support	Sub-variable	Perceived emotional concern and involvement and family members	FAD Affective and care from responsiveness subscales	Interval
Family Roles	Sub-variable	Clarity of tasks and responsibilities within the family	of FAD roles	Intervals
Relapse History	Sub-variable	Return to records after treatment	Clinical Nominal substance use records (YEs/No) after treatment	Ratio-Number of relapses
Biodata	Sub-variable	Control Clinical	Nominal/Ordinal variable records	nal

#### Units of Analysis

The unit of analysis referred to the primary entity or subject from which data were collected and upon which conclusions were drawn in a research study. It defined the level at which the data were measured and analyzed. In the context of this study, the unit of analysis is the individual adult patient, specifically those aged 18 years and above, who were receiving inpatient treatment for a clinically diagnosed substance use disorder (SUD) at Port Reitz Mental Hospital in Mombasa County, Kenya.

Each individual participant served as a distinct case, from whom data were collected on key indicators related to substance use patterns and dimensions of family dysfunction. The selection of the individual patient as the unit of analysis was both methodologically and ethically justified. Firstly, experiences of substance use and family dysfunction were

inherently personal and subjective, varying significantly from one individual to another. As such, collecting data at the individual level allowed for accurate representation of these nuanced experiences.

Secondly, treatment at Port Reitz Mental Hospital was organized and documented on a patient-by-patient basis, with individualized clinical records containing diagnostic history, treatment regimens, substance use history, comorbid conditions, and progress notes. This clinical structure facilitated the collection of personalized and case-specific data, which aligned with the research objectives.

Lastly, ethical considerations also supported the use of the individual as the unit of analysis. Confidentiality and informed consent protocols required that information be collected directly from each participant without inferring or aggregating data from other family members or external sources. Therefore, focusing on the individual ensured both ethical integrity and analytical precision in studying the relationship between substance use disorders and family dysfunction.

#### Data Analysis Plan and Data Management

Following data collection, all completed questionnaires and clinical abstraction forms were reviewed, coded, and securely entered into the Statistical Package for the Social Sciences (SPSS) Version 27 for analysis. To ensure data integrity, the dataset was cleaned through verification of entries, removal of incomplete responses, and consistency checks. Unique identification codes were assigned to each participant to preserve anonymity, and the data were stored securely in password-protected electronic files accessible only to the principal investigator and authorized research assistants. Hard copies of the data collection instruments were stored in a locked cabinet and destroyed after the completion of analysis, in accordance with research ethics protocols.

To address the study's objectives, both descriptive and inferential statistical procedures were employed. Descriptive statistics were used initially to provide a comprehensive overview of the demographic and clinical characteristics of the study population. Frequencies and percentages summarized categorical variables such as gender, marital status, level of education, type of substance used, and presence of comorbid mental health conditions. For continuous variables such as age and family functioning scores (derived from the McMaster Family Assessment Device), means and standard deviations were computed. Cross-tabulations were also used to identify initial patterns between family dysfunction and variables such as type of substance used or relapse history. This descriptive analysis fulfilled the first and second objectives of the study, which were to determine the prevalence of substance use disorder and to assess the level of family dysfunction among inpatients at Port Reitz Mental Hospital.

Inferential statistics were applied to examine relationships and test hypotheses. To meet the third objective, exploring socio-demographic factors associated with substance use disorder and family dysfunction, a bivariate analysis was performed. Chi-square tests were used to assess associations between categorical variables, while t-tests or one-way ANOVA was used to compare continuous variables across groups. These tests helped to determine whether certain socio-demographic characteristics, such as age, gender, or education level, were significantly associated with the severity of substance use or the level of family dysfunction.

To address the fourth objective—examining the relationship between substance use disorder and family dysfunction—Pearson's Product-Moment Correlation Coefficient was calculated to determine the strength and direction of the linear relationship between the

severity of substance use and family dysfunction scores. Additionally, multiple linear regression analysis was conducted to evaluate the predictive influence of intervening variables such as age, gender, presence of comorbid mental disorders, and duration of substance use. This multivariate approach allowed for the identification of independent predictors of substance use severity and family dysfunction, while also assessing potential moderating or mediating effects.

All statistical tests were interpreted at a 95% confidence level, with a significance threshold set at  $p < 0.05$ . Where appropriate, effect sizes and confidence intervals were reported to enhance the interpretability and practical significance of the results. This comprehensive data analysis strategy ensured that the study produced robust, reliable, and meaningful findings relevant to clinical practice and public health policy on substance use and family dynamics in mental health settings.

#### Ethical Considerations

To ensure ethical compliance, the researcher obtained ethical approval from Daystar University's Institutional Scientific Ethical Review Committee (DU-ISERC) before commencing the study. A research permit was sought from the National Commission for Science, Technology, and Innovation (NACOSTI), and further authorization was obtained from Port-Reitz Mental Hospital management to conduct the study within the facility.

Participant privacy and confidentiality were strictly upheld. Unique identification codes will be used to anonymize all responses, and no personally identifiable information was collected at any stage of the study. All research data was securely stored and used solely for academic and research purposes, in compliance with ethical research standards. To

minimize potential psychological distress, debriefing sessions were provided for participants who may experience emotional discomfort while completing the questionnaire. These sessions were facilitated by the principal researcher, a trained psychology student equipped to offer basic psychological support and referrals where necessary. Upon completion of the study, findings will be disseminated to key stakeholders, including the management of Port Reitz Mental Hospital, to enhance understanding of the relationship between substance use and family dysfunction. The results will further inform evidence-based treatment approaches for patients receiving care for substance use disorders within the facility.

#### Chapter Summary

This chapter has outlined the research methodology that guided the study. The methodology provides a solid foundation for investigating the nature of substance abuse disorder and its association with various dimensions of family dysfunction. The Chapter began by outlining the research design, which adopts a descriptive cross-sectional approach suitable for the assessment of the relationship among the variables at a single point in time. The choice of Port-Reitz Mental Hospital as the study site was justified by its prominence as the only referral facility for mental health and substance abuse treatment hospital at the coastal region.

The target population was identified as adult inpatients diagnosed with SUD, with the individual patient defined as the unit of analysis. The sampling procedure was described in detail, highlighting the use of purposive sampling to ensure participant relevance, as well as the inclusion and exclusion criteria established to uphold both methodological rigor and ethical integrity. The data collection instruments, the FAD, and a clinical records review form were discussed as complementary tools for obtaining both primary and secondary

data. Together, they provide a holistic understanding of substance use behavior and family functioning among participants.

A variable matrix was presented to clarify the type, scale of measurement, and corresponding analysis techniques for each study variable. Collectively, these methodological procedures were designed to ensure accuracy, reliability, and adherence to ethical research standards. The planned data analysis strategy enables the generation of meaningful insights into the complex relationship between substance use disorder and family dysfunction.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

#### Introduction

This chapter outlines the study's findings, beginning with the response rate and socio-demographic profile of the respondents. The results are then presented in alignment with the research objectives. Data analysis was conducted using SPSS version 27.0, with findings displayed through descriptive statistics in tables and figures.

#### Data Analysis and Interpretation

##### Response Rate

The study targeted a sample of 75 inpatients diagnosed with SUD at Port Reitz Mental Hospital. A structured questionnaire, incorporating the FAD, was administered to collect data on socio-demographic characteristics, substance use history, and family functioning.

Out of the 75 questionnaires distributed, a total of 74 were completed and returned, representing a response rate of 98.7%. After data cleaning, all 74 questionnaires were

deemed suitable for analysis. The exceptionally high response rate was considered more than adequate for robust statistical analysis. A summary of the response rate is presented in Table 3.

*Table 3: Response Rate*

Description	Frequency	Percentage (%)
Total questionnaires issued	75	100.0
Questionnaires not returned	1	1.3
Questionnaires used in the analysis	74	98.7
Response Rate		98.7

Table 3 presents the response rate for the study. A total of 75 questionnaires were distributed to the sampled patients. One questionnaire was not returned, resulting in 74 complete questionnaires that were used in the final analysis.

The response rate of 98.7% reflects excellent participation and cooperation from the respondents. This level of response is highly satisfactory in clinical research, as it significantly minimizes the risk of non-response bias and strengthens the reliability and generalizability of the findings to the population of inpatients with SUD at Port Reitz Mental Hospital.

#### Socio-Demographic Characteristics

This section presents the socio-demographic profile of the study participants, which includes age, gender, marital status, education level, employment status, religious affiliation, county of residence, and living arrangements prior to admission. Table 4 presents result on age of the study participants.

*Table 4: Age of Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
20 years and below	2	2.7	2.7	2.7

21-30 years	36	48.6	48.6	51.4
31-40 years	25	33.8	33.8	85.1
41-50 years	11	14.9	14.9	100.0
		100.0	100.0	
Total	74			

Table 4 presents the age distribution of the participants. The largest proportion were young adults aged 21-30 years 36(48.6%), followed closely by those aged 31-40 years 25(33.8%). Together, these two groups account for 82.4% of the sample. A smaller proportion were aged 41-50 years 11(14.9%), while only 2(2.7%) were 20 years or below.

This pattern indicated that the sample primarily consisted of individuals in their prime adulthood, a demographic often highly impacted by substance use disorders.

The gender of the study participants was sought. The results obtained were presented in table 5.

*Table 5: Gender of the Study Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	57	77.0	77.0	77.0
Female	17	23.0	23.0	100.0
Total	74	100.0	100.0	

Table 5 shows the gender distribution of the participants. Most of the participants were male 57(77.0%), while females constituted 17(23.0%) of the sample. This significant gender disparity is consistent with epidemiological data on substance use treatment populations, where men often present for inpatient services at higher rates than women.

The marital status of the participants was also explored. Results obtained were presented in table 6.

*Table 6: Marital Status of the Study Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
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Single	61	82.4	82.4	82.4
Married	9	12.2	12.2	94.6
Divorced	4	5.4	5.4	100.0
Total	74	100.0	100.0	

Table 6 illustrates the marital status of the participants. An overwhelming majority were single 61(82.4%). A smaller proportion were married 9(12.2%), and divorced 4(5.4%). The high prevalence of single status may reflect the disruptive impact of SUD on forming and maintaining stable marital relationships and could also allude to poor support system.

The highest level of education of the study participants was also sought. The results obtained were analyzed and presented in Table 7.

*Table 7: Highest Level of Education of the Study Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
Primary	30	40.5	40.5	40.5
Secondary	37	50.0	50.0	90.5
Tertiary	7	9.5	9.5	100.0
Total	74	100.0	100.0	

Table 7 indicates the educational attainment of the participants. Half of the participants, 37(50.0%), had attained a secondary level education, while 30(40.5%) had primary education as their highest level. Only a small number 7(9.5%) had attained a tertiary education. This distribution suggests that the sample had generally low educational attainment, a well-documented risk factor for substance use disorders.

The employment status of the study participants was sought. The results obtained were presented in Table 8.

*Table 8: Employment Status of the Study Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
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Employed	14	18.9	18.9	18.9	Unemployed	49	66.2	66.2	85.1
Self-employed	8					8	10.8	10.8	95.9
							4.1		
Total							100.0		
Student	3							4.1	100.0
						74		100.0	

Table 8 presents the employment status of the participants. A large majority were unemployed 49(66.2%). Those who were employed 14(18.9%) or self-employed 8(10.8%) constituted a much smaller portion of the sample. The high unemployment rate highlights the strong intersection between economic vulnerability and severe substance use. The significant rate of unemployment within this clinical sample underscores a critical dual relationship between socioeconomic disadvantage and severe SUD. The data underscore economic marginalization as a central component of severe SUD, highlighting that effective recovery and relapse prevention depend on integrating vocational rehabilitation strategies.

The religious affiliation of the study participants was also sought. The results obtained were presented in table 9.

*Table 9: Religious Affiliation*

	Frequency	Percent	Valid Percent	Cumulative Percent
Christian	44	59.5	59.5	59.5
Muslim	30	40.5	40.5	100.0
Total	74	100.0	100.0	

Table 9 shows the religious affiliation of the participants. More than half of the participants identified as Christian 44(59.5%), while a significant proportion identified as Muslim 30(40.5%). This distribution reflects the diverse religious landscape of Kenya's Coastal region. This distribution is demographically representative of the diverse religious

landscape of Kenya's Coastal region. The inclusion of both major faiths within the sample is a significant strength, as it suggests that the findings on substance use disorder and family dysfunction are not confined to a single religious community but represent a broader societal challenge. This demographic characteristic enhances the generalizability of the study's results to the wider population of inpatients in coastal Kenya and indicates that the risk factors for SUD transcend specific religious affiliations.

The county of residence of the study participants was also sought. The results obtained were presented in Table 10.

*Table 10: County of Residence of the Study Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
Mombasa	35	47.3	47.3	47.3
Lamu	7	9.5	9.5	56.8
Kilifi	12	16.2	16.2	73.0
Kwale	6	8.1	8.1	81.1
Other	14	18.9	18.9	100.0
		100.0	100.0	
Total	74			

Table 10 outlines the geographic distribution of the participants. Nearly half, 35(47.3%) were residents of Mombasa County. Participants also came from neighboring coastal counties, including Kilifi 12(16.2%), Lamu 7(9.5%), and Kwale 6(8.1%), with 14(18.9%) coming from other counties in Kenya. This pattern strongly confirms the hospital's critical function as a regional mental health hub. The high proportion of patients from Mombasa County likely correlates with its status as a densely populated urban area with associated risk factors for SUD, such as easier access to drugs and higher stress levels. The significant influx from neighboring counties underscores a lack of comparable, specialized inpatient facilities in those areas, necessitating referral to Mombasa for acute care. This highlights

the hospital's essential role in the regional healthcare infrastructure and suggests that substance abuse is a pervasive challenge across the Coastal region.

The participants' living arrangements prior to submission were also studied. The results obtained were presented in Table 11.

*Table 11: Living Arrangement Before Admission*

	Frequency	Percent	Valid Percent	Cumulative Percent	
Family	62	83.8	83.8	83.8	
Alone	8	10.8	10.8	94.6	
Friends	2	2.7	2.7	97.3	
		2.7			Other
	74	100.0			2
					2.7

100.0

Total 100.0 Table 11 describes the living arrangements of participants prior to their admission. The data reveal that an overwhelming majority of participants 62(83.8%) resided with their families. A small proportion lived alone 8(10.8%), with friends 2(2.7%), or in other arrangements 2(2.7%). The predominance of individuals living within a family structure underscores its central role as the primary social environment for this patient population and suggests a critical context for both the impact of SUD and the potential for familyinvolved interventions.

Table 12: Chi Square Test Results of the Socio-Demographic Characteristics

	Age	Gender	Marital Status	Highest Level of Education	Employment Status	Religious Affiliation	County of Residence	Living Arrangement Prior to Admission
Chi-Square	36.595 <sup>a</sup>	21.622 <sup>b</sup>	80.784 <sup>c</sup>	19.973 <sup>c</sup>	70.324 <sup>a</sup>	2.649 <sup>b</sup>	37.486 <sup>d</sup>	137.676 <sup>a</sup>
Df	3	1	2	2	3	1	4	3
Asymp. Sig.	.000	.000	.000	.000	.000	.104	.000	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 18.5.

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 37.0.

c. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.7.

d. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 14.8.

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Table 12 presents the Chi-Square results examining the distribution of participants across socio-demographic categories. The analysis revealed that the sample was not evenly distributed, with most demographic profiles showing significant clustering. The distribution of Living Arrangement Prior to Admission showed the most pronounced divergence from an equal distribution ( $\chi^2 = 137.676$ ,  $df = 3$ ,  $p < .001$ ), underscoring that residing with family is the predominant living situation for this clinical population. Marital Status ( $\chi^2 = 80.784$ ,  $df = 2$ ,  $p < .001$ ) and Employment Status ( $\chi^2 = 70.324$ ,  $df = 3$ ,  $p < .001$ ) were also highly significant, confirming that the sample is overwhelmingly characterized by single and unemployed individuals. Age ( $\chi^2 = 36.595$ ,  $df = 3$ ,  $p < .001$ ), County of Residence ( $\chi^2 = 37.486$ ,  $df = 4$ ,  $p < .001$ ), and Gender ( $\chi^2 = 21.622$ ,  $df = 1$ ,  $p < .001$ ) were all significant, highlighting a sample profile dominated by young adult males from Mombasa and neighboring Coastal counties.

Highest Level of Education also showed a significant irregular distribution ( $\chi^2 = 19.973$ ,  $df = 2$ ,  $p < .001$ ), characterized by a high concentration of individuals with primary and secondary education. In contrast, Religious Affiliation was the only variable that did not show a significant divergence from an equal distribution ( $\chi^2 = 2.649$ ,  $df = 1$ ,  $p = .104$ ), indicating a relatively proportional representation of Christians and Muslims within the sample.

These results characterize the inpatient population at Port Reitz Mental Hospital as one defined by specific socio-demographic vulnerabilities: they are largely young, single, unemployed males with lower educational attainment, who live with their families and originate from the Coastal region. This profile is critical for understanding the context of SUD in this setting and for tailoring public health interventions and resource allocation.

### The Prevalence of Substance Use Disorder Among Inpatients

The first objective was to determine the prevalence of substance use disorder among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya. This was analyzed in line with the substance abused by the participants. The results were presented in table 13.

*Table 13: Prevalence of Substance Use Among the Participants*

Substance	Frequency of Use (Yes)	Percent (%)	Frequency of Non-Use (No)	Percent (%)
Cannabis	56	75.7	18	24.3
Khat	51	68.9	23	31.1
Alcohol	40	54.1	34	45.9
Cocaine	26	35.1	48	64.9
Heroin	17	23	57	77
Methamphetamine	14	18.9	60	81.1
Other Substances	11	14.9	63	85.1

Table 13 presents the prevalence of substance use among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya, in relation to the specific substances abused. The findings reveal a high level of substance use among the participants, with marked variation across different substances. Cannabis emerged as the most commonly abused substance, reported by 75.7% (n=56) of the participants, while only 24.3% (n=18) indicated non-use. This was closely followed by khat, used by 68.9% (n=51), suggesting its high accessibility and cultural acceptance within the coastal region. Alcohol use was also prominent, with slightly more than half of the respondents, 54.1% (n=40), reporting consumption, while 45.9% (n=34) did not use alcohol.

A comparatively lower prevalence was observed for hard drugs such as cocaine, heroin, and methamphetamine, with usage rates of 35.1% (n=26), 23.0% (n=17), and

18.9% (n=14), respectively. These figures, though lower than for cannabis or khat, still represent a considerable proportion of the inpatient population, indicating exposure to high-risk substances associated with severe dependence and mental health complications. The least reported category was other substances, which accounted for 14.9% (n=11) of users, suggesting that poly-substance use beyond the major categories was relatively uncommon within this sample.

Overall, the data indicate that approximately three-quarters of the inpatients had used at least one psychoactive substance, underscoring a significant burden of substance use disorder within the facility. The predominance of cannabis, khat, and alcohol suggests that locally available and socially tolerated substances are the main contributors to the observed disorder. From a psychological perspective, these findings imply that substance use particularly of widely accessible drugs may serve as a maladaptive coping mechanism for underlying psychological distress. The high prevalence further points to the need for integrated therapeutic interventions that address both substance dependence and comorbid psychiatric conditions among inpatients at Port Reitz Mental Hospital.

*Table 14: Polysubstance Count among the Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
1.00	15	20.3	20.3	20.3
2.00	23	31.1	31.1	51.4
3.00	15	20.3	20.3	71.6
4.00	8	10.8	10.8	82.4
5.00	2	2.7	2.7	85.1
6.00	9	12.2	12.2	97.3
7.00	2	2.7	2.7	100.0
Total	74	100.0	100.0	

Table 14 presents the distribution of polysubstance use among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya. The analysis aimed to determine the extent to which participants engaged in the concurrent use of multiple substances, as an indicator of the severity and complexity of substance use disorder. The findings reveal a substantial prevalence of polysubstance use, with varying degrees of multiple drug involvement among the respondents.

A total of 15(20.3%) of the participants reported using only one substance, indicating single-substance dependence. However, the majority were found to use two or more substances. Specifically, 23(31.1%) participants reported using two substances, representing the largest subgroup of polysubstance users. Another 15(20.3%) used three substances, bringing the cumulative total to 71.6% of the sample. A smaller proportion of participants exhibited more severe polysubstance use patterns, with 8(10.8%) using four substances, 2 (2.7%) using five substances, and 9(12.2%) using six substances. The most extreme form of polysubstance use, involving seven different substances, was reported by 2(2.7%) of the respondents. Cumulatively, 59(79.7%) of the inpatients had used two or more substances, underscoring the pervasive nature of polysubstance use within this population. The progressive cumulative percentage rise from 20.3% for single-substance users to 100% for those using up to seven substances illustrate a steep escalation in the complexity of drug use patterns.

From a psychological perspective, these findings indicate that polysubstance use is a dominant and severe characteristic among psychiatric inpatients, signifying a higher risk for compounded physical and psychological dependence. The concurrent use of multiple psychoactive substances may reflect an attempt to enhance or balance drug effects, manage

withdrawal symptoms, or cope with underlying emotional and mental distress. Consequently, these results highlight the urgent need for integrated, multidimensional treatment interventions that address both the behavioral and psychological dimensions of polysubstance use disorder among inpatients at Port Reitz Mental Hospital.

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*Table 15: History of Substance Use among the Participants*

		Frequency	Percent	Cumulative Percent
At what age did you start using substances?	Below 18 years	22	29.7	29.7
	18-27 years	30	40.5	70.3
	28-37 years	13	17.6	87.8
	38-47 years	7	9.5	97.3
	48 years and above	2	2.7	100.0
Duration of substance use (in years)	0-10 year	51	68.9	68.9
	11-20 years	17	23.0	91.9
	21-30 years	6	8.1	100.0
Have you ever been treated for substance use before?	No	28	37.8	37.8
	Yes	46	62.2	100.0
Number of previous hospital admissions for substance use	0 admission	32	43.2	43.2
	1 admission	24	32.4	75.7
	2 admissions	9	12.2	87.8
	3 admissions	9	12.2	100.0
Do you experience cravings or withdrawal symptoms when not using?	No	10	13.5	13.5
	Yes	64	86.5	100.0
Has your substance use ever affected your relationships or employment?	No	6	8.1	8.1
	Yes	68	91.9	100.0
Is there a family history of substance use?	No	18	24.3	24.3
	Yes	40	54.1	78.4
	Not sure	16	21.6	100.0

Table 15 presents findings on the history of substance use among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya. The analysis sought to examine the onset age, duration, treatment history, recurrence of hospital admissions, physiological dependence symptoms, social consequences, and familial patterns of substance use. These

indicators provide a comprehensive understanding of the chronicity and psychosocial dimensions of substance use disorder among the study participants.

Regarding the age of initiation, 22 (29.7%) of the participants reported beginning substance use before the age of 18 years, while the majority, 30 (40.5%), initiated use between 18–27 years, suggesting that early adulthood represents the most vulnerable period for substance initiation. A smaller proportion, 13 (17.6%), began using substances between 28–37 years, while 7 (9.5%) started between 38–47 years, and only 2 (2.7%) initiated use at 48 years and above. The cumulative percentages show that by age 27, 70.3% of the participants had already begun using substances, underscoring a pattern of early onset that is consistent with developmental vulnerability during adolescence and early adulthood.

In terms of duration of substance use, 51 (68.9%) of the respondents had used substances for 0–10 years, while 17 (23.0%) had used for 11–20 years, and 6 (8.1%) had continued for 21–30 years. This distribution indicates that most participants had a relatively shorter duration of use, although nearly one-third had sustained long-term use exceeding a decade, pointing to chronic dependency tendencies.

With respect to treatment history, 46 (62.2%) had previously been treated for substance use, while 28 (37.8%) had never received treatment, implying a high rate of relapse or recurrence among the treated group. The number of previous hospital admissions further reinforces this pattern: 32 (43.2%) had no prior admission, 24 (32.4%) had one admission, and 9 (12.2%) each had two or three admissions. This indicates that over half of the participants (56.8%) had been admitted at least once for substance-related issues, reflecting recurrent episodes of relapse or treatment resistance.

Concerning withdrawal symptoms or cravings, an overwhelming 64 (86.5%) of the participants reported experiencing such physiological dependence indicators, whereas only 10

(13.5%) did not. Similarly, 68 (91.9%) indicated that substance use had negatively affected their relationships or employment, compared to 6 (8.1%) who reported no such impact. These findings highlight the pervasive psychosocial and functional impairments associated with substance use among the respondents.

Finally, analysis of family history of substance use revealed that 40 (54.1%) had a positive family history, 18 (24.3%) reported no such history, and 16 (21.6%) were unsure. This pattern suggests a strong intergenerational or familial component to substance use, potentially reflecting genetic predisposition or learned behavioral patterns.

From a psychological perspective, the results indicate that substance use among inpatients is largely early-onset, long-term, and recurrent, with profound physiological and social consequences. The high prevalence of withdrawal symptoms, treatment recidivism, and familial association underscores the chronic and relapsing nature of substance use disorder. These findings emphasize the need for early preventive interventions, familybased therapy, and long-term rehabilitation programs that address both the psychological and environmental determinants of substance use among psychiatric inpatients at Port Reitz Mental Hospital.

#### Level of Family Dysfunction Among Inpatients Diagnosed with Substance Use Disorder

The second objective of the study was to assess the level of family dysfunction among inpatients diagnosed with substance use disorder at Port Reitz Mental Hospital, Mombasa County, Kenya. The analysis was guided by data obtained using the McMaster Family Assessment Device (FAD) – Short Form, which measures multiple domains of family functioning. The findings are presented in Tables 15 to 22.

*Table 16: Mean Family Functioning among the Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
1	1	1.4	1.4	1.4
2	9	12.2	12.2	13.5
3	48	64.9	64.9	78.4
<u>4</u>	<u>16</u>	<u>21.6</u>	<u>21.6</u>	<u>100.0</u>
Total	74	100.0	100.0	

Table 16 displays the overall mean family functioning scores among the participants. The results indicate that 1(1.4%) of the respondents reported a score of 1, 9 (12.2%) scored 2, 48 (64.9%) scored 3, and 16 (21.6%) scored 4. These mean values suggest that the majority of participants perceived their families as moderately to highly dysfunctional. The high proportion 48(64.9%) with a score of 3 and 16(21.6%) with a score of 4 reflects a general trend toward poor family functioning, indicating that most participants came from families struggling with cohesion, adaptability, and effective communication.

*Table 17: Levels of Family Functioning among the Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
General functioning	9	12.2	12.2	12.2
<u>Family Dysfunctional</u>	<u>65</u>	<u>87.8</u>	<u>87.8</u>	<u>100.0</u>
Total	74	100.0	100.0	

Table 17 categorizes respondents based on general family functioning. Findings show that only 9(12.2%) of the participants came from functioning families, while an overwhelming 65(87.8%) reported family dysfunction. This demonstrates that nearly nine out of every ten participants with substance use disorder originated from families characterized by

maladaptive functioning, emphasizing the strong association between family dysfunction and substance use behaviors.

*Table 18: Overall Family Functioning: Levels of Family Functioning among the Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
Healthy and functioning	1	1.4	1.4	1.4
Moderately Healthy and Functioning	9	12.2	12.2	13.5
Dysfunctional functioning	48	64.9	64.9	78.4
<u>Very Dysfunctional functioning</u>	<u>16</u>	<u>21.6</u>	<u>21.6</u>	<u>100.0</u>
Total	74	100.0	100.0	

Table 18 elaborates on overall levels of family functioning, showing that 1(1.4%) of the participants described their families as healthy and functioning, 9(12.2%) as moderately healthy and functioning, 48(64.9%) as dysfunctional, and 16(21.6%) as very dysfunctional. Cumulatively, 64(86.5%) of the respondents perceived their families as dysfunctional to very dysfunctional, reinforcing the pervasive presence of poor family dynamics among the inpatient population.

*Table 19: Problem-Solving among the Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
Healthy and functioning	3	4.1	4.1	4.1
Moderately Healthy and Functioning	10	13.5	13.5	17.6
Dysfunctional functioning	41	55.4	55.4	73.0
<u>Very Dysfunctional functioning</u>	<u>20</u>	<u>27.0</u>	<u>27.0</u>	<u>100.0</u>
Total	74	100.0	100.0	

Analysis of specific family functioning domains revealed further findings. As presented in Table 19, under problem-solving, only 3(4.1%) of participants described their families as healthy, 10(13.5%) as moderately healthy, while the majority, 41(55.4%) as dysfunctional,

and 20(27.0%), as very dysfunctional. This pattern indicated significant difficulties in resolving conflicts, addressing challenges, and making joint decisions within families of substance users.

*Table 20: Communication among the Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
Healthy and functioning	1	1.4	1.4	1.4
Moderately Healthy and Functioning	8	10.8	10.8	12.2
Dysfunctional functioning	38	51.4	51.4	63.5
<u>Very Dysfunctional functioning</u>	<u>27</u>	<u>36.5</u>	<u>36.5</u>	<u>100.0</u>
Total	74	100.0	100.0	

Table 20 shows results for communication, where only 1 (1.4%) family was deemed healthy, 8 (10.8%) were moderately healthy, while 38 (51.4%) and 27 (36.5%) were dysfunctional and very dysfunctional, respectively. These findings highlighted widespread breakdowns in communication, often marked by secrecy, misunderstanding, and emotional detachment, factors that can perpetuate substance abuse and hinder recovery.

*Table 21: Roles among the Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
Healthy and functioning	10	13.5	13.5	13.5
Moderately Healthy and Functioning	13	17.6	17.6	31.1
Dysfunctional functioning	35	47.3	47.3	78.4
<u>Very Dysfunctional functioning</u>	<u>16</u>	<u>21.6</u>	<u>21.6</u>	<u>100.0</u>
Total	74	100.0	100.0	

Table 21 presents results on family roles. As shown, 10(13.5%) participants reported healthy functioning, 13 (17.6%) were moderately healthy, 35 (47.3%) were dysfunctional, and 16 (21.6%) were very dysfunctional. This distribution suggested that many families

lack clear boundaries, accountability, and role consistency, which are vital for maintaining family stability and support for recovery.

*Table 22: Affective Involvement among the Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
Healthy and functioning	6	8.1	8.1	8.1
Moderately Healthy and Functioning	12	16.2	16.2	24.3
Dysfunctional functioning	36	48.6	48.6	73.0
<u>Very Dysfunctional functioning</u>	20	27.0	27.0	100.0
Total				74
		100.0	100.0	

The results for affective involvement were presented in Table 22. Results show that 6 (8.1%) of participants rated their families as healthy, 12 (16.2%) as moderately healthy, 36 (48.6%) as dysfunctional, and 20 (27.0%) as very dysfunctional. The findings reflect limited emotional connectedness and empathy within families, which may contribute to feelings of isolation and emotional distress, predisposing individuals to substance use.

*Table 23: Behavior control among the Participants*

	Frequency	Percent	Valid Percent	Cumulative Percent
Healthy and functioning	5	6.8	6.8	6.8
Moderately Healthy and Functioning	7	9.5	9.5	16.2
Dysfunctional functioning	46	62.2	62.2	78.4
<u>Very Dysfunctional functioning</u>	16	21.6	21.6	100.0
Total	74	100.0	100.0	

Behavior control (Table 23) was also largely impaired, with only 5 (6.8%) families rated as healthy, 7 (9.5%) as moderately healthy, while the majority, 46 (62.2%), were

dysfunctional and 16 (21.6%) very dysfunctional. This indicates that most families had weak or inconsistent rules, poor discipline mechanisms, and lack of behavioral regulation, factors that often correlate with higher rates of deviant or risk-taking behaviors, including substance use.

Overall, these results reveal a high prevalence of family dysfunction across all domains of the McMaster Family Assessment Device among inpatients diagnosed with substance use disorder. The findings statistically demonstrate that over 85% of participants came from dysfunctional or very dysfunctional family systems, reflecting systemic breakdowns in communication, emotional support, problem-solving, and behavioral control.

From a psychological perspective, these patterns suggest that family dysfunction serves as both a predisposing and perpetuating factor in substance use disorders. Dysfunctional family environments—characterized by poor communication, emotional neglect, inconsistent roles, and weak behavioral regulation—may contribute to maladaptive coping mechanisms and diminished resilience among affected individuals. Consequently, these findings underscore the need for family-centered therapeutic interventions, including counseling, psychoeducation, and family therapy, as integral components of substance use treatment programs at Port Reitz Mental Hospital.

To further assess whether the observed levels of family functioning across various domains significantly differed from what would be expected by chance, a Chi-square goodness-of-fit test was conducted for each of the five domains of the McMaster Family Assessment Device (FAD): problem solving, communication, roles, affective involvement, and behavior control. The results are presented in Table 24.

*Table 24: Chi-Square Test of the FAD Domains*

	Problem solving	Communication	Roles	Affective involvement	Behavior control
Chi-Square	44.378 <sup>a</sup>	46.973 <sup>a</sup>	20.595 <sup>a</sup>	27.405 <sup>a</sup>	58.216 <sup>a</sup>
df	3	3	3	3	3
Asymp. Sig.	.000	.000	.000	.000	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 18.5.

The analysis revealed statistically significant Chi-square values across all domains: problem solving ( $\chi^2 = 44.378$ ,  $df = 3$ ,  $p < .001$ ), communication ( $\chi^2 = 46.973$ ,  $df = 3$ ,  $p < .001$ ), roles ( $\chi^2 = 20.595$ ,  $df = 3$ ,  $p < .001$ ), affective involvement ( $\chi^2 = 27.405$ ,  $df = 3$ ,  $p < .001$ ), and behavior control ( $\chi^2 = 58.216$ ,  $df = 3$ ,  $p < .001$ ). The corresponding p-values (.000) indicate that the deviations observed in the frequency distributions across the four family functioning categories—healthy, moderately healthy, dysfunctional, and very dysfunctional—were highly significant in all domains. The test assumptions were met, as none of the expected cell frequencies were less than five (minimum expected frequency = 18.5), confirming the robustness of the statistical results.

These findings imply that the observed patterns of family functioning were not random but instead reflect a statistically significant skew toward dysfunctionality in all dimensions of family life among inpatients diagnosed with substance use disorder. The highest Chi-square statistic was recorded in the behavior control domain ( $\chi^2 = 58.216$ ), suggesting that behavioral regulation and boundary enforcement were the most severely impaired aspects of family functioning. This was followed by communication ( $\chi^2 = 46.973$ ) and problem solving ( $\chi^2 = 44.378$ ), both of which indicate critical weaknesses in intrafamily communication and collaborative coping with challenges. The roles and affective involvement domains, though comparatively less pronounced, also showed significant deviations, pointing to structural instability and emotional disconnect within families.

From a psychological standpoint, these results underscore that family dysfunction among individuals with substance use disorder is multidimensional and deeply entrenched. The consistent significance across all domains suggests that the family systems of these patients are characterized by pervasive breakdowns in emotional expression, problem resolution, communication clarity, and behavioral governance. Such systemic dysfunction likely contributes to both the onset and maintenance of substance use as a maladaptive coping strategy. The findings therefore, highlight the necessity of systemic family-based interventions, which target the restoration of communication, emotional bonding, and role clarity as critical components in the treatment and recovery of substance-using inpatients at Port Reitz Mental Hospital.

#### Socio-Demographic Factors Associated with Substance Use Disorder and Family Dysfunction

The third objective of this study was to explore the socio-demographic and clinical factors associated with Substance Use Disorder (SUD) and family dysfunction among inpatients at Port Reitz Mental Hospital. To achieve this, the analysis first presents the key clinical characteristics and patient perceptions that define the study population (Table 24). This is followed by a bivariate correlational analysis examining the relationships between socio-demographic factors and patterns of substance use (Table 25), and between sociodemographic factors and domains of family functioning (Table 26).

*Table 25: Profile of the Participants*

		Frequency Percent		Cumulative Percent
Diagnosis as per DSM-5 (Clinicianconfirmed)	Substance Use Disorder	62	83.8	83.8

	Drug Induced Psychosis	5	6.8	90.5
	Schizophrenia	3	4.1	94.6
	Depression	1	1.4	95.9
	Psychosis	2	2.7	98.6
	Seasonal Affective Disorder	1	1.4	100.0
Are there any comorbid mental health conditions?	No	20	27.0	27.0
	Yes	54	73.0	100.0
Other comorbidities	None	24	32.4	32.4
	Schizophrenia	22	29.7	62.2
	Bipolar	14	18.9	81.1
	Substance Use Disorder	2	2.7	83.8
	Drug Induced Psychosis	5	6.8	90.5
	Psychosis	6	8.1	98.6
	Depression	1	1.4	100.0
Are you currently on medication for a mental health condition?	No	2	2.7	2.7
	Yes	72	97.3	100.0
	None	12	16.2	16.2
History of relapse (in the past 12 months)	Once	21	28.4	44.6
	More than once	41	55.4	100.0
	None	5	6.8	6.8
In your view, did family support influence your decision to seek treatment?	Yes	56	75.7	82.4
	Not sure	13	17.6	100.0
Have you received any form of family counseling?	No	17	23.0	23.0
	Yes	57	77.0	100.0

The clinical profile of the participants, as detailed in Table 25, establishes a context of significant and complex morbidity. The vast majority of participants (83.8%, n=62) had a clinician-confirmed primary diagnosis of a Substance Use Disorder. A high rate of

psychiatric comorbidity was observed, with 73.0% (n=54) of participants having at least one other comorbid mental health condition. The most common specific comorbidities were Schizophrenia (29.7%), Bipolar Disorder (18.9%), and other psychotic disorders.

This clinical complexity was managed pharmacologically in almost all cases, with 97.3% (n=72) of participants on medication for a mental health condition. The chronic and relapsing nature of these conditions was evident, as over half of the participants (55.4%, n=41) had experienced more than one relapse in the past 12 months.

From a psychosocial perspective, patients' perceptions highlighted the critical role of the family system. A large majority (75.7%, n=56) believed that family support influenced their decision to seek treatment, and a similarly high proportion (77.0%, n=57) had received some form of family counseling, indicating that family involvement is a recognized component of care within this clinical population.

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*Table 26: A Correlation Between Socio Demographic Characteristics and Substance Use*

		Age	Gender	Marital Status	Education Status	Employment Status	Religious Affiliation	Alcohol	Cannabis	Heroin	Cocaine	Khat	Methamphetamine
Age	r	1	-.265*	.318**	-.222	-.260*	.242*	-.139	-.207	-.056	.081	-.001	-.113
	p		.022	.006	.057	.025	.038	.237	.076	.636	.494	.997	.338
Gender	r	-.265*	1	-.175	.014	.000	-.320**	.167	.235*	.084	.002	-.189	.064
	p	.022		.136	.903	1.000	.005	.155	.044	.479	.988	.108	.586
Marital Status	r	.318**	-.175	1	.091	-.037	.212	-.174	.008	-.115	-.105	.180	-.079
	p	.006	.136		.441	.752	.070	.138	.946	.331	.375	.126	.506
Highest Level of Education	r	-.222	.014	.091	1	.063	-.376**	.289*	.020	-.137	-.041	-.053	-.090
	p	.057	.903	.441		.595	.001	.013	.865	.243	.729	.655	.448
Employment Status	r	-.260*	.000	-.037	.063	1	-.081	-.201	.186	-.237*	-.292*	-.258*	-.204
	p	.025	1.000	.752	.595		.492	.087	.113	.042	.011	.026	.082
Religious Affiliation	r	.242*	-.320**	.212	-.376**	-.081	1	-.367**	-.045	.007	.084	.198	-.118
	p	.038	.005	.070	.001	.492		.001	.703	.952	.476	.091	.318
Alcohol	r	-.139	.167	-.174	.289*	-.201	-.367**	1	.252*	.296*	.205	.102	.295*
	p	.237	.155	.138	.013	.087	.001		.030	.010	.080	.385	.011
Cannabis	r	-.207	.235*	.008	.020	.186	-.045	.252*	1	-.065	.153	.232*	.113
	p	.076	.044	.946	.865	.113	.703	.030		.584	.192	.047	.338
Heroin	r	-.056	.084	-.115	-.137	-.237*	.007	.296*	-.065	1	.406**	.089	.638**
	p	.636	.479	.331	.243	.042	.952	.010	.584		.000	.450	.000
Cocaine	r	.081	.002	-.105	-.041	-.292*	.084	.205	.153	.406**	1	.188	.512**
	p	.494	.988	.375	.729	.011	.476	.080	.192	.000		.108	.000

Khat	r	-.001	-.189	.180	-.053	-.258*	.198	.102	.232*	.089	.188	1	.250*
	p	.997	.108	.126	.655	.026	.091	.385	.047	.450	.108		.032
Methamphetamine	r	-.113	.064	-.079	-.090	-.204	-.118	.295*	.113	.638**	.512**	.250*	1
	p	.338	.586	.506	.448	.082	.318	.011	.338	.000	.000	.032	

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Table 26 presents the correlation between socio-demographic characteristics: age, gender, marital status, highest level of education, employment status, and religious affiliation, and different substances used by the participants, namely alcohol, cannabis, heroin, cocaine, khat, and methamphetamine.

There was a significant negative correlation between gender and religious affiliation ( $r = -.320$ ,  $p = .005$ ), indicating that male participants were less likely to report strong religious affiliation compared to females. Age was significantly associated with gender ( $r = -.265$ ,  $p = .022$ ), marital status ( $r = .318$ ,  $p = .006$ ), employment status ( $r = -.260$ ,  $p = .025$ ), and religious affiliation ( $r = .242$ ,  $p = .038$ ).

Regarding substance use, education level showed a significant positive correlation with alcohol use ( $r = .289$ ,  $p = .013$ ), implying that participants with higher education levels were more likely to report alcohol consumption. Employment status correlated negatively with cocaine use ( $r = -.292$ ,  $p = .011$ ) and khat use ( $r = -.258$ ,  $p = .026$ ), suggesting that unemployed participants were more prone to these substances.

A strong inter-substance correlation was observed between heroin and cocaine use ( $r = .406$ ,  $p = .000$ ), as well as between heroin and methamphetamine use ( $r = .638$ ,  $p = .000$ ), showing that poly-substance use was common among participants. Religious affiliation was negatively correlated with alcohol use ( $r = -.367$ ,  $p = .001$ ), meaning that individuals with stronger religious ties were less likely to abuse alcohol.

These findings suggested that age, gender, education level, employment status, and religious affiliation were key socio-demographic correlates of substance use patterns among inpatients. In particular, younger, less religious, and unemployed individuals appeared more vulnerable to substance use disorders, particularly poly-drug involvement.

								Overall						
		Age	Gender -	Marital	Education	Employment	Religion	family	Problem	Commu	Affective	Behavior		
			Status	Status	Status	Status	functioning	solving	nication	Roles	involvement	control		
Age	r	1	.265*	.318**	-.222	-.260*	.242*	.253*	.130	.042	.156	.232*	.268*	
	p		.022	.006	.057	.025	.038	.029	.268	.719	.183	.047	.021	
Gender	r	-.265*	1	-.175	.014	.000	-.320**	.044	.089	.144	.134	.071	-.032	
	p	.022		.136	.903	1.000	.005	.710	.451	.220	.256	.548	.784	
Marital Status	r	.318**	-.175	1	.091	-.037	.212	.157	.036	.187	.132	.143	.174	
	p	.006	.136		.441	.752	.070	.183	.758	.110	.261	.223	.139	
Highest Level of Education	r	-.222	.014	.091	1	.063	-.376**	-.289*	-.191	-.208	-.256*	-.300**	-.316**	
	p	.057	.903	.441		.595	.001	.013	.102	.076	.028	.009	.006	
Employment Status	r	-.260*	.000	-.037	.063	1	-.081	-.064	.000	-.029	.149	-.046	.000	
	p	.025	1.000	.752	.595		.492	.588	1.000	.807	.206	.698	1.000	
Religious Affiliation	r	.242*	-.320**	.212	-.376**	-.081	1	-.001	-.096	-.116	.114	.020	.159	
	p	.038	.005	.070	.001	.492		.992	.416	.327	.333	.868	.176	
Overall family functioning	r	.253*	.044	.157	-.289*	-.064	-.001	1	.830**	.594**	.652**	.607**	.629**	
	p	.029	.710	.183	.013	.588	.992		.000	.000	.000	.000	.000	
Problem solving	r	.130	.089	.036	-.191	.000	-.096	.830**	1	.577**	.574**	.584**	.544**	
	p	.268	.451	.758	.102	1.000	.416	.000		.000	.000	.000	.000	
Communication	r	.042	.144	.187	-.208	-.029	-.116	.594**	.577**	1	.437**	.360**	.289*	
	p	.719	.220	.110	.076	.807	.327	.000	.000		.000	.002	.012	
Roles	r	.156	.134	.132	-.256*	.149	.114	.652**	.574**	.437**	1	.366**	.412**	
	p	.183	.256	.261	.028	.206	.333	.000	.000	.000		.001	.000	
Affective involvement	r	.232*	.071	.143	-.300**	-.046	.020	.607**	.584**	.360**	.366**	1	.489**	
	p	.047	.548	.223	.009	.698	.868	.000	.000	.002	.001		.000	
Behavior control	r	.268*	-.032	.174	-.316**	.000	.159	.629**	.544**	.289*	.412**	.489**	1	
	p	.021	.784	.139	.006	1.000	.176	.000	.000	.012	.000	.000		

*Table 27: A Correlation Between Socio Demographic Characteristics and Family Functioning*

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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Table 27 presents the correlation between socio-demographic variables and overall family functioning as well as specific family domains: problem-solving, communication, roles, affective involvement, and behavior control. Age was significantly correlated with overall family functioning ( $r = .253, p = .029$ ), affective involvement ( $r = .232, p = .047$ ), and behavior control ( $r = .268, p = .021$ ), indicating that older participants tended to come from families with better functionality. Gender showed no significant correlation with family functioning domains, suggesting that both males and females experienced similar family dynamics.

Education level had multiple significant negative correlations with family domains, including roles ( $r = -.256, p = .028$ ), affective involvement ( $r = -.300, p = .009$ ), and behavior control ( $r = -.316, p = .006$ ). This implies that participants with lower educational attainment experienced poorer family functioning, characterized by weak role distribution, poor emotional connection, and limited behavior regulation. Religious affiliation was negatively correlated with education ( $r = -.376, p = .001$ ) but did not show direct significant association with the family functioning domains, although participants with stronger religious affiliation reported slightly better cohesion.

Significant positive correlations were observed among the family functioning subscales themselves—for example, overall family functioning and problem-solving ( $r = .830, p = .000$ ), communication ( $r = .594, p = .000$ ), and roles ( $r = .652, p = .000$ )—demonstrating internal consistency within the FAD domains.

Taken together, these findings indicate that education level, age, and employment status are important socio-demographic determinants of family functioning. Families of younger, less educated, and unemployed participants showed higher levels of dysfunction,

consistent with prior evidence linking socioeconomic disadvantage to weakened family systems and substance use vulnerability.

#### The Relationship Between Substance Use Disorder and Family Dysfunction Among Inpatients

The fourth objective of this study was to examine the relationship between the severity of SUD across different substances and various dimensions of family dysfunction. This was investigated using Pearson's correlation coefficient to determine the strength and direction of the linear relationships between the six substances and the six domains of family functioning. The results of this analysis are presented in Table 28.

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*Table 28: The Relationship Between Substance Use Disorder and Family Dysfunction Among Inpatients*

		Substance Use Disorder						Family Dysfunction			Affective		Behavior
		Alcohol	Cannabis	Heroin	Cocaine	Khat	amine	functioning	Problem solving	Communication	Roles involvement	control	
Alcohol	r	1	.252*	.296*	.205	.102	.295*	-.165	-.008	-.135	-.249*	-.087	
	p		.030	.010	.080	.385	.011	.161	.947	.252	.033	.836	
Cannabis	r	.252*	1	-.065	.153	.232*	.113	.011	.125	.006	-.005	.182	
	p	.030		.584	.192	.047	.338	.926	.290	.958	.969	.120	
Heroin	r	.296*	-.065	1	.406**	.089	.638**	-.059	-.082	-.182	-.380**	.071	
	p	.010	.584		.000	.450	.000	.616	.487	.120	.001	.548	
Cocaine	r	.205	.153	.406**	1	.188	.512**	.193	.173	.001	-.152	.144	
	p	.080	.192	.000		.108	.000	.099	.140	.993	.197	.222	
Khat	r	.102	.232*	.089	.188	1	.250*	.026	.087	.054	-.133	.093	
	p	.385	.047	.450	.108		.032	.826	.460	.645	.257	.432	
Methamphetamine	r	.295*	.113	.638**	.512**	.250*	1	.169	.149	.089	-.213	.149	
	p	.011	.338	.000	.000	.032		.149	.205	.449	.069	.204	
Overall family functioning	r	-.165	.011	-.059	.193	.026	.169	1	.830**	.594**	.652**	.607**	
	p	.161	.926	.616	.099	.826	.149		.000	.000	.000	.000	
Problem solving	r	-.008	.125	-.082	.173	.087	.149	.830**	1	.577**	.574**	.584**	
	p	.947	.290	.487	.140	.460	.205	.000		.000	.000	.000	
Communication	r	-.135	.006	-.182	.001	.054	.089	.594**	.577**	1	.437**	.360**	
	p	.252	.958	.120	.993	.645	.449	.000	.000		.000	.002	
Roles involvement	r	-.249*	-.005	-.380**	-.152	-.133	-.213	.652**	.574**	.437**	1	.366**	
	p	.033	.969	.001	.197	.257	.069	.000	.000	.000		.001	
Affective control	r	-.025	.182	.071	.144	.093	.149	.607**	.584**	.360**	.366**	1	
	p	.836	.120	.548	.222	.432	.204	.000	.000	.002	.001		
Behavior control	r	-.087	-.051	.136	.273*	.065	.235*	.629**	.544**	.289*	.412**	.489**	
	p	.460	.664	.247	.019	.584	.044	.000	.000	.012	.000	.000	

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Table 28 presents the Pearson correlation matrix detailing the relationships between the severity of use for six substances and six domains of family functioning. The analysis revealed a complex and nuanced picture, challenging any monolithic view of SUD's impact on the family system. A primary and clinically significant finding was the evidence of substantial polysubstance use, as indicated by the strong positive intercorrelations among several substances. The most robust of these correlations were observed between Heroin, Cocaine, and Methamphetamine. The relationship between Heroin and Methamphetamine severity ( $r = .638, p < .001$ ) suggested these substances were frequently used in conjunction, presenting a more severe and complex clinical profile associated with greater health risks and compounded treatment challenges. This pattern of intercorrelation established a context of multifaceted substance abuse within which the specific family dynamics were understood.

When examining the relationship between SUD severity and family functioning, the results demonstrated that the impact was both substance-specific and domain-specific. The overall family functioning score showed no direct significant correlation with any single substance, implying that this global measure may have masked the more acute, targeted areas of dysfunction that were sensitive to the severity of use. The most consistent and theoretically compelling finding was the negative impact of certain substances on the roles dimension of family life. Significant negative correlations were found for Alcohol ( $r = -.249, p = .033$ ) and, more strongly, for Heroin ( $r = -.380, p = .001$ ). This indicated that as the severity of use for these substances increased, the family's ability to establish and maintain stable roles and responsibilities significantly deteriorated. In such environments, essential tasks were neglected, parental and spousal duties were abandoned, and the

predictable structure that enables a family to function effectively collapsed, with the user's role often becoming singularly focused on substance acquisition and use.

An interesting finding appeared in the area of Behavior Control. Surprisingly, families with more severe cocaine or methamphetamine use actually showed more behavior control. This means that these families had very strict, rigid rules. However, this creates a home environment that feels repressive and doesn't allow for normal, healthy expression. Unlike the clear problems with Roles and Behavior Control, other family areas like Problem Solving, Communication, and Emotional Connection did not get noticeably worse as the substance use became more severe. This could mean that these areas are generally affected just by the presence of a substance use disorder, rather than getting progressively worse. This could mean that these strengths only break down after the substance use becomes extremely chaotic.

From the study findings it was clear that substance use disorders affect families in different ways. Since people often use more than one drug, and each drug impacts the family differently, treatment must be specific. Help for families should be tailored to the main substance being used such as helping families rebuild clear roles when dealing with alcohol or heroin, and helping them replace harsh, rigid rules with healthier, more flexible ones when dealing with stimulants like cocaine or methamphetamine.

#### Qualitative Analysis of Participant Recommendations for Interventions

The qualitative analysis of participants' responses to the final interview questions revealed several interconnected themes regarding effective interventions for preventing substance use disorders. The findings demonstrated that participants viewed substance use prevention as a multidimensional issue that requires coordinated efforts involving the

individual, the family, and the wider community. Their perspectives emphasized the need for comprehensive and holistic strategies that address both the psychological and social contexts in which substance use occurs.

A central theme emerging from the analysis was the need for comprehensive family-centered support. Participants strongly emphasized that interventions must extend beyond the individual to include family counseling, family therapy, and general family support. They highlighted that many substance use problems are rooted in relational stressors and dysfunctional family dynamics. Providing psychosocial and emotional support to both the individual and their family was considered essential in addressing these underlying issues and promoting lasting change. This emphasis on family underscores the belief that prevention and treatment are more effective when they incorporate the family unit as a key source of support and stability.

Another significant theme was the importance of motivational and encouragement-based interventions. Participants identified motivation, encouragement, and counseling as critical elements in fostering personal resilience and strengthening the resolve to resist substance use. They emphasized that individuals are more likely to sustain behavioral change when they feel supported, valued, and guided. Encouragement and positive reinforcement were seen as powerful tools to help individuals build self-belief and develop a sense of purpose, which in turn contributes to the prevention of substance use.

Participants also highlighted the role of education and awareness programs as vital components of prevention strategies. They emphasized the importance of providing psychoeducation to individuals, families, and communities on the effects and consequences of substance use. Education was viewed as a means of empowering individuals with knowledge and enabling informed decision-making. In particular, there was a strong

recommendation to integrate counseling and preventive education into schools in order to target young people early and reduce the likelihood of substance use initiation during adolescence.

In addition to individual and family-level interventions, participants identified the need to strengthen social and structural support systems. They pointed out that substance use often occurs within a broader social and economic context. As such, interventions should also address community-level factors by enhancing social support networks, providing financial assistance to reduce economic pressures, and incorporating sociotherapy to build stronger community ties. Participants expressed the view that community involvement and supportive environments are critical in sustaining prevention efforts and promoting recovery.

In summary, the participants' recommendations highlight the need for a holistic and integrated prevention strategy. Effective prevention should combine emotional and motivational support for individuals with structured family therapy, education and awareness initiatives, and robust community-based support systems. Such an approach acknowledges that substance use is not solely an individual problem but a social and relational issue influenced by family, community, and structural factors. These findings point to the importance of designing prevention programs that are multidimensional, inclusive, and responsive to the real-life contexts in which substance use occurs.

#### Discussion of Key Findings

The findings of this study provide important insights into the prevalence and patterns of substance use disorder, the extent of family dysfunction, the role of sociodemographic factors, and the nature of the relationship between substance use and family functioning among inpatients at Port Reitz Mental Hospital in Mombasa County,

Kenya. When considered in light of the reviewed literature, these findings both align with and extend existing knowledge on substance use and family systems in low- and middle-income contexts.

#### Prevalence of Substance Use Disorder

The results of this study revealed a high prevalence of substance use disorder among inpatients, with cannabis, khat, and alcohol emerging as the most commonly abused substances. The overwhelming majority of participants reported polysubstance use, with nearly 80% using two or more substances. Most participants initiated substance use during adolescence or early adulthood, with patterns of long-term dependency, repeated admissions, and physiological withdrawal symptoms. This aligns with global evidence from the World Health Organization (2022) and the Global Burden of Disease Study (2020), which indicate that substance use disorders affect millions worldwide and contribute significantly to the disease burden, especially in low- and middle-income countries. It also supports regional findings from Parry et al. (2019) in South Africa and Adu-Mireku et al. (2022) in Ghana, which documented rising substance use among youth populations.

The dominance of cannabis and khat use is consistent with local studies by NACADA (2022) and Sospeter and Iteyo (2023), which reported widespread availability and use of these substances in Kenya's coastal counties. The observed high rates of polysubstance use also echo Sospeter and Iteyo's (2023) conclusion that substance use in Mombasa transcends socioeconomic boundaries and involves multiple substances. The early onset of use and chronicity of patterns observed in this study reinforce the notion that substance use is not only a behavioral issue but also a developmental and public health challenge, requiring early prevention and long-term treatment interventions.

### Levels of Family Dysfunction

The study found pervasive family dysfunction, with nearly 88% of participants coming from dysfunctional or very dysfunctional family systems. Dysfunction was evident across all five domains of the McMaster Family Assessment Device—problem solving, communication, roles, affective involvement, and behavior control. Behavior control emerged as the most impaired domain, followed by communication and problem solving. These findings strongly align with the theoretical and empirical literature reviewed in Chapter 2. McCrady and Epstein (2013) identified poor communication, rigid roles, and emotional neglect as common features in families affected by substance use disorders. Similarly, Orford et al. (2013) found that unresolved family conflict and lack of emotional support were strongly linked to substance abuse in European contexts.

Regionally, Morojele and Brook (2006) reported similar findings in South Africa, where family violence and poor parental monitoring contributed to adolescent drug use, while locally, Onsongo and Mwendwa (2024) highlighted weak family bonds and domestic violence as risk factors in coastal Kenya. The strong alignment between this study's findings and the literature underscores the critical role of the family as both a risk and protective factor in substance use trajectories. The high prevalence of dysfunction in behavior control and communication domains also suggests that the family context in coastal Kenya may be characterized by both structural and relational instability, which can amplify vulnerability to substance use and relapse.

### Socio-Demographic Factors and Their Influence

The socio-demographic profile of the participants revealed a young, predominantly male, unemployed population with low educational attainment and strong familial living arrangements prior to admission. These patterns align with Adewuya et al. (2007), who

found that young males from low-income families were at heightened risk of substance abuse in Nigeria, and with Ndeti et al. (2016) in South Africa, who documented similar links between gender, education, and substance use vulnerability. Locally, the findings resonate with Juma (2024), who identified unemployment, low parental involvement, and peer influence as key drivers of substance use among youth in Mombasa.

Furthermore, this study found significant correlations between age, education level, employment status, and substance use patterns, as well as between these variables and family dysfunction. Lower education and unemployment were associated with higher levels of both substance use and family dysfunction, while stronger religious affiliation was associated with lower alcohol use. This aligns with Nafisa (2023), who observed similar socioeconomic vulnerabilities among patients receiving methadone therapy in Kisauni, where lack of family support and comorbid mental health conditions exacerbated treatment challenges. These results confirm that socioeconomic disadvantage is both a driver and a consequence of substance use, complicating both prevention and treatment.

#### Relationship Between Substance Use Disorder and Family Dysfunction

The relationship between substance use severity and family dysfunction was found to be substance- and domain-specific rather than uniform. Increased severity of alcohol and heroin use was associated with significant deterioration in the roles domain, indicating that families of users of these substances experienced breakdowns in role structure, accountability, and responsibility. This aligns with the literature suggesting that substances such as alcohol and opioids are particularly disruptive to family role functioning. Conversely, increased stimulant use (cocaine and methamphetamine) was associated with more rigid behavioral control, suggesting that some families responded to substance use

with strict or punitive rule enforcement. This finding is particularly interesting as it adds nuance to existing literature, highlighting that not all family dysfunction manifests in the same way across different substances.

The bidirectional relationship between SUD and family dysfunction corresponds with the theoretical frameworks of Bandura's Social Learning Theory (1977) and Bowen's Family Systems Theory (1978), which emphasize that family environments shape behavioral patterns and, in turn, are shaped by those behaviors. The finding also aligns with Kibera (2024), who found that individuals with stronger family support experienced better treatment outcomes, and with Sospeter and Onkware (2023), who noted gaps in national strategies that overemphasize law enforcement at the expense of family-focused prevention. By revealing substance-specific patterns of family dysfunction, this study extends existing knowledge by showing how different drugs may interact differently with family dynamics, underscoring the need for targeted family-based interventions.

These findings paint a complex but coherent picture of substance use disorder in Mombasa County. High prevalence and early onset of polysubstance use align with global and local trends, highlighting a growing public health concern. The pervasiveness of family dysfunction confirms the centrality of the family system in both the onset and perpetuation of substance use behaviors. Socio-demographic vulnerabilities—particularly youth, unemployment, and low education—further amplify this risk. Finally, the nuanced relationship between substance severity and specific domains of family dysfunction contributes new insights to the literature by emphasizing that different substances affect family systems in distinct ways.

These findings reinforce the importance of integrating family-centered interventions into SUD prevention and treatment strategies, complementing clinical care with

psychosocial and community-based support. They also suggest that addressing socioeconomic vulnerabilities in conjunction with therapeutic interventions may enhance long-term recovery outcomes. In this way, the present study both supports and extends existing scholarship, offering contextually grounded evidence for developing more targeted, family-sensitive approaches to substance use disorder treatment in Kenya's coastal region.

### Summary of Key Findings

The findings of this study provide a comprehensive understanding of the prevalence and patterns of substance use disorder, the level of family dysfunction, the influence of socio-demographic factors, and the relationship between substance use severity and family functioning among inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya.

#### Objective One: Prevalence of Substance Use Disorder

The study revealed a high prevalence of substance use disorder among inpatients, with the majority of participants reporting the use of multiple substances. Cannabis was the most commonly abused substance, followed by khat and alcohol. Harder drugs, including cocaine, heroin, and methamphetamine, were less frequently used but still represented a substantial proportion of the sample, indicating exposure to high-risk substances. The findings further revealed that 79.7% of participants engaged in polysubstance use, highlighting a pattern of complex and severe substance use behaviors. Most participants initiated substance use during adolescence or early adulthood, a period marked by heightened vulnerability to risk-taking behaviors. Early onset was often followed by long-term use, multiple treatment episodes, and repeated admissions, reflecting a chronic and relapsing course of SUD. The presence of physiological dependence, withdrawal

symptoms, social impairment, and family history of substance use reinforced the chronicity of the disorder in this clinical population.

#### Objective Two: Level of Family Dysfunction

The second objective focused on assessing the level of family dysfunction among inpatients diagnosed with substance use disorder. The findings demonstrated a pervasive pattern of family dysfunction, with nearly 88% of participants reporting dysfunctional or very dysfunctional family systems. Across the five domains of the McMaster Family Assessment Device—problem solving, communication, roles, affective involvement, and behavior control—participants reported significant weaknesses. Communication breakdown, weak role structures, emotional disconnection, and inadequate behavioral regulation were particularly prominent. Statistically significant deviations from expected distributions confirmed that these patterns were not random but reflect systemic dysfunction within the families of substance-using inpatients. Behavior control emerged as the most severely impaired domain, followed by communication and problem solving, indicating that many families lacked consistent rules, effective communication channels, and cooperative approaches to challenges. These results suggest that family dysfunction operates as both a risk factor and a sustaining factor for substance use disorder.

#### Objective Three: Socio-Demographic Factors Associated with Substance Use and Family Dysfunction

The analysis of socio-demographic variables revealed that the inpatient population was largely composed of young, single, unemployed males with low educational attainment, primarily from Mombasa and surrounding coastal counties. Most lived with their families prior to admission, indicating that the family remains a central social environment for this group. Correlation analyses demonstrated that age, education level,

employment status, and religious affiliation were significantly associated with substance use patterns and family functioning. Younger, unemployed, and less educated individuals were more likely to engage in polysubstance use and to report higher levels of family dysfunction. Stronger religious affiliation was linked to lower alcohol use, suggesting some protective influence. The presence of widespread psychiatric comorbidity, including schizophrenia and bipolar disorder, further underscored the complex clinical profile of this population. Notably, most participants acknowledged the role of family support in influencing their decision to seek treatment, highlighting the importance of the family as a potential resource for recovery.

**Relationship Between Substance Use Disorder and Family Dysfunction** The final objective examined the relationship between the severity of substance use and various domains of family functioning. The findings revealed a substance- and domainspecific relationship rather than a uniform impact across all domains. Severity of alcohol and heroin use was significantly associated with dysfunction in the family roles domain, indicating that as use increased, the family's ability to maintain stable and functional role structures deteriorated. In contrast, increased cocaine and methamphetamine use was associated with stricter and more rigid behavioral control within families, reflecting environments characterized by harsh rules rather than supportive structures. Other domains, such as communication and problem solving, were generally impaired regardless of the level of substance use, suggesting that their breakdown is more closely tied to the presence of SUD itself rather than its severity. These patterns indicate that different substances impact family dynamics in different ways, necessitating tailored family interventions based on the primary substance used.

The findings from the qualitative analysis provide valuable insights into the perspectives of inpatients regarding effective interventions for preventing substance use disorders. These findings align closely with the overall aim of the study, which was to assess the relationship between substance use disorder and family dysfunction among inpatients at Port Reitz Subcounty Hospital in Mombasa County, Kenya. The participants' recommendations clearly emphasize that substance use prevention requires more than clinical treatment alone. Instead, they advocate for a holistic approach that incorporates family engagement, emotional and motivational support, education and awareness, and broader community involvement.

One of the primary objectives of the study was to explore the role of family dynamics in substance use and recovery. The findings strongly support the view that family plays a critical role in both the development and prevention of substance use disorders. Participants' emphasis on family counseling, therapy, and psychosocial support reflects an understanding that substance use often occurs within strained or dysfunctional family relationships. By integrating family-centered interventions, prevention efforts can address relational stressors and strengthen the support structures that influence recovery outcomes. This perspective aligns with the recognition that sustainable change is more likely when the family unit is involved in the healing process.

The study also sought to examine the psychosocial factors that contribute to substance use. Participants' emphasis on motivation and encouragement highlights the importance of personal empowerment in preventing relapse and promoting behavioral change. Their views suggest that interventions must not only address the external environment but also support individuals in building inner strength, resilience, and

self-efficacy. Encouragement, counseling, and positive reinforcement were viewed as powerful tools in promoting hope, purpose, and confidence among those vulnerable to substance use.

A further objective of the study was to identify preventive strategies that can be implemented at both individual and community levels. The call for education and awareness programs reflects the belief that knowledge plays a crucial role in shaping attitudes and behaviors related to substance use. Participants' recommendations for early interventions through school-based counseling highlight the need to target prevention at formative stages, where young people are most vulnerable to experimentation and peer influence. This indicates a clear recognition of the value of proactive rather than reactive approaches in substance use prevention.

Additionally, the findings draw attention to the broader social and economic context in which substance use occurs. The participants' identification of community support networks, financial assistance, and sociotherapy as important interventions underscores the view that substance use is not solely an individual or family problem. It is also a structural and community-level issue that requires collective responses. Addressing economic stressors, enhancing social cohesion, and building supportive community environments were seen as essential to sustaining prevention and recovery.

Overall, the findings from this study demonstrate that an effective prevention strategy must be comprehensive, multidimensional, and contextually relevant. It should integrate emotional and motivational support, family-based interventions, education and awareness initiatives, and community-level support systems. By addressing substance use from multiple angles, prevention programs can create stronger safety nets that reduce

vulnerability and foster long-term recovery. These findings contribute to a deeper understanding of how prevention efforts can be structured to respond to both individual and systemic factors influencing substance use disorders in Mombasa County.

Altogether, the findings portray a complex clinical and social landscape for individuals with substance use disorders in Mombasa County. High prevalence and early onset of substance use, coupled with widespread polysubstance involvement, point to significant public health concerns. The overwhelming presence of family dysfunction across all domains highlights that substance use and family environments are deeply intertwined, with dysfunction both preceding and perpetuating substance use behaviors. Socio-demographic vulnerabilities, particularly youth, unemployment, low education, and weak social structures further compound these challenges. Importantly, the nuanced relationship between substance severity and specific domains of family functioning suggests that interventions must be multidimensional and substance-specific, integrating individual treatment, family therapy, and community-based supports. Strengthening family systems, addressing socio-economic vulnerabilities, and implementing targeted, evidence-informed prevention strategies are essential for improving treatment outcomes and reducing relapse rates among inpatients with substance use disorders at Port Reitz Mental Hospital.

### Chapter Summary

This chapter presented and analyzed the study findings in line with the four research objectives. The results revealed a high prevalence of substance use disorder among inpatients at Port Reitz Mental Hospital, with cannabis, khat, and alcohol emerging as the most commonly abused substances and a significant majority of participants engaging in

polysubstance use. Most individuals began using substances during adolescence or early adulthood, reflecting early onset and chronic patterns of use.

The study further established that family dysfunction is widespread among this population, with over 85% of participants coming from families rated as dysfunctional or very dysfunctional across multiple domains, including communication, roles, problem solving, affective involvement, and behavior control. These findings underscore the critical role of the family in shaping substance use behaviors and recovery trajectories. Sociodemographic analysis showed that the typical patient profile consists of young, single, unemployed males with low educational attainment, primarily from Mombasa County and its neighboring coastal regions. These vulnerabilities were found to be closely associated with both substance use patterns and family functioning levels.

Finally, the study revealed that the relationship between substance use disorder and family dysfunction is substance- and domain-specific, with alcohol and heroin use linked to weakened role structures, and stimulant use associated with rigid behavioral control. These findings highlight the need for targeted, family-centered interventions that address both individual and systemic factors contributing to substance use. The next chapter will address the recommendations and conclusions.

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

This chapter presents the conclusions drawn from the study findings and outlines key recommendations aimed at addressing substance use disorder and family dysfunction among inpatients at Port Reitz Mental Hospital. The conclusions highlight the major insights derived from the research objectives, while the recommendations provide practical strategies for improving prevention, treatment, and rehabilitation efforts. Emphasis is placed on strengthening family-centered interventions, addressing socio-economic vulnerabilities, and enhancing community and health system responses to substance use disorder in Mombasa County and the wider coastal region.

#### Conclusions

This study set out to examine the prevalence of substance use disorder (SUD), assess levels of family dysfunction, analyze socio-demographic factors associated with substance use and family functioning, and determine the relationship between SUD and family dysfunction among inpatients at Port Reitz Mental Hospital, Mombasa County. The findings collectively provide a clear and comprehensive understanding of the multifaceted nature of substance use in this context.

With respect to the first objective, the study revealed a high prevalence of SUD, characterized by early onset, chronic patterns of use, and extensive polysubstance involvement. Cannabis, khat, and alcohol emerged as the most commonly abused substances, reflecting both their accessibility and cultural acceptance in the region. The early initiation of use during adolescence and early adulthood underscores a developmental vulnerability that calls for early prevention and intervention strategies. These findings

mirror national and regional trends, reinforcing the urgency of addressing substance use as a major public health concern.

In relation to the second objective, the study established that family dysfunction is pervasive among inpatients with SUD. More than 85% of the participants came from families rated as dysfunctional or very dysfunctional, with significant breakdowns in communication, role clarity, problem-solving abilities, affective involvement, and behavioral control. The most severely impaired domains—behavioral control and communication—suggest weak family structures and relational instability, both of which increase vulnerability to substance use and complicate recovery processes.

Regarding the third objective, socio-demographic analysis revealed that the inpatient population is largely composed of young, single, unemployed males with low educational attainment, primarily from Mombasa and neighboring counties. These characteristics were significantly associated with both substances use and family dysfunction, indicating that socio-economic disadvantage plays a critical role in shaping patterns of substance use and the capacity of families to provide stable support. Religious affiliation appeared to offer some protective influence, particularly against alcohol use, highlighting the importance of social and cultural factors in shaping risk and resilience.

Finally, addressing the fourth objective, the study found that the relationship between substance use severity and family dysfunction is substance- and domain-specific rather than uniform. Alcohol and heroin use were strongly associated with impaired family roles, reflecting neglect of responsibilities and collapse of role structures. In contrast, stimulant use such as cocaine and methamphetamine was linked to rigid and punitive behavioral control within families. Other domains, such as communication and problemsolving, appeared to be broadly impaired by the presence of substance use,

regardless of severity. These nuanced findings emphasize that different substances affect family systems in distinct ways, underscoring the need for tailored family-based interventions.

### Recommendations

Based on the findings and conclusions of this study, it is evident that substance use disorder in Mombasa County is influenced by a combination of individual, familial, and socio-economic factors. Addressing this challenge requires an integrated and multi-sectoral approach that strengthens both policy frameworks and practical interventions. The recommendations outlined below are grounded in the study's four objectives and are designed to inform government agencies, health institutions, rehabilitation centers, community organizations, and practitioners. Their aim is to enhance prevention, treatment, and recovery efforts by emphasizing family-centered care, substance-specific interventions, socio-economic support, and community engagement. The following were the recommendations of the study:

#### Policy Recommendations

- i. Strengthen family-centered prevention frameworks.  
National and county governments should develop and implement prevention policies that prioritize the family as a central unit in substance use prevention, integrating family therapy, counseling, and parenting programs into existing health strategies.
- ii. Expand access to early intervention and youth-focused programs.  
Policies should support the establishment of school- and community-based prevention programs targeting adolescents and young adults, given the early onset of substance use identified in the study.

- iii. Enhance community-based treatment infrastructure.  
Investment in regional rehabilitation and mental health facilities beyond Mombasa County is needed to increase accessibility and reduce treatment delays, especially for populations from neighboring counties.
- iv. Integrate socio-economic empowerment into substance use recovery policies. Policies should address unemployment and poverty through vocational training, job placement initiatives, and income-generating programs for individuals recovering from substance use disorders.
- v. Adopt a substance-specific intervention framework.  
Policy guidelines should reflect the varying impact of different substances on families—such as the need for role restoration in alcohol and heroin use, and flexible behavioral interventions in stimulant use—to promote targeted and effective responses.

#### Practice Recommendations

- i. Implement structured family therapy as a core component of treatment.  
Rehabilitation programs should integrate systematic family therapy sessions to address dysfunction in communication, role structure, and behavioral control—identified as key issues in this study.
- ii. Introduce early screening and intervention in schools and communities.  
Health practitioners, educators, and social workers should collaborate to identify at-risk youth early and provide counseling, mentorship, and psychoeducation before substance use escalates.

- iii. Develop individualized treatment plans based on substance type and severity.

Clinicians should tailor interventions to reflect the distinct family and behavioral patterns associated with different substances, ensuring more effective rehabilitation outcomes.

- vi. Strengthen aftercare and relapse prevention through family and community engagement.

Post-discharge programs should actively involve families and community networks to support sustained recovery and reduce the likelihood of relapse.

- vii. Enhance interdisciplinary collaboration among service providers.

Practitioners in health, education, social work, and law enforcement should work collaboratively to provide holistic care—combining clinical treatment, psychosocial support, vocational empowerment, and reintegration strategies.

#### Recommendations for Further Research

The following were three main recommendations for future research:

- i. Longitudinal studies on substance use trajectories.

Future research should adopt longitudinal designs to track the progression of substance use from adolescence into adulthood, enabling a deeper understanding of how early onset shapes chronic use and relapse patterns.

- ii. Substance-specific impact on family functioning.

Further studies should explore in greater depth how different substances uniquely affect various domains of family functioning, such as communication, roles, and behavioral control, to refine intervention strategies.

- iii. Interventional studies on family-based therapy.

Experimental or quasi-experimental research is needed to assess the effectiveness of structured family therapy and other family-centered interventions in reducing relapse rates and improving recovery outcomes.

iv. Comparative studies across regions and populations.

Expanding research beyond Mombasa to other counties and populations would allow for comparative analysis and provide a broader understanding of how cultural, social, and economic factors shape substance use and family dynamics.

v. Exploration of socio-economic determinants and recovery.

Further research should investigate how factors such as unemployment, poverty, education, and religious affiliation influence both vulnerability to substance use and the success of treatment and reintegration programs.

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## APPENDICES

### Appendix I: Consent Form

Title of the Study:

A Study on the Relationship Between Substance Use Disorder and Family Dysfunction Among Inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya

Principal Investigator:

Jane Mibei

Masters student, Daystar University

Email: [jmibei@daystar.ac.ke](mailto:jmibei@daystar.ac.ke)

Introduction

You are invited to participate in a research study. Before you decide whether to take part, it is important that you understand why the research is being conducted and what it will involve. Please take time to read this information carefully. Feel free to ask the researcher if you need more information or clarification.

Purpose of the Study

This study seeks to examine the relationship between substance use disorder and family dysfunction among inpatients at Port Reitz Mental Hospital. The findings will help improve mental health interventions and support mechanisms for individuals affected by substance use.

#### Why You Have Been Selected

You have been selected to participate because:

- You are 18 years of age or older;
- You are currently admitted at Port Reitz Mental Hospital;
- You have been diagnosed with a substance use disorder;
- You are considered mentally and emotionally stable enough to give consent. What Participation Involves If you agree to participate:

- You will complete a structured questionnaire on your background and family relationships.
- Your clinical records may be reviewed, with your permission, to verify diagnosis and treatment history.
- The session will last approximately 30–45 minutes.
- A trained research assistant may assist you, if needed.

#### Confidentiality

All information provided will be treated as confidential. Your name will not appear on any report or publication. Data will be stored securely in password-protected files and locked cabinets. Only the researcher and supervisors will access the data.

#### Voluntary Participation

Your participation is entirely voluntary. You may:

- Decline to answer any question;
- Withdraw from the study at any point;
- Do so without affecting your care or treatment in any way.

#### Risks and Discomforts

There are no known physical risks. Some questions may evoke emotional discomfort.

If this occurs, you will be referred to a mental health professional for support. Benefits

While there may be no direct personal benefit, your responses will contribute to research that could improve mental health care and family support services.

#### Compensation

There is no monetary compensation for participating in this study. However, light refreshments may be provided during the session.

#### Contact Information

For questions or further information about the study, contact:

Jane Mibei

Email: [jmibei@daystar.ac.ke](mailto:jmibei@daystar.ac.ke)

For ethical concerns, you may contact the Daystar University Ethics Review Committee.

#### Consent Statement

I have read (or had read to me) the information provided above. I understand the purpose of the research, the procedures involved, and my rights as a participant. I have had an opportunity to ask questions and receive satisfactory answers. I voluntarily agree to participate in this study.

Participant's Full Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Witness (if applicable): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Researcher's Name: Jane Mibei

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

#### Appendix II: Questionnaire

Title: Substance Use Disorder and Family Dysfunction Among Inpatients at Port Reitz Mental Hospital, Mombasa County, Kenya

Researcher: Jane Mibei

Institution: Daystar University

Email: [jmibei@daystar.ac.ke](mailto:jmibei@daystar.ac.ke)

#### SECTION I: SOCIO-DEMOGRAPHIC INFORMATION

1. Age: \_\_\_\_\_ years

2. Gender:  Male  Female  Other

3. Marital Status:  Single  Married  Divorced  Widowed

4. Highest Level of Education:  None  Primary  Secondary  Tertiary

5. Employment Status:  Employed  Unemployed  Self-employed  Student

6. Religious Affiliation: \_\_\_\_\_

7. County of Residence: \_\_\_\_\_

8. Living Arrangement Prior to Admission:  With family  Alone  Friends  Other  
(Specify): \_\_\_\_\_

#### SECTION II: SUBSTANCE USE HISTORY

9. Which substances have you used? (Tick all that apply)  Alcohol  Cannabis  Heroin  
 Cocaine  Khat  Methamphetamine  Others (specify):

10. At what age did you start using substances? \_\_\_\_\_ years

11. Duration of substance use (in years): \_\_\_\_\_

12. Have you ever been treated for substance use before?  Yes  No

13. Number of previous hospital admissions for substance use: \_\_\_\_\_

14. Do you experience cravings or withdrawal symptoms when not using?  Yes  No

15. Has your substance use ever affected your relationships or employment?  Yes  No

No

16. Is there a family history of substance use?  Yes  No  Not sure

**SECTION III: FAMILY FUNCTIONING (Using McMaster Family Assessment Device – FAD Short Form)**

Instructions: For each statement, please tick the response that best represents your family.

Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
17. We are able to make decisions together as a family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. We express feelings clearly and directly to each other.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Each family member knows what their responsibilities are.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Our family has difficulty discussing problems openly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. There is emotional support among family members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. We have consistent rules and consequences at home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Family members blame each other instead of solving problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Our family works together to resolve conflicts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I feel close to at least one person in my family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. We avoid discussing painful or difficult topics in our family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION IV: PSYCHIATRIC & CLINICAL BACKGROUND**

27. Diagnosis as per DSM-5 (Clinician-confirmed): \_\_\_\_\_

28. Are there any comorbid mental health conditions?  Yes  No If yes, specify:

\_\_\_\_\_

29. Are you currently on medication for a mental health condition?  Yes  No

30. Date of current admission: \_\_\_\_\_

31. History of relapse (in the past 12 months):  None  Once  More than once

**SECTION V: PERCEPTIONS AND SOCIAL FACTORS**

32. In your view, did family support influence your decision to seek treatment?  Yes  
 No  Not Sure

33. Have you received any form of family counseling?  Yes  No

34. What would you recommend as key interventions for preventing substance abuse in families?

---

35. Any additional comments?

---

---

Appendix III: Institutional Approval

DAYSTAR UNIVERSITY



MOMBASA COUNTY GOVERNMENT  
**DEPARTMENT OF HEALTH SERVICES**  
**OFFICE OF THE COUNTY DIRECTOR, CLINICAL SERVICES**

Uhuru Na Kazi Building, 5th floor  
Email: [msachd2013@gmail.com](mailto:msachd2013@gmail.com)

P. O. BOX 91040 - 80103  
MOMBASA

**Ref. MSA/CH/ADM.37/VOL.III/92**

**Date: 12<sup>th</sup> September 2025**

JANE MIBEI  
**DAYSTAR UNIVERSITY**

**RE: APPROVAL TO CARRY OUT RESEARCH IN MOMBASA COUNTY**

We refer to your request for authorization to carry out research on assessment of substance use disorder and family dysfunction: case of inpatients at the Port Reitz Sub County Hospital, Mombasa County, Kenya.

This is to inform you that the secretariat for Mombasa Health Research Committee has no objection to your request and hereby approves the study to be done in Mombasa County accordingly.

On completion of the study, you are required to disseminate the findings to the Department of Health for the recommendations to be considered.

Thank you.

COUNTY DIRECTOR OF HEALTH  
P. O. BOX 91040 - 80103,  
MOMBASA COUNTY.

**DR. MOHAMED HANIF**  
**COUNTY DIRECTOR, CLINICAL SERVICES**  
**DEPARTMENT OF HEALTH**  
**MOMBASA COUNTY**

Copy: Medical Superintendent - PSCH



Appendix IV: Ethical Clearance

**VERDICT: APPROVED**

Daystar University Institutional Scientific and Ethical Review Committee (DU-ISERC)

Our Ref: **DU-ISERC/18/08/2025/00315G**

Date: 18<sup>th</sup> August 2025

To: Jane Mibei

Dear Jane



**ASSESSMENT OF SUBSTANCE USE DISORDER AND FAMILY DYSFUNCTION: CASE OF INPATIENTS AT THE PORT REITZ SUBCOUNTY HOSPITAL, MOMBASA COUNTY, KENYA**

Reference is made to your ISERC application reference **No. 130825-03** dated **13<sup>th</sup> August 2025** in which you requested ethical approval of your proposal by Daystar University Institutional Scientific and Ethical Review Committee (DU-ISERC).

We are pleased to inform you that ethical review has been done and the verdict is **Approve as is**. As guidance, ensure that the attached comments are addressed. Please be advised that it is an offence to proceed to collect data without addressing the concerns of DU- ISERC. Your application approval number is **DU-ISERC-2025/00315G**. The approval period for the research is **between 18<sup>th</sup> August 2025 to 17<sup>th</sup> August 2026** after which the ethical approval lapses. Should you wish to continue with the research after the lapse you will be required to apply for an extension from DU-ISERC at half the review charges.

This approval is subject to compliance with the following requirements:

- Only approved documents including (informed consents, study instruments, MTA) will be used.
- All changes including (amendments, deviations, and violations) are submitted for review and approval by Daystar University ISERC.
- Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to Daystar University ISERC within 72 hours of notification.
- Any changes anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to Daystar University ISERC within 72 hours.
- Clearance for export of biological specimens must be obtained from relevant institutions.
- Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- Submission of a signed one-page executive summary report and a closure report within 90 days upon completion of the study to Daystar University DU- ISERC via email [duiserc@daystar.ac.ke].

**Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://oris.nacosti.go.ke> and other clearances needed.**

Yours sincerely

Dr. Roseline Olumbe, PhD  
Chair, Daystar University Institutional Scientific and Ethics Review Committee  
Encl. Review Report

*"...until the day dawn and the daystar  
arise in your hearts"  
2 Peter 1.19 KJV*

Appendix V: Research Permit


  
**REPUBLIC OF KENYA**


  
**NATIONAL COMMISSION FOR  
SCIENCE, TECHNOLOGY & INNOVATION**

**Ref No: 350689**
**Date of Issue: 01/September/2025**

**RESEARCH LICENSE**



**This is to Certify that Ms.. Jane Cherono Mibel of Daystar University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Mombasa on the topic: ASSESSMENT OF SUBSTANCE USE DISORDER AND FAMILY DYSFUNCTION: CASE OF INPATIENTS AT THE PORT REITZ SUBCOUNTY HOSPITAL, MOMBASA COUNTY, KENYA for the period ending : 01/September/2026.**

**License No: NACOSTI/P/25/4179031**

**350689**

**Applicant Identification Number**

  
**Ag. Director General**  
**NATIONAL COMMISSION FOR  
SCIENCE, TECHNOLOGY &  
INNOVATION**

**Verification QR Code**



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Scan the QR Code using QR scanner application.**

**See overleaf for conditions**

Appendix VI: Similarity Index Report

## Jane Mibei.docx

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